

H+H Software

Hidden Automatic Navigator



Version 4.5

H+H Software GmbH
Maschuehlenweg 8-10
37073 Goettingen
Phone: +49 (0)551 52208-0
Fax: +49 (0)551 52208-25
E-mail: hh@hh-software.com
Internet: www.hh-software.com

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Introduction

Thank you for choosing HAN, the software suite that revolutionizes management of Internet resource access. This manual gives you step-by-step instructions on installing and configuring the components you need, and explains both how HAN works and how you can work with HAN.

This introductory chapter looks at the basic operating principles of your HAN system.

HAN as Reverse Proxy:

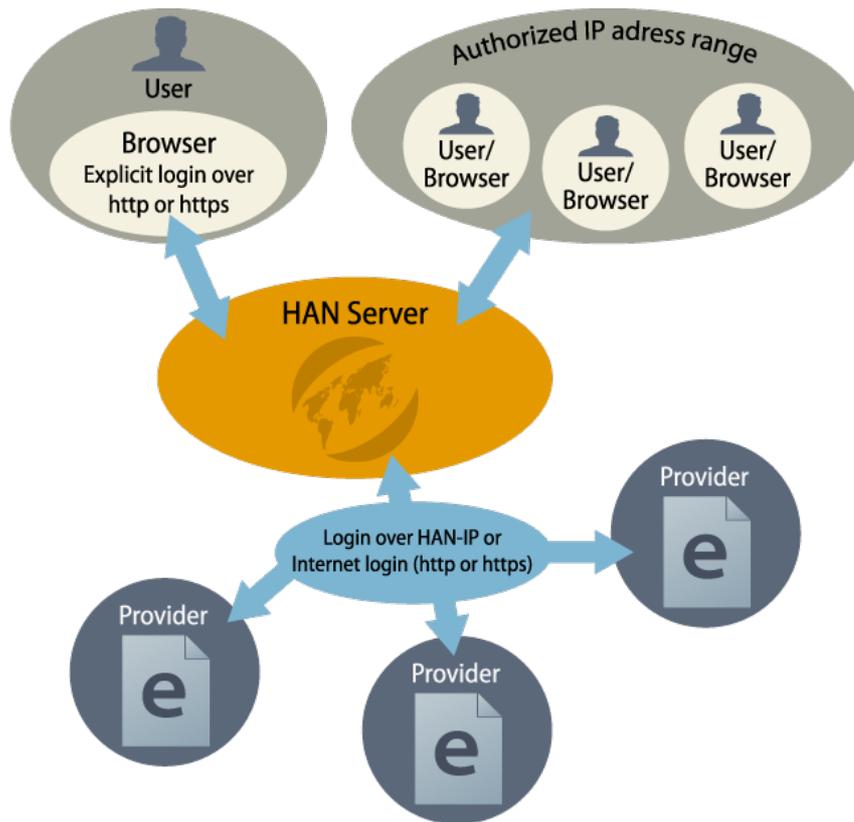
Among the various functions of a proxy server (such as caching web pages), that of a reverse proxy is most relevant in the HAN context.



When a client requests content from the web server of an online content provider (also referred to as the origin server), the request is received by the reverse proxy, which communicates with the origin server and then passes its response (for example, the requested content) back to the client. In other words, the client communicates only with the reverse proxy, not with the origin server. The reverse proxy receives the requested content directly from the origin server and delivers it to the browser, where it appears and is handled as though it originated in the reverse proxy.

Your HAN server provides URLs (`http://<provider server name>.<HAN ID>.<HAN server>/page.html`) for each e-journal you make available to your users. To access a particular e-journal, the user simply enters the corresponding HAN-URL in the browser address line. The HAN server then initiates communication with the content provider and executes any associated scripts; for example, to log in on the origin server. Once the resource has been located, the requested page is delivered by HAN to the user.

Thus HAN is a reverse proxy in the sense of the definition given above, because clients communicate only with the HAN server, not with the provider of the requested online resources.



The following diagrams illustrate this process:

1. The user calls an online resource:



2. HAN checks whether the user has permission to access this resource:



If the user does not have the required permissions, a login page opens (or, depending on your configurations, an error message is shown):



3. HAN opens the home page indicated and, if necessary (and if the e-script is so programmed), logs in on the provider's server:



4. HAN delivers the target page to the user:



This method has the following advantages:

- **Fixed point of access for e-journals:** Independent of a given website's URL, the URL used to call the e-journal remains constant and can be permanently stored; for example, in a library's OPAC system.
- **Access control:** Every time a user calls a HAN-URL, the HAN server can determine whether that user has permission to access the requested resource. For more on the Access Control functions, see "[Authentication and Authorization in HAN](#)".
- **Metering:** Every time a user calls a HAN URL, HAN can store statistical data regarding the usage of the e-script. For details on the statistics functions in HAN, see "[Event Logging and Statistical Analysis](#)".
- **License Management:** HAN can monitor and control parallel usage of online resources.
- **Help Desk:** You can configure HAN to open an HTML page of your choice in the event of error; for example, to provide an explanation or background information (e.g. "Login failed" or "No license available").

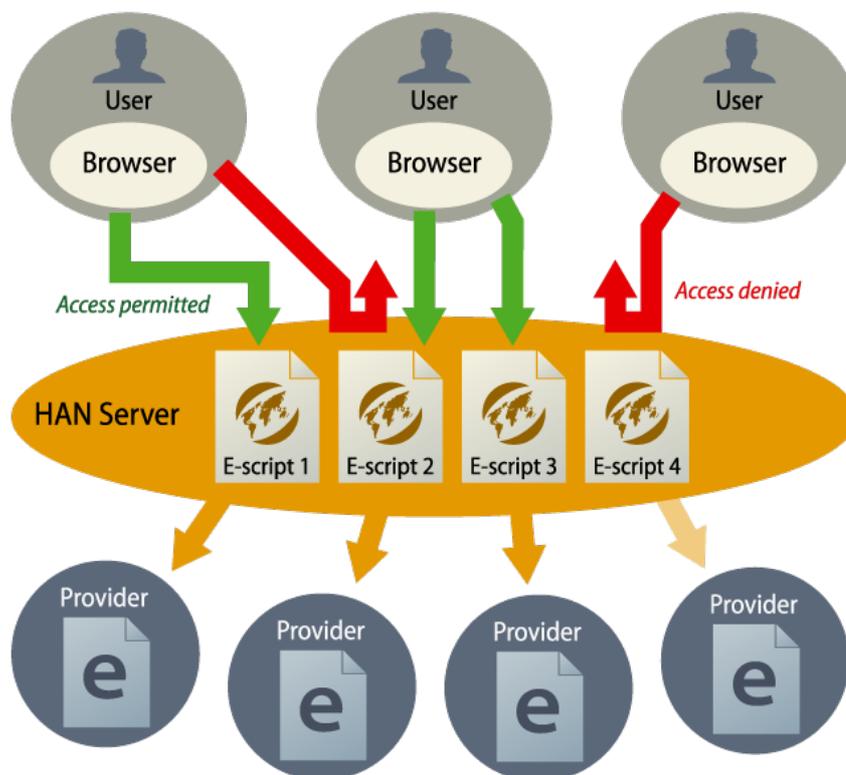
- **Protection of login data:** Login on and communication with the content provider involve only HAN and the origin server - not the HAN user. Login data and other sensitive information is not shown to users.
- **Location independence:** If the requested content is authorized for access only by local computers, for example, you can use a masking IP address so that HAN can serve your users no matter where they login to HAN from (particularly useful for campus licensing schemes!).
- **No modifications on the client:** The use of resources provided by HAN is independent of the client's operating system. HAN is suitable for use even in heavily regulated environments, since no installation or component configuration is required on the client side.

Authentication and authorization in HAN:

When a HAN resource is called, HAN can check whether the user has the permissions required for access to the requested content. In the process, an important distinction is made between authentication and authorization:

- **Authentication** is part of the login process; the system addressed determines the user's identity and checks it for authenticity.
- **Authorization**, on the other hand, is the allocation of permissions, privileges or rights to the identified user.

HAN supports the authentication of individual users and permits an administrator to restrict or permit access to resources on the basis of user privileges. This can be done on two levels:



1. Define which users can access HAN (authentication)
2. Define which HAN resources a given user is permitted to call (authorization)

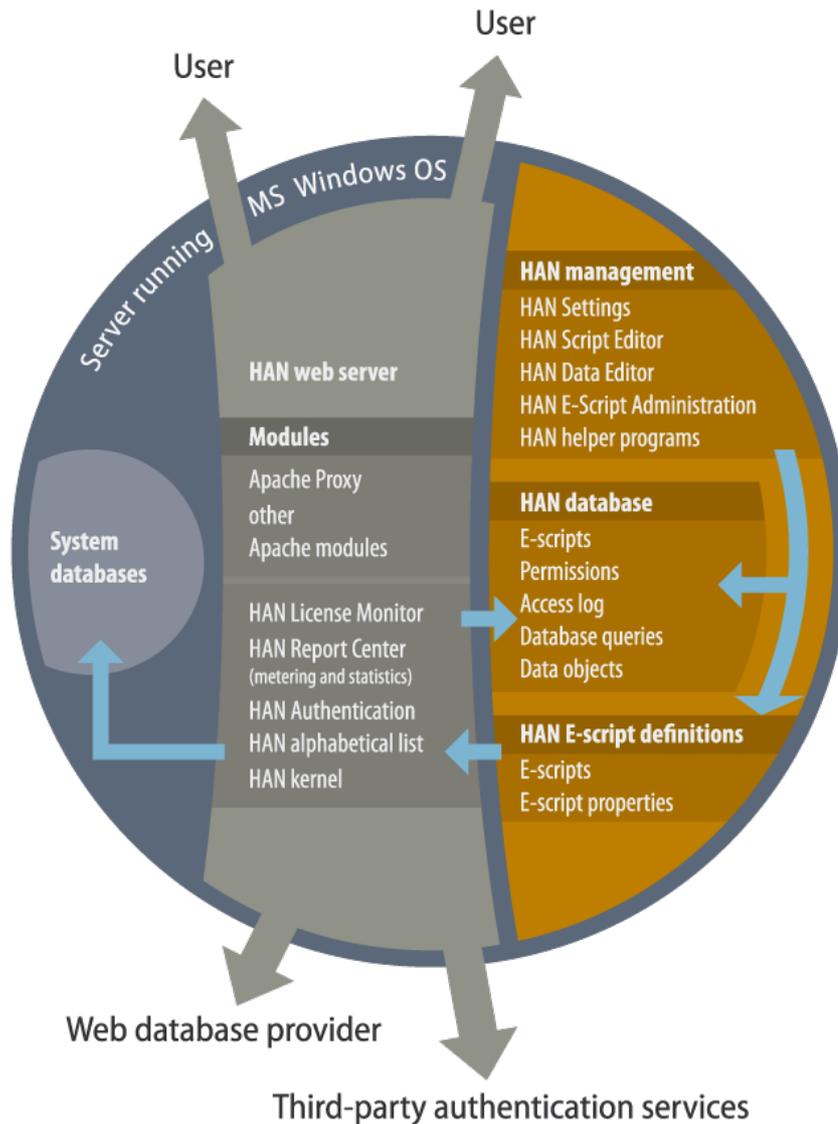
HAN supports the use of existing user management tools and settings for authentication. In the development of HAN, uncomplicated administration of resources was one of our main objectives. That is why HAN is specifically designed to leverage existing configurations, such as ADS and OPAC settings, for authentication to eliminate redundant user management operations. For details, see "[Configuring Authentication Services](#)".

Statistics:

HAN can collect statistical data on every client access operation, which means you can analyze all usage data pertaining to your online resources. In addition to analysis of the total usage, HAN gives you the option of evaluating parallel use of e-journals and online databases. The results can help you determine the optimum number of concurrent-use licenses for e-journal subscriptions. Furthermore, HAN can run web-counter-compatible evaluations on use statistics. For details on using the HAN statistics functions, see "[Event Logging and Statistical Analysis](#)".

HAN web server:

The HAN web server leverages Apache web server technology and builds on its reverse-proxy functionality. HAN also uses Windows modules, for example for the E-Script Administration and HAN Settings programs. The web-based statistics features are also provided over the HAN web server. Due to the close interaction between the web server and the HAN modules, some modifications in HAN settings are not active until after a web server reboot. Web services are configured in the HAN System Settings program (**Windows Control Panel/System and Security/H+H HAN/Web Service**). The following diagram illustrates the interaction between the individual HAN components:



HAN installs a temporary server certificate (DO-NOT-TRUST) when the web server is installed. Once HAN installation is complete, this should be replaced by an official certificate (issued by a certification authority). The official certificate has to be a wildcard certificate that can cover multiple subdomains. HAN also installs a root certificate, which ensures the correct display of HTTPS pages in the Script Editor. For details on creating a wildcard certificate request with HAN, see "[Configuration/Wildcard Configuration \(HAN 3 Kernel\)](#)".

Documentation Conventions

Terms frequently used in this manual that have a special meaning in the context of HAN are listed together with their definitions in the [glossary](#). A PDF version of the HAN manual is available on the installation CD-ROM. You can use the search function in the Adobe Reader (version 3 or later) to find specific terms in the PDF file. The HAN documentation uses the following text conventions to highlight certain content:



Note. Designates critical information that must be taken into account.



Tip. Designates useful tips and suggestions for working with HAN. 'Tips' show you how to simplify tasks or how to avoid problems before they occur.



Definition. Marks passages that explain a particular term, or provide details on a certain topic.

Text formatting conventions:

- **Control elements**
- **Title/name**
- **User input/PC output/Example of code**
- *Reference*

No drive letters are specified by name for the installation directory, because you can install HAN on your choice of drive. The default drive is used in the examples given here (`\HH\HAN\`). If your installation is in a different directory, be sure to adapt your input accordingly.

Values between angle brackets ("`<`" and "`>`") in this text are placeholders, and must be replaced by the actual values valid in your HAN environment.

Example:

`<HAN server>`: Name of your HAN server.

`<Path to temp directory>`: Directory for temporary files, e.g. `C:\Temp`.

`<HAN ID>`: Designation of the HAN e-script.

Support

If you have questions regarding support, please contact your software vendor.

You can send technical questions about the HAN software to the following e-mail address:

supportHAN@hh-software.com.

Before you submit a support request, please read the relevant sections of the manual and refer to the on-line Help in the HAN program; if you are not sure where to look, check the Help index.

If you still need help, please provide the following information when you send us your question, or have it on hand when you call your software vendor:

- The text of any error messages, as well as any relevant data from the H+H Trace Monitor
- The steps required to reproduce the problem

- A diagnostics file created using HAN Diagnostics

Ideas and Suggestions

We are always happy to hear your ideas and comments, and any suggestions you may have for improvements or additions. Please send them to:

H+H Software GmbH

Attn.: HAN Product Manager

Maschmühlenweg 8 - 10

37073 Göttingen

Germany

Or send e-mail to: support@hh-software.com with "HAN" in the subject line.

New in HAN 4.5

This chapter describes the features that are new in HAN 4.

System:

- **Suitable for cloud installation:** HAN 4.5 is suitable for installation on a virtual server in an appropriate provider's cloud.
- **Protection against web crawlers:** The new crawler protection protects your HAN resources from being indexed by web crawlers and overloading your servers.
- **HTML 5 support:** HAN supports the display of database contents with HTML 5. This replaces Flash and allows the use of iOS devices with HAN.
- **WebSockets support:** HAN supports the WebSockets protocol for data transfer. In combination with HTML 5, WebSockets offers great advantages over Flash in terms of performance and security.

System Requirements

The following software and hardware specifications are required for operation of HAN:

Server components

- Windows Server 2008 R2, or Windows Server 2012
- CPU: quad core
- At least 8 GB RAM; recommendations by subscription/institution size:
 - Entry-level/small: 8 to 12 GB
 - Large: 12 to 16 GB
 - "Infinite:" 16 to 24 GB
- At least 150 GB disk space; recommendations by subscription/institution size:
 - Entry-level/small: 150 to 200 GB
 - Large: 250 GB

- "Infinite:" 500 GB
- Up-to-date PDF reader
- Wildcard DNS record (FQDN of the HAN server) pointing to the HAN server in the local DNS
- Wildcard SSL certificate (FQDN of the HAN server; recommended)
- IP address with ports 80 and 443 available (HAN defaults)
- Prerequisite for hypervisors: Paravirtual network adapter

The HAN setup program installs the following components:

- HAN web server (built on Apache 2.2)
- HAN components
- Self-signed root certificate for correct recording from web pages over HTTPS



The HAN web service is updated by the HAN update module.

HAN Client

- Windows 7 64-Bit, Windows Server 2008 64-Bit, Windows Server 2008 R2, Windows 8/8.1 64-Bit, Windows Server 2012/R2, Windows 10 64-Bit
- 4 GB RAM
- Up-to-date Windows PC

For administration of the HAN suite, a good working knowledge of the following is recommended:

- HTML
- HTTP and HTTPS
- Networks

Contents of This Manual

The chapter entitled "**Introduction**" contains a general introduction to the software, information you will need prior to installation, and notes on the use of the documentation.

["Installation"](#) describes the procedures for installing HAN, registering your HAN software and updating from an earlier HAN version.

["Configuration"](#) shows the initial basic steps required when you put HAN into operation, such as configuration of the System Monitor and Authentication Services.

["Providing Online Resources with HAN"](#) explains how to create e-scripts: these are what gives your users access to the e-journals and reference databases you provide over the HAN server. This chapter provides such details as: how to use flexible parameters in URLs so that these are accessible outside the current browser session; how to create conditional scripts that run only under the conditions you specify; how to handle frames and cookies, and how to allocate usage licenses.

["Managing HAN Resources"](#) describes the administration of central HAN resources. It also includes details on using the Data Editor and working with queries.

["HAN Web API"](#) describes the use of the HAN web API, a configurable interface for interaction with various discovery services. The HAN web API is an open interface, designed for working with all currently available and future services.

"[Event Logging and Statistical Analysis](#)" describes how data are logged in HAN, how you can view these data and how to create statistical evaluations of usage from these data using the HAN Statistics program.

"[Appendix](#)" contains additional information for easy reference, such as lists of all authentication services supported by HAN with their parameters.

Installation

This chapter describes the procedures to follow when installing HAN. The installation is in three stages, carried out in the following order:

1. Install HAN
2. License HAN
3. Import data from an earlier HAN version (if installed)

The procedure for installing and licensing HAN is explained in detail in the following sections:

"[Installing the HAN Server Component](#)" describes how to install HAN on your servers.

"[Installing the HAN Client](#)" describes how to install the HAN Client on additional client stations.

"[Registering Your HAN Software](#)" describes how to license HAN following installation.

"[Updating from HAN 2](#)" describes how to update from HAN 2 to HAN 3.

"[Updating from HAN 3](#)" describes how to update from HAN 3 to HAN 4.

"[Configuring EZB Access](#)" describes how to configure HAN for access to the EZB. This is prerequisite for use of the EZB module.

Installing HAN Server Component

This chapter describes how to install your HAN server. Install HAN on the console of your server:

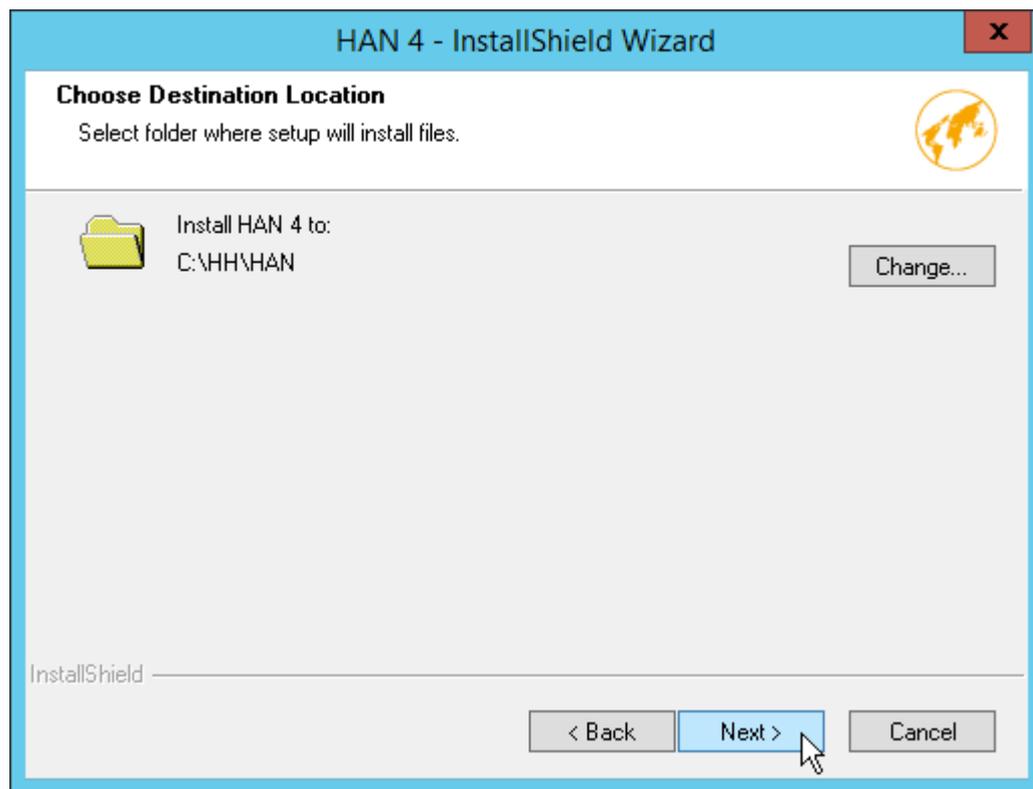


A valid HAN license is required before you can complete the installation.



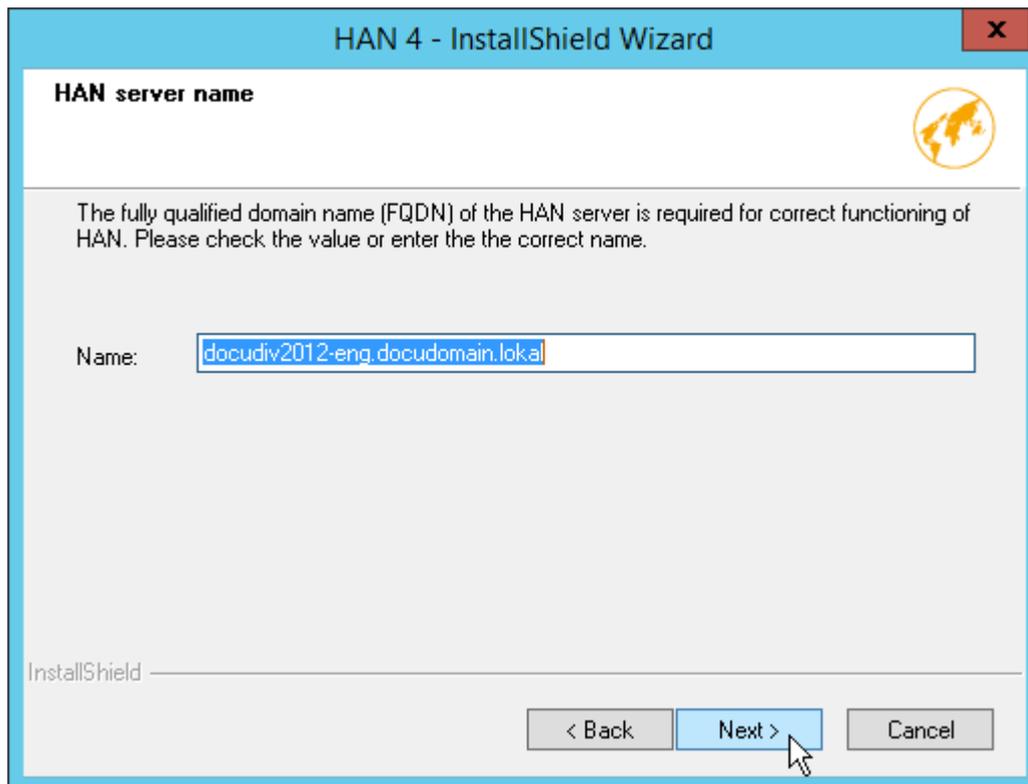
When installing HAN on Windows Server 2008 or later, keep in mind that with its default settings, Microsoft restricts user privileges in the %ProgramFiles% directory. HAN installs by default in a directory called `C:\HH\HAN`. If you wish to install HAN in the Windows program directory instead, remember that you will need to modify user privileges accordingly.

1. Run the `Setup.exe` file to start the HAN installation program.
2. When the "Welcome" page opens, click on **Next**.
3. Click **Yes** to confirm the license agreement and continue.
4. On the **Choose Destination Location** path, enter the path in which you wish to install HAN:



Click on **Next**.

5. On the **HAN server name** page, enter the fully qualified domain name of the HAN server and confirm by clicking on **Next**:

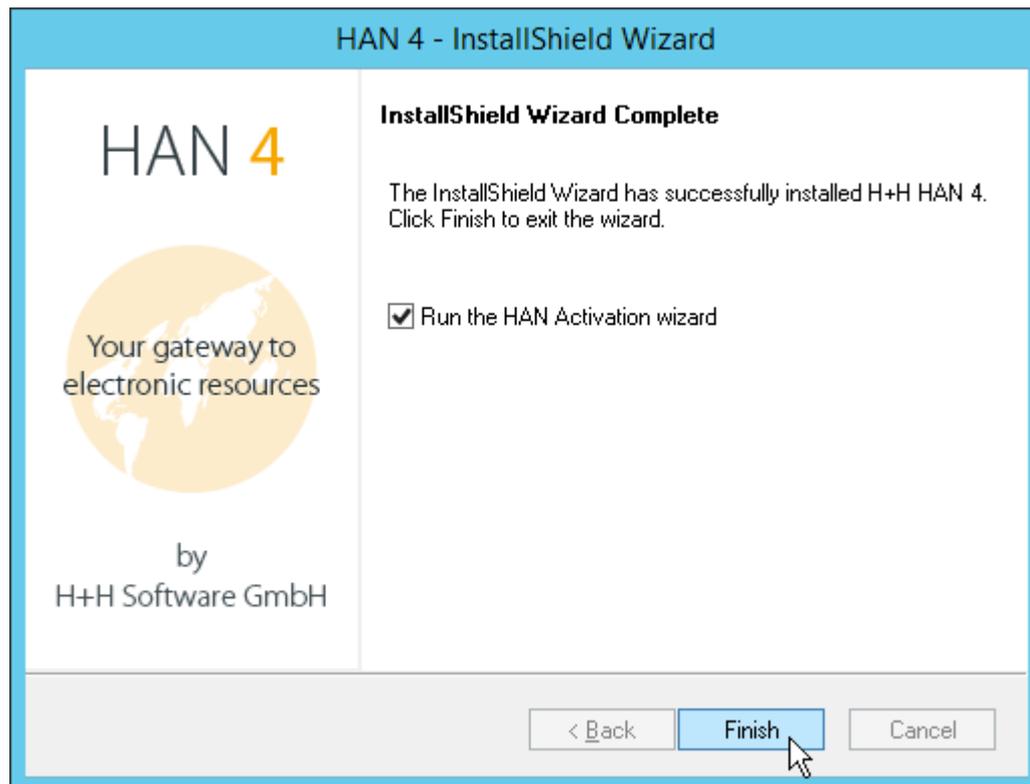


 To enable the HAN DNS kernel mode to make replacements directly in the server name, you need to create a wildcard DNS record for HAN (*.<servername> and the corresponding IP address; no PTR/reverse lookup). This applies to both Windows and Linux. For detailed instructions on creating a wildcard DNS record, see "[Configuration/Wildcard Configuration \(DNS Kernel Mode\)](#)".

6. On the **Ready to Install Program** page, click **Install** to start the HAN installation. The installation wizard now installs both the HAN server component and the HAN client. For details on installing the HAN client on additional computers, see "[Installing the HAN Client](#)".

 During installation, a window with a command prompt might open. In this case, press any key to continue the installation.

7. In the **InstallShield Wizard Complete** window, the **Run the HAN Activation wizard** option is activated by default:



Click on **Finish** to conclude the installation process and automatically start the Activation wizard to register HAN. For details on activating HAN, see "[Registering Your HAN Software](#)". HAN installation in accordance with your settings is now complete.

8. After you have installed HAN and licensed the HAN Server component, the HAN Client is installed automatically. The client provides access to the HAN administration tools. To confirm the conclusion of the installation process, click on **Finish**.

Following installation, you need to configure your HAN program. This is why the HAN Settings program opens automatically after both server and client have been installed. For details on configuring HAN, see "[Configuration](#)". For details on configuring EZB access, see "[Configuring EZB Access](#)".

Installing HAN Client

On the HAN server, the HAN client is installed automatically during installation of the server component. To install the HAN client on an administrative client station, use the installation web page. Administrator rights are required for installing the HAN client:



Important: in addition to having admin privileges, the user account must be assigned the "Administrator" role to enable HAN Client installation. For details on creating an administrative user for installation of the HAN client, see "[Creating an Administrative HAN User](#)".

1. Point your browser to `http://<HAN server>/clientsetup/client.html`.



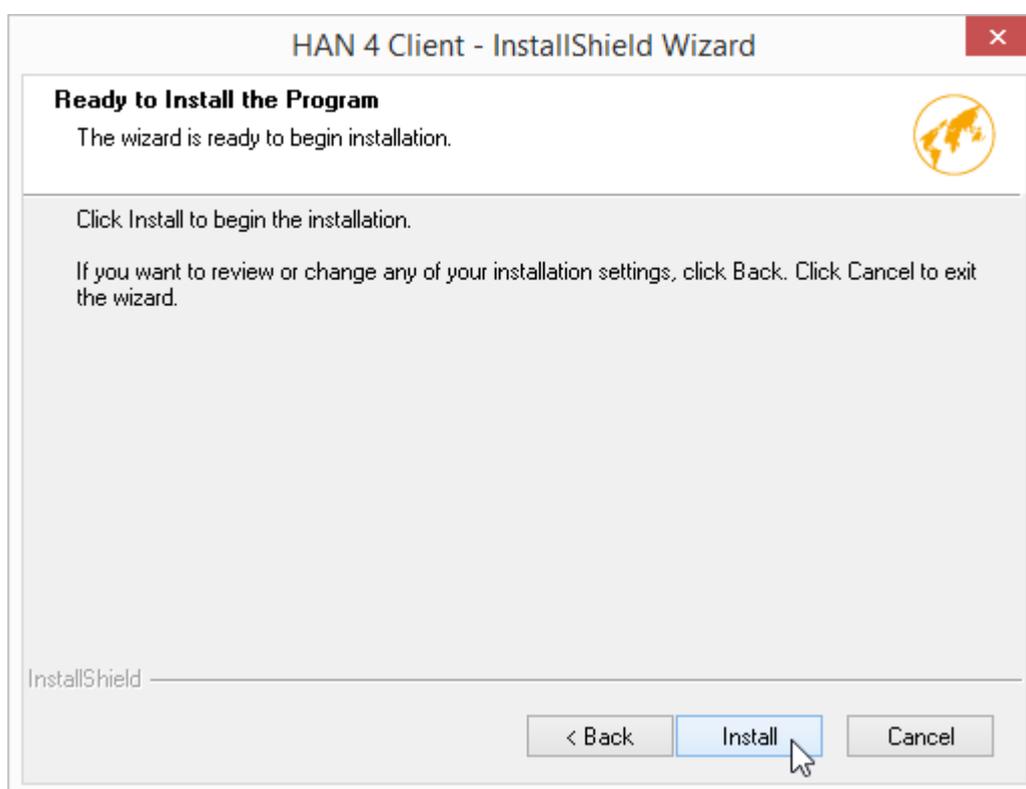
If you do not have an official certificate stored, a certificate error is shown. For test purposes, however, you can continue without the certificate.

2. Log in.

3. Select **Install client**:

4. In the "Welcome" window, click on **Next**.

5. In the **Ready to install the program** window, click on **Install**:



6. The installation executes. The installation program automatically adds the HAN Tools shortcut to the Windows desktop. For details on using the HAN client, see "[HAN Client](#)".

Registering Your HAN Software

HAN can be registered and activated only if you placed an order for the software. When your order is received, a HAN product key is sent to you, which you then enter in your online H+H license account for registration. After you install HAN, the software has to be activated. To activate HAN, you need to import a license file into the HAN program. This license file is obtained by downloading it from your license account. The following instructions for [activating HAN](#) assume that you have already obtained the license file. If you do not have a license file, see below for details on [registering the product key](#) in your H+H license account and [downloading a license file](#).

Activating HAN:

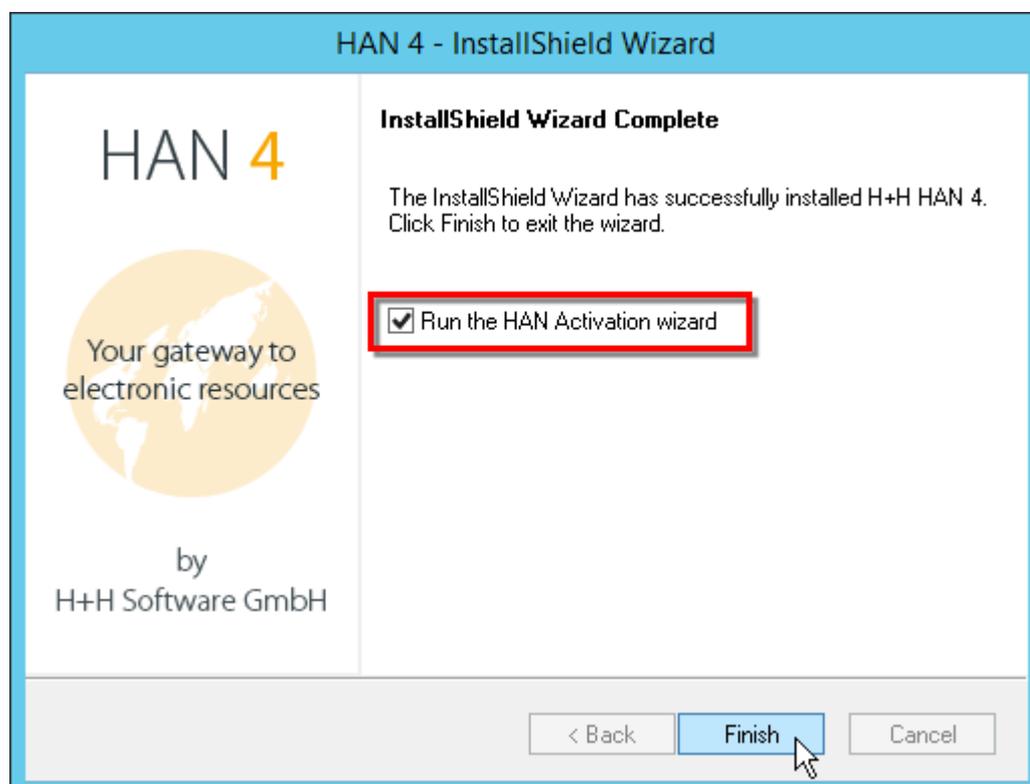


If you have not already downloaded a license file, check the box labeled **Go to activation page** to download the file. Alternatively, you can log in directly to your licensing account to download the file. For details on how to download a license file, see "[Downloading a license file](#)". To run the Activation wizard at a later point, navigate to the **All Programs/H+H HAN** folder in the Windows Start menu and select the wizard.



If you go to the activation page from this wizard and download a license file, rather than importing an existing file, HAN will import the file automatically when you download it.

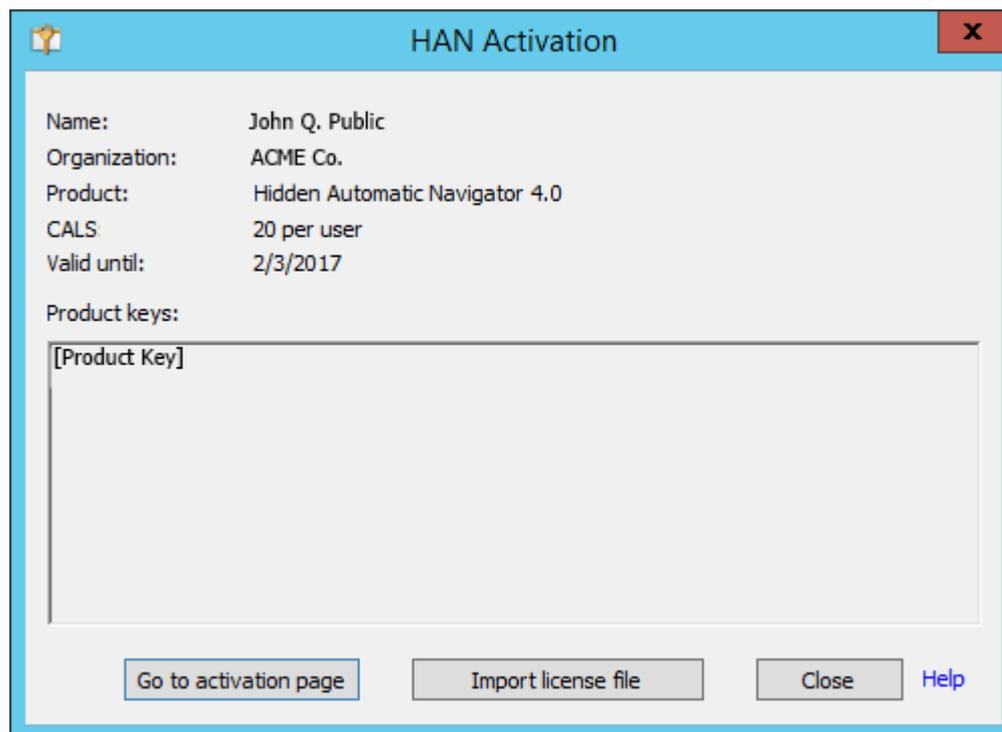
1. To have the Activation wizard open automatically after installation, select the **Run the HAN Activation wizard** option at the end of the installation process:



Alternatively, you can run the Activation wizard at any time by selecting **All Programs/H+H HAN/HAN Activation wizard** in the Windows Start menu or on the Windows Start page, under **All Apps/H+H HAN/HAN Activation Wizard**.

2. In the Activation wizard, click on **Import license file**.

3. Select your license file in the File dialog and click **Open**. The required data is imported and HAN is activated.



4. Click on **Close** to close the Activation wizard.



We recommend configuring the basic settings for your HAN software as soon as you have completed the licensing and installation of the HAN client. For details on configuring HAN settings, see "[Configuration](#)".

Registering HAN:

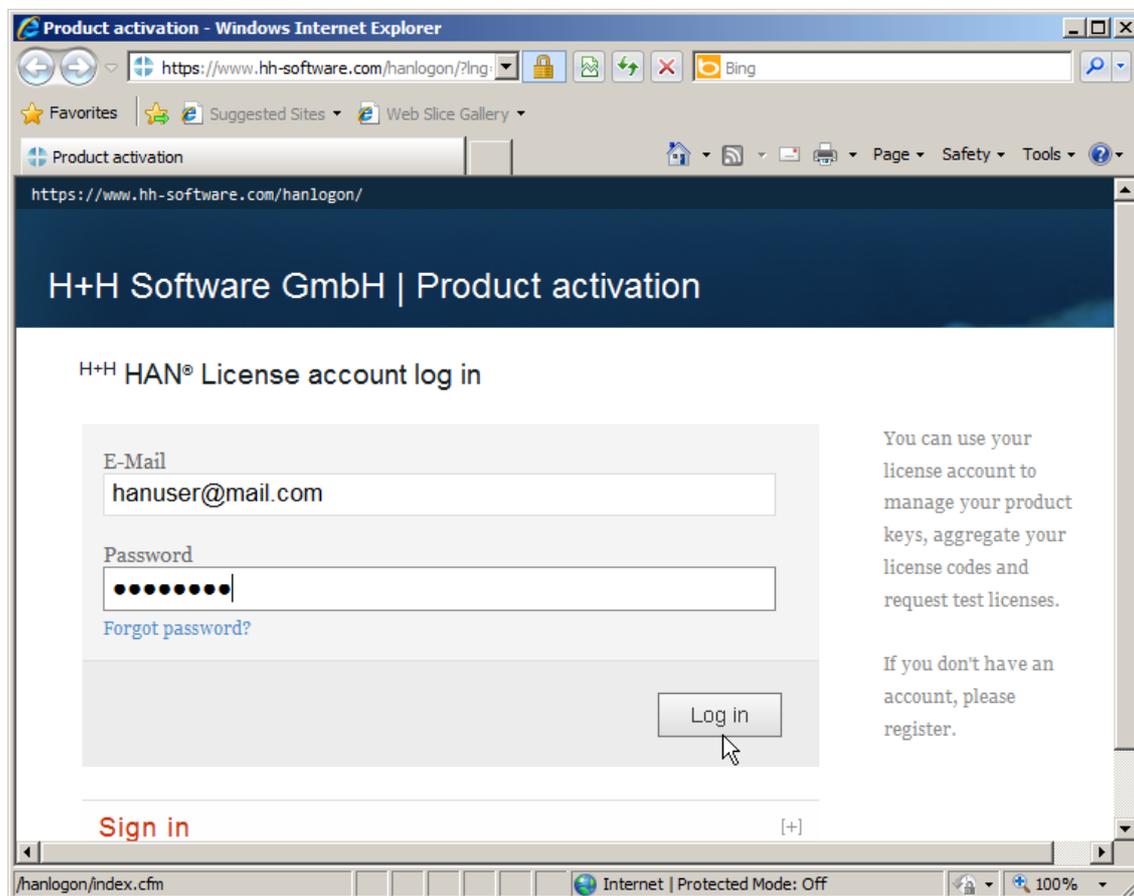
Registering the product key:

When you purchase the HAN software, you are provided with a product key. Like the familiar Microsoft product key, this has five groups of five characters consisting of numbers and letters, with each group separated by dashes. To simplify entering the code, all of the letters are upper-case. You can manage all of your H+H product keys in your H+H license account. Register your products here by entering the product key and then download a license file for activation. The web address for H+H product activation is: <https://www.hh-software.com/hanlogon/?lng=0>. You are prompted to log in before you can access your license account.

1. Login: Enter your e-mail address and license account password:



If you do not have a license account, click on **Sign in**. This opens a page for setting up a license account. A link will be e-mailed to you to verify the account before you can use it.



2. Add: Click on the **Add key** button in your license account to add a new product key.

Downloading a license file:

You can download license files to activate your products at any time, from the license account associated with your H+H products. For details on how to associate products with your license account, see "[Registering the product key](#)" above. You can create and download a license file as follows:

1. In your license account, click on the **download** link next to the product key:

H+H Software GmbH | Product activation

Hidden Automatic Navigator NetMan Desktop Manager

H+H HAN® Product activation

Subscription Product key

Product key						
ID	Product key	Version	License type	CALS	Valid until	Download license
772	[Product key]	3.0	concurrent (Base license)	10	unlimited	download

Add key

2. Click on the **Download license file** link to store the license file locally:

Product key

[Product key]

License file

[Download License file](#)

The license file is saved. Your HAN program also imports the license automatically into the Activation wizard and activates HAN.



Some browsers offer the choice of either opening or saving the license file. If you are prompted to choose between these two options, select **Open** to have the license automatically registered in the Activation wizard, or **Save** to store the license file. If you save the license file, it will have to be imported into the Activation wizard afterward. For details on importing a licensing file, see "[Activating HAN](#)".

Extending your subscription:

When you update your HAN 3 installation to HAN 4, you need to license your HAN software again. To do this, you must have an up-to-date subscription. You cannot use a HAN 3 subscription to license HAN 4. If you have a HAN 3 subscription, it must be extended before it can be used for licensing HAN 4. This is a simple process, performed in your online H+H license account:

1. Log in to your license account and select the **Hidden Automatic Navigator** section.
2. On the **HAN Product activation** page, open the **Subscription** dialog.
3. In the **Extend** column, click on the **Check** link. If you have purchased HAN 4, your subscription is already marked for extension here. Your HAN ID is checked in the system and then used to generate a new ID. If you have multiple subscriptions, all of them are extended and used to generate new IDs.

Updating from HAN 2

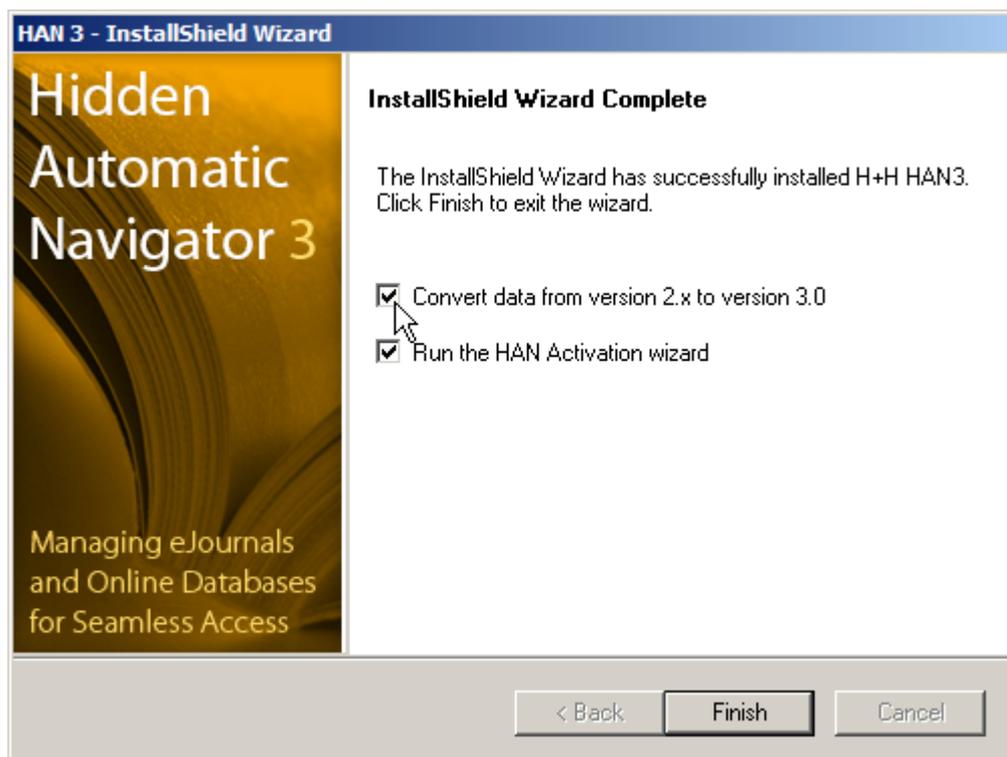


It is not possible to update HAN 2 directly to HAN 4. If you are still using HAN 2, you need to update to HAN 3 first, and then update v3 to v4. This section describes the procedure for updating HAN 2 to HAN 3. For instructions on updating HAN 3 to HAN 4, see "[Updating from HAN 3](#)".

To update from HAN 2 to HAN 3, begin by installing v3 parallel to v2. Following the installation of HAN 3, run the Migration Wizard to migrate your existing e-scripts from HAN 2 to HAN 3. To run the Migration Wizard, select the **Convert data from version 2.x to version 3.0** option at the end of installation:



Data can be migrated only from HAN 2, because the database format was changed in that version. If you have an earlier version, you need to update it to v2 before the data can be imported.



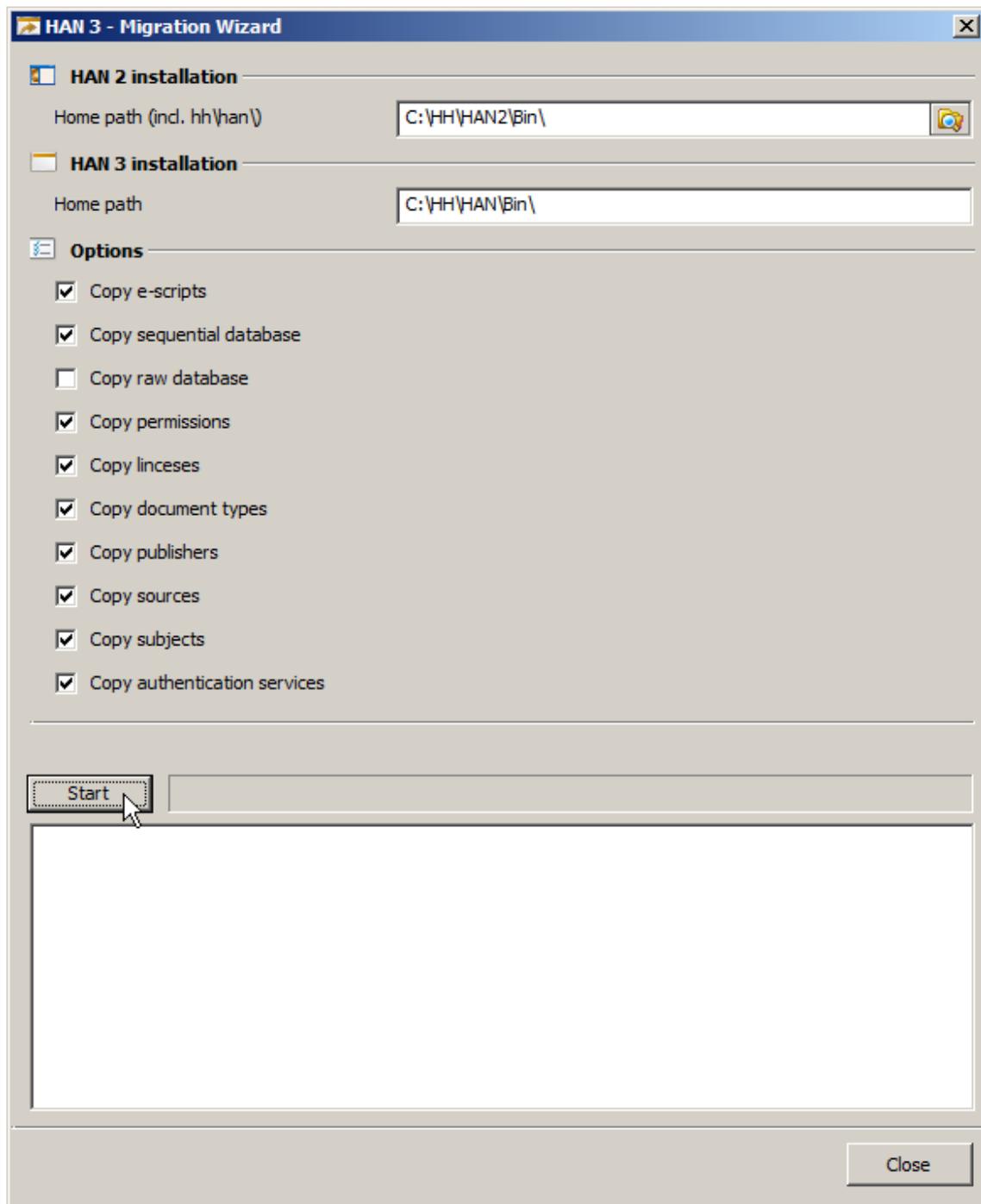
You can import the following data from a HAN 2 installation:

- HAN accounts (now called 'e-scripts')
- Permissions
- Configured authentication services
- Data objects
- Sequential database
- Log data (importing log data is possible, but not recommended, because it could be a very large amount of data)



For groups, a filter is created in HAN 3.

1. Enter the path to your HAN 2 installation and a path for the conversion log file.



2. Specify whether you wish to import the log files (HAN statistics data) as well. (This option is not available in HAN 3 Beta!)



When log files are converted from earlier versions, HAN 3 log files are automatically deleted.

3. Click on **Start** to begin converting the HAN accounts (e-scripts) and statistics data to the HAN 3 format.



Important: Do not copy the databases from HAN 2 to HAN 3! Always use the update function for this purpose. HAN 3 uses a totally new database format that is not compatible with files from the earlier version.

For a detailed description of the options in the Migration Wizard, see "[Migration Wizard](#)".

Updating from HAN 3

If you have been using HAN 3, you can update your existing installation to HAN 4 and continue to use all of your all existing data. Prerequisite for this is that you have a late version of HAN 3 (HAN 3.4.x).



It is not possible to update HAN 2 directly to HAN 4. If you are still using HAN 2, you need to update to HAN 3.4 first, and then update v3 to v4. This section describes the procedure for updating HAN 3 to HAN 4. For instructions on updating HAN 2 to HAN 3, see "[Updating from HAN 2](#)".

Unlike the update from v2 to v3, updating v3 to v4 does not involve any parallel installation of the two versions. Instead, the HAN 4 installation program runs on your HAN server and updates the existing HAN 3 version to HAN 4.



The HAN database is updated during this procedure. It is important to keep in mind that this step cannot be undone! That is why it is essential to back up both the HAN 3 database and your system environment before running the v3-to-v4 update. To back up your HAN database, select **Backup** on the **DB Configuration** page of the HAN System Settings. Use a separate program to back up your system environment (e.g. Windows Server Backup). Otherwise, it will not be possible to restore your HAN 3 installation. Also keep in mind that the server might have to be restarted during your v3-to-v4 update, due to the database updating process.

1. Run the HAN 4 installation program.
2. When the "Welcome" page opens, click on **Next**.
3. An information page shows details concerning the update process. Read the knowledge base article referenced, and then confirm by clicking the checkbox next to the text, **I have read the article**:



Click on **Next** to continue.

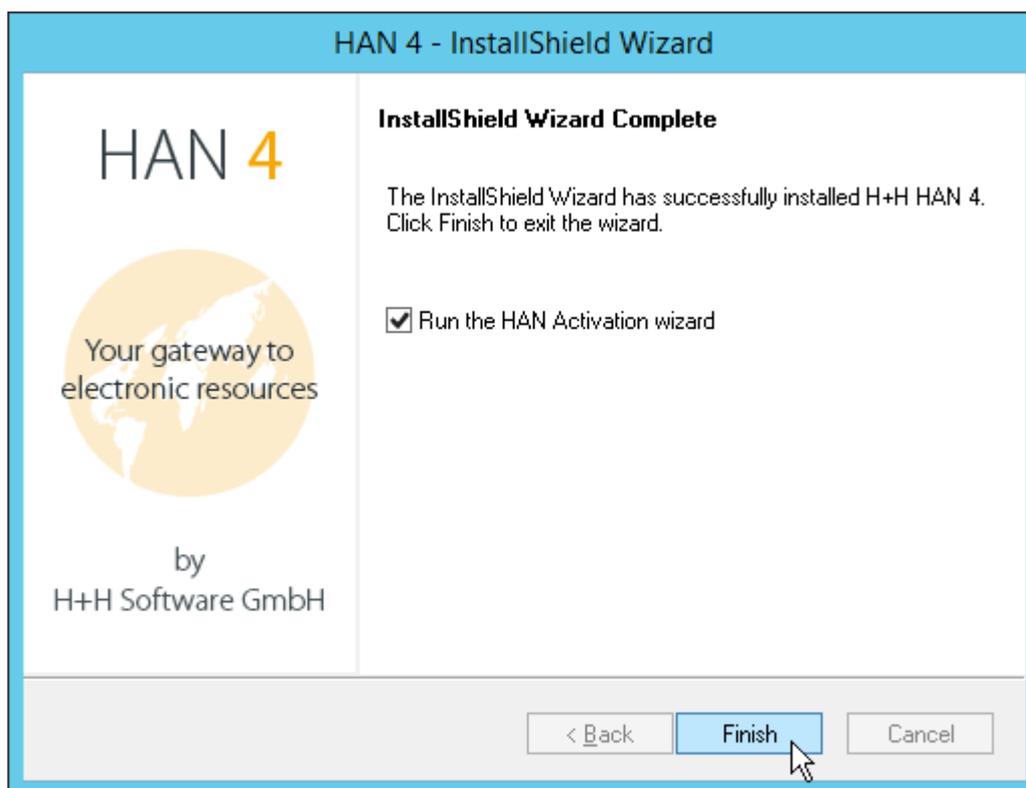
4. Click **Yes** to confirm the license agreement and continue.



Like HAN 3, your HAN 4 installation also requires a wildcard DNS record. The update program automatically designates the same record for v4 that was used for v3. For details on creating a wildcard DNS record, see "[Configuration/Wildcard Configuration \(DNS Kernel Mode\)](#)".

5. On the **Ready to Run Installation** page, click on **Install** to begin the update.

6. After updating, you will need to import your license to activate the HAN 4 installation version. To do this, select **Run the HAN Activation wizard** on the **InstallShield Wizard completed** page:



Then click on **Finish** to conclude the update process and automatically run the Activation wizard to register HAN 4. For details on activating HAN, see "[Registering Your HAN Software](#)".

7. After you have updated HAN and licensed the HAN Server component, the HAN client is installed automatically. The client provides access to the HAN administration tools. To confirm the conclusion of the update process, click on **Finish**.

Configuration

The configuration steps required directly after installation of HAN are described in the following:

Wildcard configuration:

With the HAN DNS kernel, the HAN URL rewriting engine modifies the structure of the e-journal URLs when they are opened. Thus a wildcard DNS record is required for correct addressing of the HAN server. To enable the HAN web server to process SSL connections without a certificate warning, the web server needs a wildcard SSL certificate. For details on creating a wildcard DNS record and on requesting and importing a wildcard certificate, see "[Wildcard Configuration \(DNS Kernel Mode\)](#)".

Creating administrative HAN users:

The newest version of HAN has a whole new approach to handling roles and users. This lets you tailor access to HAN for particular individuals in accordance with their needs. For an overview of this new system and its roles and user accounts, see "[HAN Roles and Users](#)". For details on creating HAN user accounts, see "[Creating an Administrative HAN User](#)".

Configuring authentication services:

Authentication services restrict access to your HAN system in accordance with rules that you define. For this purpose HAN supports a number of authentication services, for example to bind login to a particular IP address or an ADS login. For details, see "[Configuring Authentication Services](#)".

Disk space monitoring:

A certain amount of free disk space is required, to ensure optimum performance and availability of your HAN system. The HAN System Monitor tool helps you keep an eye on your system's capacity. It monitors the available disk space continuously, and automatically sends an e-mail message when a specified lower limit is exceeded. For details on using the System Monitor to monitor available disk space, see "[Disk Space Monitor](#)".

Configuring EZB access:

If you have an access account with the "Elektronische Zeitschriften Bibliothek" of Regensburg or EZB, the electronic journal library at the University of Regensburg, HAN takes over some of the administration of access and provides the available e-journals. For details on integrating your EZB account in HAN, see "[Configuring EZB Access](#)".

EZB data logging:

The EZB data logging function creates a daily log of EZB access events, if you have activated the EZB module. If you wish to use the EZB module without EZB data logging, deactivate this function in the EZB settings. For details on how to deactivate EZB data logging, see "[Deactivating EZB Data Logging](#)".

Configuring HAN over HAN:

The HAN over HAN feature gives you a mechanism for accessing e-journals over a separate HAN server. In this scenario, the separate HAN server acts as a primary HAN server over which the secondary HAN server can call and provide e-journals. The primary and secondary HAN servers must be specifically configured for the use of HAN over HAN. For details on configuring HAN over HAN, see "[HAN over HAN](#)".

Defining HAN users:

The newest version of HAN has a whole new approach to handling roles and users. This lets you tailor access to HAN for particular individuals in accordance with their needs. For an overview of this new system and its roles and user accounts, see "[HAN Roles and Users](#)". For details on creating HAN user accounts, see "[Creating HAN Users](#)".

Defining access permissions for users:

Permissions restrict the access of authenticated users to particular HAN resources (i.e., e-journals and online databases). You can define permissions in advance and then allocate them as needed, for example when you add a new resource. Permissions are defined in the HAN Data Editor. For details, see "[Defining Permissions](#)". For more information on working with the Data Editor, see "[Data Editor](#)".

Protecting data privacy:

The anonymization and pseudonymization functions in HAN enable implementation of privacy protections that meet legal requirements. Anonymization means removing any and all personal references from data that is logged by HAN. Pseudonymization denotes the encryption of personal references in the data records. Access to the data correlation function is protected by dual control mechanisms. For details on configuring privacy protection in HAN, see "[Anonymization/Pseudonymization of Data Records](#)".

Customizing HAN for your company environment:

There are several areas in which you can integrate your corporate identity in HAN: login pages, error messages and the A-to-Z list. For details on adapting these pages to your firm or organization, see "[Customizing HAN for Your Company](#)".

Additional options for configuration can be found in the HAN Settings. The options in the HAN Settings program are grouped in various sections on the following dialog pages:

Global:

- [Global](#)
- [E-Script](#)
- [Help Desk](#)
- [Proxy](#)
- [System Monitor](#)
- [Restricted Domains](#)
- [Global Document Types](#)
- [URL Rewriting](#)
- [Recording](#)
- [Data Protection](#)

Authentication:

- [Authentication](#)
- [LDAP](#)

Web API:

- [Preferences](#)
- [Web API](#)
- [EZB](#)
- [A-Z List](#)

Wildcard Configuration (DNS Kernel Mode)

With HAN DNS kernel mode (HAN 3), the HAN URL rewriting engine modifies the structure of the e-journal URLs as follows when the URL is opened: HAN saves this data in the server name. This entails two new prerequisites for correct functioning of the HAN system:

- A [wildcard DNS record](#) must be created for correct resolution of the HAN server name in the DNS – even though the address of the e-journal provider is at the beginning of the URL.
- To resolve web addresses over SSL using the HAN web server without showing a certificate warning every time, a [wildcard certificate](#) must be requested from a certificate authority and imported into HAN.

Creating a wildcard DNS record:

A wildcard DNS record ensures both correct resolution of the HAN server name, and that the name resolution functions properly even when any number of other server names or parts of names precede the HAN server name in the URL. In practical terms, this means not only that the HAN server can be addressed by its actual name, but also that its name can be resolved correctly even if there is no explicit entry for it in the DNS. Thus the wildcard DNS record is necessary because when HAN 3 rewrites a URL, it moves the e-journal provider's server name to the first position:

```
http://<provider server name>.<HAN ID>.<HAN server>/page.html.
```

Configure the wildcard DNS record in the DNS as follows: Create a new host in the relevant domain with the following data:

Name your HAN server ***.<HAN server name>**. This yields the following as fully qualified domain name ***.<HAN server name>.<domain>**. In the **IP address** field, enter the IP address of the HAN server. Keep in mind that **Create associated pointer (PTR) record** must be deactivated. Once you have added the host name, your host may be display, for example, as follows:

Name	Type	Data
(same as parent folder)	Host (A)	192.168.1.65
*	Host (A)	192.168.1.65

The following entries have been stored for the HAN server:

```
<HAN server.domain.com>    Host (A)    <IP address>
<*.HAN server.domain.com>  Host (A)    <IP address>
```

With the entries shown in the example, both `HAN.docudom.local` and `www.informaworld.com.HANID1030.HAN.docudom.local` point to the IP address 192.168.1.65.

Requesting and importing a wildcard certificate:

With a wildcard SSL certificate, the browser does not show a certificate error message every time a user calls a script that uses SSL. The regular SSL certificate for your HAN web server is issued for `<HAN server>.<domain>`. Because the HAN 3 function for rewriting URLs puts the provider's address in the first position, however, this web server certificate is not valid when e-scripts run. What you need is a wildcard certificate that covers all sub-domains of a domain; specifically, `*.<HAN server>.<domain>`.



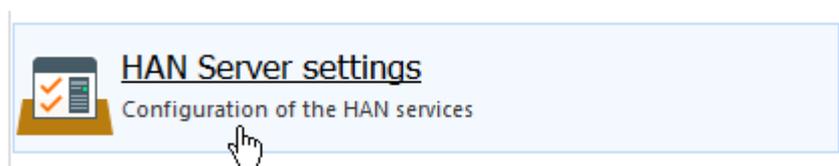
Not all certificate authorities will issue wildcard SSL certificates! For a non-exhaustive list of certificate authorities that issue wildcard certificates, see "[Certificate authorities for wildcard certificates](#)" below.

The following steps are required for certification of your web server with a wildcard certificate:

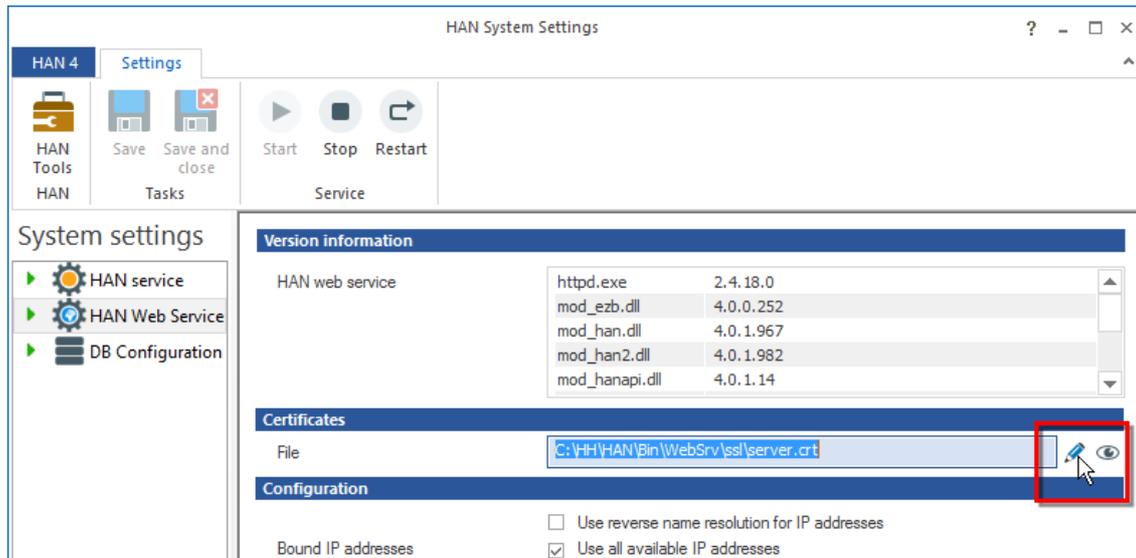
1. Create a certificate request
2. Send the certificate request to a certificate authority
3. Import the wildcard certificate from the certificate authority into your HAN system

You can use the Certificate Wizard to create a wildcard certificate request. Open the Certificate Wizard from the HAN System Settings:

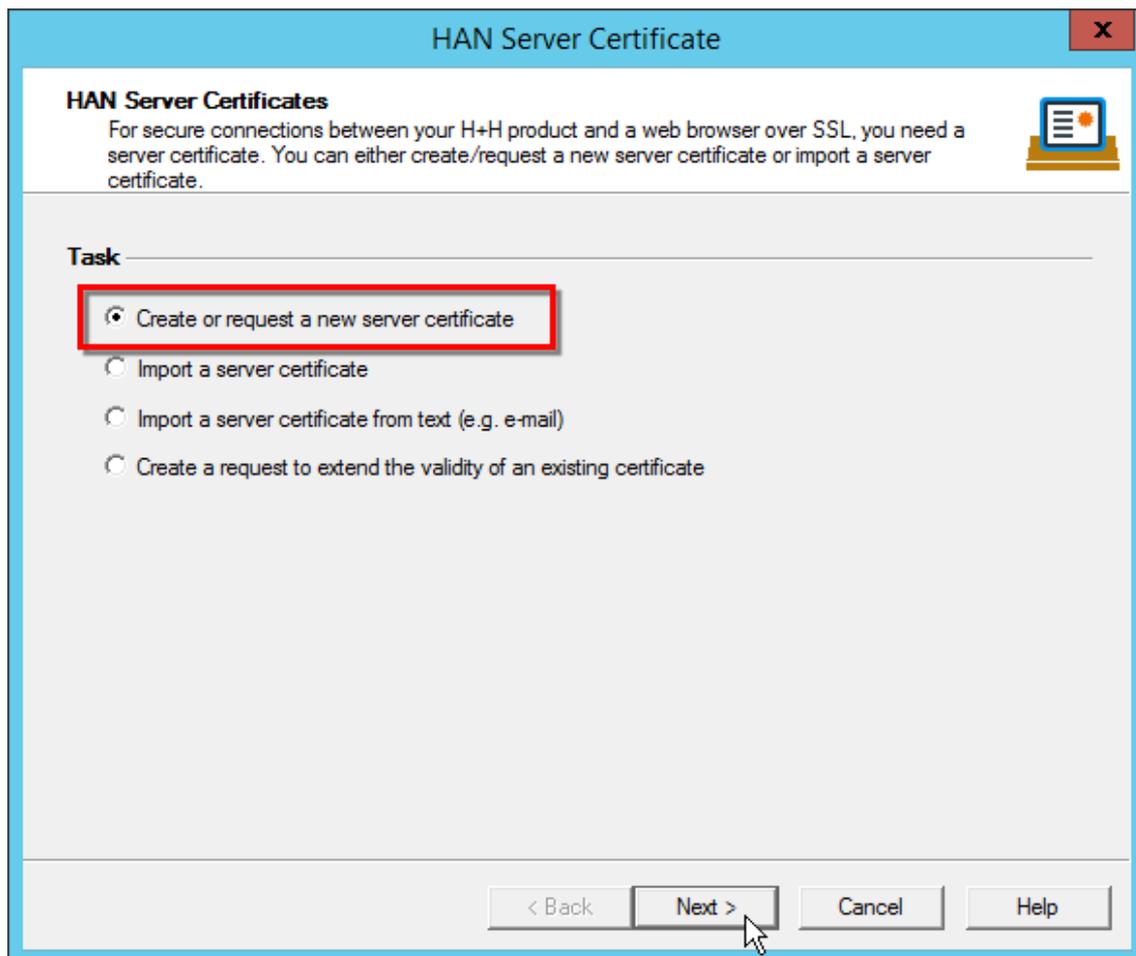
1. Double-click the HAN Tools desktop shortcut and select **HAN Server Settings**:



2. In the HAN System Settings, on the **HAN Web Service** page, click on the **Edit** button to the right of the **File** input field:

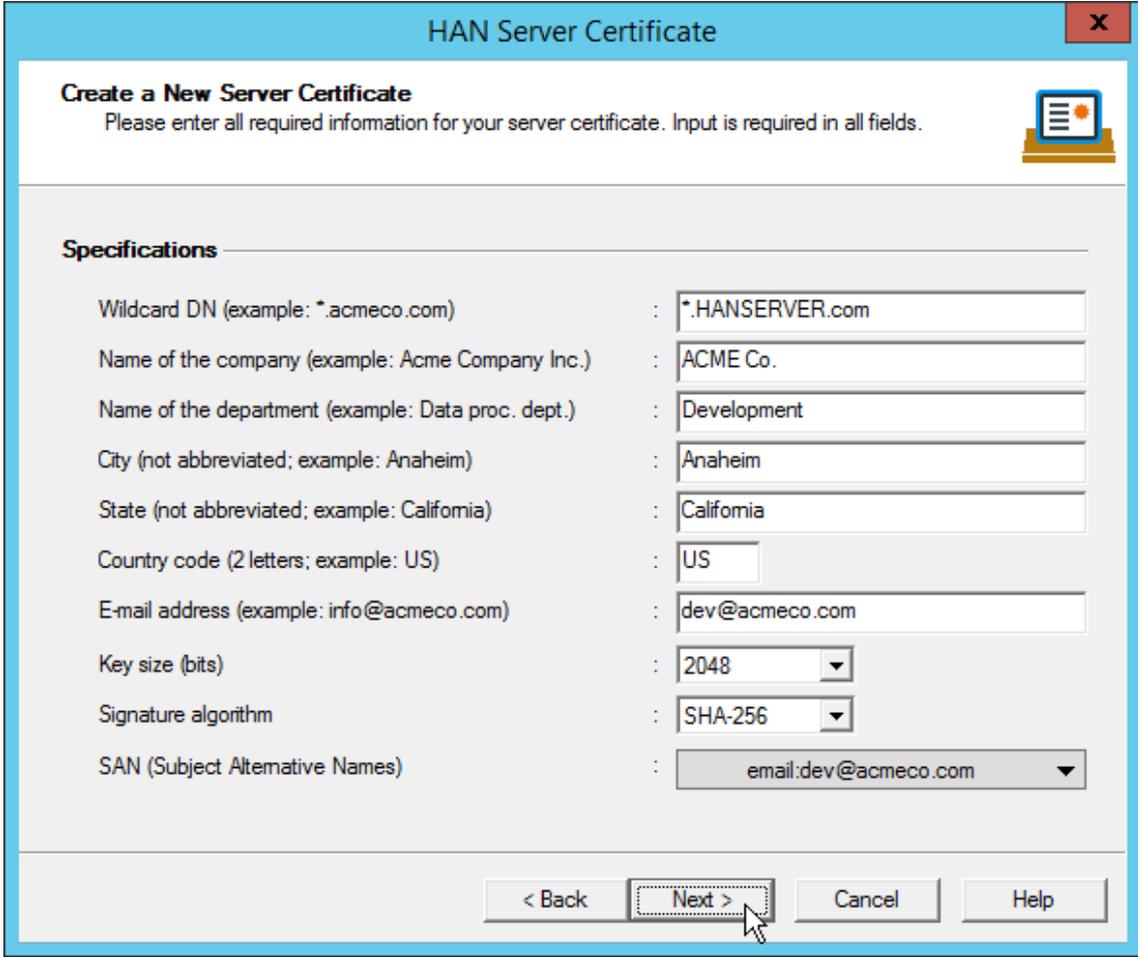


3. This opens the HAN Certificate Wizard. Select **Create or request a new server certificate** and click **Next**:



4. Under **Specifications** enter the specifications of the required wildcard certificate:

 Check with the certificate authority concerning their requirements for a certificate request, in particular with regard to the key size (last field). Otherwise your request might fail, in which case you would have to create and send a new request.



Wildcard DN (example: *.acmecoco.com)	:	*.HANSERVER.com
Name of the company (example: Acme Company Inc.)	:	ACME Co.
Name of the department (example: Data proc. dept.)	:	Development
City (not abbreviated; example: Anaheim)	:	Anaheim
State (not abbreviated; example: California)	:	California
Country code (2 letters; example: US)	:	US
E-mail address (example: info@acmecoco.com)	:	dev@acmecoco.com
Key size (bits)	:	2048
Signature algorithm	:	SHA-256
SAN (Subject Alternative Names)	:	email.dev@acmecoco.com

Under **Wildcard DN**, enter the name of your web server, using the asterisk ("*") as the wildcard for sub-domains. In the **Key size (bits)** field, select the key size specified by the certificate authority. Complete all fields and then click **Next** to confirm.

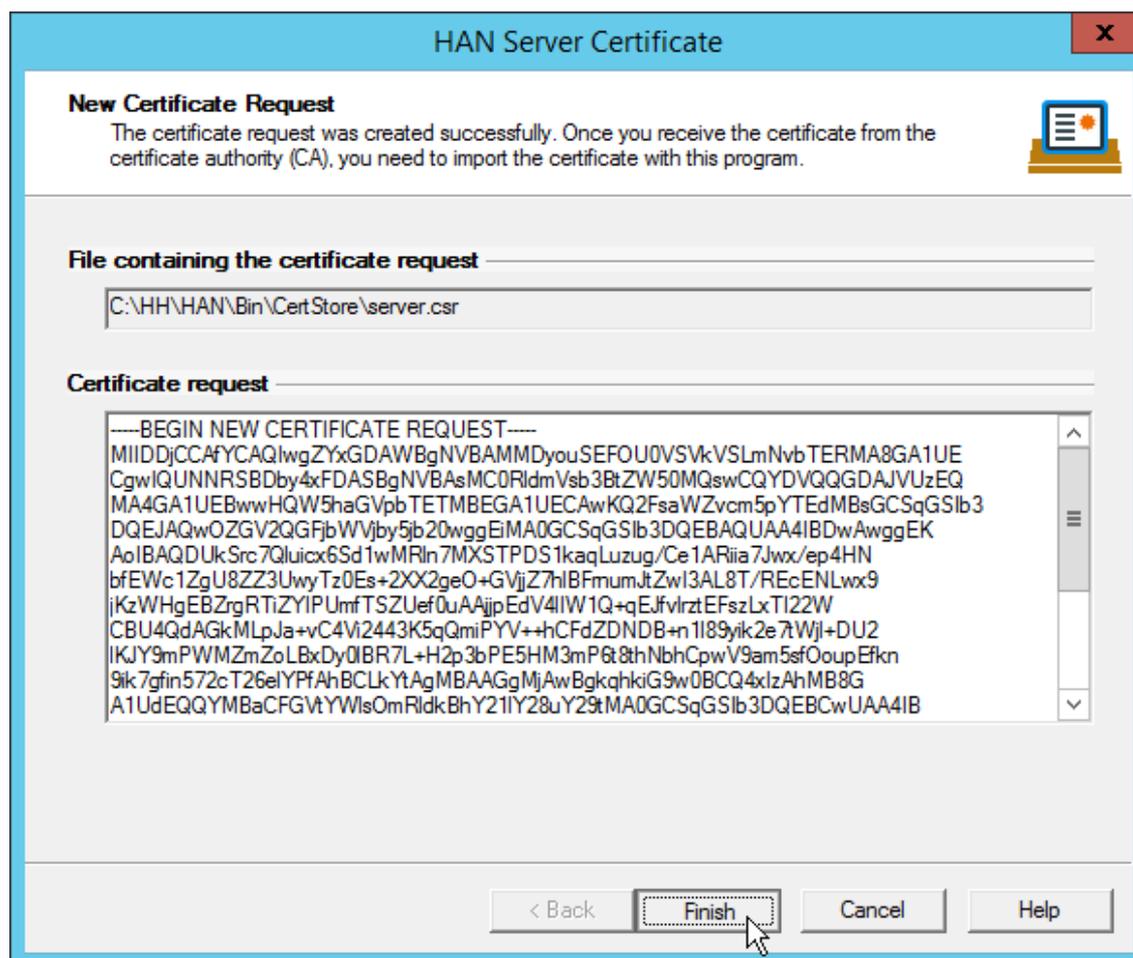
5. Select **Create a certificate request for an official certificate authority**. In the **Password** field for the private key of the certificate, enter a password and then repeat your input in the subsequent field:

After you click on **Finish**, the Certificate Wizard creates two files: `server.csr`, which contains the public key and is sent as a certificate request to the certificate authority, and `server.key` which contains the private key. Do not allow unauthorized persons to access this private key.



Certificate authorities sometimes offer a choice of HASH encryption keys. HAN requires a method that is supported by Apache 2.2; for example, SHA-2 (and later SHA-2 techniques) or even SHA-1. For optimum security, select the newest Apache 2.2-compatible method available.

6. The summary shows the path and file name under which HAN has saved the certificate request:



Some certificate authorities also have an on-line form for requesting certificates, and some expect an e-mail text containing the request. To use either of these options, copy the text in the **Certificate request** box and paste it into the form or e-mail. Click on **Finish** to close the Certificate Wizard.

Once you have received the certificate from the certificate authority, open the Certificate Wizard again to import the certificate:

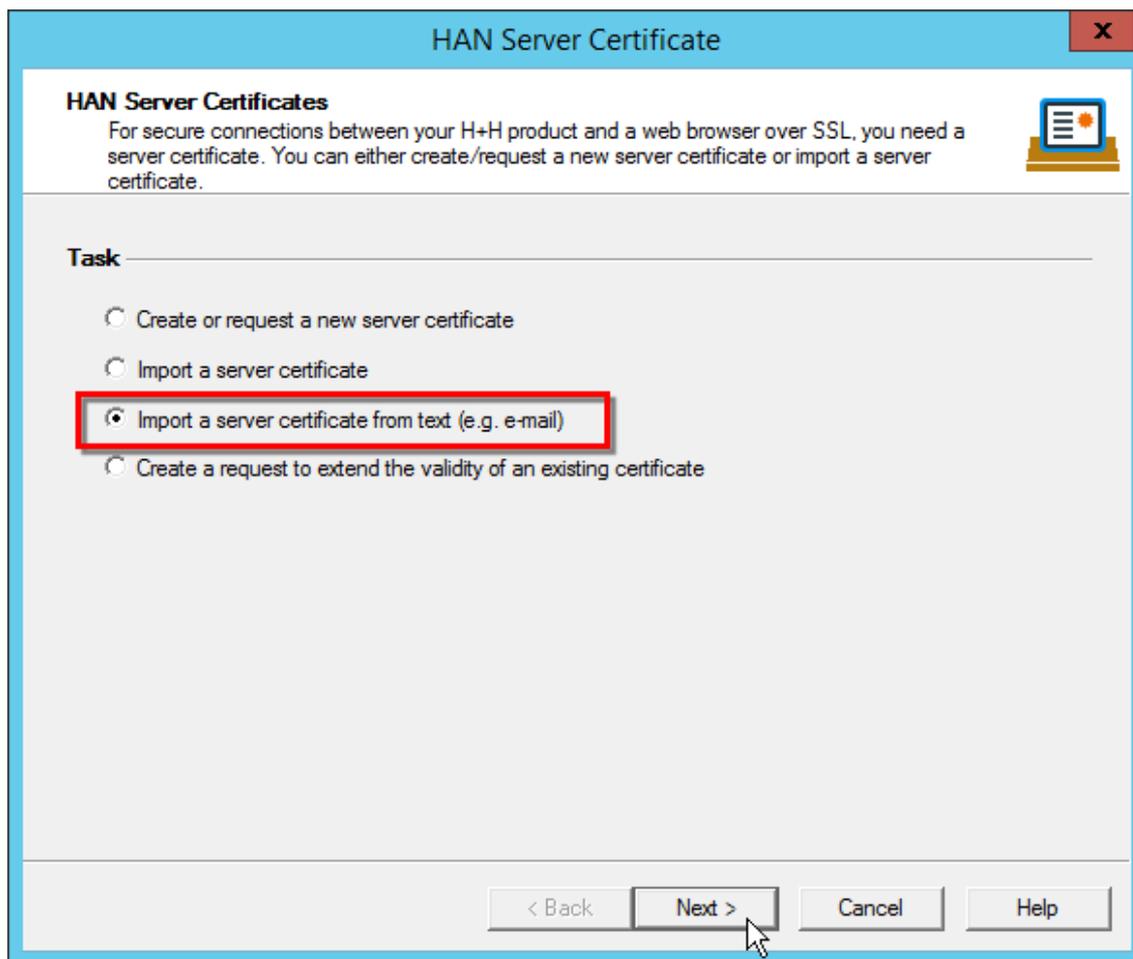


As a rule, the certificate will be sent to you in plain text, in the body of an e-mail. The certificate consists of everything between the text markers "-----BEGIN CERTIFICATE-----" and "-----END CERTIFICATE-----", as well as these two markers themselves. Copy the text, including the text markers.

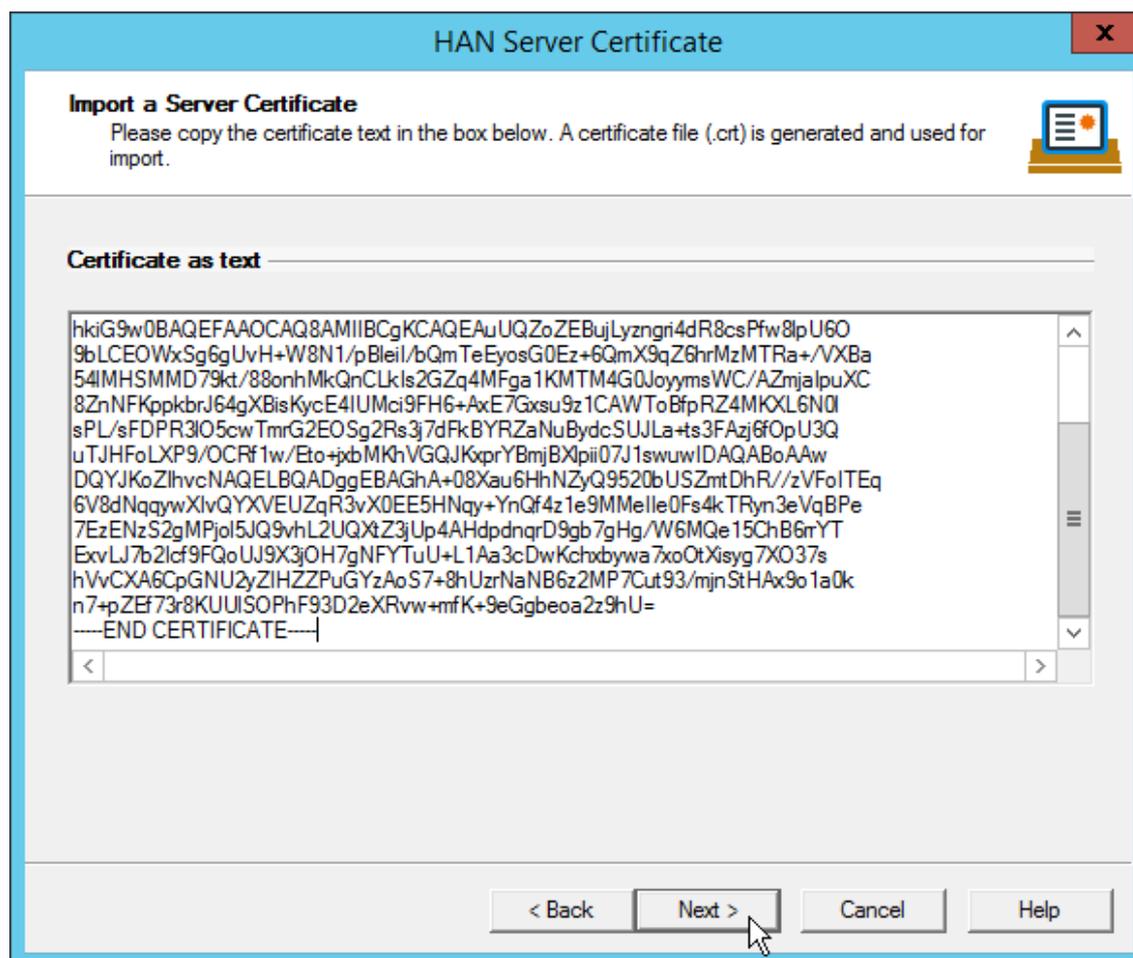
1. In the Certificate Wizard, select **Import a server certificate from text (e.g. e-mail)**:



If you received the certificate in the form of a file rather than plain text, select **Import a server certificate** and import the file. For details on importing a certificate file, skip to Step 3.



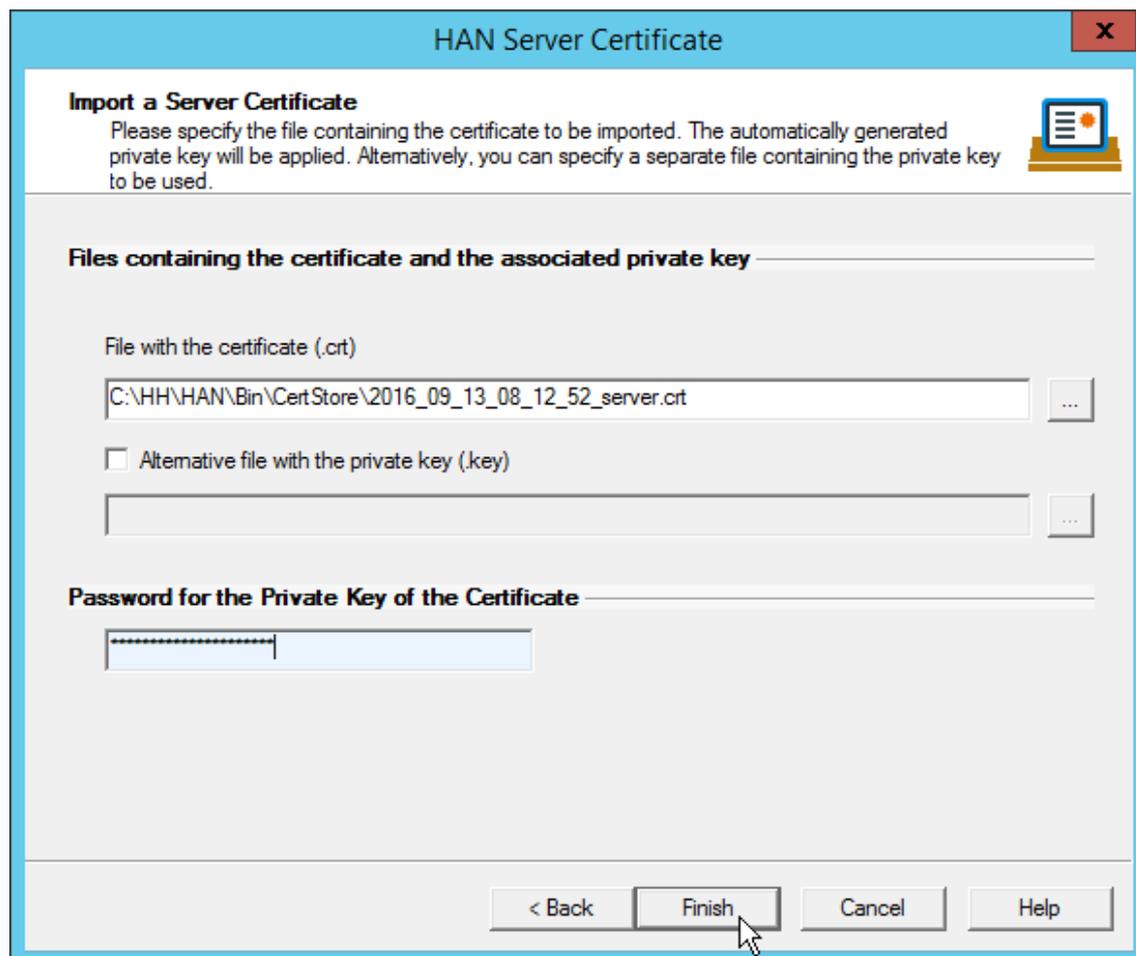
2. Paste the certificate text into the input field and click **Next**:



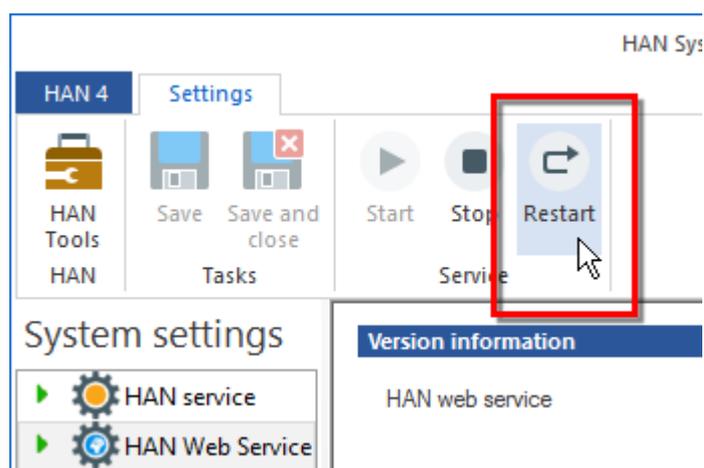
3. The Certificate Wizard creates a certificate file from the certificate and enters its name in the **File with the certificate (.crt)** input field. If you received a file, rather than plain text in an e-mail, browse to the CRT file you received and select it. Enter the password:



Select **Alternative file with the private key (.key)** only if you did not create the certificate request using the HAN Certificate Wizard. The program expects the certificate and key files to be in the DER format. This is also the format used when you create the certificate request using the HAN Certificate Wizard.



4. Click **Finish** to import the wildcard certificate. Once the import has been completed, you need to restart the web service to integrate the certificate:



Following the reboot, your HAN server and all of the sub-domains created by the addition of provider addresses to URLs are certified.

Certificate authorities for wildcard certificates:

To select the right certificate for your needs, consider each of the options available. Wildcard certificates have various attributes:

- Time span/Period of validity
- Validation method
- Level of encryption
- Payment methods
- Time to issue
- Insurance/Financial guarantees

The shorter the period of validity, the lower the price; when the certificate expires, however, you will need to renew or replace it. Some certificate providers also offer discounts on longer time spans, such as a low annual price, for example; thus if you need the certificate for a long time, choosing a long period of validity may in fact be the more economical option.

The two most widely used validation methods are company validation and domain validation. Domain validation is sufficient for HAN's requirements. With this method, the certificate provider checks whether the domain really belongs to the requesting party. With company validation, the certificate provider checks whether the request is from a properly registered firm. To do this, they generally contact the company personally, e.g. by phone, and run a background check. The result is a high-quality certificate that meets even the standards applied for financial transactions over the Internet.

The maximum level of encryption is usually 256-bit; the minimum, 40. These are standard values, offered by almost all providers.

A number of providers accept payments only through systems such as credit card companies or PayPal. Some accept cash on delivery (COD).

"Time to issue" is the amount of time it takes an authority to issue a certificate. This varies from one provider to the next and depends in part on which validation method you select. With domain validation, the certificate is usually issued within a few hours.

Providers often insure their certificates against misuse. Insured sums range from tens of thousands to millions of dollars. This criterion is not relevant for certification of your HAN web server.

The following are two examples of certificate authorities that offer cost-effective packages appropriate for your HAN system:

- "RapidSSL": <http://www.rapidssl.com/index.html>
- "GoDaddy": <http://www.godaddy.com/ssl/ssl-certificates.aspx?ci=9039>

Resellers for SSL certificates offer certificates from various providers, which gives you an overview of the different products available. Checking with resellers is definitely worthwhile, as they often have very economically priced offers. One recommended reseller for wildcard SSL certificates is "SSL 247" (in the US: <https://www.ssl247.com/ssl-certificates/type/wildcard>; in Germany: <https://www.ssl247.de/ssl-zertifikate/kategorie/wildcard>; other countries/languages also available).

Creating an Administrative HAN User

HAN has an integrated system of roles that makes it easy to assign each user exactly those privileges needed to work productively with HAN.



For details on the HAN concept of roles and users, see "[HAN Roles and Users](#)".

Installing the HAN Client, for example, requires a user account that is assigned the "Administrator" role. When HAN is first installed, only one user account is automatically created with the designation "HAN Administrator." This account does not initially have a password.



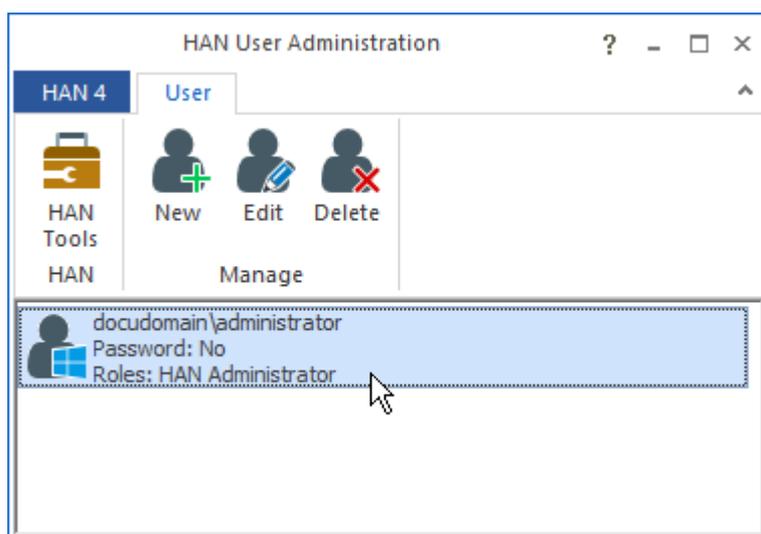
The HAN password is not the same thing as the Windows password.

Ideally, the HAN system administrator should open HAN User Administration directly following installation, assign a password to the HAN Administrator account and then, if needed, create one or more additional administrative HAN accounts. Administrators with roles that are not essential for administration – such as Statistician – can be created later.

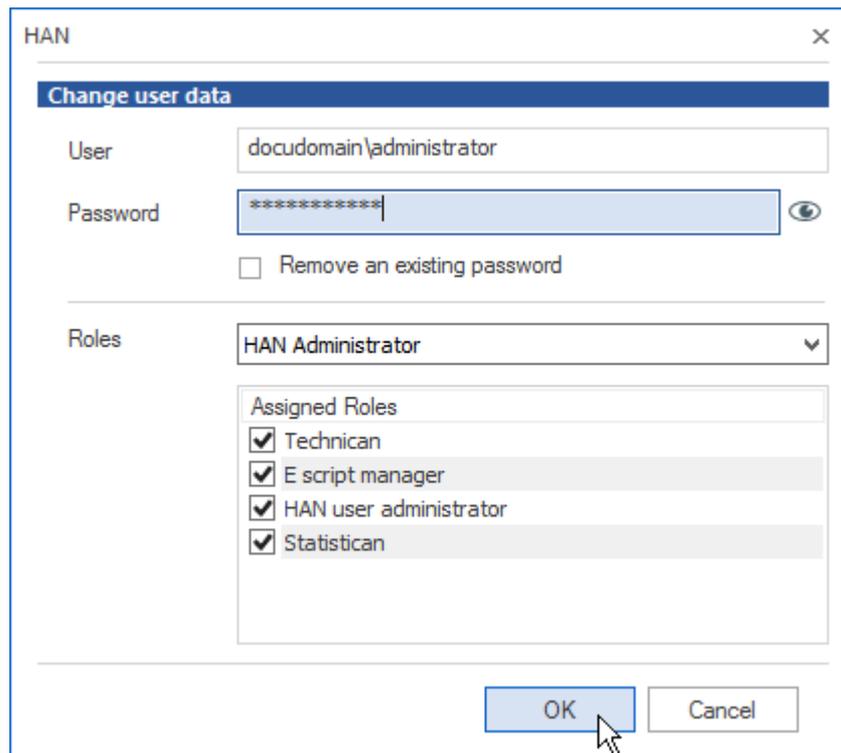
This chapter shows how to assign a password to the initial HAN Administrator account and create one additional administrative user.

Users are created by a HAN Administrator using the HAN User Administration program:

1. Double-click on the **HAN Tools** desktop shortcut and then select **HAN User Administration**.
2. In the User Administration program, double-click on the "HAN Administrator" user:

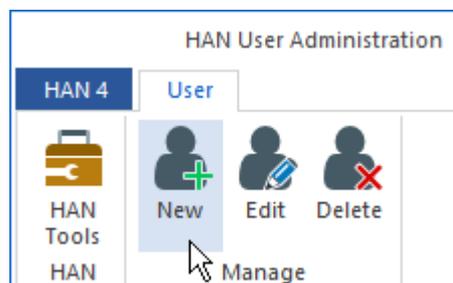


3. This opens the **Change user data** dialog; enter a password in the **Password** field:

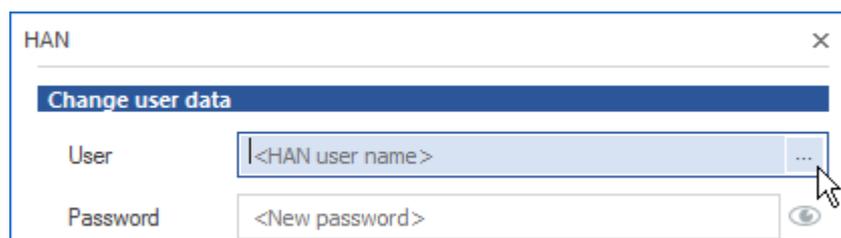


4. Click on **OK** to confirm. The new password is stored in the database. Note: once a password is stored, it is no longer displayed in User Administration.

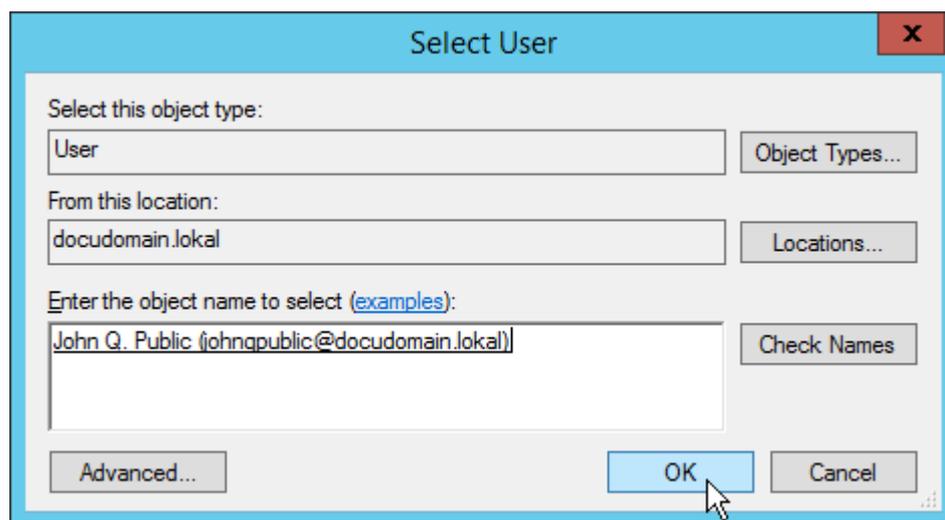
5. To create another administrative user, click on **New** in the User Administration ribbon:



6. In the **Change user data** dialog, enter the user name in the **User** field by selecting the user from your Active Directory. To do this, click on the **browse** button ("...") next to the input field:

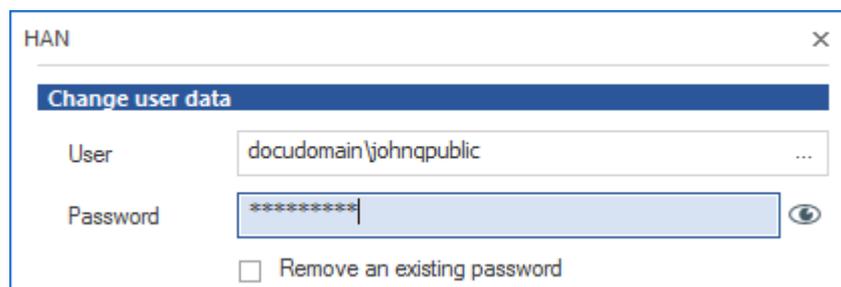


7. This opens the Windows **Select User** dialog:

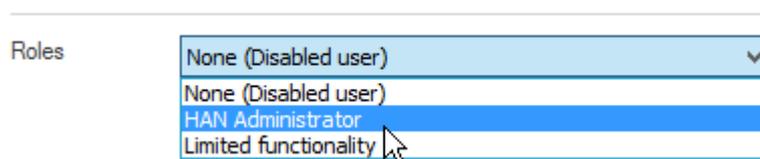


The user you select is stored in the HAN database with login name and SID.

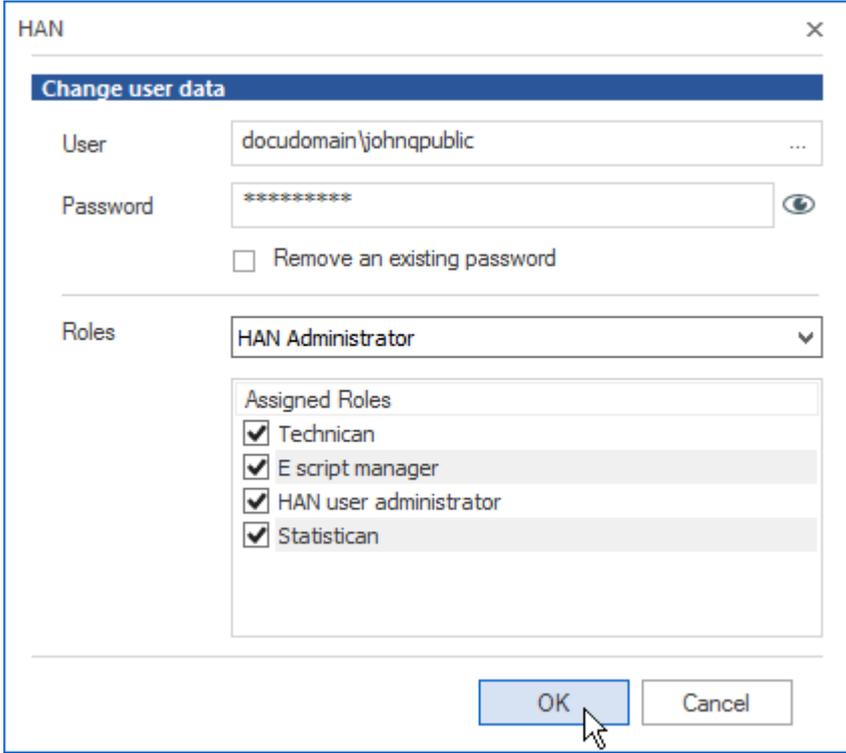
8. Define a password for this user in the **Password** field. The password cannot be added automatically by selecting it in Windows, but if desired you can type in the same password here that is associated with this user in Windows:



9. In the **Roles** field, select **HAN Administrator**:



By default, this user is assigned all administrative roles:



The screenshot shows a dialog box titled "HAN" with a close button (X) in the top right corner. The main title of the dialog is "Change user data". Below this, there are several input fields and a list of roles. The "User" field contains "docudomain\johnqpublic". The "Password" field contains "*****" and has a visibility icon (an eye) to its right. Below the password field is a checkbox labeled "Remove an existing password" which is currently unchecked. The "Roles" section has a dropdown menu set to "HAN Administrator". Below the dropdown is a list titled "Assigned Roles" with four items, each with a checked checkbox: "Technican", "E script manager", "HAN user administrator", and "Statistican". At the bottom of the dialog are two buttons: "OK" and "Cancel". A mouse cursor is pointing at the "OK" button.

10. Click on **OK** to confirm your input. The user is created in accordance with your settings and can immediately carry out administrative tasks.

Details on working with the User Administration program and an overview of all its functions can be found in "[User Administration](#)".

Configuring Authentication Services

You can restrict access to the HAN system by configuring authentication services.



An authentication service is a predefined HAN module that detects user identity based on an authentication source.

HAN supports the following authentication services:

- IP address/host name check
- NT login (SSPI)
- ODBC interface to an ODBC-compatible database
- ODBC login via SHA1
- LDAP login
- ALEPH login
- LBS login
- SIP2 login
- XServer login

- SISIS login

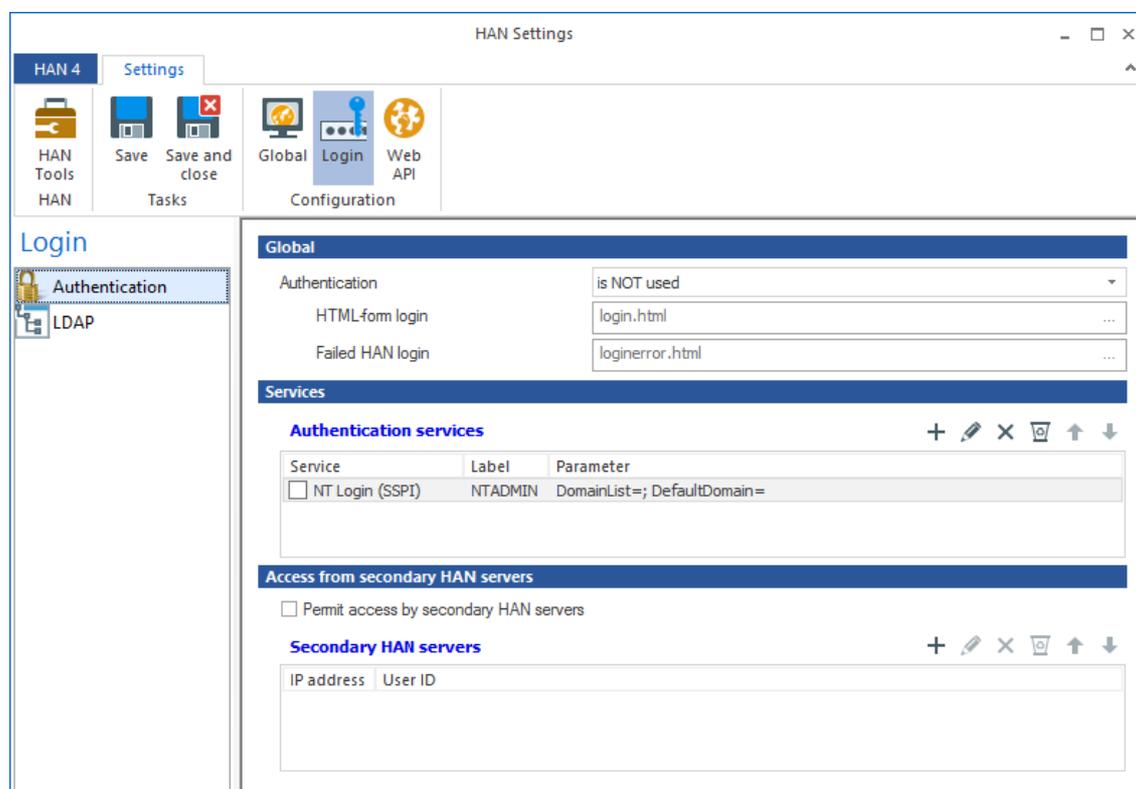


The list of supported authentication services shown on the HAN Settings program includes additional services which are not described here. These are services that have been specifically adapted for special areas of use and for internal functions.

For details on the settings for each of the authentication services, see the appendix entitled "[Authentication Services and their Modules](#)". This chapter shows you the [settings for authentication](#) and how to [configure an authentication service](#).

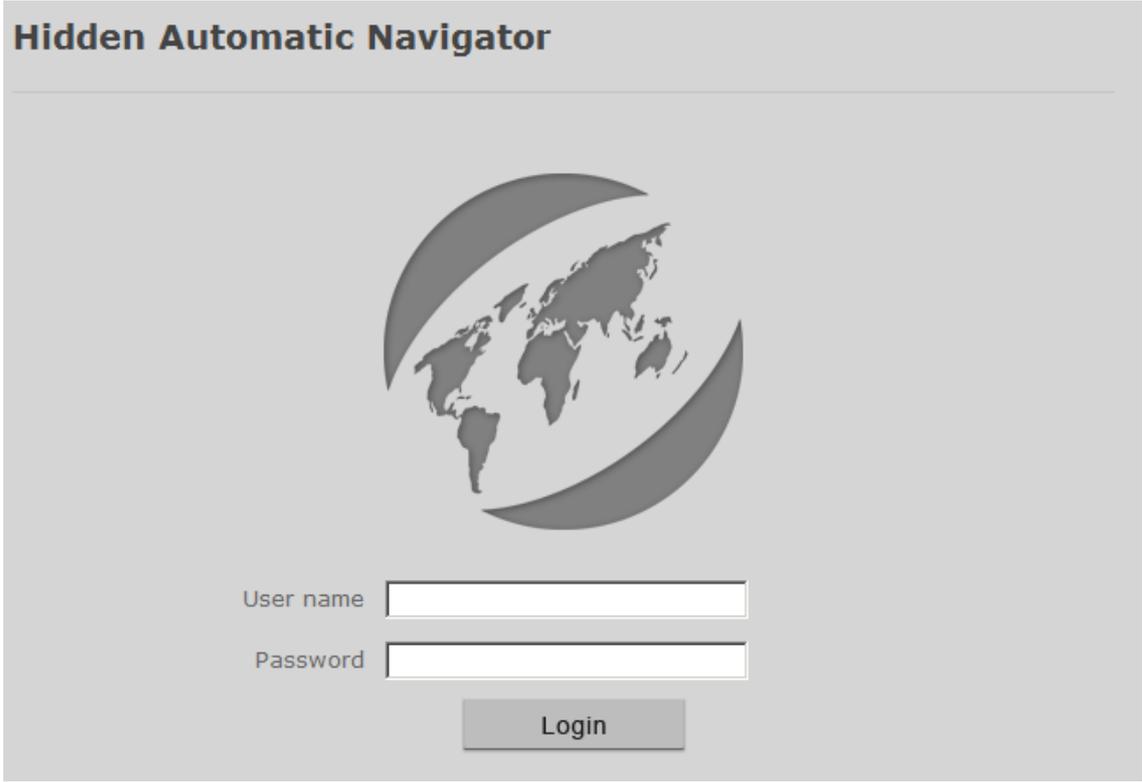
Authentication settings:

Settings for authentication are configured in the HAN Settings. Open the HAN Settings from the **HAN Tools** desktop shortcut. In the HAN Settings, select the **Authentication** page in the **Login** section:



For a complete description of the options on this page, see "[HAN Settings/Login/Authentication](#)".

HAN distinguishes between implicit and explicit login. With implicit login, the user does not enter credentials; for explicit login, the user enters a user name and a password for authentication. Implicit login is based on client IP address or host name and is independent of user identity. The explicit login uses an HTML-form login:



Hidden Automatic Navigator

User name

Password

Login

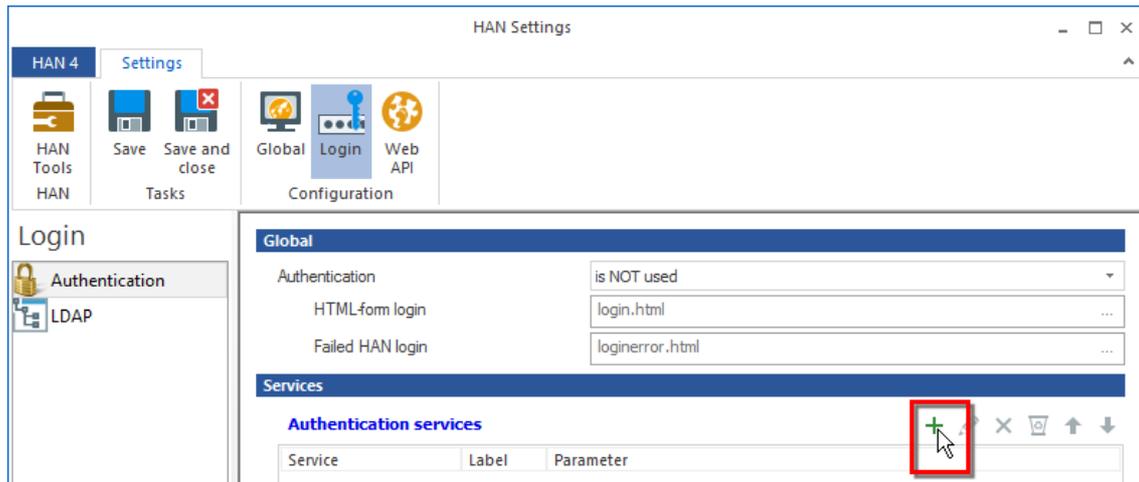


This login page can be edited and, if desired, adapted (for example, to match your intranet pages). For details on adapting the login page, see "[Customizing HAN for Your Company](#)".

Configuring an authentication service:

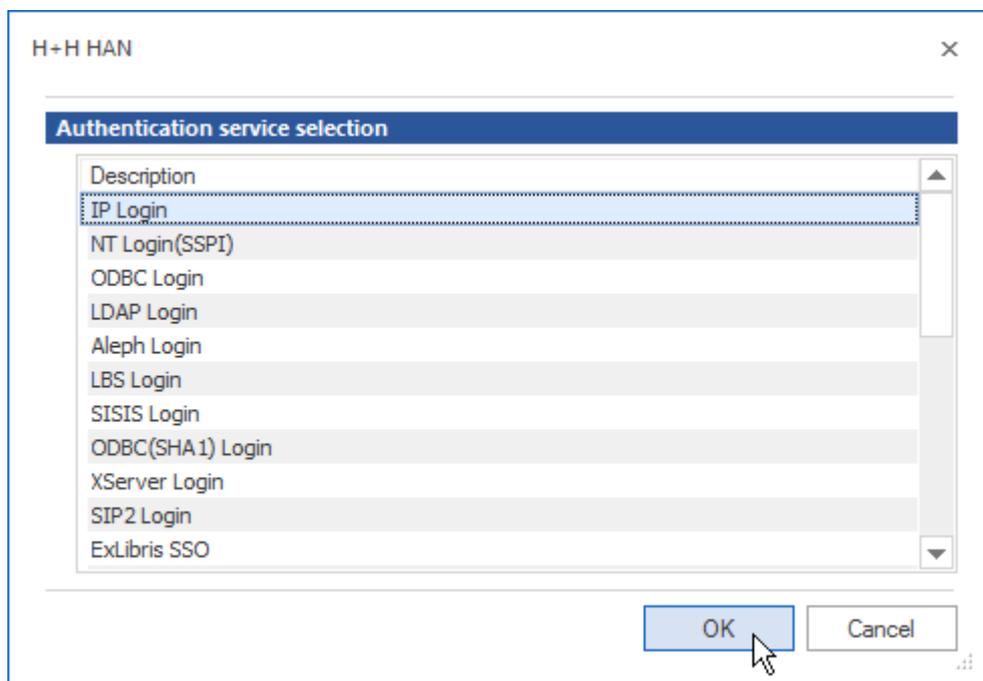
The following steps demonstrate how to configure an authentication service, using the "IP Authentication" service as an example. Authentication services are configured in the HAN Settings:

- 1.** Click on **Login** in the ribbon and select the **Authentication** page.
- 2.** On the **Authentication** page, click on the **New** button at the top of the **Authentication services** list:



The list of authentication services shows all of the authentication services you have configured. If more than one authentication service has been defined, they are processed in order, from top to bottom, until one service has successfully completed the login, after which subsequent services are ignored. You can use the **Up** and **Down** buttons to change the order of authentication services. If an IP authentication service is defined, this is the first service applied, because IP-based authentication does not require user input.

3. In the **Authentication services** dialog, select the desired authentication service:



4. Click on the **OK** button. The dialog for **configuring an authentication service** opens automatically when you select a service. In the **Authentication service** field, enter a name for the new authentication service (in this example, "IP login"). The label (in this example, "IP") is required for internal processing:

The screenshot shows a configuration window titled "H+H HAN". It is divided into two main sections:

- Authentication service configuration:**
 - Activate service
 - Description: IP Login
 - Label: IP
 - Use persistent cookies for login
 - Validity (hours): 0
- Service configuration:**
 - Parameter: CfgFile (written in red)
 - Value: (empty)

The **Activate service** checkbox activates or deactivates the service. Thus you can activate or deactivate a service as needed, while its configuration settings remain stored.

5. The parameters you can configure for the selected service are listed under **Service configuration**. A parameter is configured by entering a value for it. In our example, a file is required as the value; thus the **Select** button opens a File Dialog for selecting a file:

Parameter names written in red indicate required parameters; those written in black are optional.

This close-up shows the "Service configuration" table. The parameter "CfgFile" is highlighted in red. The value field is empty, and a mouse cursor is hovering over the "..." select button on the right side of the value field.

For our example, we specify a .CFG file that contains the permitted IP addresses:

This close-up shows the "Service configuration" table. The parameter "CfgFile" is highlighted in red. The value field now contains the file path "C:\HH\HAN\Bin\System\web\bin\ipranges.cfg".

6. Your HAN program lets you set an expiration time for the validity of login credentials. This function is activated by selecting the **Use persistent cookies for login** option. When this option is active, you can set the period (in hours) of validity for a login.

To use this option, the user's browser must accept cookies from the HAN server. If no persistent cookie is set, the login credentials remain valid until the user closes the browser.

7. Under **IP configuration**, you can define permitted and excluded IP addresses:



The "IP login" option is the only authentication service that has a section for configuring permitted and excluded IP addresses. This section of the dialog is not shown for other authentication services.

You can specify various ranges of IP addresses and/or host names to define which clients are permitted to access HAN resources and which are explicitly denied access. You also have the option of defining a single user ID for a collection of IP address, for purposes of statistical analysis. For example, you could create an IP authentication service for users whose IP addresses are located within the library, and enter "Library" as the user ID in the **Permitted** section. As a result, all usage data originating from library computers is collected the statistics database with the user ID "Library".

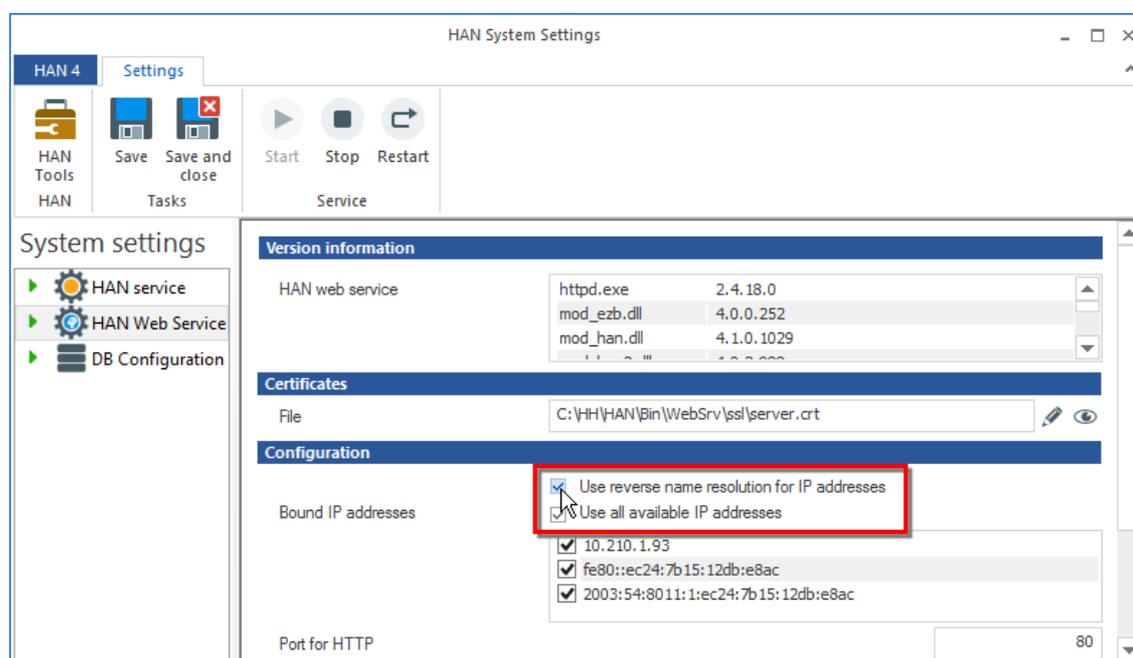


To check the host names of client computers, the HAN web server has to perform reverse name resolution on the IP addresses. This function is configured in the HAN System Settings, on the **HAN Web Services** page. After activating reverse name resolution, the web service must be restarted (by clicking on the **Restart** button in the ribbon) before the change takes effect. If reverse name resolution is not activated, the handling of e-script calls will be very slow.



Before you activate name resolution, test your system's name resolution performance by running **nslookup** and entering the client IP address. The nslookup program should return the client's host name. If this works, then you can activate name resolution in the web server. If the host name is not returned, do not activate name resolution in the web server!

8. If you changed the setting for reverse name resolution, the web service has to be restarted before the new setting is applied for user authentication. If your changes affect only the definition of IP address ranges, however, it is not necessary to restart the web service. To restart the web service, begin by opening the HAN System Settings program from the Windows Control Panel under **System and Security/H+H HAN/HAN Web Service**. Click on the **Restart** button in the ribbon to restart the web service:



For details on working with the HAN System Settings program, see "[HAN System Settings](#)". Once the web server has been restarted, the new authentication service settings are applied for login on the HAN system.

Disk Space Monitoring

Available disk space is an important factor in maintaining the reliability and availability of HAN. That is why HAN offers automatic monitoring of available disk space. You can define a lower limit to specify when you wish to be notified (by e-mail) of critically low available space.



Note: If you are using a resident virus guard or software firewall, keep in mind that it might classify these HAN system e-mails as mass mailings and block them. In this case, it is important to configure the settings in your anti-virus software or firewall to allow e-mail from HAN. Otherwise, your HAN system might shut down unexpectedly, for example if resource availability drops below the lower limit and you do not receive an e-mail alert. For details on configuring your virus guard or firewall, see below. ("[Receiving system e-mail in a protected environment](#)").

1. Open the HAN Settings using the **HAN Tools** desktop shortcut.
2. Open the **Global** section of the **System Monitor** page to modify settings for monitoring:



Do not enter any values lower than the default values given, as these are the absolute minimum amounts of available disk space required to keep your HAN system stable.

Send warning at. When the available disk space drops below this level, an e-mail warning is sent to the administrator. The warning is repeated every 1000th time the system is accessed thereafter.

Stop HAN at. When this level is reached, any further attempt to access HAN results in an error message, and no access is possible.

HAN error page. The page specified here is opened when the available disk space drops below the second value ("Stop HAN at"). Error pages are stored in `\HH\HAN\Bin\WebSrv\error`. You can modify the error pages stored here, or add your own pages.

SMTP server. The SMTP server used to send the warning e-mail.

Encryption. Defines the encryption method for the sending the e-mail.

Port. Port for the SMTP server.

Sender. Address used as sender of the e-mail. Enter an e-mail address here for use as the sender address.

Recipient. Address to which the e-mail warning is sent. Enter an e-mail address here for use as the recipient address.

Domain. If a login is required before the e-mail can be sent, enter the login domain here.

User. User name for the account from which the e-mail is sent.

Password. Password for the account from which the e-mail is sent.

Click on **Send test e-mail** to test your configuration settings by sending an e-mail.

3. Define the values for the System Monitor and save your settings by clicking on the **Save** button on the ribbon. Once saved, the settings are effective immediately.

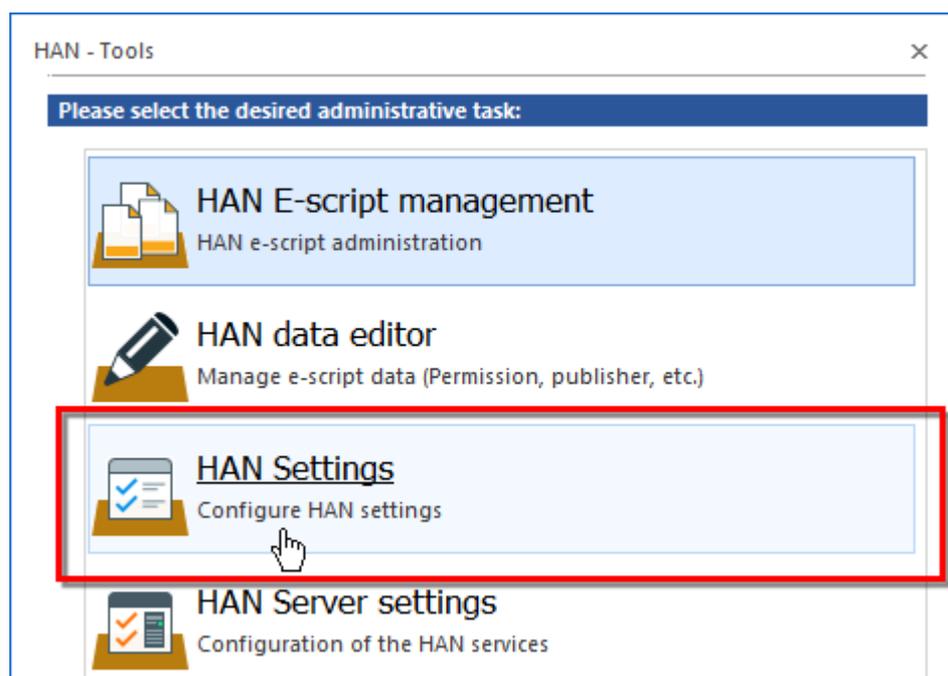
Receiving system e-mail in a protected environment:

To ensure that HAN system e-mails are delivered in an environment running protective software (e.g. virus guard or firewall), you need to define an exception for HAN in that software. Otherwise, the protective program might classify HAN system e-mail as mass mail, spam, or a mass-mailing worm. To enable delivery of HAN system mail without deactivating the protective software, configure an exception for **HANSett.exe (C:\HH\HAN\Bin\System\64)** and add it to the existing rules. For details on how to define such an exception, please refer to the documentation of the protective program. Contact your network administrator if you do not have sufficient user rights to define the exception yourself.

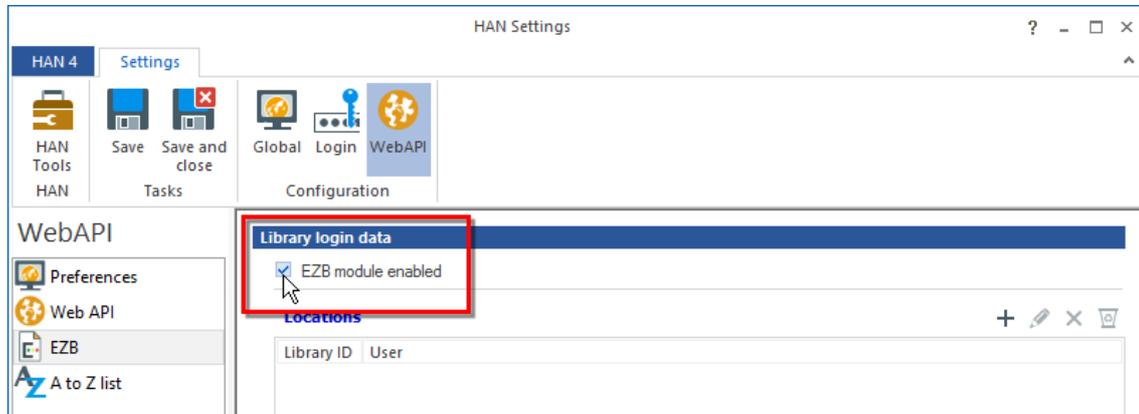
Configuring EZB Access

The settings for EZB access are configured in the HAN Settings. At the end of installation, the HAN Settings program opens automatically. If you choose to configure the EZB settings at a later point, you will need to open HAN Settings manually:

1. To access the Settings program, double-click the **HAN Tools** desktop shortcut.
2. In the **HAN Tools** program, select **HAN Settings**:



3. In HAN Settings, select the **Web API** section and open the **EZB** page.
4. Tick the box next to **EZB module enabled** to activate use of the EZB module.



4. To add an account for EZB access, click on **New (+)** at the top of the **Locations** list box.
5. In the **Edit location** dialog, enter the library ID and login credentials:

- Library ID.** Designation of the library in the EZB.
- User.** User name to be used for login.
- Password.** Password to be used for login.
- Show** ('eye' icon). Shows the password in plain text.

6. Click on **OK** to confirm your settings. The new EZB access account is added to the **Locations** list.
7. Click on **Save** in the ribbon to save your settings.



If you click on **Save and close**, the HAN Settings program will close automatically after saving your settings.

Deactivating EZB Data Logging

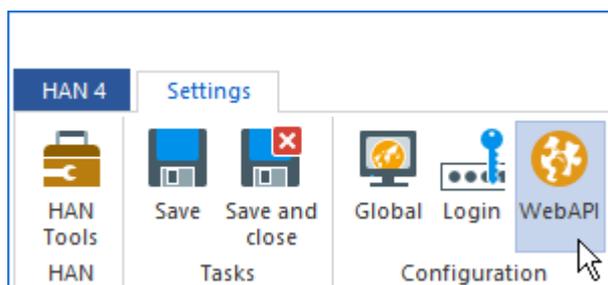
With the default settings, EZB data logging is active.



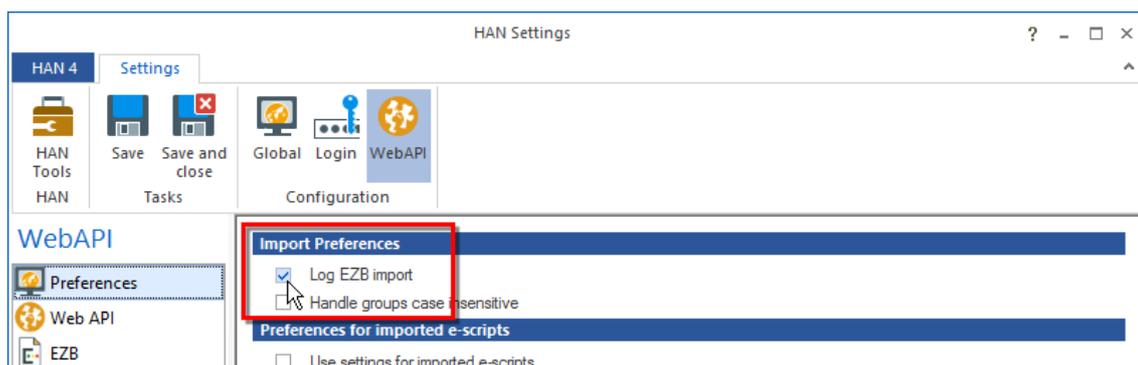
In this case, EZB-importing as well as updates of EZB-imported e-scripts are recorded in the HAN Event Log.

If you do not wish to log EZB data, this function must be deactivated. To deactivate EZB data logging, begin by opening the HAN Settings from the **HAN Tools** desktop shortcut:

1. In the HAN Settings, click on the **Web API** button in the menu bar:



2. On the **Preferences** page, click to remove the checkmark from the **Log EZB import** box:



3. Click on **Save** in the ribbon. The EZB data logging is now inactive.

HAN over HAN

HAN can provide online resources for access by additional, external HAN servers. This involves a primary HAN server, which provides access to the online resource, and a secondary HAN server, which receives the user query and requests the resource from the primary HAN server. Use of the 'HAN over HAN' function requires specific configurations for this purpose on both the primary and secondary HAN servers. A secondary HAN server cannot call e-scripts from the primary HAN server unless the secondary server has been specifically granted access permission. Furthermore, the e-script itself must be configured to permit this form of access. Specifically, the use of HAN over HAN requires the following configurations:

- On the primary HAN server, [secondary HAN servers must be granted permission](#) to access the primary server.
- At the [e-script level](#), the secondary HAN server(s) permitted to call a given script must be specified in the properties of that script on the primary HAN server.
- On the secondary HAN server, the [FQDN of the primary HAN server and the e-script's ID on the primary HAN server](#) must be specified in the properties of e-scripts that point to a primary server.

Configuring the primary HAN server:

The primary HAN server recognizes requests from secondary HAN servers only if those servers are registered for this purpose in the HAN Settings on the primary server. To configure this, select the **Login** section of the HAN Settings and open the **Authentication** page:

The screenshot shows the 'HAN Settings' application window. The 'Login' section is active, and the 'Authentication' page is displayed. The 'Access from secondary HAN servers' checkbox is checked and highlighted with a red box. Below it, the 'Secondary HAN servers' table lists IP addresses and user IDs.

IP address	User ID
87.252...	Lib1
87.252...	Lib2
87.252...	Lib3

Activate the **Permit access by secondary HAN servers** option to generally enable access for secondary HAN servers. In the **Secondary HAN servers** list, enter the IP addresses of all permitted secondary HAN servers together with a unique user ID for each server. You can choose any user ID you like for the servers; these names are used for event logging and statistical evaluation purposes.

For a complete description of all options on the **Authentication** page, see "[HAN Components/HAN Settings/Login/Authentication](#)".



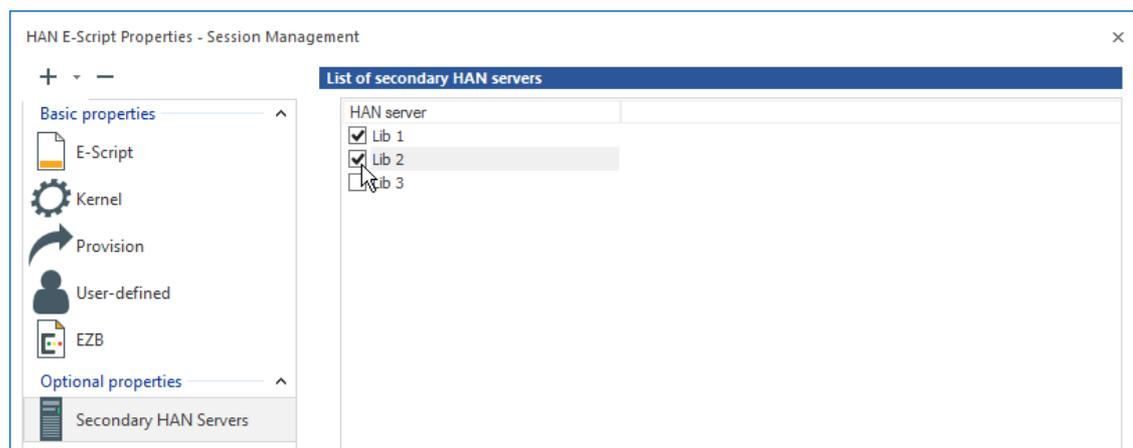
After the secondary HAN servers have been defined, the web service must be restarted. Web service controls are contained on the **Web Service** page in the HAN system settings. To restart the service, double-click the **HAN Tools** desktop shortcut and select **HAN Server Settings** to access the web service controls.

Configuration at the e-script level:

To make e-scripts accessible to secondary HAN servers, the secondary HAN servers must be specified in the e-script properties; in other words, the e-script settings must grant access permission to the secondary HAN servers. To configure this, open the **Secondary HAN Servers** page of the e-script properties:



Being accessible to a secondary HAN server is an optional e-script property. If the corresponding page is not shown in the e-script properties window, use the "+" button above the list in the Selection sidebar to add it. For details on working with e-script properties, see "[Managing HAN Resources/E-Scripts/E-Script Properties](#)".



Under **Secondary HAN servers**, activate the desired HAN server(s) to grant permission to access the e-script. The list shows all servers that have been specified in the HAN Settings as secondary HAN servers. For a complete description of all options on the **Secondary HAN Servers** page, see "[Managing HAN Resources/E-Scripts/E-Script Properties/Secondary HAN Servers](#)".

Configuring the secondary HAN server:

Secondary HAN servers do not need to be specifically configured as such. However, if a given e-script is to be called from a primary HAN server, the primary server must be specified in that e-script's properties on the secondary server. To do this, open the **Kernel** page of the e-script properties:

The screenshot shows the configuration interface for HAN e-script properties. The 'Kernel' section is expanded, showing 'Use' set to 'DNS kernel mode'. Below it are three checkboxes: 'Ignore invalid SSL certificates' (unchecked), 'Use advanced cookie management on the HAN server' (unchecked), and 'Enable data compression (GZIP)' (checked). The 'Alternate IP address' section has an 'IP address' field with the placeholder '<Please insert an alternate IP address>'. The 'HAN over HAN' section is highlighted with a red box and contains: 'Primary HAN server' checked, 'HAN server' set to 'centrallib@uni.com', and 'E-Script' set to 'han_login'. The 'Domain list' section is partially visible at the bottom.

The following configurations are required in the e-script for the activation of HAN over HAN:

- The kernel mode must be set to DNS
- The root URL must correspond to the pattern: `http://.../han/...`

Activate the **Primary HAN server** option and enter the FQDN of the primary HAN server in the input field. In the **E-script** field, enter the script ID of the e-script on the primary HAN server. For a complete description of all options on the **Kernel** page, see "[Managing HAN Resources/E-Scripts/E-Script Properties/HAN Kernel](#)".

Defining Permissions

Your HAN program can restrict access to certain resources based on permissions that you define.



Permissions define the conditions that users or client machines must meet before they can access the requested HAN resource. If the defined conditions are not met, an error message and/or a login page of your choice is opened.

Permissions can be allocated based on any of the following:

- Host name
- IP address
- Variables
- Global permissions
- LDAP (group or OU)
- AD user account
- AD user group
- User OU

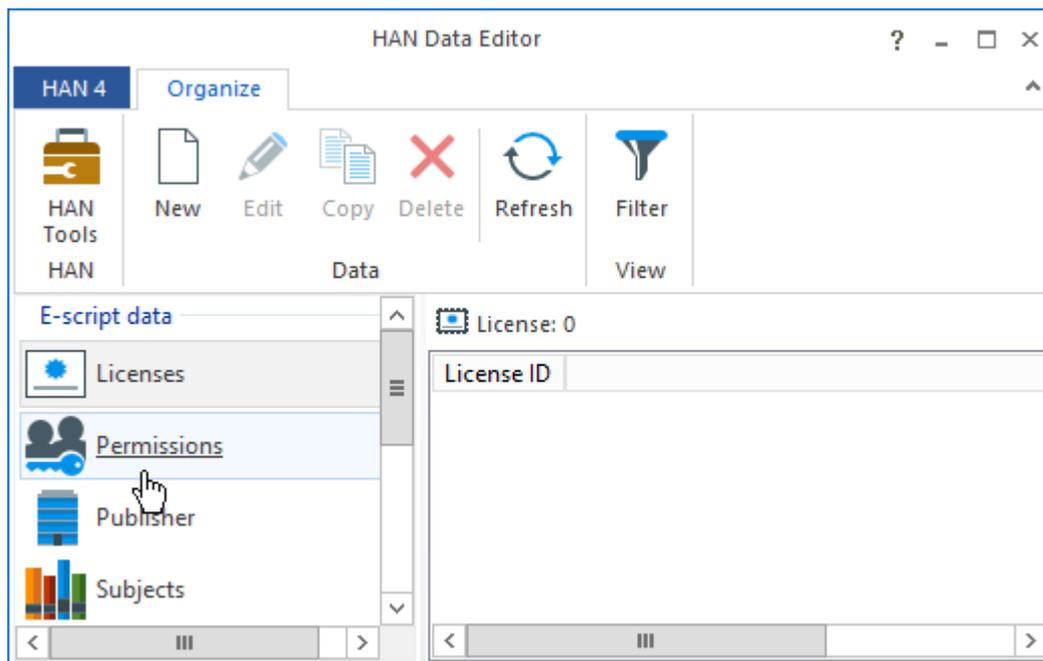
Each condition must be checked by a corresponding authentication service. When login is successful, the authentication service can store user-specific data in environment variables. When an e-script is called, the user's or client's permissions are checked against the corresponding values configured in the e-script before the access to the resource is permitted. If the user/client does not qualify for the permission, the specified error page (or login page) is shown. For details, see

"[Configuring authentication services](#)". This chapter describes how to [create](#) permissions and [assign](#) them to e-scripts.

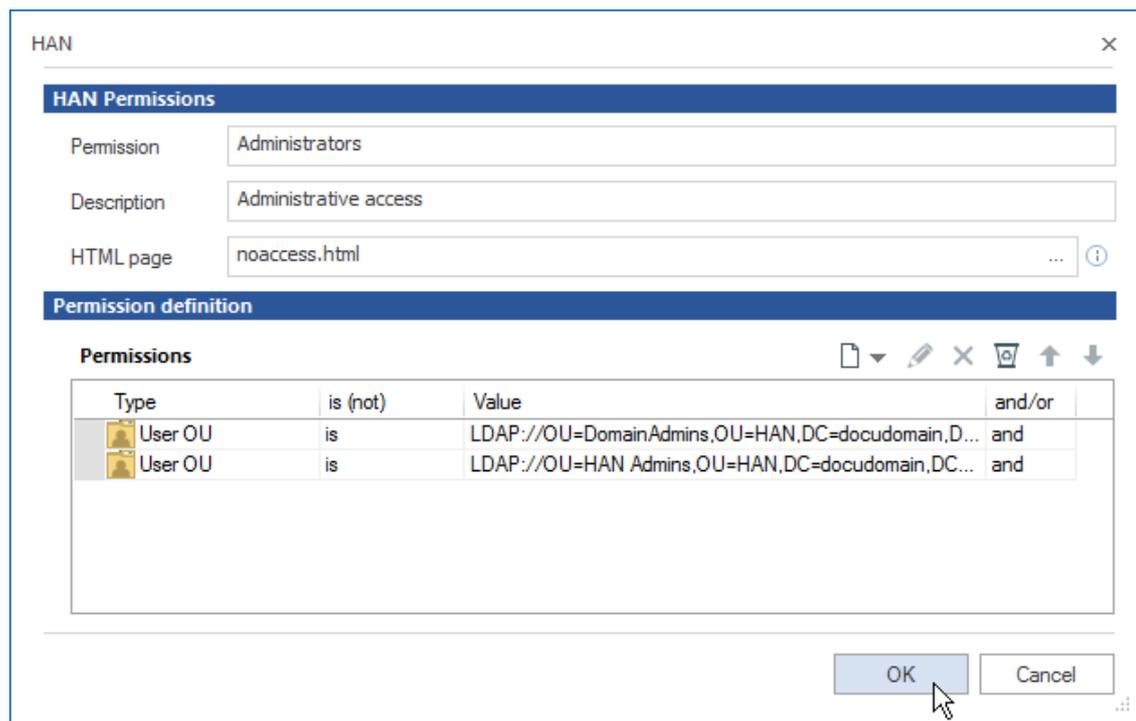
Creating permissions:

Permissions are created, edited and managed in the data editor:

1. Open HAN Tools and then select **HAN Data Editor**.
2. In the data editor, open the **Permissions** page:



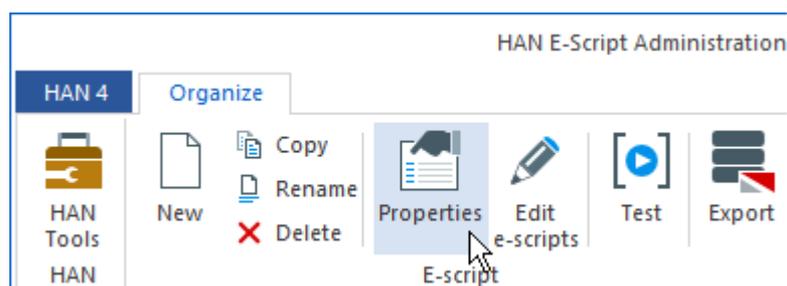
3. Click on the **New** button in the ribbon to create a new permission.
4. In the dialog box, decide whether to create a permission or a global permission. Global permissions can be inserted later into other permissions.
5. Define the new permission in the **HAN permissions** dialog:



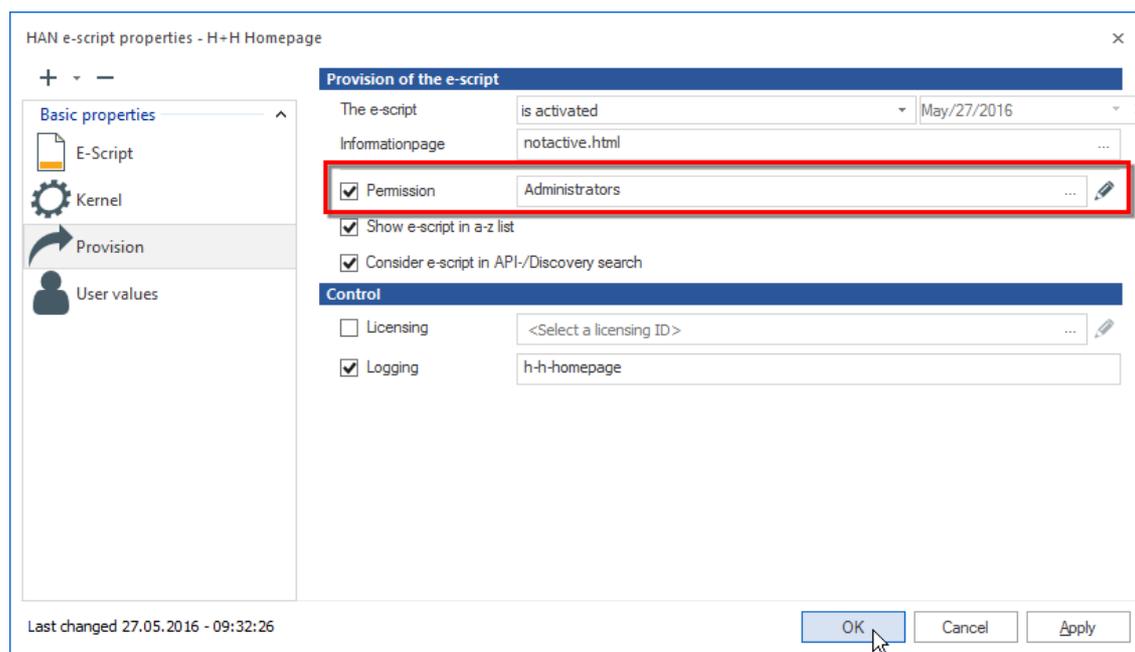
6. Click on **OK** to confirm. The new permission is added to the list of permissions. To use it, allocate the permission to an e-script.

Allocating permissions:

You can associate a permission with your choice of e-scripts. Permissions are allocated in an e-script's properties. To open the e-script properties for editing, select the desired e-script in the e-script administration program and click on **Properties** in the ribbon:



On the **provision** page, activate the use of permissions by clicking in the checkbox next to **permission** so the checkmark appears. In the input field next to the box, enter the name of a permission manually, or click the **Select** button to open a dialog to select an existing permission. Click on the **Edit** button if you want to edit the specified permission:

**Example:**

The instructions below show how to create a permission. This example demonstrates configuration of a permission that grants access only to users at computers that are located in the library ("IP Address Check"). An exception for library staff will also be configured here. Library employees in this example are members of the "HAN Admins" group, and will be granted location-independent access:

1. First of all, you need to select the authentication services that can determine the relevant conditions. In this example, these are the "auth_ip.dll" and "auth_ldap.dll" modules.
2. The next step is to check whether these authentication services have been configured. If they have not, then both services must be set up before continuing with this example. For details, see "[Configuring authentication services](#)". After configuring the authentication services, these steps follow:
3. Open the data editor, select the **Permissions** page and click on the **Create** button.
4. Select the type of permission. In the example, we are creating a simple permission.
5. In the HAN permissions dialog, enter a name for the permission in the **Permission** field (in this example, "Library"). Entering a description in the **Description** field is optional (in this example: "For users inside the library only (staff exempt)");

HAN

HAN Permissions

Permission: Library

Description: For users inside the library only (staff exempt)

HTML page: newlogin.html

Permission definition

Permissions

Type	is (not)	Value	and/or

6. Click on the **New** button at the top of the **Permissions** list ('blank page' icon) and select the condition that will define whether permission is granted. For this example, we begin by selecting **IP address** to define an IP address check:

HAN

HAN Permissions

Permission: Library

Description: For users inside the library only (staff exempt)

HTML page: newlogin.html

Permission definition

Permissions

Type	is (not)	Value

- Host name
- IP address
- Variable
- LDAP
- AD user
- AD user group
- user OU

7. In the **IP address to be checked** dialog, we enter the IP address range of the computers located in the library and confirm by clicking on **OK**:

HAN

IP address to be checked

IP address: 192.168.72.1-192.168.73.255

OK Cancel

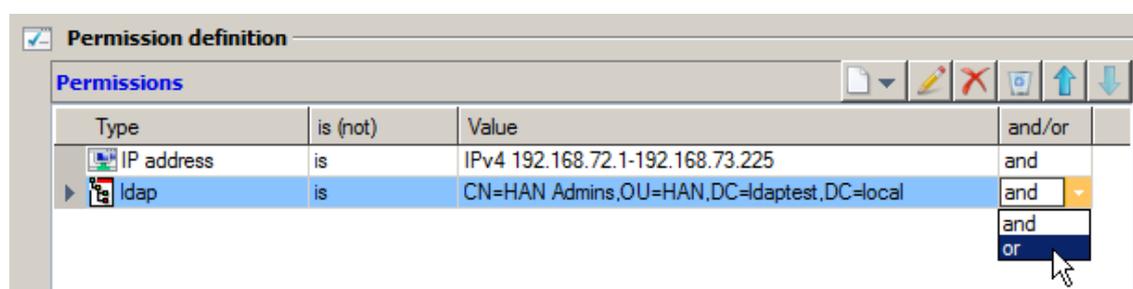
8. The procedure is similar for our next step: We click on **New** and this time select **LDAP**.



To perform authorization through an LDAP server, that server must be set up on the **LDAP Configuration** page of the HAN Settings. For details on setting up an LDAP server, refer to the HAN online help, under "[HAN Components/HAN Settings/Login/LDAP Configuration](#)".

9. The **LDAP Group Selection** dialog opens. We select the desired LDAP group and click on **OK** to confirm.

10. You can link conditions with logical ANDs and ORs, if desired. You can also define whether a condition must be met or not met, by selecting "is" or "is not". To configure these links and requirements, click on the corresponding line in the desired column. For our example, we link the conditions with a logical "or":



11. The last step is to specify the page to be opened in case of error, in the **HTML page** field. The page specified previously was "newlogin.html", which gives the user an opportunity for another login attempt. Depending on the level of permission required, you might want to have a login page opened that provides information on the type of login required.



These HTML pages are stored in `\HH\HAN\Bin\System\web\htdocs_user\haninfo`.

Example: In this example, all library users have unrestricted access to library resources as long as they are inside the library. User location is determined from the IP addresses of the computer workstations in the library. Access from outside the library requires LDAP authentication. The assigned LDAP permission allows only library employees to access library resources from outside the library. Login from outside is performed on the central system, so it is clear from the outset whether the request comes from an employee or a student. Thus there is no need, in this example, to have a login page opened. Anyone outside the library who cannot be authenticated as an employee will be denied access. Rather than a login page, the configurations in this example open an HTML page explaining that the library resources can be accessed only on the computers located inside the library. To this end, we created an informational page called `accessOnlyInLibrary.html.en`.



Make sure the file names for your info-pages have a language extension. Otherwise, HAN will not find the page.

Anonymization/Pseudonymization of Record Data

To meet the legal requirements for the protection of privacy as stipulated in data protection laws, HAN provides anonymization and pseudonymization functions. Data fields in the HAN database that contain personal data can be anonymized or pseudonymized:

- **Anonymization:** Personal references are removed from data that was originally person-related – in this case, information regarding any personal or material circumstances can no longer be correlated to any natural person (or not without disproportionate investment of time and effort).
- **Pseudonymization:** The central identifying attribute (e.g., a person's name) is replaced with a pseudonym – in this case, information regarding any personal or material circumstances can no longer be correlated to a specific natural person unless the correlation function is used (or not without disproportionate investment of time and effort).



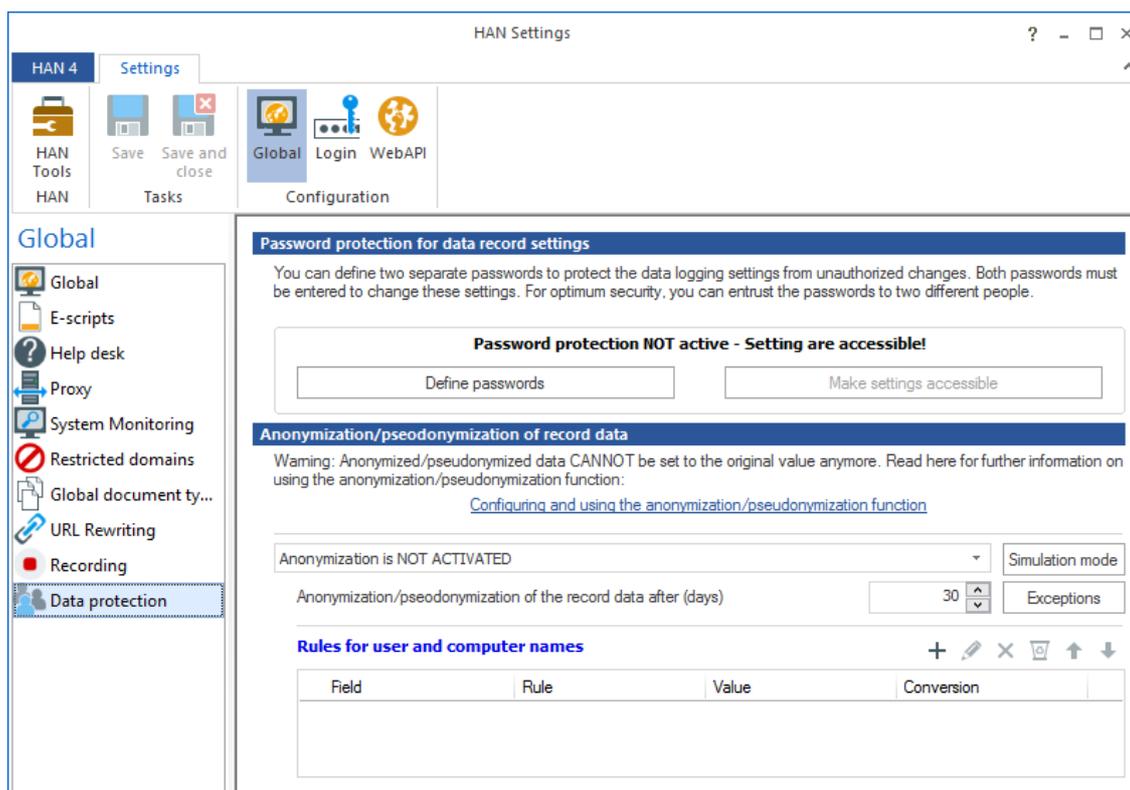
Certain data protection and privacy laws forbid the processing of personally identifiable information for any purpose other than that for which the information was collected. This generally makes it impossible to use such data for statistical evaluation. Anonymized/pseudonymized data, however, are generally allowed to be shared and processed within the collecting institution, e.g. for purposes of statistical evaluation.

The anonymization/pseudonymization is configurable; in other words, you can determine which methods are used. The precise definition of the anonymization/pseudonymization can be configured as well:

- Fields can be set to "empty" or changed to a specified value. In this case, the original value is irretrievably discarded (anonymization):
 - Removal of personally identifiable information, i.e. the data element that identifies the user (e.g. the last portion of an IPv4 network address), without replacement.
 - Replacement of personally identifiable information by an alternative value: the personally identifiable information in the data record is replaced with a neutral value, such as a profile name.
- Fields can be replaced in whole or part by a hash value. The original value is encrypted, but can be decrypted later (pseudonymization).

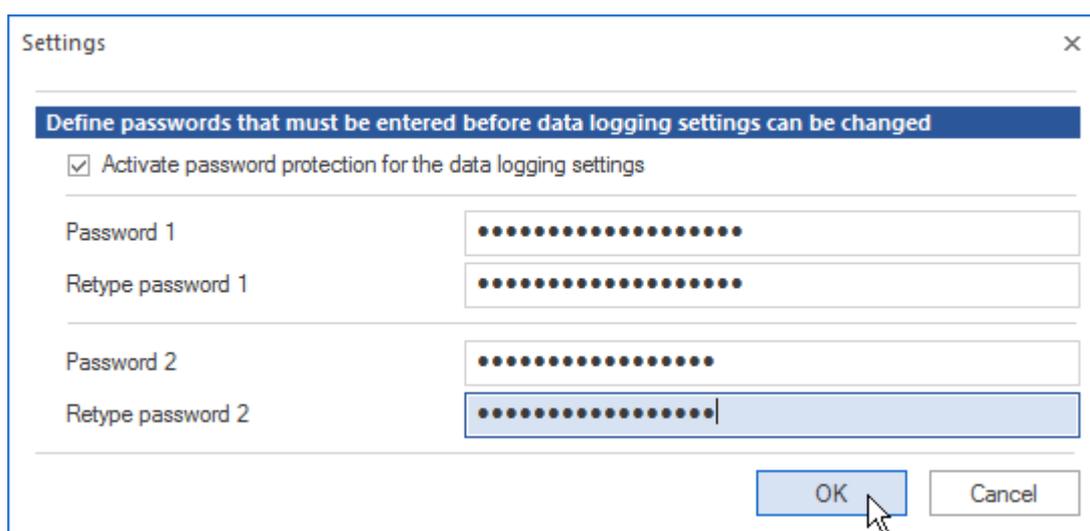
If you choose to enable anonymization or pseudonymization of data records, anonymization/pseudonymization cycles will run regularly. You can configure the intervals at which these cycles run.

The anonymization and pseudonymization functions are configured on the **Global** page of the HAN Settings, under **Data protection**:



For a detailed description of all functions on the **Data protection** page, see the online help under "[Data protection](#)".

Before you can use the anonymization or pseudonymization functions, you need to set the required passwords. To do this, click on the **Define passwords** button:



Anonymization/pseudonymization is protected by a dual control mechanism. Configuration requires two passwords; dual control is achieved by having two different people define one password each, so that one person alone cannot access these functions. For this purpose, have the two designated

password holders define their passwords in the **Define passwords** dialog. From this point on, changes in the data protection configurations will require two people.

The data records have two variables that can identify persons: the workstation (Computer) and the user name (User). The workstation identifier is logged as either a computer name or an IP address, depending on your system configurations. Thus the anonymization and pseudonymization functions target both of these values. Anonymization and pseudonymization are both configured in the same table. How you define the rules in this table determines whether the values are anonymized or pseudonymized. The field names **Computer** and **User** are entered in the table by default.

Using pseudonymization

With pseudonymization, data is replaced by hash values (i.e., encrypted). The original values can be restored if desired. Pseudonymization is the default setting. To have data pseudonymized, set the following values:

Rules for user and computer names + ✎ ✕ 🗑️ ⬆️ ⬇️

Field	Rule	Value	Conversion
User	all	<no value necessary>	\$hash\$
▶ Computer	all	<no value necessary>	\$hash\$

In the **Field** column you can see one rule each is defined for the User and Computer values. In the **Rule** column, the "all" indicates that the rule is applied to all entries in the **User** and **Computer** fields. In the **Conversion** column, the variable `$hash$` has been entered. This means the entire value in that field will be converted into a hash value. The `$hash$` variable is automatically entered when you add a new rule.

To define the intervals at which data are converted, select a number of days next to the **Anonymization/pseudonymization of the record data after (days)** field:

Anonymization/pseudonymization of record data

Warning: Anonymized/pseudonymized data CANNOT be set to the original value anymore. Read here for further information on using the anonymization/pseudonymization function:
[Configuring and using the anonymization/pseudonymization function](#)

Anonymization is NOT ACTIVATED Simulation mode

Anonymization/pseudonymization of the record data after (days) Exceptions



The minimum interval is one day.

Using anonymization

Anonymization involves changing personally identifiable data so that any reference to the person is permanently removed. To remove personal references from the values that identify users and computers, implement the following rules:

Rules for user and computer names

Field	Rule	Value	Conversion
User	all	<no value necessary>	\$empty\$
▶ Computer	all	<no value necessary>	\$empty\$

Under **Conversion** enter the variable `$empty$`. For a list of available variables, see "[Variables](#)".



Variables under **Conversion** are entered manually rather than chosen from a list. You can also define complex rules in this column, for example to have only part of the value converted, or to create a combination of anonymization and pseudonymization. For detailed examples of complex rules, see "[Creating complex rules](#)".

Simulation mode

The simulation mode has to be activated every time you change a rule for conversion of user or computer data. Because changes in data records cannot be undone, using the simulation mode helps to protect the integrity of your data. The simulation mode uses your existing data records and converts the data in accordance with the rules you define. To activate the simulation mode, click on the **Simulation mode** button. If the simulation produces the desired result, you can activate the anonymization/pseudonymization mode. If not, edit the rules and activate the simulation mode again.



You cannot activate the anonymization/pseudonymization mode until after you have performed at least one simulation. Thus if you forget to run a simulation, HAN will remind you.

Variables

`$hash$` – Hash value for the user or computer

`$empty$` – Set to 'empty'

`$user$` – User ID as stored in the database

`$computer$` – Workstation ID as stored in the database

`$costid$` – Cost center (HAN)



For a list of internal functions for conversion of strings/characters, see "[Appendix/Internal Functions for Conversions of Strings](#)".

Creating complex rules

Complex rules can combine several anonymization or pseudonymization methods, or even combine anonymization with pseudonymization. Because the rules for conversion of a value are entered manually, you can create rules as complex as you like, to meet your particular requirements.

Example 1: Anonymization through user profiles

If you want to remove the user name (or other personally identifiable value) from data records while maintaining their usefulness for statistical evaluations, you can have the user name replaced by a user profile. Assuming this is compatible with your system configurations, this lets you meet legal

requirements yet also create detailed usage analyses. To replace user names with user profiles, enter the following under Conversion:

```
$userprofile$
```

The plain-text user name is irretrievably removed and replaced by the user profile.

Example 2: Anonymization by removing the user-specific portion of the IPv4 address

If persons can be identified in your network from the fixed IPv4 address used by their workstation, removing the last portion of the IP address is generally sufficient for anonymization. To do this, enter the following under **Conversion**:

```
HHSubStr ($computer$, 1, HHDec (HHReverseFind ($computer$, .) ) )
```

The conversion rule above removes both the last portion of the IP address and the preceding dot. Specifically:

- **HHReverseFind** searches the original string from right to left until the first dot is reached (**HHReverseFind (\$computer\$, .)**). Thus for the IPv4 address 192.168.100.100, the return value would be 12.
- **HHDec** reduces this value by 1, to 11.
- **HHSubStr** returns the desired values from the original string:
HHSubStr (192.168.100.100, 1, 11) = 192.168.100.

Example 3: Pseudonymization of a department name in the plain-text data

This example shows how to allow a department name or cost center, for example, to remain recognizable while the data that could identify a person is encrypted:

```
HHSubStr ($user$, 1, 3) $hash$
```

This example assumes that the first three positions of the user name designate the user's department or cost center. In the example, the name of the department is connected to the user name (**\$user\$**). Depending on your network configurations, it might actually be the name of the workstation (**\$computer\$**) that is preceded by the department designation. Enter the rule in the appropriate line (User or Computer) and use the corresponding variable. **HHSubStr** is an internal function that reads the desired value from the original string, and must be specified. **1, 3** designates the first and last of the positions to be converted. The rest of the string is replaced by a hash value (**\$hash\$**). With this example, the plain text identifier **IT-JoSchmidt** is converted to **IT-xyz123abc456**.

Customizing HAN for Your Company

HAN offers a number of ways to integrate your corporate identity or your organization's logo:

- On login pages
- In error messages
- In the A-to-Z list

In both cases, you can adapt the existing HTML pages and create new ones. Login pages are stored in the `\HH\HAN\Bin\System\web\htdocs_user\login` directory. Error pages are stored in the `\HH\HAN\Bin\System\web\htdocs_user\haninfo` directory. The header of the A-to-Z list is edited in the `\HH\HAN\Bin\System\web\htdocs_user\atoz\custom.txt` file.



Program files for the web-based HAN program are stored in the `HH\HAN\Bin\System\web\htdocs` directory. Do not make any changes in these directories. All files in these directories are overwritten during program updates. Always edit the files in the `htdocs_user` directory.

Login and error message pages are available in various languages. The language in each file is indicated by the country code appended to the file name; e.g., "error.html.de" (German) or "error.html.en" (English). Selection dialogs show only those files which are in the same language as the operating system. Thus, when you create your own HTML pages for login or error messages, it is essential to append the country code to the file name.



Keep in mind when editing login pages that the following HTML text must be included, unchanged, in the page:

```
<form action="/hhauth/login" method="POST">
  Name:&nbsp;<input type="text" name="User" maxlength="30">
  Password:&nbsp;<input type="Password" name="Password"
maxlength="30" >
  <input type="submit" value="Login" style="width:96px">
</form>
```

Providing Online Resources with HAN

With HAN you can provide your users with access to a variety of online resources over a centralized interface. The source of the resource provided cannot be detected by the client in your network, because the client communicates only with the HAN server. Validation of user credentials is also handled entirely by HAN. To this end, HAN uses scripts to call the requested online resources. These e-scripts are specially adapted to carry out all the procedures that are necessary for calling the desired resource correctly.

This chapter describes details on how to provide online resources for your users with HAN. Online resources are made accessible in HAN through the use of e-scripts. An e-script contains both a script that calls the online resource, and all of the settings required for calling the e-script correctly. E-scripts are created in HAN E-Script Administration. To run the E-Script Administration program, use the **HAN Tools** desktop shortcut.

Which is the best way to create a given e-script depends on the degree of complexity involved:

- With automatic script recording: If the root URL of the online resource is the same as the destination URL in the e-script, HAN can create an e-script automatically, with no further editing required. In this case, the root URL is the target URL if no redirection takes place; for example, no login is required, or the login uses an HTTP dialog.
- With manual script recording: If redirection is involved or login is carried out in the background of a web page, the script must be recorded manually. This entails a number of additional steps, such as inserting variables in URL parameters.

The chapters linked below provide details on creating e-scripts:

["E-Script Administration"](#) is a reference work for looking up details on using the E-Script Administration program.

["Script Editor"](#) describes the functions in the Script Editor, the program for creating and editing e-scripts.

["Creating E-Scripts"](#) describes both the automatic and manual recording methods for creating e-scripts, as well as how to optimize manually recorded scripts.

["Using Flexible URL Parameters"](#) explains how to make your e-scripts more flexible by inserting variables in place of session-specific parameters.

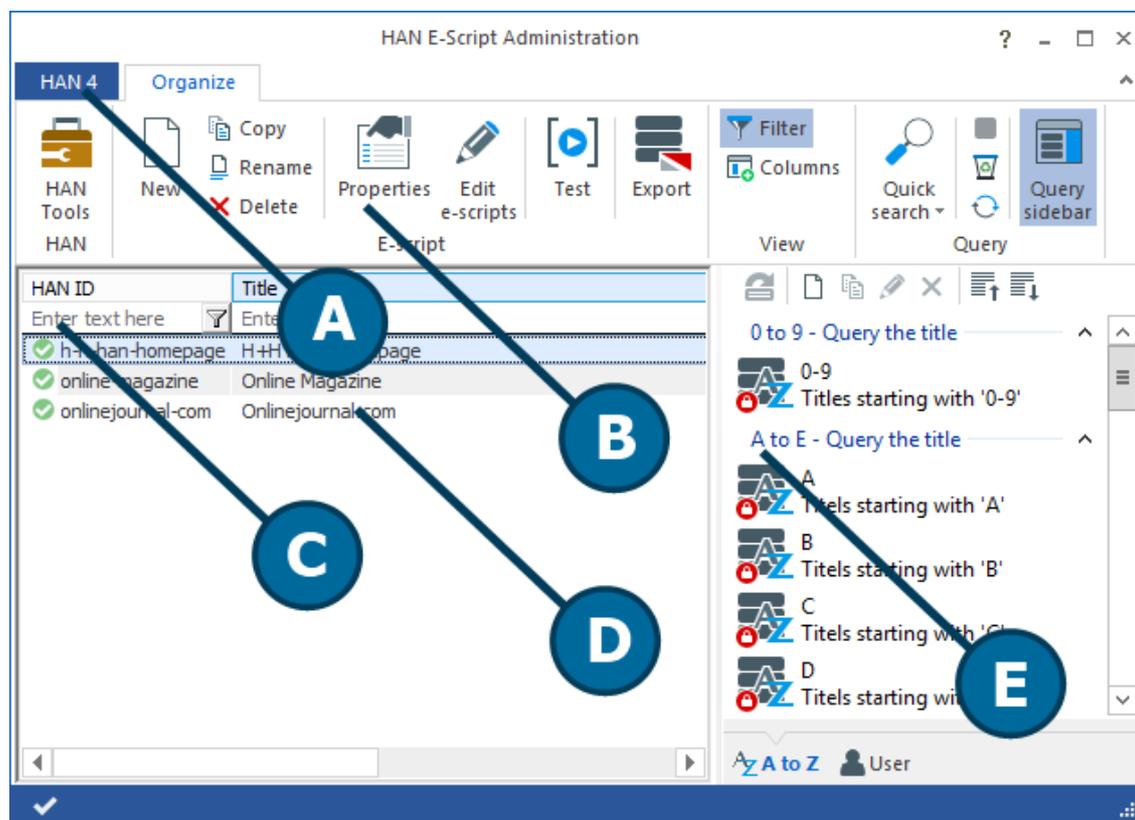
["Conditional Scripts"](#) provides details on customizing e-scripts for reliable use with web pages that have both blocked and accessible areas, and for logins that are required only when a user attempts to access a blocked area.

["Frames"](#) describes how to optimize your e-scripts for use with frame-based web pages.

["Allocating Licenses"](#) describes how to have HAN associate licenses with your e-scripts, to ensure licensing-compliant use of the online resources you provide.

E-Script Administration

The HAN E-Script Administration program is the central element in HAN. This is where you manage your on-line resources (e-scripts) that HAN serves to your users. To open the E-Script Administration program, use the **HAN Tools** desktop shortcut. The main window of the E-Script Administration program shows all existing e-scripts at a glance and gives you access to advanced functions:



E-Script Administration consists of the following elements:

- A. Program Menu.** Access to program functions, settings, and utilities.
- B. Ribbon.** Access to central e-script administrative tasks.
- C. Filter sidebar.** Use this to search for e-scripts.
- D. E-Script Selection.** Lists all HAN e-scripts that match the criteria in the filter sidebar and in the query sidebar.
- E. Query sidebar.** Lists all existing database queries. The query sidebar has several dialog pages and a toolbar to apply and edit queries. Once a query is applied, the E-Script Selection shows only those e-scripts which match the criteria given in the query. For details on managing queries, see "[Managing Queries](#)". For details on using queries, see "[Managing HAN Resources/Using Queries](#)".

Dialog pages in the Query sidebar:

- A to Z.** Search for scripts that match criteria in the alphabetical list.
- User.** Queries e-scripts for your own user-defined criteria. All of your user-defined queries are listed here.
- EZB.** Queries e-scripts that have been imported from the EZB.

For details on using the E-Script Selection and the filter bar, see "[Managing HAN Resources/E-Scripts](#)". For details on editing e-scripts in the Script Editor, see "[Providing Online Resources with HAN/Creating HAN E-Scripts/Using Manual Script Recording](#)".

E-Script Administration tasks:

- Managing e-scripts: Creating, editing, duplicating, deleting and testing scripts; editing e-script properties. For details on managing e-scripts, see "[Managing HAN Resources/E-Scripts](#)". For details on the properties of e-scripts and how you can edit them, see "[E-Script Properties](#)".
- Managing queries: The query mechanism lets you group and sort e-scripts by querying the e-script database for various properties. E-scripts that have certain properties in common may be found together in multiple sets of query results. For details on using queries, see "[Managing HAN Resources/Managing Queries](#)".

Additional functions in the e-script administration window:

The HAN E-Script Administration program is the central system program in HAN. Other administrative programs in HAN can be accessed only through this program window. These include the following:

- Script recording: You can have e-script recording run automatically whenever a new e-script has been created.
- Script Editor: You can have the Script Editor run automatically whenever a new e-script has been created. For details on working with the Script Editor, see "[Script Editor](#)". You can also select the editing function in E-Script Administration to edit existing e-scripts in the Script Editor.
- E-script properties: You can define various properties pertaining to e-scripts, such as object properties, list of permitted domains, login credentials for accessing online resources, licensing and data logging. For details on the properties of e-scripts, see "[Managing HAN Resources/E-Scripts/E-Script Properties](#)".
- Exporting and importing e-scripts: You can export e-scripts for later import, or import e-scripts that had previously been exported. The import function is in the Program Menu, under **Import**. The export function is in the Ribbon ("Export"). For details on importing e-scripts, see "[Managing HAN Resources/Importing E-Scripts](#)". For details on exporting e-scripts, see "[Managing HAN Resources/Exporting E-Scripts](#)".
- HAN Diagnostics: Shows detailed information about your HAN system, such as server and license information and the current HAN environment. For details on working with the HAN Diagnostics program, see "[HAN Diagnostics](#)".
- Utilities

Commands in the ribbon:

The toolbar, or ribbon, in the E-Script Administration window has the following buttons:

HAN Tools. Opens the HAN Tools window.

New. Creates a new HAN e-script.

Copy. Copies the selected e-script.

Rename. Renames the e-script.

Delete. Deletes the e-script currently in the e-script selection.

Properties. Opens the properties of the selected e-script. For details on the properties of e-scripts and how you can edit them, see "[Managing HAN Resources/E-Scripts](#)".

Edit e-scripts. Opens the selected e-script for editing in the Script Editor. For details on working with the Script Editor, see "[Script Editor](#)".

Test. Tests the selected e-script.

Export. Exports the selected e-scripts as exchange files to the HAN exchange folder.

Filter. Shows a filter bar in the E-Script Selection, in which you can enter a search term for each column. Entering a search term filters the E-Script Selection so that only those e-scripts are displayed which match the search term.

Columns. Opens a dialog for choosing which columns are displayed in the E-Script Selection.

Quick search. Searches the HAN database by HAN ID or e-script-title or both, and displays the returned e-script(s) in the E-Script Selection. For details on using the quick-search dialog, see "[Quick search](#)" below.

Stop. Stops the active query.

Reset. Resets the query. All e-scripts are once again shown in the e-script view

Reload. Updates the E-Script Selection.

Query sidebar. Shows or hides the query sidebar. The query sidebar lists all existing queries in the HAN system. For details on using queries, see "[Managing HAN Resources/Managing Queries](#)".

Commands in the Query sidebar (toolbar):

Apply. Applies the selected query and loads the matching e-scripts.

Create. Generates a new user-defined query.

Copy. Copies the selected query.

Edit. Lets you edit the selected query.

Delete. Deletes the selected query.

Hide. Shows only the category.

Show. Shows category and queries.

Import. Imports e-scripts from the EZB.

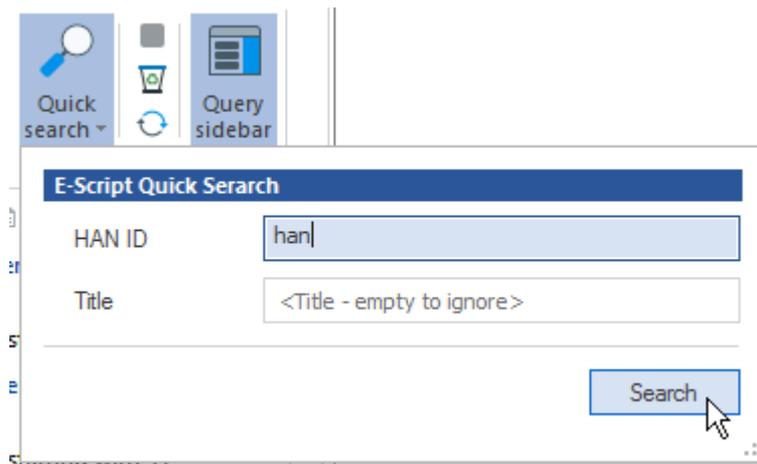
- **Import.** Starts an EZB import to import e-scripts.
- **Collate.** Collates existing e-scripts with those in the EZB. E-scripts in HAN that are not found in EZB are deleted from HAN; e-scripts in the EZB not found in HAN are imported.

Defaults for management of e-scripts are defined in the HAN Settings, on the **E-Scripts** page in the **Global** section. For a description of the settings options, see "[HAN Components/HAN Settings/Global/E-Scripts](#)".

Quick search:

The quick-search function searches the HAN database for the e-script or e-scripts that match the given search term(s), and displays these in the E-Script Selection. The quick-search function ignores all active queries.

1. Click on **Quick search** in the ribbon to run the quick-search function. This opens the **Quick search** dialog:



2. Enter a string that matches the desired HAN ID(s) in the **HAN ID** field, or enter a string that matches the desired e-script title(s) in the **Title** field. You can also combine the two search arguments.



Keep in mind that the quick-search function searches all existing e-scripts. The less specific your search arguments are, the longer the search will take.

3. Click on **OK** to start the search. The E-Script Selection then lists all e-scripts that match the search arguments.

CSV import:

The CSV Import tool lets you import e-scripts from CSV files. Open the Program Menu and select **Data/CSV import** to open this tool:



The CSV import is not the only method for importing e-scripts into HAN; you can also use HAN data exchange files. For details on importing e-scripts, see "[Managing HAN Resources/E-Scripts/Importing E-Scripts](#)".



For import into HAN, the CSV file has to be Unicode encoded.

CSV file. The CSV file you wish to import. Click on the **Browse** button (folder icon) to open a dialog for selecting a file. Click on the **Edit** button (pencil) to open the CSV file in the default Windows editor (e.g. Notepad); for example, to save it in Unicode format.

1st property. You can designate any property as the first object property in the e-script. This can be queried when searching the database. Designating a first property is optional.

Existing IDs. Defines how existing e-scripts are handled when they have the same HAN ID as imported CSV files:

- **will be created with a new unique ID.** HAN creates a new e-script in spite of identical IDs, but gives it a new HAN ID.
- **will be overwritten (note: the root URL will not be overwritten!).** HAN overwrites the existing e-script. Note that the root URL cannot be overwritten; thus the root URL in the existing script is retained.
- **will be skipped.** E-scripts found in the target location with IDs already present in the HAN database are not imported.

Separator. Specifies what character separates the columns of the data records in the CSV file:

- **Specified character.** The character you specify in the subsequent field is used as the separator.
- **Tab stop.** A tab stop character is used as the separator.

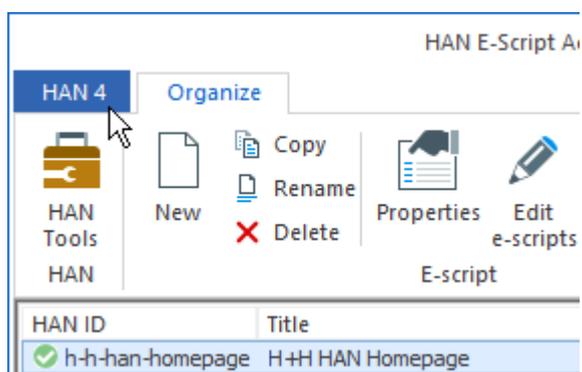
CSV file: first record contains column names. With this option, HAN ignores the first data record in the CSV file because it contains the column headers.

CSV data columns. Lists the data columns contained in the existing CSV file. The **Title** and **Root URL** headers are mandatory. You can use the buttons at the top of the list to delete entries from the list or change their positions.

Available HAN fields. Lists all available HAN fields that can be imported from the CSV file but are not currently in use. Click the button at the top of the list to move an entry to the **CSV data columns** list if you want to have the corresponding e-script property imported from the CSV file.

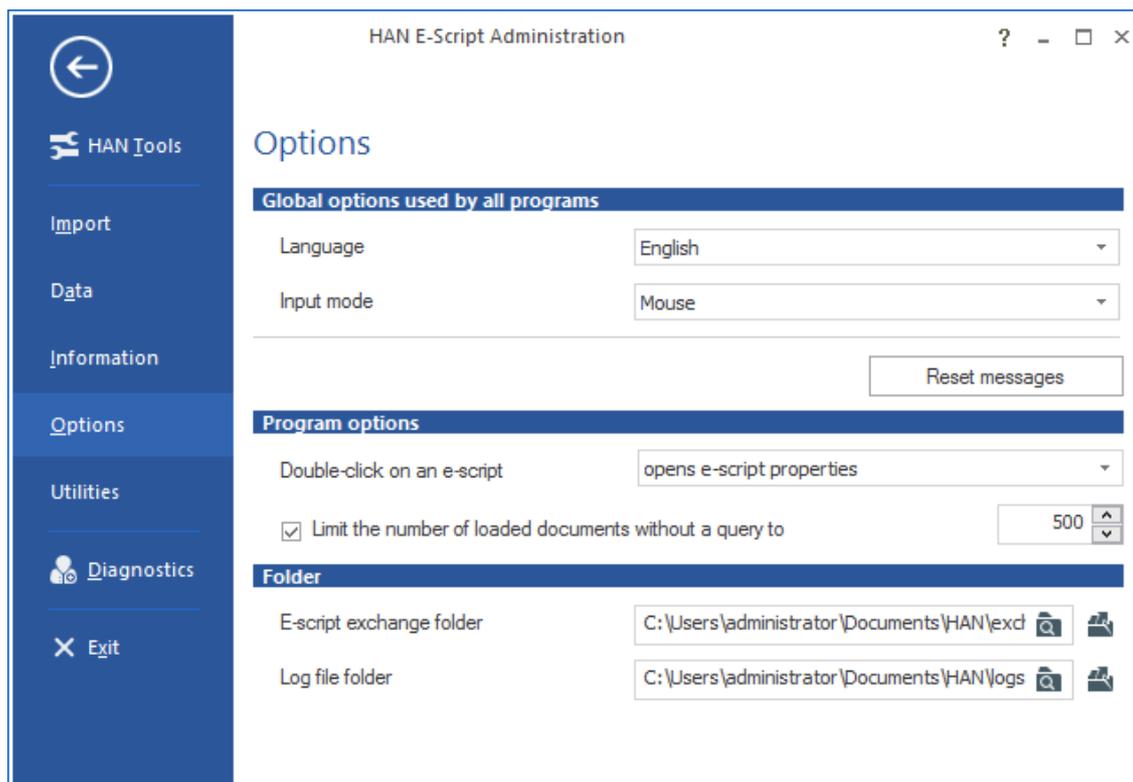
Program Menu

In the Program Menu of the E-Script Administration window, you can access program settings, auxiliary functions, and utilities. To open the Program Menu, click on the **HAN 4** tab:



Commands in the Program Menu:

The Program Menu in the E-Script Administration window contains the following commands:



HAN Tools. Opens the HAN Tools window.

Import. Imports e-scripts from e-script exchange files.

Data. Access to commands for exporting and importing e-scripts from CSV files, as well as to the EZB import and EZB data collation functions.

Information. Shows information about the program and lets you access the online help and other HAN information resources on the Internet.

Options. Opens the program options to let you define which function is triggered by double-clicking on an e-script. The options available are **show e-script properties** and **load the e-script in the Script Editor**.

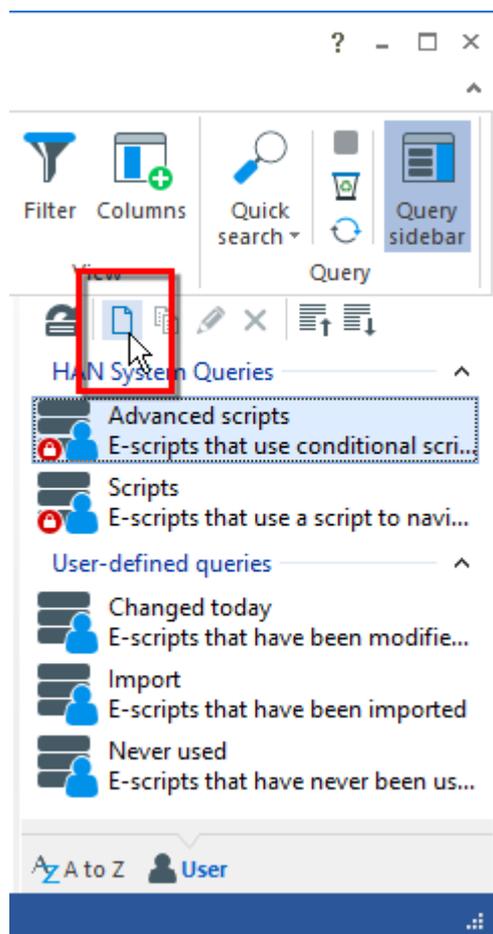
Utilities. Commands for starting various HAN utilities, such as the Trace Monitor.

Diagnostics. Opens the HAN Diagnostics program, which gives you an overview of your system configuration. For details on working with the diagnostics program, see "[HAN Diagnostics](#)".

Exit. Closes the E-Script Administration program.

Managing Queries

Queries are used in HAN for dynamic sorting. In the E-Script Administration program, you can create fixed database queries which list all e-scripts that match the criteria you selected. To run the E-Script Administration program, use the **HAN Tools** desktop shortcut. To create a new user-defined query, select the **User** dialog page in the query sidebar. In the **Query** toolbar, click on the **New** button:



To edit an existing query, select the query and click on **Edit** in the **Query** toolbar. In the **Query** dialog, you can define the properties of the database query:

HAN

User defined HAN e-script query

Query: Springer

Description: Springerlink

Query definition

Filter expressions

Filter by	Rule	Value	and/or
▶ HAN ID	begins with	Springer	and

OK Cancel

Query. Name of the query.

Description. If desired, you can enter a description here; e.g., describing the content or purpose of the query.

The **Filter expressions** table lists the individual criteria of the query.



The criteria are processed in the order in which they are listed here, from top to bottom.

Use the buttons at the top of this list to edit the list:

New. Opens the **Add field for filter** dialog in which you can select a query criterion.

Delete. Deletes the selected filter expression.

Delete all. Deletes all filter expressions from the list.

Up. Moves a list entry one position higher.

Down. Moves a list entry one position lower.

Columns in the table:

Filter by. Lists the query criteria. Possible criteria are:

- Property (1 to 4)
- Alternative IP address
- Login type
- Permission
- Permission ID
- Description
- Source
- Date of import

- eISSN
- EZB update
- EZB anchor
- EZB ZDB number
- EZB ID
- Subject
- HAN kernel
- HAN ID
- Information page
- ISSN
- Most recent modification
- Most recent call
- License
- License ID
- Record ID
- Logging
- Starting URL
- Status
- Title
- Type
- Publisher

Rule. Defines a relationship between a criterion and a value. Possible relationships are:

- is
- is not
- starts with
- contains
- is defined
- is not defined

Value. Value associated with the criterion. For most criteria, user-defined input is accepted and wildcards are allowed. for the "Automatic EZB update", "Permission", "License" and "Logging" criteria, you can choose from the following predefined values:

- true
- false
- defined
- not defined

And/or. Defines a relationship to the subsequent expression in the list. This lets you define complex database queries consisting of multiple expressions.

Script Editor

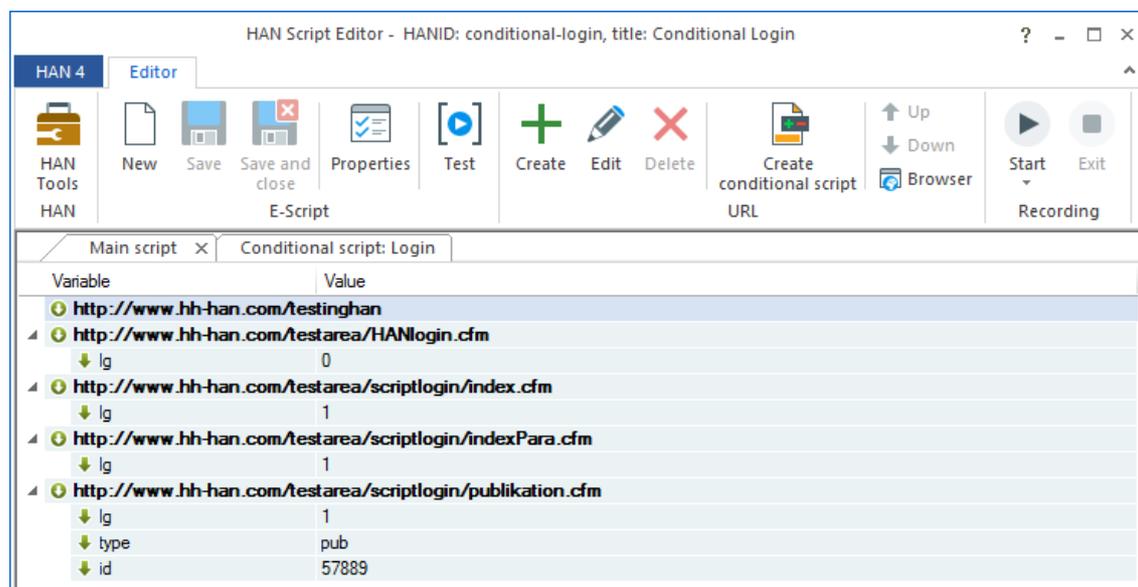
In the Script Editor you can edit scripts, including conditional scripts. This chapter describes the [Functions in the Script Editor](#). It also provides details on how to edit the properties of [URLs](#) and [parameters](#):



Scripts must be edited if the root URL of the online resource is not the same as the destination URL in the e-script. In such cases, URL parameters have to be replaced by variables or, in other words, made flexible. For details on how to make URL parameters flexible, see the HAN manual chapter entitled "[Using Flexible URL Parameters](#)".

Functions in the Script Editor:

To start the Script Editor select an E-Script and, in the Ribbon, click on the **Edit E-Scripts** button. For details on working with the E-Script Administration program, see "[E-Script Administration](#)". The Script Editor has several dialog pages for editing scripts:



The script itself is edited on the **Main script** page. If the script contains a conditional script, it can be edited on the **Conditional script: <name>** page. Conditional scripts run a login that is conditional upon a certain URL. The **Conditional script** page is only shown if you have created a conditional script.

Commands in the toolbar:

Tools. Opens the HAN Tools window.

New. Creates a new e-script.

Save. Saves the current script.

Save and close. Saves the script and closes the Script Editor.

Properties. Lets you edit the URL properties. For details on editing URL edit properties, see "[URL Properties](#)".

Test. Opens the browser and tests the script.

Create. For manually generating a new URL in a script or conditional script.

Edit. Lets you edit the selected element (either a URL or a parameter).

Delete. Deletes the selected element.

Create conditional script. Moves a selected URL in a conditional script. A conditional script is a script that executes only if a certain condition is met, for example, if a specified parameter has a particular value. When a new conditional script is created, a dialog page for editing it is generated automatically.

Up. Moves the selected URL one position higher.

Down. Moves the selected URL one position lower.

Browser. Opens the selected URL in the browser.

Start. Begins manual script recording. For details on manual script recording, see "[Script Recording](#)".

Exit. Stops manual script recording.

Double-click on an entry in the Script Editor to edit it. When you double-click on a URL, the URL properties window opens. Double-clicking on a parameter opens the parameter properties.

URL Properties:

URL properties are edited in the **Edit URL** dialog:

The screenshot shows the 'HAN Script Editor - Edit URL' dialog box. It is divided into several sections:

- E-Script URL:** A text field containing the full URL: `http://www.hh-han.com/testarea/scriptlogin/publikation.cfm?lg=1&type=pub&id=57889`. Above the field are icons for clipboard, copy, and browser.
- Protocol and server of the URL:** A dropdown menu for 'Protocol' set to 'HTTP' and a text field for 'Server' containing 'www.hh-han.com'.
- Address called with the URL:** A dropdown menu for 'Parameter method' set to 'GET' and a text field for 'Address' containing '/testarea/scriptlogin/publikation.cfm'.
- Parameters in the URL:** A table with columns 'Parameter' and 'Value'.

Parameter	Value
lg	1
type	pub
id	57889

At the bottom right, there are 'OK' and 'Cancel' buttons.

Complete e-script URL. Shows the entire URL being edited. You can use the buttons above this input field to add a URL from the Clipboard, copy the URL to the Clipboard, or open the URL in the browser.

Protocol. Protocol that the URL uses; either HTTP or HTTPS.

Server. Name of the server.

Parameter method. Method used to pass the URL parameters to the URL.

Address. Internet address called.

URL parameter. Lists all of the parameters for this URL, with their names and values.

Use the buttons at the top of this list to edit the list.

New. Opens the **Add URL Parameter** dialog for creating a new parameter. For details on defining parameters, see "[Parameter Properties](#)".

Edit. Lets you edit the selected parameter. For details on editing parameters, see "[Parameter Properties](#)".

Delete. Deletes the selected parameter.

Delete all. Deletes all parameters from the list. You are prompted to confirm this command before the parameters are deleted.

Up. Moves a parameter one position higher.

Down. Moves a parameter one position lower.

Parameter properties:

Open the **Edit URL Parameter** dialog to edit URL properties:



The options in the **Edit URL Parameter** dialog correspond to those in the **Add URL Parameter** dialog for creating new parameters.

Parameter. Name of the parameter.

Value. URL-encoded value of the parameter. This is the value passed. Click on the button to the right of the input field to toggle the input mode. In the default mode, input is not URL-encoded. If the value you wish to enter includes characters that the server expects in encoded form, click on the button to toggle the input mode; subsequent input will automatically be URL encoded.

URL human readable. The value to be passed, decoded by HAN for readable display in this field.

Parameter. Defines the parameter property:

- **has a predefined value.** The parameter has a predefined value that does not change.

- **to be used for login - user name (%user%).** The value of the parameter is the user name for a login. The parameter corresponds to the HAN %user% variable.
- **to be used for login - password (%password%).** The value of the parameter is the password for a login. The parameter corresponds to the HAN %password% variable.

POST is used for transmitting URL parameters - send parameter in the URL anyway. The parameter is passed in the URL even though the method is POST. This is always required if the web server calls for it.

Recording Scripts

This function is for manual recording of all the steps required for access to an online resource, including all navigation and login procedures. Manual recording is required when the root URL in the e-script is not the same as the target URL, for example because session-specific parameters are used. When a special login procedure is required, too—for example, if the online resource has both protected and unprotected areas, or if session-specific parameters are used—the script must be recorded manually. You do not need manual recording of scripts when a basic login over an HTML form is used, because HAN can store the login data in the e-script properties.

Manual script recording is started either directly when the e-script is created in E-Script Administration, or when editing a script in the Script Editor.

In E-Script Administration:

If you already know when creating the e-script that manual recording will be required, select **then begin recording in the Script Editor** in the **Create** field of the **Information for creating a new e-script** dialog:

Information for creating a new e-script	
Title	HAN Login
Root URL	www.hh-han.com/testinghan
HAN ID	han-login
Create	then begin recording in the Script Editor

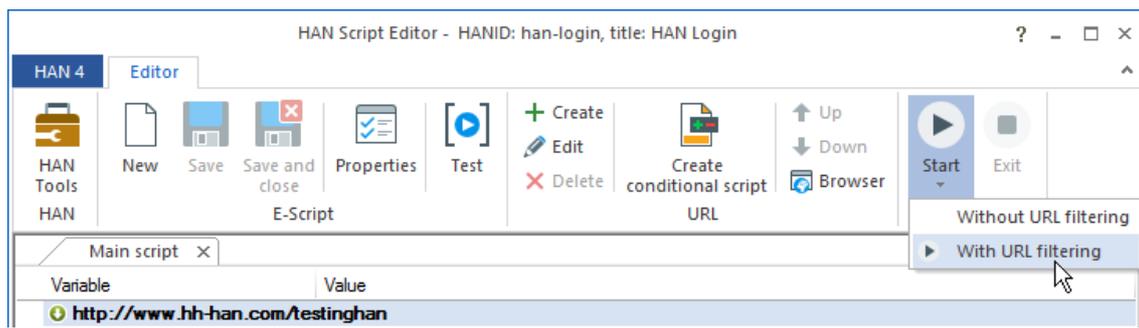
The e-script is created and the Script Editor is started. In addition, the browser is opened and the recording of the script is started.

In the Script Editor:

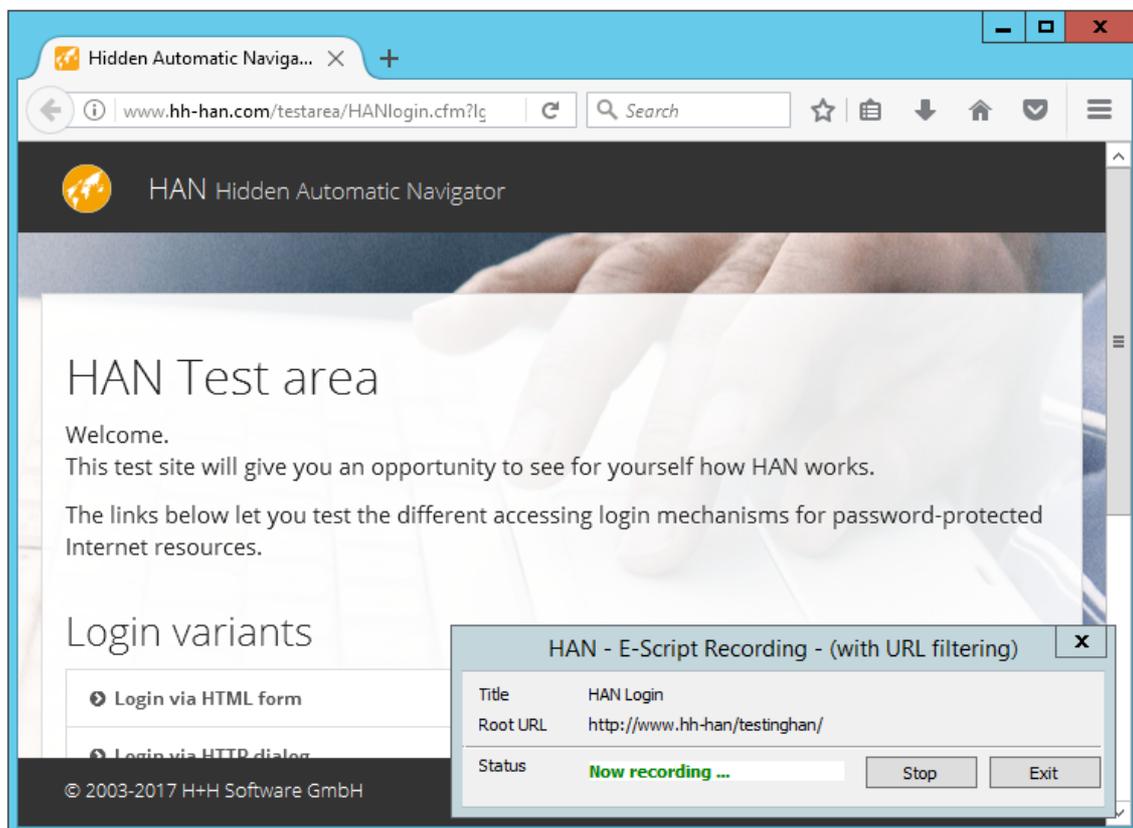
When editing a script, the manual recording function is started from the Ribbon in the Script Editor, by clicking on **Start** in the **Recording** section:



Any existing recording is discarded – only the root URL remains.



In the example shown here, the option to record **With URL filtering** has been selected. This produces a script from which all superfluous URLs have been removed. Once the settings have been selected, the browser is started and the recording begins:



The dialog box that opens during processing shows details and lets you pause or end the recording process:

Title. Name of the e-script.

Root URL. Starting URL in the e-script.

Status. Status of the recording process.

Stop. Pauses the recording process.

End. Terminates the recording process and shows the individual steps in the Script Editor window.

See the manual for detailed information on manual recording of scripts:

- "[Using Manual Script Recording](#)" describes how to record scripts manually.
- "[Using Flexible URL Parameters](#)" explains how to make URL parameters flexible so that the correct session-specific values are passed to the server.
- "[Conditional Scripts](#)" provides details on creating conditional scripts.

Creating E-Scripts



A HAN e-script contains a script that calls an online resource via the HAN server. In addition to that script, each e-script stores a number of properties. For details on what properties an e-script can have, see "[Managing HAN Resources/E-Scripts](#)". The central element of an e-script is the script, which both initiates the call of an online resource and defines certain behaviors or conditions associated with the call. This script can include an automatic login on the origin server, for example, or can navigate the user to a particular HTML page. Further definable properties may include licenses or permissions, which can optionally be associated with the e-script.

This chapter describes how to create and edit e-scripts. There are two ways to create a new e-script:

- Without manual recording (e.g., when authentication is based on IP address, or when login uses an HTML login form).
- With manual recording (e.g., when explicit login is required on the origin server).

E-scripts created without manual recording:

If the root URL of the online resource is also the target URL in the e-script, then no manual recording is required when you create the script. Simply create a new e-script and write in the root URL for the online resource; the e-script is functional right away. For details on creating an e-script without manual recording, see "[No Manual Recording Required](#)".

E-scripts created with manual recording:

Manual recording is required whenever the root URL and target URL for the e-script are not the same; for example, because a login or other manual user activity is required. The first step, as for the method without manual recording, is to create the e-script. Then you initiate the recording process and begin navigating to the desired target page, handling whatever steps are required for access to the resource. Once you reach the target page, you end the recording mode and save the script. You also have the option of running HAN's testing utility, to check the functioning of the script. For details on creating an e-script using manual script recording, see "[Using Manual Script Recording](#)".

Optimizing a script:

Once a script has been recorded, it should be streamlined so that only the only pages it opens are those relevant for HAN. These can include, for example, login pages, target pages, and any intermediate pages that are required for subsequent processing. The goal is to limit scripts to the essentials and keep them as short as possible. The shorter the script, the faster HAN can process it. For a detailed demonstration of how a script can be optimized, see "[Using Manual Script Recording](#)".

Optimization options:

- Delete superfluous steps: First, you can delete any steps that are not directly connected with calling the target URL.
- Replace parameters: This step makes session-specific values in URL parameters flexible. For details on how to make URL parameters flexible, see "[Using Flexible URL Parameters](#)".

- Creating conditional scripts: For web sites that have both freely accessible and protected content, you can create conditional scripts that perform a login only for the protected content. For details on creating conditional scripts, see "[Conditional Scripts](#)".
- Adaptations for frame-based web pages: For frame-based web pages, the script must reference the definition file for the frameset; otherwise only a frame is opened by the script, rather than the whole web page. For details on integrating frame-based web pages, see "[Frames](#)".

Additional options:

In addition to optimization, you can associate licenses to e-scripts: If you simply provide online resources with HAN with no further configuration steps, then – theoretically – any number of your users can access the online resources thus provided. If this is undesirable, however, for example due to licensing conditions between your organization or firm and the original provider, you can associate HAN licenses with your e-scripts to prevent violation of those conditions. For details on licensing your e-scripts, see "[Allocating Licenses](#)".

No Manual Recording Required

The simplest form of an e-script is one in which the root URL for the online resource is the same as the target URL to be opened by the e-script. When this is the case, the script does not require editing; all required information is automatically stored in HAN when the e-script is created.

In the following example, we create an e-script that opens the web edition of the Financial Times newspaper using the URL `http://www.ft.com/home/us`:

1. Open E-Script Administration.
2. Click on the **New** button in the ribbon to create a new e-script.
3. In the **Information for creating a new e-script** dialog, enter a name for the e-script in the **Title** field and the root URL in the **Root URL** field:



The HAN ID may contain only numbers and letters (upper and lower case). The length of the ID must not exceed 256 characters.

Information for creating a new e-script	
Title	Financial Times
Root URL	http://www.ft.com/home/us
HAN ID	financial-times
Create	and do nothing else

The name in the **HAN ID** field is generated automatically by HAN; you can edit the HAN ID if desired.



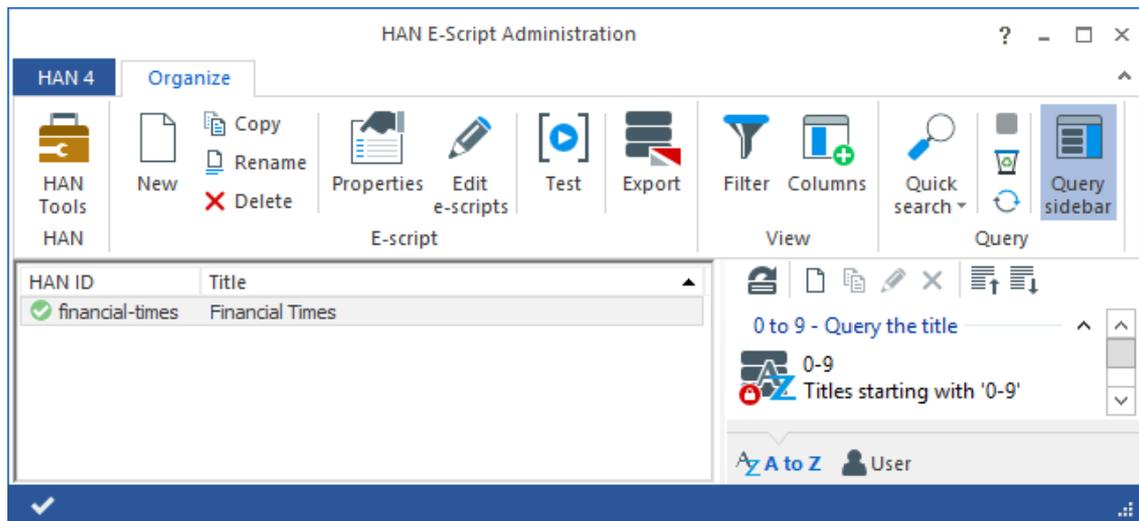
The HAN ID has to be unique, as it is the primary identification criterion within HAN.

In the **Create** field, you can choose an action to be executed by HAN automatically after creating the e-script:

- **and do nothing else.** No further actions are automatically carried out after the e-script is created.
- **then open e-script properties.** The e-script properties dialog is opened automatically.
- **then open it in the Script Editor.** The newly created e-script is automatically opened in the Script Editor.
- **then begin recording in the Script Editor.** The e-script is opened in the Script Editor and the recording mode is activated.

Because we are creating a script for which no manual recording is required – i.e., which we do not need to edit – we select **and do nothing else**.

4. Click on **OK** to confirm your input. The new e-script is saved and is displayed in the E-Script Selection:



A standard script is automatically created for the e-script, which in this case is completely adequate for the purpose because no further user input is required. The new e-script is fully functional as soon as it has been saved, and can be called using the URL `http://<HAN server FQDN>/han/financial-times` (assuming you did not modify the HAN ID in Step 3 above).



Alternatively, you can test the e-script in the E-Script Administration program by clicking on **Test** in the ribbon.



If the test is not successful, then the automatic recording function did not obtain all of the data required for the script. This may be the case, for example, if parts of the website are loaded from

other domains which had not yet been recorded at the conclusion of automatic recording. When a script made with automatic recording fails in testing, you will generally find that you have to use manual script recording to provide the desired resource. For details on manual script recording, see "[Using Manual Script Recording](#)".

Script with login:

To create a script that performs a login on the origin server with an HTTP login dialog, only one additional step is required: Create a new e-script and select the **then open e-script properties** option in the **Create** field. In the e-script properties, open the **Login** page and enter the login data:



The **Login** page is an optional page of the e-script properties. You can add optional pages to the Properties window as needed, by clicking on the **Add** button (+) at the top of the sidebar and selecting the desired page from the menu.

For further information on the properties of e-scripts, see "[Managing HAN Resources/E-Scripts](#)". When logging in using an HTTP login dialog, data is encrypted before it is sent by the browser. For this reason, data for the access script is not relevant. HAN sends the data when it is requested by the origin server. To create an e-script that performs login in the background or guides the user to a specific HTML page, you need to record a script manually. For details on creating an e-script using manual script recording, see "[Using Manual Script Recording](#)".

Using Manual Script Recording

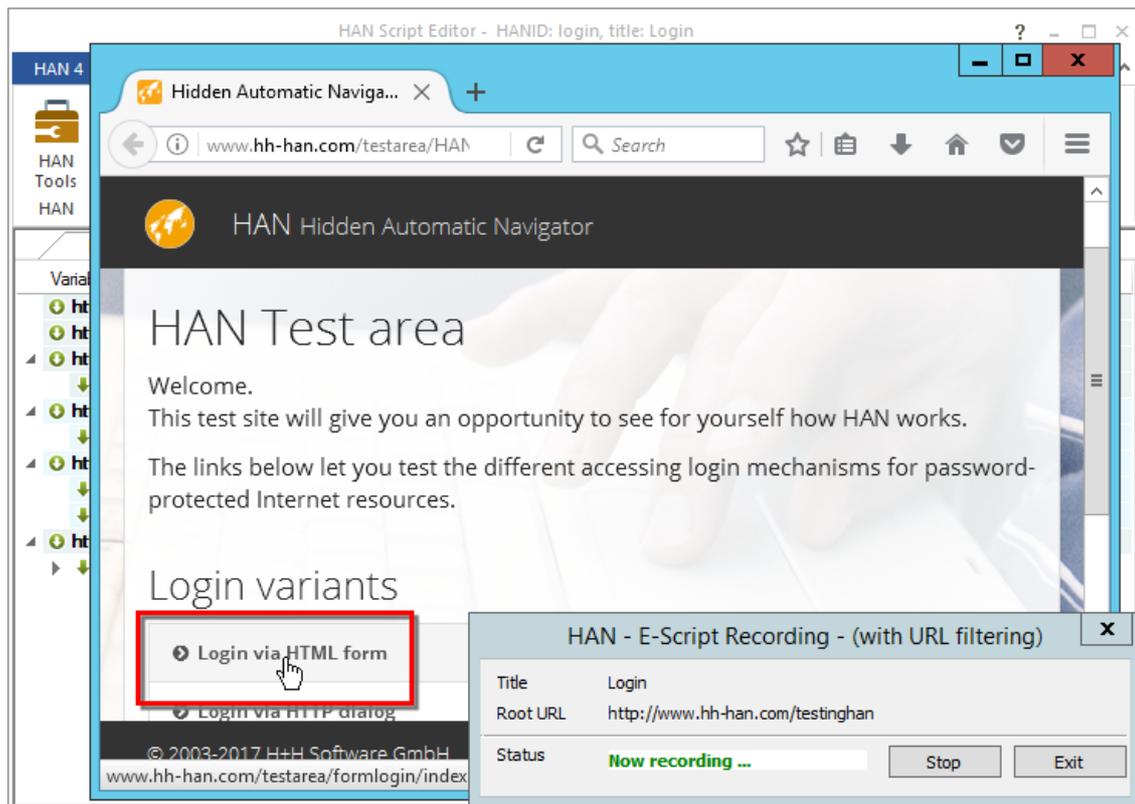
In this example, we will create an e-script that opens a page at the H+H HAN testing site (<http://www.hh-han.com/testinghan>). The first steps are the same as those for creating an e-script without manual recording. For details on creating e-scripts without manual recording, see "[No Manual Recording Required](#)". The home page of the test site lists the test areas available and shows the login credentials to be used. Click on the "Login via HTML form" link. This opens a login form. Enter "HAN" (without quotation marks) for both user name and password and click on "Login". This opens a page that offers congratulations on your successful login, and shows an overview of the HAN automation feature. This will be the target page of the e-script created in the following example:

1. Create a new e-script (title: Login) with <http://www.hh-han.com/testinghan> as the root URL.



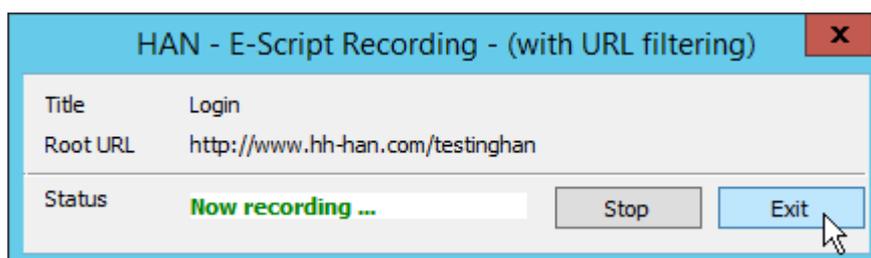
Because we are using HTTP, there is no need to specify the protocol when entering the URL. When using HTTPS, however, the protocol must be entered.

2. In the **Create** field, select the option **then begin recording in the Script Editor** and click **OK**. HAN creates the e-script and automatically starts the manual script recording process. The Script Editor runs in the background. Manual script recording runs in your browser (specifically, in the default browser as defined in the operating system):

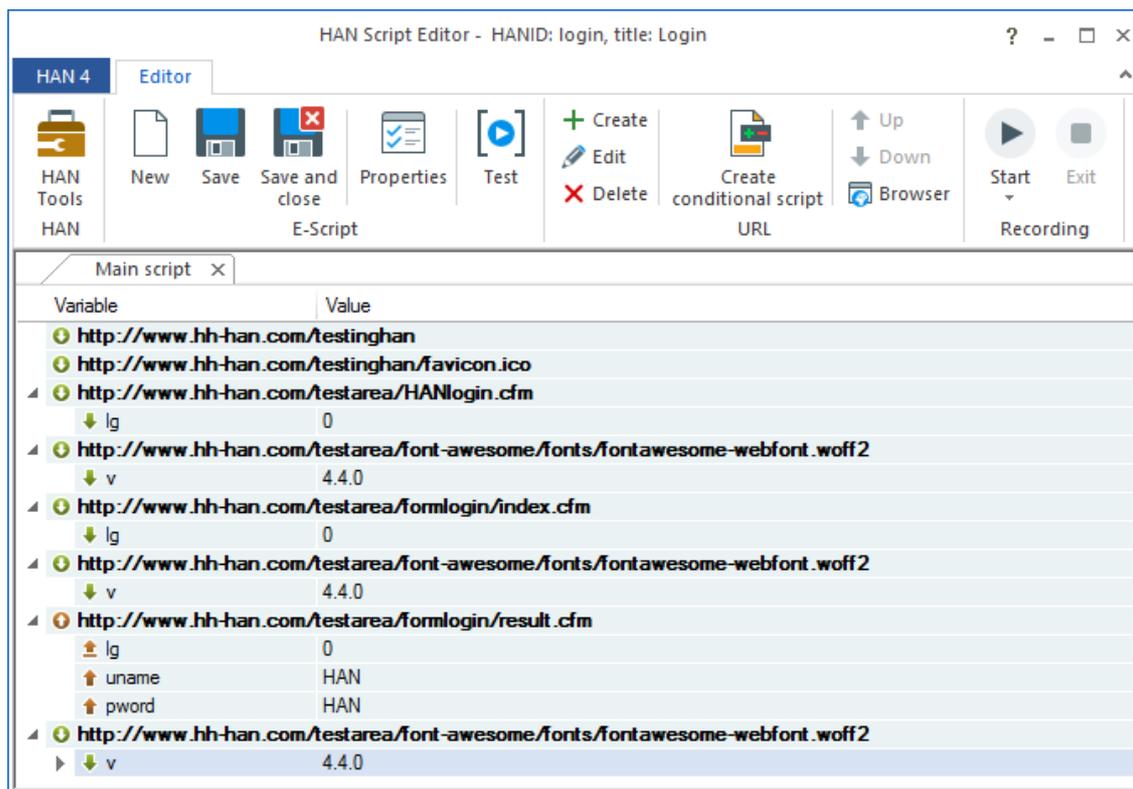


3. To record the script, carry out all steps required (i.e. login, navigation) to reach the target page. In this example, the steps include clicking the "Login via HTML form" link, entering the user credentials and then clicking on **Login**. The target page is now open, for this example.

4. In the recording window, click on **Exit** to stop the recording process and return to the Script Editor:



The Script Editor window shows all of the recorded steps:



5. Click on the **Save** button in the ribbon. This saves the entire e-script.

You now have a fully functional script that you can call using the testing function. To test the script, click on **Test** in the ribbon. In some cases, a script may contain calls that are not relevant for the desired process. In such cases, it is a good idea to optimize the script before releasing it for use. Before going into details on script optimizing, we shall outline the [structure of a script](#) in the following. The subsequent section explains how to [optimize a script](#):

Structure of a script:

A script shows the process that executes when a URL is called in HAN. The steps are processed in the order shown, from top to bottom. Three levels are distinguished:

- URL
- Parameters
- Values

The URL is the highest in this hierarchy:



URLs can have any number of parameters. Each parameter is assigned to the URL above it in the hierarchy:

lg	0
http://www.hh-han.com/testarea/formlogin/result.cfm	
lg	0
name	han
pword	han
submiting.x	0
submiting.y	0

Each parameter has a value assigned to it:

lg	0
http://www.hh-han.com/testarea/formlogin/result.cfm	
lg	0
name	han
pword	han
submiting.x	0
submiting.y	0

When the sample script was created (see previous section), a number of URLs were recorded. These URLs do not all have the same number of parameters. In accordance with the hypertext transfer protocol (HTTP), both URLs and parameters can be sent using the POST and GET methods. HAN detects the correct method when the script is recorded and shows the result next to the URL:

http://www.hh-han.com/testinghan	
http://www.hh-han.com/testarea/HANlogin.cfm	
lg	0
http://www.hh-han.com/testarea/formlogin/index.cfm	
lg	0
http://www.hh-han.com/testarea/formlogin/result.cfm	
lg	0
name	han
pword	han
submiting.x	0
submiting.y	0

HAN stored the login data you entered while recording the script:

http://www.hh-han.com/testarea/formlogin/result.cfm	
lg	0
name	han
pword	han

This data is sent automatically when the script executes; thus no user input is required for login. You can modify scripts at any time. Double-click on a URL or a parameter to change the properties stored for it. Alternatively, you can right-click and then select **Edit** from the shortcut menu.

Click on the **New** button in the ribbon to add a URL. Click on the **Delete** button to delete the selected item.



The URL shows the protocol used to call it. To change the protocol manually, double-click on the URL and edit it. Then change the protocol in the server node properties.

Optimizing a script:

Unlike a script used for programming, such as a Java or Visual Basic script, for example, a HAN script may contain steps that are not relevant for the intended process. There are two reasons for this:

- The information recorded may include elements that have nothing to do with the intended purpose of the script, but were recorded because they were part of the web page contents.
- The path to the target page can go through a number of forwarding operations.

Following the recording process, the script includes all the steps that were carried out to arrive at the target. Afterwards, you can optimize the script so that the e-script opens only the relevant page(s). These can include, for example, login pages, target pages, and any intermediate pages that are required for subsequent processing. The goal is to limit scripts to the essentials and keep them as short as possible. The shorter the script, the faster HAN can process it.



Before optimizing an e-script, we recommend making a backup copy of it. This way, you can edit the copy and still have the original in case anything goes wrong during optimization (e.g., deleting one URL too many).



When you click on **Start** in the ribbon to begin a new recording process, this deletes the previous main script and replaces it completely with the new recording.

Optimization options:

1. Delete superfluous steps: First, delete any steps that are not directly connected with calling the target URL.
2. Flexible URL parameters: When an HTML page is called, parameters containing session-specific values are often added to the URL. These can lead to errors later, when the page is called again using the script. This can be avoided by replacing the parameter values with variables, to make the parameters flexible. For details on how to make URL parameters flexible, see "[Using Flexible URL Parameters](#)".
3. Create conditional scripts for online resources that have password protection only in some areas: Some web pages offer access to both protected content and freely available content. To have a login performed only for the protected content, HAN can use conditional scripts as a supplement to the main script. The conditional script executes only when a defined condition is met (e.g., when a protected resource is requested). For details on creating conditional scripts, see "[Conditional Scripts](#)".
4. Adaptations for frame-based web pages: Frame-based web pages require additional processing to ensure that the definition file of the frameset is linked in the script; otherwise, only a frame is displayed, rather than the entire web page. For details on integrating frame-based web pages, see "[Frames](#)".

Example:

In our example, the login page and target page are the relevant pages. This is what the script looks like directly following the recording process:

Variable	Value
http://www.hh-han.com/testinghan	
⊟ http://www.hh-han.com/testarea/HANlogin.cfm	
↓ lg	0
⊟ http://www.hh-han.com/testarea/formlogin/index.cfm	
↓ lg	0
⊟ http://www.hh-han.com/testarea/formlogin/result.cfm	
↑ lg	0
↑ name	han
↑ pword	han
↑ submitting.x	0
↑ submitting.y	0

After optimizing, the script looks like this:

Variable	Value
http://www.hh-han.com/testinghan	
⊟ http://www.hh-han.com/testarea/HANlogin.cfm	
↓ lg	0
⊟ http://www.hh-han.com/testarea/formlogin/index.cfm	
↓ lg	0
⊟ http://www.hh-han.com/testarea/formlogin/result.cfm	
↑ lg	0
↑ name	han
▶ ↑ pword	han

Using Flexible URL Parameters

When a web page is called, session-specific values in the URL may be sent to the web server; for example, to verify the validity of a session. When you record a script in HAN, these values are fixed in URL parameters. If you test it right away, the script will work. When used later to call a page, however, the parameter values may have expired, in which case the script fails. This is why HAN offers the option of using flexible parameters, which store their values in variables. With this feature, HAN does not send the parameter value saved in the script, but rather the current value used by the origin server, valid in the session from which the URL is called. The following demonstration illustrates this technique:

1. Create a new e-script with `http://www.hh-han.com/testarea/cookie/index.cfm?lg=0` as starting URL and the **then begin recording in the Script Editor** option selected in the **Create** field. For details on creating e-scripts, see "[Creating E-Scripts/No Manual Recording Required](#)".
2. Enter the user credentials, **HAN** (user name) and **HAN** (password), and click on **Login**.

3. Click on **Exit** to stop the recording process. On conclusion of recording, the script is shown in the Script Editor as follows:

 We have already optimized this script by removing unneeded URLs. For details on optimizing scripts, see "[Creating E-Scripts/Using Manual Script Recording](#)".

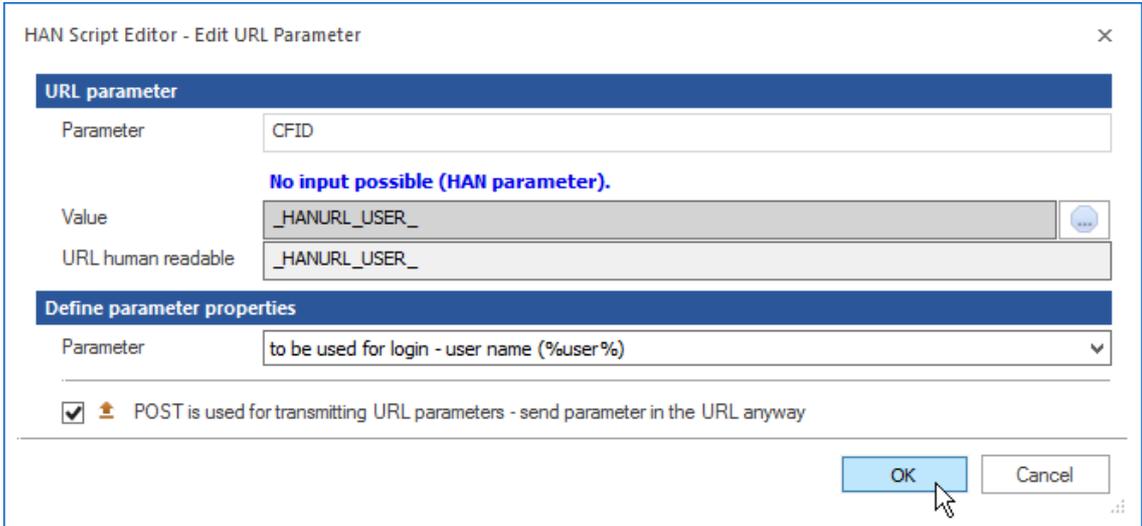
Variable	Value
Main script x	
http://www.hh-han.com/testarea/cookie/index.cfm	
lg	0
http://www.hh-han.com/testarea/cookie/result.cfm	
lg	0
CFID	71850d2d-aa05-40d0-a02e-6c922a6ee6de
CFTOKEN	0
uname	han
pword	han

The **CFID** and **CFTOKEN** entries are URL parameters that have different values each time the page is opened.

 When you create an e-script, you might not know which parameters have different values each time the URL is called. In such cases it can be helpful to create the script again later, under a different name, and then compare the parameters values in the second version of the script with those in the first.

4. Double-click on the **CFID** parameter in the Script Editor to open the parameter properties.

3. In the **Edit URL Parameters** dialog, set the option for **Parameter** to **is used for login - user (_HANURL_USER_)** and click **OK**:



HAN Script Editor - Edit URL Parameter

URL parameter

Parameter: CFID

No input possible (HAN parameter).

Value: _HANURL_USER_

URL human readable: _HANURL_USER_

Define parameter properties

Parameter: to be used for login - user name (%user%)

POST is used for transmitting URL parameters - send parameter in the URL anyway

OK Cancel

The value for the `CFID` parameter is replaced by `_HANURL_USER_`:

http://www.hh-han.com/testarea/cookie/result.cfm	
lg	0
CFID	<code>_HANURL_USER_</code>
CFTOKEN	58619014



HAN replaces this parameter value both in the selected URL and in all other instances in the script.

6. Open the properties of the `CFTOKEN` parameter and set the option for **Parameter** to **is used for login - password** (`_HANURL_PASSWORD_`):

HAN Script Editor - Edit URL Parameter

URL parameter

Parameter: CFTOKEN

No input possible (HAN parameter).

Value: `_HANURL_PASSWORD_`

URL human readable: `_HANURL_PASSWORD_`

Define parameter properties

Parameter: to be used for login - password (%password%)

POST is used for transmitting URL parameters - send parameter in the URL anyway

OK Cancel

After you click on **OK**, HAN replaces all instances of the `CFTOKEN` parameter with `_HANURL_PASSWORD_`:

http://www.hh-han.com/testarea/cookie/result.cfm	
lg	1
CFID	<code>_HANURL_USER_</code>
CFTOKEN	<code>_HANURL_PASSWORD_</code>
name	han

7. Click on the **Test** button in the ribbon to test the e-script. The web page called now shows the current values of the `CFID` and `CFTOKEN` parameters.

Options for defining parameters in URLs:

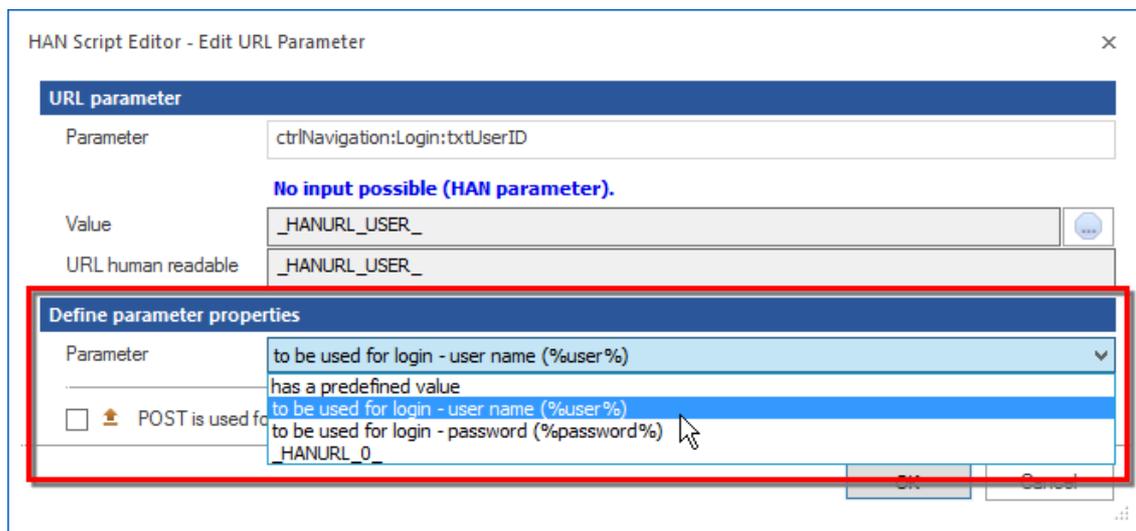
The method outlined above for making parameters flexible involved straight replacements. We double-clicked to open parameter properties and replaced the values for login with the predefined HAN variables for user ID and password. Your HAN system also lets you replace a random value with a variable that is not bound to a particular purpose. You can replace not only parameter values, but also session IDs in URLs with variables.



HAN can replace a value with a variable only if HAN recognizes the value. Some web pages, however, contain parameters in hidden form fields. A common example is the "viewstate" parameter used in ASP pages. If a variable is used to send data over HAN to the origin server (using the POST method), HAN sends the wrong value. Solution: Use the GET method to call the web page first, and then use POST to send the variable defined for the value.

Parameter used for login:

Double-click to open parameter properties and replace the login values with the predefined HAN variables, HANURL_USER_ for the user ID and HANURL_PASSWORD_ for the password. The **Parameters** field under "Define how the parameter is used in the script" offers the following options:



has a predefined value. The value for this parameter is predefined and does not change. It is passed "as is" to resource provider's server.

is used for login - user (HANURL_USER_). The parameter is for the login name; the value is replaced by the predefined HAN variable for the login name, HANURL_USER_.

is used for login - password (HANURL_PASSWORD_). The parameter is for the login password; the value is replaced by the predefined HAN variable for the password, HANURL_PASSWORD_.

Example: We shall create an e-script for a fictitious online resource which we shall call "onlinejournal.com". This site requires user authentication with user name and password. It also has a hidden form field (VIEWSTATE):

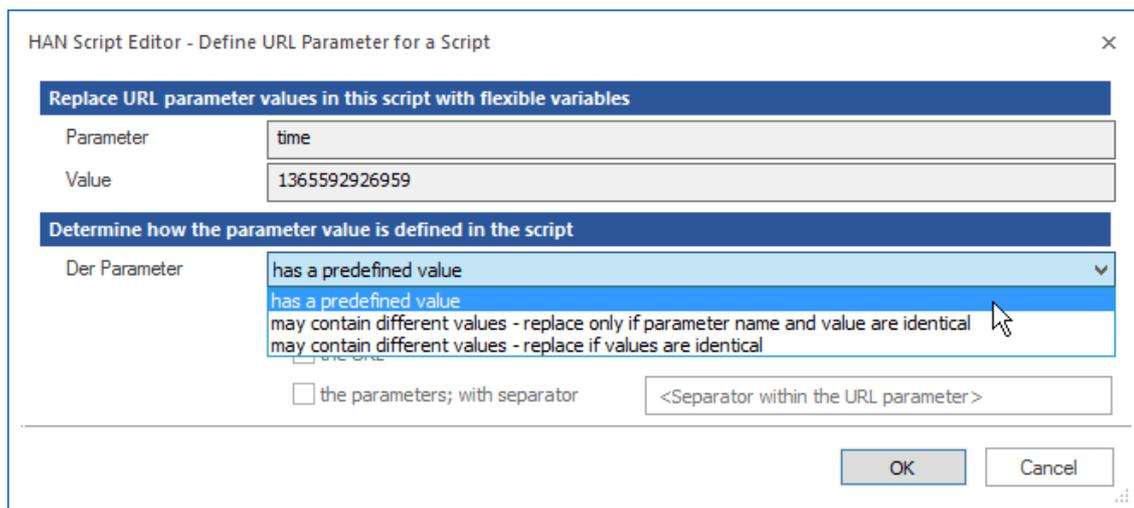
Variable	Value
http://www.onlinejournal.com/	
http://www.onlinejournal.com/home.aspx	
__VIEWSTATE	3fea47586736
ctrlHeader:TxtSearch	
ctrlNavigation:Login.txtUs...	han
ctrlNavigation:Login.txtPa...	han
hdnJournalID	312
Result:QID	
ctrlNavigation:Login.imgbt...	14
ctrlNavigation:Login.imgbt...	8

The two values in the parameters for login credentials are replaced by variables as described above. The value for the `__VIEWSTATE` parameter is made flexible by using an unbound variable. For details on using flexible values for this type of parameter, see "[Parameter has a random value](#)". The script still fails to execute, however, because HAN cannot detect the current value of the `__VIEWSTATE` parameter. If the `/home.aspx` page is loaded separately beforehand using the GET method, HAN can read the HTML code and detect the required parameters:

Variable	Value
http://www.onlinejournal.com/	
http://www.onlinejournal.com/home.aspx	
http://www.onlinejournal.com/home.aspx	
__VIEWSTATE	<code>__HANURL_0_</code>
ctrlHeader:TxtSearch	
ctrlNavigation:Login.txtUs...	<code>__HANURL_USER_</code>
ctrlNavigation:Login.txtPa...	<code>__HANURL_PASSWORD_</code>
hdnJournalID	312
Result:QID	
ctrlNavigation:Login.imgbt...	14
ctrlNavigation:Login.imgbt...	8

Parameter has a random value:

If a parameter has a random value, such as a session ID, you can replace it with the predefined `__HANURL_N_` HAN variable. The procedure is similar to that described for making parameters flexible. Rather than double-clicking to open the properties, however, in this case you need to right-click on the parameter in the Script Editor and select **Flexible parameter** from the shortcut menu. The following options are available in the "Parameter" field:



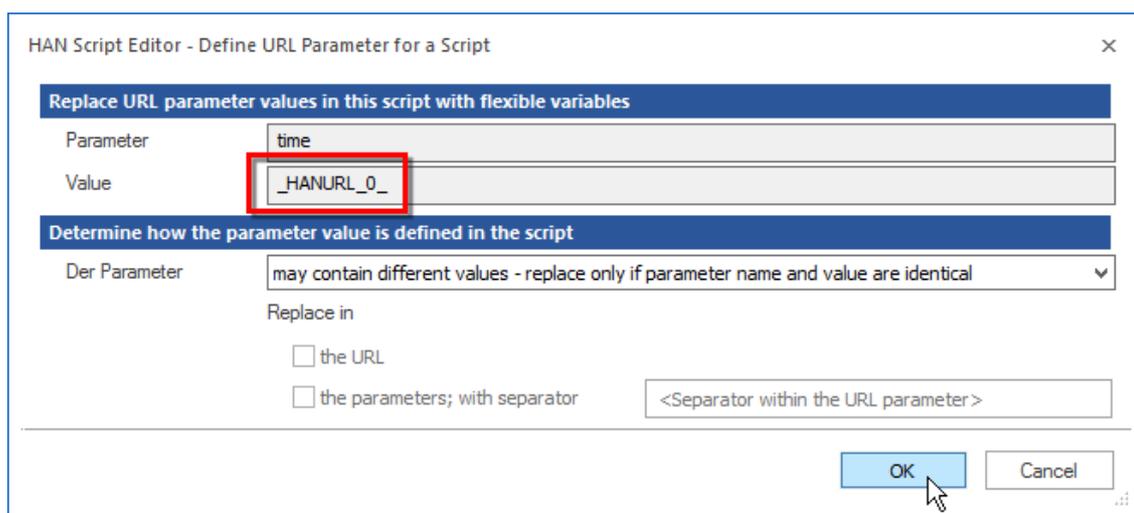
has a predefined value. The value for this parameter is predefined and does not change. It is passed "as is" to resource provider's server.

may contain different values - replace only if parameter name and value are identical. HAN replaces the value in all instances in which this parameter name is paired with this exact value.

may contain different values - replace only if values are identical. HAN replaces the value in all instances in which it is found, regardless of the parameter in which it is stored. In the **Replace in** field, define the position in which the value is to be replaced.

Replace if parameter names and values are identical:

To have HAN replace the values for the selected parameter in every instance in which the specified parameter has the specified value, select **may contain different values - replace only if parameter name and value are identical** in the **Parameter** field. In the **Value** field, the value is automatically replaced by a variable:



Replace only if values are identical:

With this option, HAN replaces the value of the selected parameter even when it is found in a different position, e.g. within a URL or as a component of a value in a different parameter. Only the value itself must match the selection. With this option selected, you need to define in the **Replace in** field just where the value is to be replaced. Otherwise, only the currently selected Parameter value will be

made flexible. Furthermore, a separator for the parameter must be specified. Select **may contain different values - replace only if values are identical** in the Parameter field. In the **Value** field, the value is automatically replaced by a variable. Under **Replace in**, put checkmarks in the checkboxes as needed, depending on where you wish to have additional identical values replaced. Enter the separator in the field next to **the parameters; with separator**:

HAN Script Editor - Define URL Parameter for a Script

Replace URL parameter values in this script with flexible variables

Parameter: time

Value: **_HANURL_0_**

Determine how the parameter value is defined in the script

Der Parameter: may contain different values - replace if values are identical

Replace in

the URL

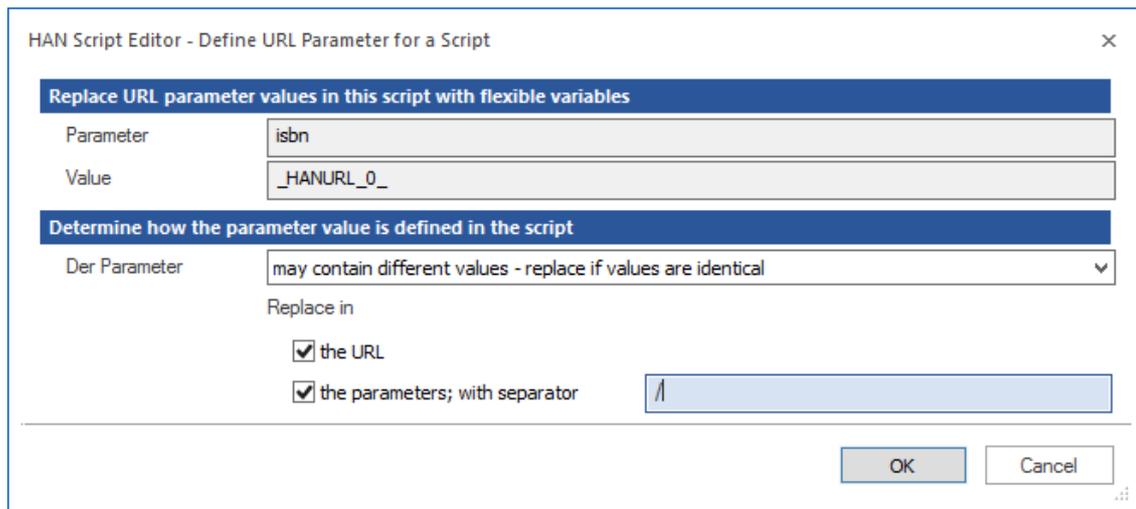
the parameters; with separator: /

OK Cancel

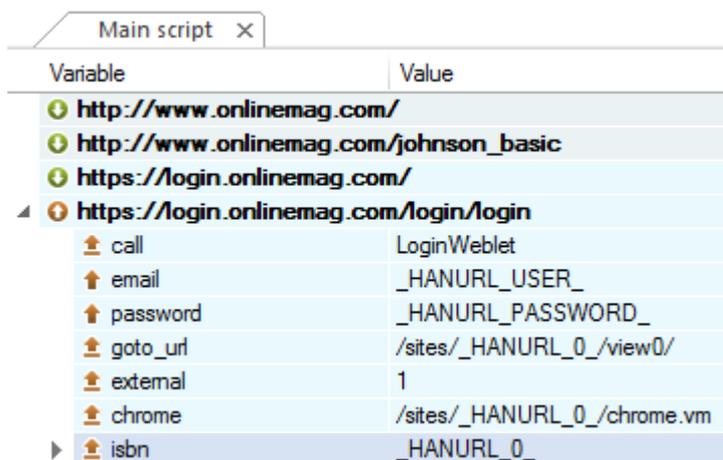
Example: The home page of our fictitious online magazine, "onlinemag.com," shows their latest issue. Thus the content on this page changes regularly. The script that calls this resource appears as follows in the Script Editor:

Variable	Value
http://www.onlinemag.com/	
http://www.onlinemag.com/johnson_basic	
https://login.onlinemag.com/	
https://login.onlinemag.com/login/login	
call	LoginWeblet
email	admin@han
password	han
goto_url	/sites/00073902647/view0/
external	1
chrome	/sites/00073902647/chrome.vm
isbn	00073902647

The parameters for login have already been replaced with variables, and the script is fully functional. The page it opens, however, always shows the issue that was current when the e-script was created, rather than the latest issue. The value for the **isbn** parameter must be made flexible in such a way that it is changed not only in the **isbn** parameter, but also within the **goto_url** and **chrome** parameters, where the identical value appears. The parameter separator in this example is "/". Right-click to open the shortcut menu for the **isbn** parameter and select **Flexible parameter**. In the **Define URL Parameter for a Script** dialog, select the **may contain different values - replace only if values are identical** option in the **Parameter** field:



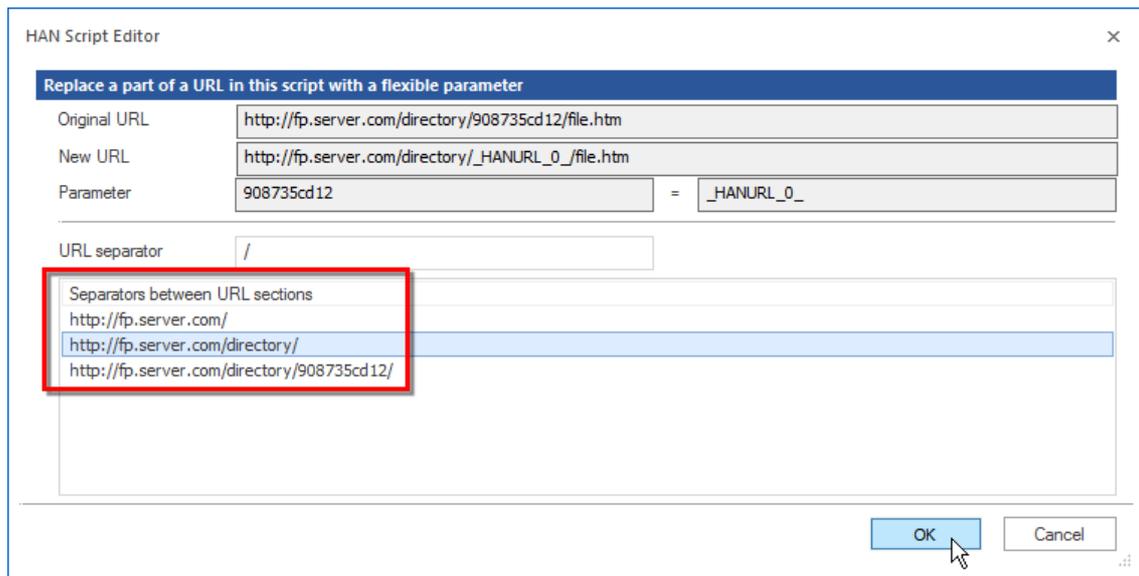
Under **Replace in** select "the parameters" and enter / as the separator. You do not need to select **the URL**, because there is no value from the "isbn" parameter in the URLs. With these settings selected, HAN replaces all parameter values that match the `isbn` parameter value – throughout the entire script. Once all variables have been added, the script appears as follows in the Script Editor:



Replacing a session ID in a URL:

In some cases, the session ID is not appended to the URL, but rather is a fixed part of the URL itself. With HAN, you can replace this URL section if desired. Here is an example:

1. In the URL `http://server/directory/908735cd12/file.htm`, the Session ID is `908735cd12`. Select the URL and right-click to open the shortcut menu.
2. In the shortcut menu, select **Flexible parameter**.
3. In the **Replace a part of a URL in this script with a flexible parameter** dialog, select that portion of the URL which precedes the desired value, so that HAN can detect which part of the URL is to be replaced:



The **Parameter** fields show the parameter name on the left, and the HAN variable which will replace it on the right.

4. Click on **OK** to have the session ID made flexible in the URL in accordance with your settings.

AJAX Login

If a particular e-journal requires AJAX login, the e-script must be manually edited before it can implement the login correctly. Simply recording the login procedure will not produce the desired result, because with AJAX, a Java script processes the response from the server and makes the required functions available on the web page. When a simple login is performed by HAN, the client-side JavaScript methods are not activated and the browser cannot provide the corresponding functions.

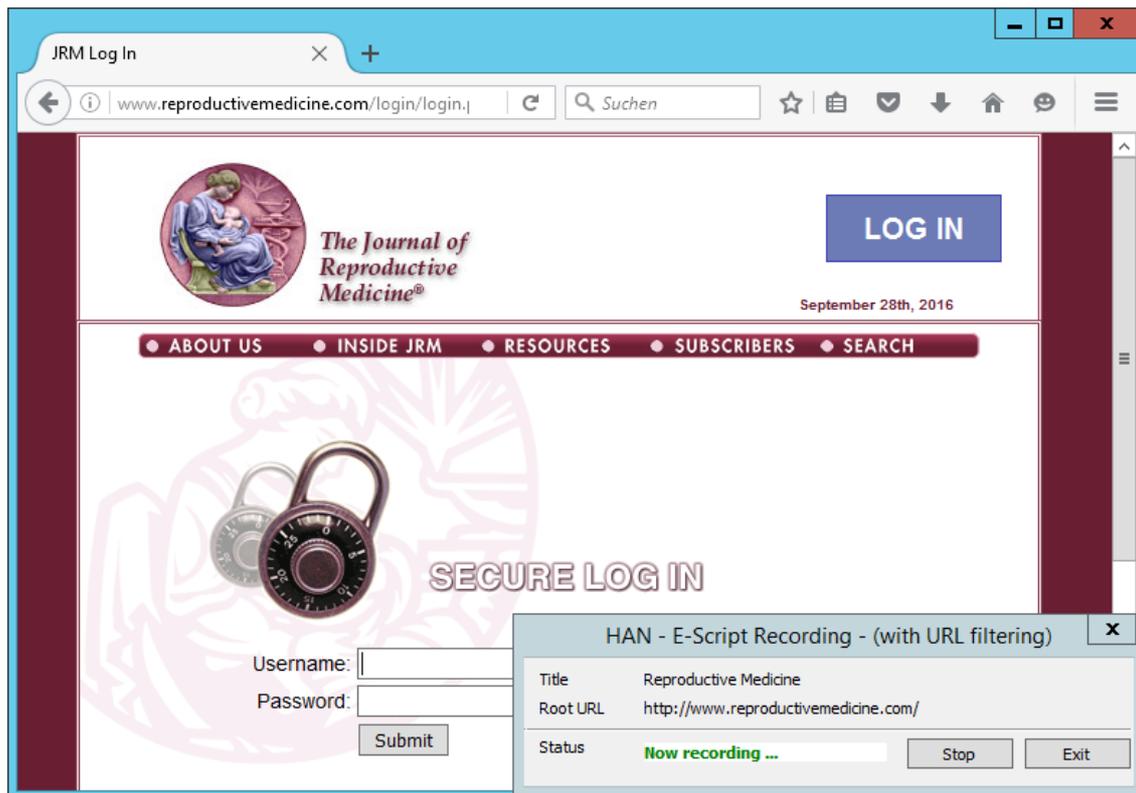
This chapter describes how to edit the e-script manually so that it can perform the AJAX login. The first step is to edit the script, and the next is to initiate a login on the client end using a Java script with dummy data, which data are then replaced by the HAN server when it processes the request. This technique ensures that the login data remain hidden. The procedure is as follows:

1. In E-Script Administration, create a new e-script and begin the script recording process (**then begin recording in the Script Editor**).

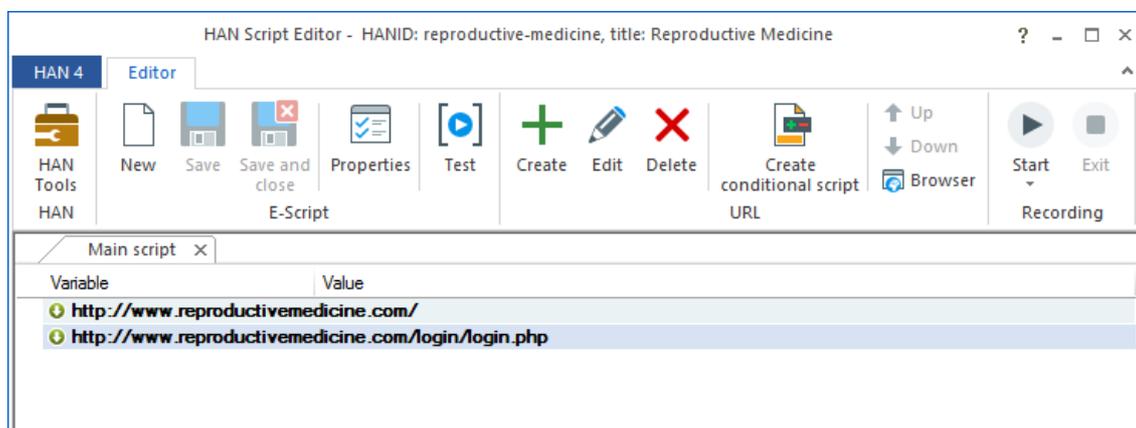


If you know the URL of the login page, you can use it as the root URL. In any case, the login URL must be the last URL in the script.

2. Navigate to the login page and stop the recording function. In this example, we are creating an e-script for access to the on-line "Journal of Reproductive Medicine" (<http://www.reproductivemedicine.com>):

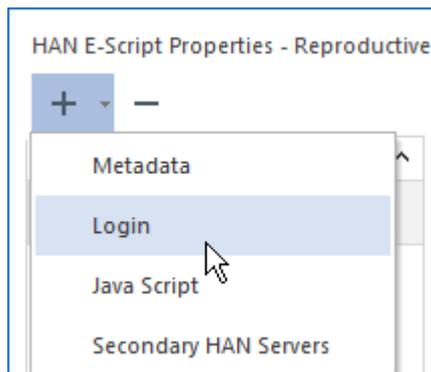


3. Optimize the script as needed. Make sure the login URL is the last URL in the script:

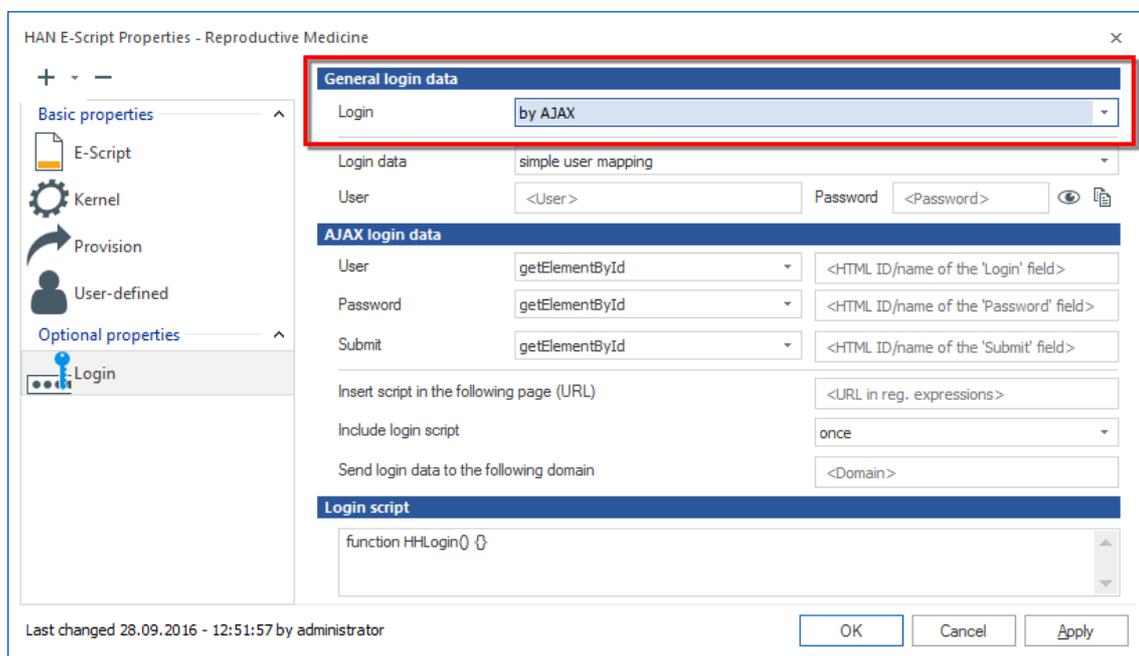


4. Open the e-script properties by clicking on **Properties** in the ribbon.

5. In the E-Script Properties, add the **Login** page by clicking on the **Add** button (+) above the sidebar selecting **Login** from the menu:



6. Activate the AJAX login by selecting the **by AJAX** option in the **Login** field:



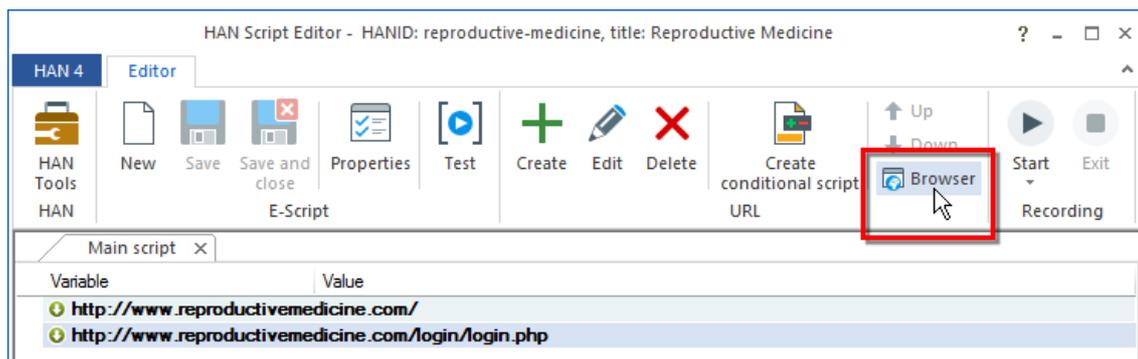
7. Under **General login data**, enter the login name and password:

Login data	simple user mapping		
User	user	Password	*****

8. Click on **OK** to save the settings. The next step is to define the AJAX login. First, you need to know what type of identifier is used to address the HTML elements in the web page that save the login data and perform the login. To find out, examine the code in the web page. Open the login page by selecting the page's URL in the Script Editor and clicking on **Browser** in the ribbon:

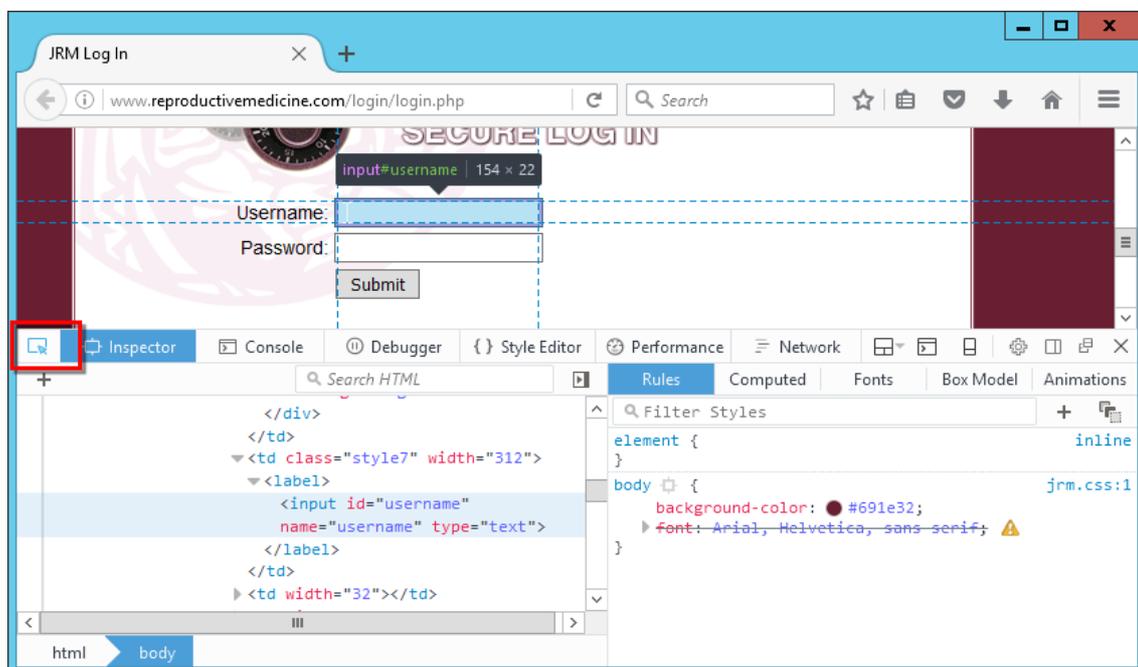


Use a browser that has a developer view. This example uses Internet Explorer 9, but other browsers offer comparable functions. The browser you use must be set as the Windows default browser.



9. Open the browser's developer view (in Internet Explorer 11: press F12).

10. Activate the selection tool and click on the object in the web page that has the code you wish to examine; in this example, the **Username** input field:



The analysis window shows that the input field is identified by both a name (**name=username**), and an ID (**id=username**). In the example, we select the **id** identifier.



Use the **id** field if possible, because the **name** identifier is frequently used for a range of different elements in web pages. HAN offers the option of defining two different **name** elements, but using the **id** identifier gives you the greatest possible flexibility.

11. Open the e-script properties in the Script Editor, go to the **Login** page and select the **GetElementById** option under **User** in the **AJAX login data** section. Enter the value determined previously for the **id** identifier; in this example, **username**:

HAN E-Script Properties - Reproductive Medicine

Basic properties

E-Script

Kernel

Provision

User-defined

Optional properties

Login

General login data

Login by AJAX

Login data simple user mapping

User user Password *****

AJAX login data

User getElementById username

Password getElementById <HTML ID/name of the 'Password' field>

Submit getElementById <HTML ID/name of the 'Submit' field>

Insert script in the following page (URL) <URL in reg. expressions>

12. Determine the identifiers for the password input and the "send" button; in our example, these are **Password** and **Submit**, respectively. Enter these as above. In our example, the result is as follows:



The **Submit** button in our example does not have an ID, it has only the `name` identifier. So we select the `getElementsByName[0]` option under **Submit**.

AJAX login data

User getElementById username

Password getElementById password

Submit getElementById Submit

13. To define the page on which login takes place, enter the URL of the login page as a regular expression under **Insert script in the following page (URL)**; in this example, `http://www.reproductivemedicine.com/login/login.php`:

AJAX login data

User getElementById username

Password getElementById password

Submit getElementById Submit

Insert script in the following page (URL) reproductivemedicine.com/login/login.php

Include login script once

Send login data to the following domain <Domain>



The **Include login script** option defines whether the login script is sent only once, or each time the e-script is called. The **with each call** option is useful for testing purposes, but should not be active during regular operation. When this option is active, the login script is sent again every time the login screen reopens following a logout. The result is an endless login loop that makes it impossible to log out.

14. The next step is to determine the name of the server to which the login is sent.



To ensure that the login data are not sent to just any server, the HAN server replaces the values only if the server name/domain name is identical to the server/domain name the of the e-script's root URL. If the names are not identical, enter the required URL in the **Send login data to this domain** field; again, as a regular expression.

Return to the browser and use the selection tool to select the "Submit" button. The code now shows the address to which the data are sent:

```

    <td valign="top">
      <div align="center">
        <div class="thinblueborder">
          <form name="form1" method="post" action="process_login.php">
            <table border="0" align="center" width="500">
              <tbody>
                <tr></tr>
                <tr></tr>
                <tr></tr>
                <tr>
                  <td class="style7"></td>
                  <td class="style7">
                    <label>
                      <input name="Submit" value="Submit" type="submit">
                    </label>
                  </td>
                </tr>
              </tbody>
            </table>
          </form>
        </div>
      </div>
    </td>
  </tr>
</tbody>
</table>
  
```

In our example, the only value for the **action** attribute is **process_login.php**, which means the data will be passed to the root server. No modification is needed here. If a specific URL with a non-matching server/domain name is shown here, enter that server/domain name in the **Send login data to this domain** field.

15. Click on **OK** to save your settings in the e-script properties. Then click on **Save** in the ribbon of the Script Editor to save the entire e-script. From that point on, an AJAX login will be performed for this e-journal.

To test your e-script, click on **Test** in the ribbon of the Script Editor.

Conditional Scripts

The main purpose of the e-scripts created in the previous examples was performing an immediate login. When such an e-script is called, the user is logged in on the content provider's web server. This solution is ideal for accessing on-line resources that require user login. Such resources can include on-line databases, archives, and others. For websites that offer both freely accessible and password-protected resources, however, you need e-scripts that perform login only when a protected area is accessed. Such sites might include on-line magazines that provide free access to abstracts, but require user login before full articles can be read. With HAN you can create e-scripts that perform login only when a specified URL is encountered. This is done using **conditional scripts**, which supplement main scripts. To create a conditional script, begin by creating an e-script that performs login to access the password-protected area. For details on creating an e-script using manual script recording, see "[Creating E-Scripts Using Manual Script Recording](#)". A conditional script executes only when a certain condition is met; e.g., when a specified URL is called. The login is made a part of the conditional script. The following example shows how to define the condition for login in the main script, and then use this to create a conditional script. The last part of the example shows how to define flexible parameters for the conditional script. Creating a conditional script requires the following steps:

1. [Recording](#)
2. [Creating a conditional script](#)
3. [Define flexible parameters for the specified condition](#)
4. [Optimizing and testing the script](#)

See "[Define flexible parameters for the URL](#)" below for details on defining flexible parameters for a condition that has a value in the URL.

This example uses the H+H HAN test site to illustrate the procedure:

Recording:

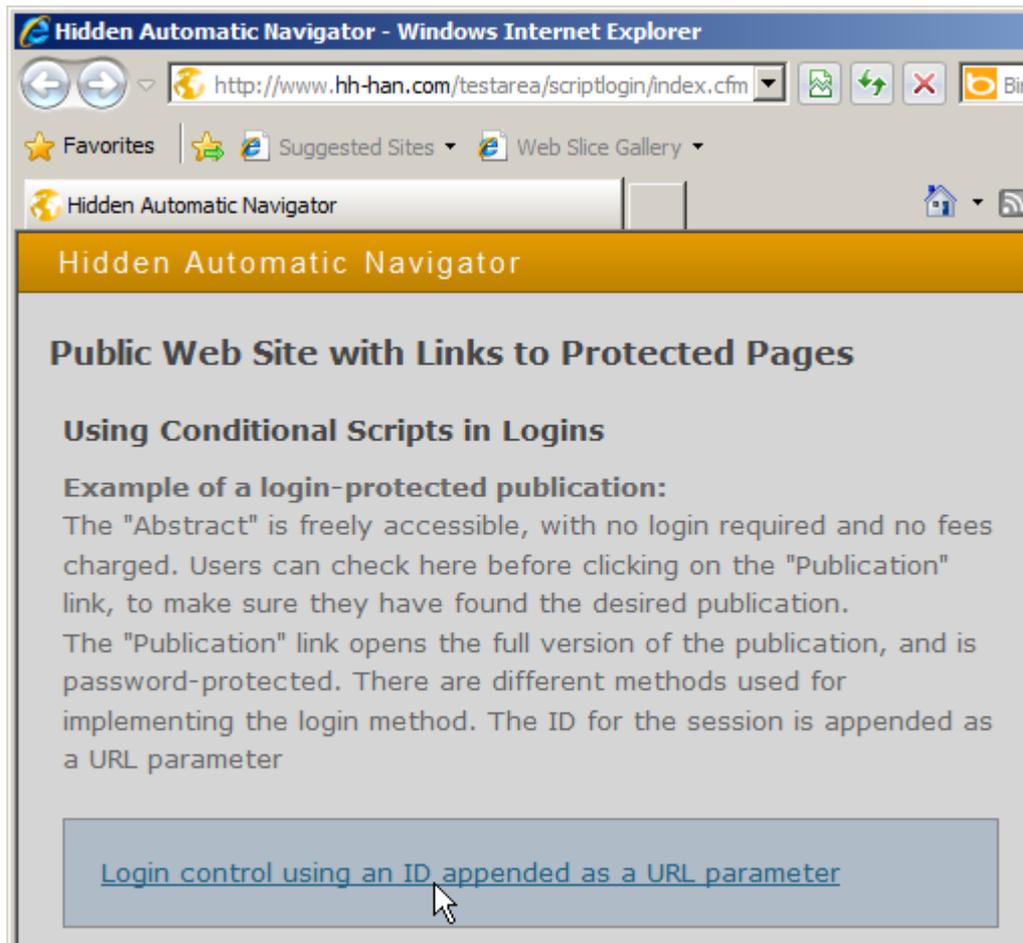
1. Create an e-script with `http://www.hh-han.com/testarea/scriptlogin/index.cfm?lg=0` as the starting URL and select **then begin recording in the Script Editor** under **Create**:

The screenshot shows a dialog box titled "HAN" with a close button (X) in the top right corner. The dialog contains the following information:

- Title:** Conditional Script
- Root URL:** http://www.hh-han.com/testarea/scriptlogin/index.cfm?lg=0
- HAN ID:** conditional-script
- Create:** then begin recording in the Script Editor (selected from a dropdown menu)

At the bottom right of the dialog, there are two buttons: "OK" and "Cancel". A mouse cursor is pointing at the "OK" button.

2. Click on the **Login control using an ID appended as URL parameter** link:



This open a page with excerpts and publications.

3. For each title, a freely accessible abstract and a password-protected full publication are listed. Click on one of the **Publication** links and perform the login:



Once this is accomplished, the HAN test site reports successful login.

4. Click on **Close** in the recording window to stop the recording function. The script recorded is now shown in the Script Editor.

5. Click on **Save** in the ribbon to save the results. At this point, the script is functional but has two disadvantages: First, it will always perform the login, and second, the target page is always the same publication. To have the login performed only when it is required, we now create a conditional script that prompts a login only when login is required.

Creating a conditional script:

1. Determine which URL represents the condition for login. In the current example, the login prompt opened when you clicked on the **Publication** link. In our example from the HAN test site, the URL in question passes a parameter with the value **pub** to the web server. Furthermore, this URL contains an identifier for the requested publication ("id=57889"):

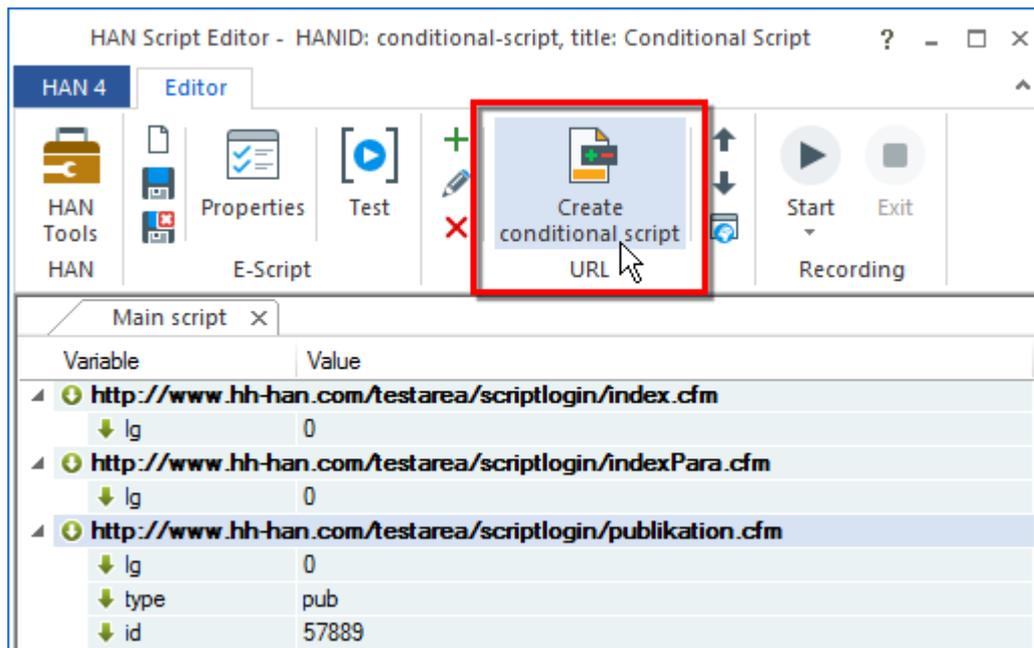


As a rule, the last URL shown before the login (which usually uses the POST method) contains the condition to be used in your conditional script.

The screenshot shows the HAN Script Editor window with the following ribbon options: HAN Tools, HAN, Properties, E-Script, Test, Create conditional script, URL, Start, and Exit. The main script area displays a list of URLs and their associated variables:

Variable	Value
Main script x	
http://www.hh-han.com/testarea/scriptlogin/index.cfm	
lg	0
http://www.hh-han.com/testarea/scriptlogin/indexPara.cfm	
lg	0
http://www.hh-han.com/testarea/scriptlogin/publikation.cfm	
lg	0
type	pub
id	57889
http://www.hh-han.com/testarea/scriptlogin/publikation.cfm	
lg	0
type	pub
id	57889
name	han
pword	han
submit	Login

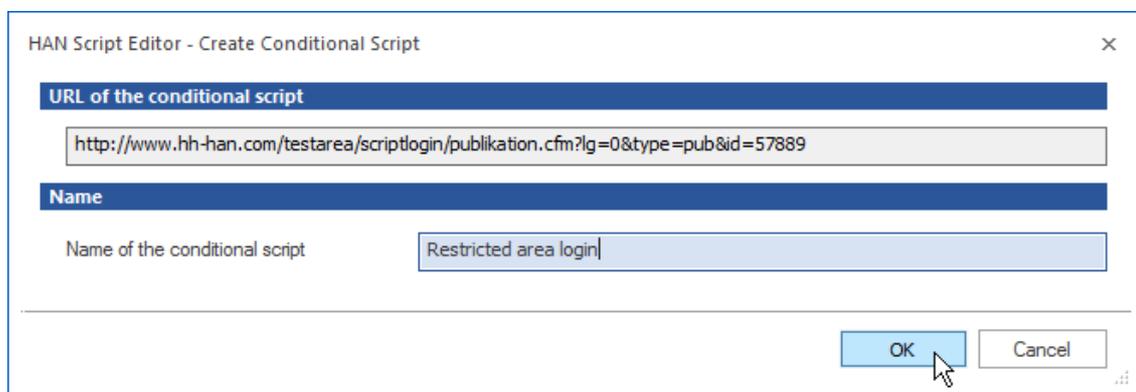
2. To create a conditional script, select the URL which is the condition and click on **Create conditional script** in the ribbon:



3. In the **Create Conditional Script** dialog, enter a descriptive name in the **Name of the conditional script** field:



Use a name that indicates the purpose of the script, such as "Restricted area login".



4. Click on **OK** to confirm your input. HAN modifies the existing script and moves the condition, and all URLs that follow it, to the subscript:



The Script Editor highlights the condition in yellow for easy recognition.

Main script		Conditional script: Restricted area login X	
Variable		Value	
▲	Ⓞ	http://www.hh-han.com/testarea/scriptlogin/publikation.cfm	
	↓	lg	0
	↓	type	pub
	↓	id	57889
▲	Ⓞ	http://www.hh-han.com/testarea/scriptlogin/publikation.cfm	
	↓	lg	0
	↓	type	pub
	↓	id	57889
▲	Ⓞ	http://www.hh-han.com/testarea/scriptlogin/publikation.cfm	
	↑	lg	0
	↑	type	pub
	↑	id	57889
	↑	name	han
	↑	pword	han
	↑	submit	Login

The script will now prompt a login only when the login is required, but the problem that it always opens the same publication remains. To solve this problem, the condition must be made flexible so that calling any publication will match the condition, and the requested publication will be opened.

Define flexible parameters for the specified condition:

Select the `id` parameter in the condition, right-click to open the shortcut menu and select **Flexible condition**. The value for the `id` is replaced by the `*` wildcard, and all instances of the `id` parameter in the subscript are given values that reference the `id` parameter in the condition; in this example, `_HANURL_id`:

Main script		Conditional script: Restricted area login X	
Variable		Value	
▲	Ⓞ	http://www.hh-han.com/testarea/scriptlogin/publikation.cfm	
	↓	lg	0
	↓	type	pub
	↓	id	*
▲	Ⓞ	http://www.hh-han.com/testarea/scriptlogin/publikation.cfm	
	↓	lg	0
	↓	type	pub
	↓	id	_HANURL_id
▲	Ⓞ	http://www.hh-han.com/testarea/scriptlogin/publikation.cfm	
	↑	lg	0
	↑	type	pub
	↑	id	_HANURL_id
	↑	name	han
	↑	pword	han
	↑	submit	Login

The next step is to make the login parameters in the conditional script flexible, in the same manner as it was done in previous examples for modifying the main script. For details on how to make login parameters flexible, see "[Using Flexible URL Parameters](#)".

Optimizing and testing the script:

The last step is to check whether the calls in the main script still work properly and to test the script by clicking on **Test** in the ribbon. Be sure to save the script at this point, if you have not already done so.

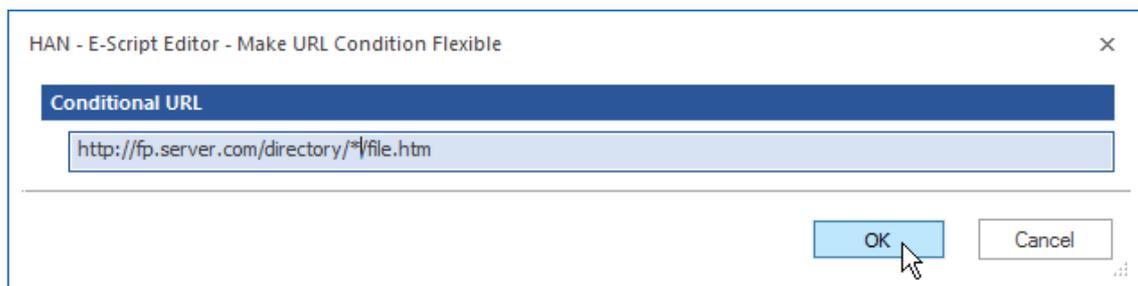


You can begin recording again in the main script; this will not affect existing subscribers.

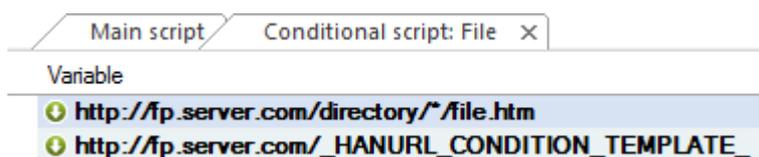
In our example, the test is successful: the main script is functional, and a login is prompted only when a full publication is requested.

Defining flexible parameters for the URL in the condition:

1. If the URL of the condition contains a value that needs to be made flexible, right-click on it to open the shortcut menu and select **Flexible condition**.
2. In the "Make URL Condition Flexible" dialog, replace the value with the "*" wildcard:



3. Click on **OK** to confirm. The condition is now flexible. HAN also automatically makes the script flexible as well:



Frames

Web page structures can vary widely. In addition to the use of tables or containers, the use of frames is widespread.



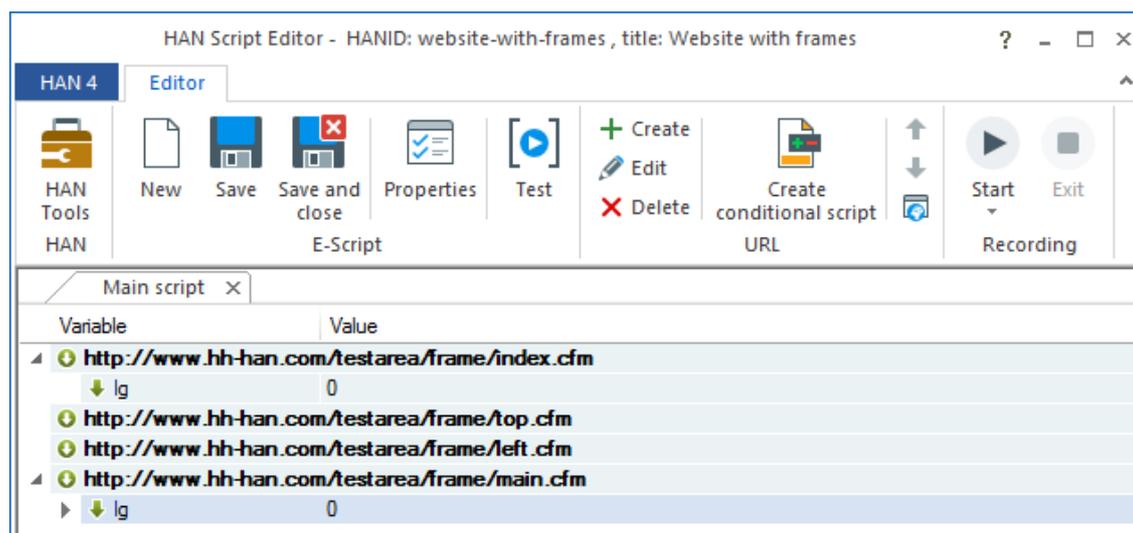
A frame-based page is actually a number of web pages displayed together, as each frame is a web page in itself. A definition file, called a frameset, controls how the frames are displayed on the page that is called.

When using HAN, it is important to make sure that the last URL in the e-script contains the definition file for the frameset. If the last URL points to a page that is a single frame in the set, then the user will see only that frame when the e-script is called. The H+H HAN test site (<http://www.hh-han.com/testinghan>) has a frame-based page you can use to see this mechanism in action:

1. Create an e-script with `http://www.hh-han.com/testarea/frame/index.cfm?lg=0` as the starting URL, and select **then begin recording in the Script Editor** in the **Create** field to start the script recording program automatically:

A screenshot of a dialog box titled "HAN" with a close button (X) in the top right corner. The dialog box has a blue header bar that says "Information for creating a new e-script". Below the header, there are four input fields: "Title" with the text "Website with frames", "Root URL" with the text "http://www.hh-han.com/testarea/frame/index.cfm?lg=0", "HAN ID" with the text "website-with-frames", and "Create" with a dropdown menu showing "then begin recording in the Script Editor". At the bottom right of the dialog box, there are two buttons: "OK" and "Cancel". A mouse cursor is pointing at the "OK" button.

2. When the frame-based page is opened, click on **Exit** to stop the recording function. The Script Editor shows the following script:



When you run this script, only the last frame (`main.cfm`) is opened.

3. To open the entire frameset using HAN, delete all URLs except the frameset definition file (in this example, `index.cfm`):

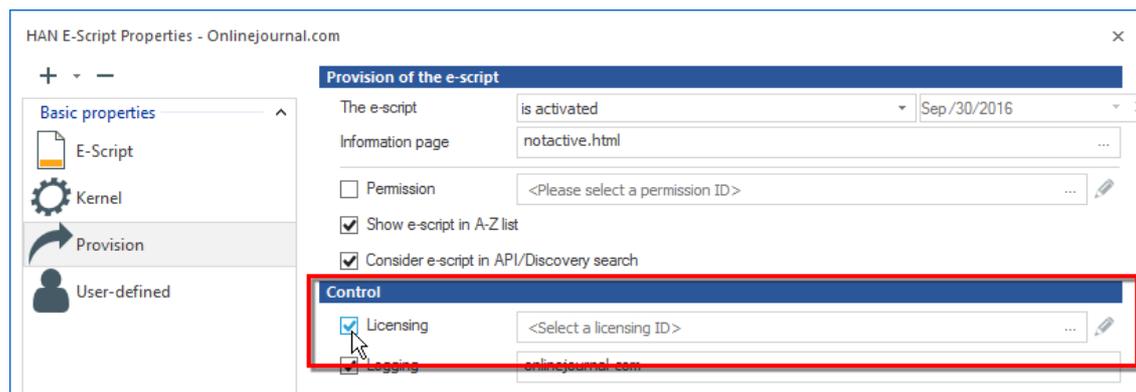


When you test the script, it now opens the complete web page.

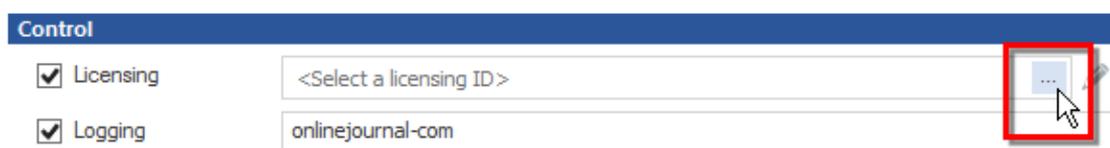
Allocating Licenses

You can configure HAN to restrict parallel usage of online resources. For example, you could enter the number of licenses purchased for a particular e-journal as the maximum parallel instances permitted in your system:

1. In E-Script Administration, double-click on an e-script to open the e-script properties.
2. In the e-script properties, select the **Control** page.
3. Tick the box next to **Activate licensing**. Licensing is now active for the selected e-script:



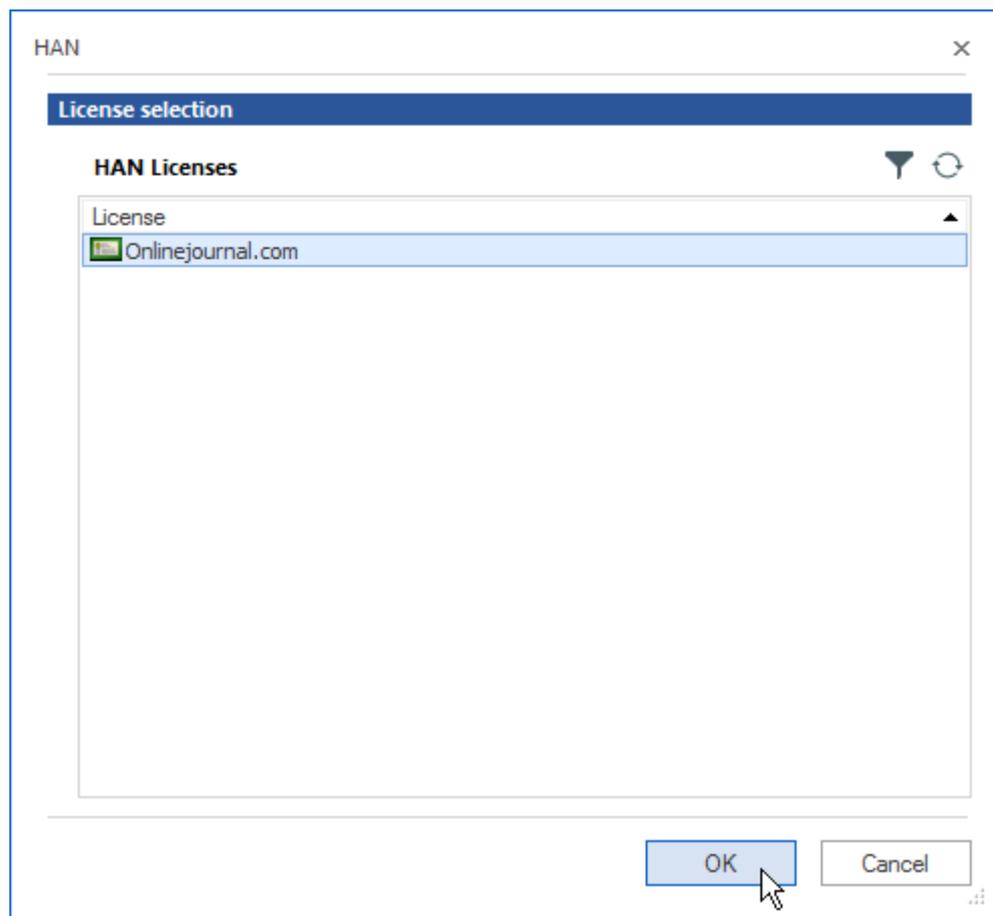
4. Click on the **Select** button next to the input field to select a license:



5. In the **License selection** dialog, select a license:



Licenses are created in the Data Editor. For details on creating licenses, see "[Managing HAN Resources/Data Editor/Licenses](#)".



6. Click on **OK** to confirm. The license is assigned to the e-script:



The new setting is effective immediately. The HAN License Monitor shows the number of licenses in use. Open the HAN License Monitor from the Windows Start menu by selecting **All Programs/H+H HAN/HAN License Monitor**. For more information on working with the License Monitor, see "[License Monitor](#)".

Managing HAN Resources

This chapter describes the optimum methods for managing your HAN e-scripts. E-script management tasks are implemented in the E-Script Administration program. For details on working with the E-Script Administration program, see "[Providing Online Resources with HAN/E-Script Administration](#)". The chapters linked below provide details on managing your e-scripts:

- "[E-Scripts](#)" describes the general functions of e-scripts and how to work with them in the E-Script Administration program. This chapter provides details on all e-script properties, and explains how to import and export e-scripts.
- "[Data Editor](#)" describes how to use the Data Editor for editing certain properties which are then assigned to e-scripts. These can include, for example, licenses, permissions and subjects. In addition, you can manage queries in the Data Editor.
- "[Using Queries](#)" describes how to work with HAN database queries to organize your e-scripts, and how to group them so you can assign common properties.
- "[A to Z List](#)" provides details on the functions of the A to Z List, which lists all of your e-scripts alphabetically.

E-Scripts



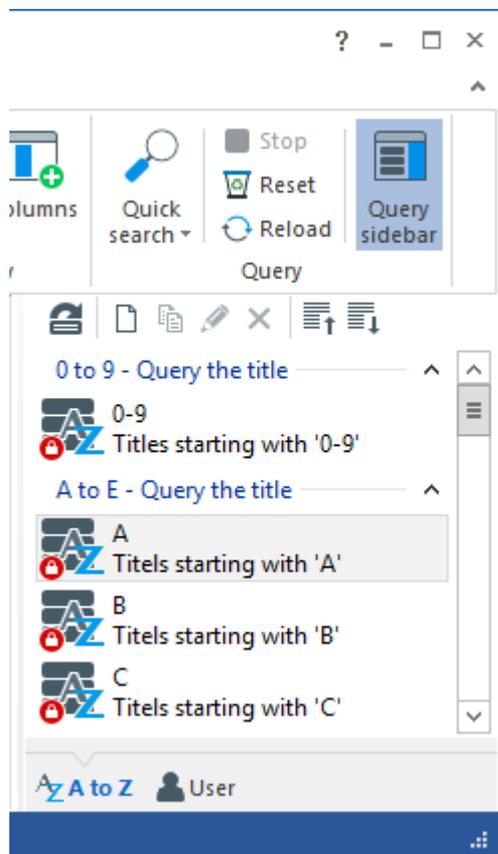
A HAN e-script is a script that calls an online resource via the HAN server. Each e-script can have different properties. The central element of the e-script is a script. This is what initiates the call of the online resource and defines what happens when the resource is called. This script can include an automatic login on the origin server, for example, or can navigate the user to a particular HTML page. E-scripts can also have a number of additional properties, such as licenses and permissions, which you can edit.

For details on creating e-scripts, see "[Providing Online Resources with HAN/Creating E-Scripts](#)". E-scripts are managed in E-Script Administration. For details on working with the E-Script Administration program, see "[Providing Online Resources with HAN/E-Script Administration](#)". The E-Script Administration program shows all of the existing e-scripts in your HAN system in the E-Script Selection pane:

HAN ID	Title
1006	ACM Transactions on Design Automation of Electronic Systems (TODAES)
10106	Attention, Perception, & Psychophysics (Formerly: Perception & Psychophysics) (2001)
1018	Applied Surface Science
10224	Advances in Biochemical Engineering, Biotechnology
10299	Annali di Matematica Pura ed Applicata (4. Ser.)
10313	American Mineralogist
10385	Astrobiology
1045	Annals of Tropical Medicine and Parasitology

There is a filter bar along the top of the E-Script Selection pane, which you can use to search for specific e-scripts. To activate the filter bar click on the **Filter** button in the Ribbon.

This E-Script Administration program also has a pane for queries. To open this pane, click on the **Query sidebar** button in the Ribbon:



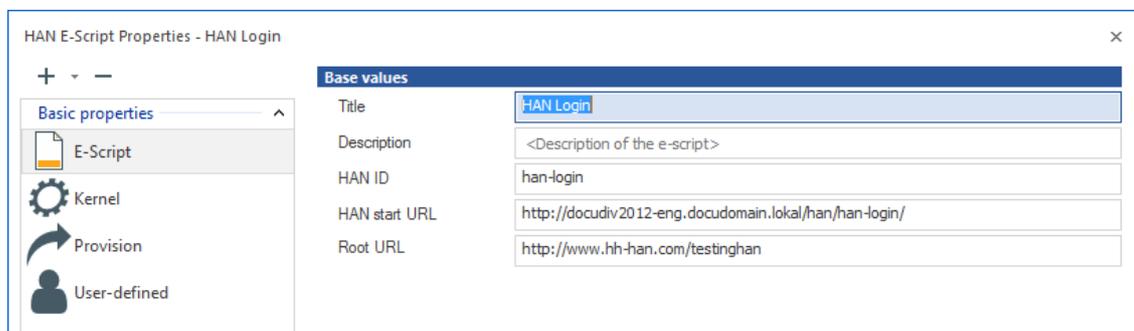
In queries, you can specify certain data elements to search for among the e-scripts in your HAN database. Queries are fixed HAN objects. You can use them at any time to access the e-scripts that match the criteria you have selected. At the same time queries are dynamic objects, in the sense that whenever you create a new e-script, it is automatically added to the results shown for any query that it matches. For details on working with queries, see "[Managing Queries](#)".

E-scripts have properties which you can edit either singly, for each e-script individually, or for multiple e-scripts at one time. Double-click on an e-script to open a dialog for editing its properties. For information on the properties of e-scripts and details on editing the properties of multiple e-scripts simultaneously, see "[E-Script Properties](#)".

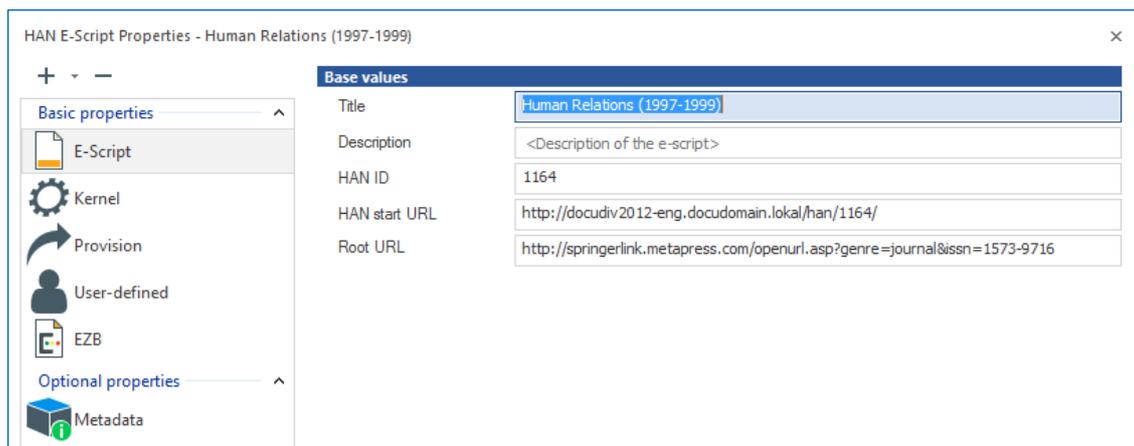
For details on creating e-scripts, see the user manual ("[Providing Online Resources with HAN/Creating E-Scripts](#)").

E-Script Properties

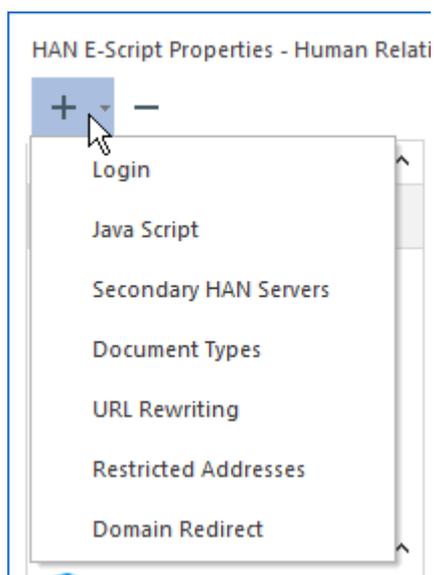
Each e-script has configurable properties. These are, firstly, its basic properties. Open the e-scripts properties (by double-clicking on the e-script), the basic properties are shown under **Basic properties**:



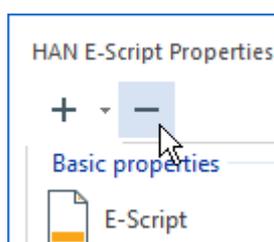
Secondly, e-scripts can also have additional properties. These may vary depending on the e-script. The e-scripts properties for additional properties under **Optional properties** show only the pages that contain properties of the e-script:



To add additional property pages, e.g., because the e-script needs further additional properties, click the **Add Property** button above the selection bar (+):



To remove unneeded property pages, click the **Delete property** button above the selection bar (-):



An e-script has the following properties (edited on the following dialog pages):



If you select multiple e-scripts, the cumulative properties are displayed. In this case, not all dialog pages will be available, and the pages available may have fewer options available than are shown in these instructions. For details on the display of cumulative properties, see "[Selecting multiple e-scripts: Cumulative e-script properties](#)".

- General properties ([Global](#))
- Properties of the HAN kernel ([Kernel](#))
- Options for providing e-scripts ([Provision](#))
- User-defined object properties ([User-defined](#))
- Configuring EZB access; optional ([EZB](#))
- Managing login data ([Login](#))
- Defining document types ([Document Types](#))
- Configuration of domain forwarding ([Domain Redirect](#))
- Defining restricted (HAN 3 kernel) and permitted (HAN 2 kernel) addresses ([Restricted Addresses](#))
- Custom Java scripts for AJAX login ([Java Script](#))
- Details on source, publisher, ISSN, etc. ([Meta-Information](#))
- Sharing the secondary HAN server e-script ([Secondary HAN Servers](#))

- Defining search and replace expressions for adapting web pages ([URL Rewriting](#))

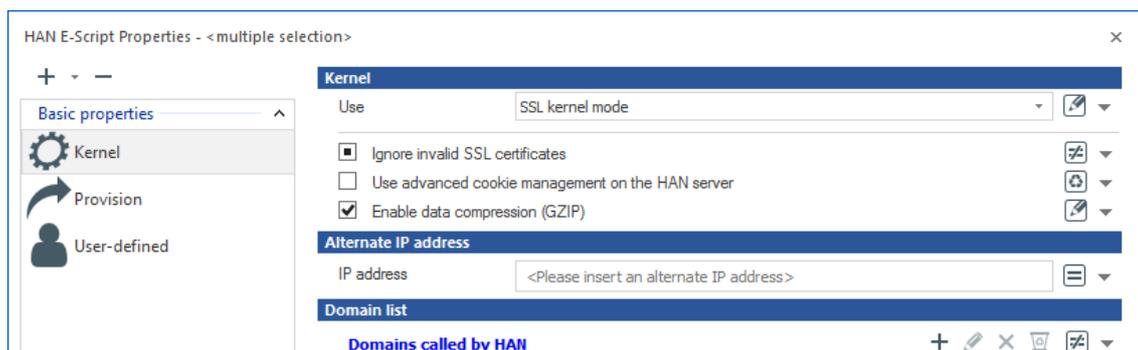
To open the properties of an e-script, select the e-script and click on **Properties** in the Ribbon, or right-click on it and select **E-script properties** from the popup menu.

Selecting multiple e-scripts: Cumulative e-script properties

When you select multiple e-scripts, you can view and edit their cumulative properties. In this case only those properties are shown which are meaningful for multiple e-scripts. The following property pages are not shown:

- E-Script
- Login
- Java Script
- Secondary HAN Servers
- URL Rewriting
- Restricted Addresses

All other pages are shown as usual, except that the properties shown apply to all selected e-scripts. Properties that are meaningful only for individual e-scripts are not shown. The purpose of opening cumulative properties of multiple e-scripts is to have the ability to define common properties for the selected e-scripts all at once. This is implemented as follows in the program interface:



In the title, **<multiple selection>** indicates that you are editing the properties of multiple e-scripts. If you change a property, it will be changed for all e-scripts. The graphic to the right of the properties shows the action that will be executed the next time you save:

- Equal.** The property is the same in all selected e-scripts.
- Different.** One or more e-scripts have different properties.
- Edited.** The property has been edited and will be set the next time it is saved.
- Reset.** The property has been reset to defaults.

Basically, you change cumulative e-script properties in three ways:

- To set a cumulative property: Change a property by typing a value into an input field or by enabling or disabling a check box. If you have changed a property, the icon behind the property is set to **Edited**. Edited properties are saved when you by clicking **OK** or **Apply**.
- Discard changes: click the arrow icon behind the property, and choose **Discard Changes** from the menu. The previous value is then returned to the property.

- **Reset Values:** Resets the property to your default value. This is not the previous value, but the value of the property immediately after installation! To reset a value to the default value, click the arrow icon behind the property and select from the menu **Reset value**.

Control boxes know three cumulative properties instead of two states:

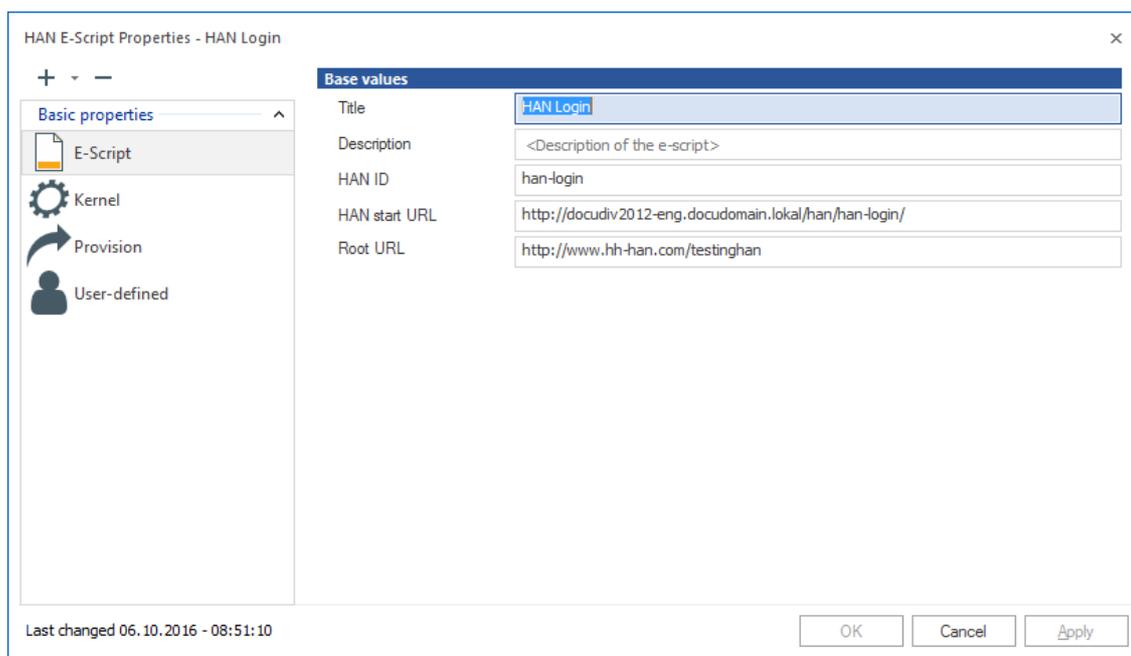
- Set for all selected e-scripts.
- Not set for all selected e-scripts.
- Set for some of the marked e-scripts.

You can see at first sight the cumulative status of the property.

In the cumulative properties, you set properties the same as in the e-scripts properties of a single script: By clicking **OK** and **Apply** save the changes, **Cancel** discards any changes. To assign common properties, see also the chapter "[Using Queries/Allocating Properties](#)".

E-Script

On this page, you can store general information about an e-script:



The following information is specified when you create the e-script and cannot be edited directly: HAN ID, HAN starting URL and root URL.

Title. Title of the HAN e-script.

Description. Description of the e-script. Enter a meaningful description.

HAN ID. The HAN ID is the URL-compliant name of the e-script. If the e-script name contains any characters that are not allowed in URLs (such as umlauts or other special characters), these are automatically deleted when the HAN ID is generated.

HAN start URL. Starting URL in the e-script; the URL that is opened first.

Root URL. Shows the URL with which the e-script was created.

Kernel

On this page, you can define the following properties of the HAN kernel:

Use. The HAN kernel to be used for the e-script. This setting overwrites global defaults. Which HAN functions are supported for an e-script depends to a certain extent on which kernel it uses.

WebSocket mode. Defines the WebSocket working mode:

- **Unchanged (default).** Documents are transmitted unchanged.
- **Parse text only.** HAN only parses the text (body) of transmitted documents.
- **Parse text and header.** HAN parses the document header and body.

Ignore invalid SSL certificates. Defines whether an e-journal web page is opened if the site is using an invalid SSL certificate.

Use advanced cookie management on the HAN server. The HAN SSL mode stores cookies; these are transferred to the HAN server.

Enable data compression (GZIP). With the default settings, HAN uses GZIP for compression of the HTML body. If this leads to any difficulty calling an e-script, you can deactivate data compression for the e-script here.

IP address. Defines an alternative IP address for the HAN server used by the e-script. With the default settings, HAN uses the IP address of the HAN server in communication with providers of online resources. In some cases, however, you might wish to use a different IP address for communication with certain providers. HAN will use only the IP address entered on this page for communication with the origin server whenever this e-script is called. One example of when an alternative IP address may be useful is if you wish to enable IP-based access for clients from computers outside the permitted IP range.



The alternative address you specify must be a real IP address; in other words, it must be both bound to the network card in the HAN server and defined in the router and the DNS. Contact your network administrator if you wish to use an alternative IP address in HAN.

Primary HAN Server. Enables e-script access over a primary HAN server (HAN over HAN). In the **HAN server** input field, enter the FDQN of the primary HAN server. In the **E-script** field, enter the HAN ID of the e-script on the primary HAN server.

Domains called by HAN. Specifies the domains which the e-script is permitted to call. The list shows the domains that the e-script calls (for example, heise.com, ebsohost.com, etc.). The box to the left of the entries in this list lets you activate or deactivate the domain for use in HAN.



This function is available only when using the DNS kernel mode.

Provision

This page defines options for the permission of e-scripts via the different HAN mechanisms and allows the allocation of authorizations and licenses as well as the data logging:

The e-script. Defines whether and how the e-script is restricted:

- **is deactivated.** The e-script is deactivated and cannot be used. If an e-script is deactivated, an information page opens when the e-script is called.
- **is activated.** The e-script is available for use.
- **is temporarily activated until.** The e-script is temporarily active. Select the date on which the e-script will become inactive in the field to the right of this option.
- **calls the URL directly - HAN is not used.** The e-script is opened directly, rather than over the HAN server.

Information page. Defines the HTML page to be displayed if the e-script is deactivated and a user tries to call it. The **Edit** button (pencil) opens the default editor defined in the HAN settings for HTML files so you can edit the HTML page.

Permission. Defines whether access to the e-script is limited. Tick the box to restrict access. Use the **Select** button ("...") to select the desired permission. Click on the **Edit** button to edit the permission.

Show e-script in the A-Z list. The e-script is available through the A-to-Z list.

Show e-script in the API/Discovery search. The e-script is available through the web API or Discovery Services.

Licensing. Tick the box to activate licensing for this e-script. In the input field, enter a license ID or click on the **Select** button to select an existing one. For details on assigning licenses to online resources, see "[Providing Online Resources with HAN/Allocate Licenses](#)". Licenses are edited in the Data Editor, on the **Licenses** page. For more about the editing options, see "[Data Editor/Licenses](#)".

Data logging. Tick the box to activate data logging. Enter a record ID in the input field. The record ID is the name under which data on this e-script will be recorded in the HAN database.

User-defined

On this page, you can define your choice of object properties for e-scripts, which can then be used as search arguments in queries and notes regarding the e-script:

Individual properties:

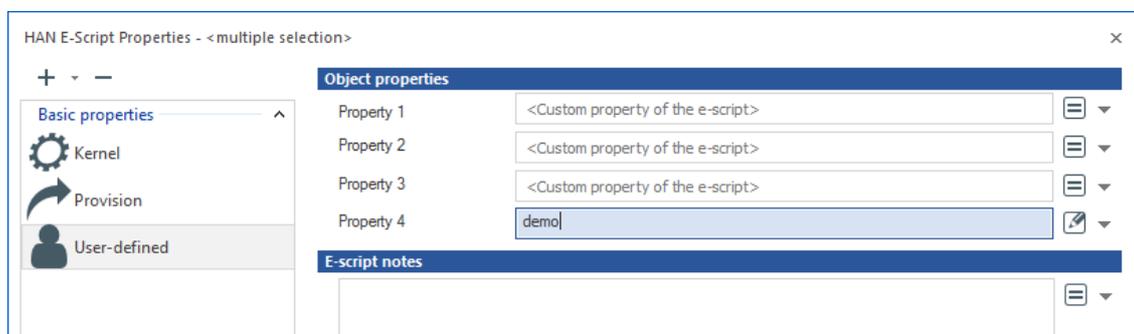
All e-scripts permit up to four user-definable properties. Defining these properties is optional.



When you import from the EZB, the EZB anchor is automatically written as one of these object properties; this is written in a fifth field, however, which is not shown in this window. To view the EZB anchor, open the **EZB** page.

Cumulative properties:

By editing the cumulated object properties, you assign a common property to multiple e-scripts. Just highlight the desired e-scripts and, on the **User-defined Properties** page, enter the new property:



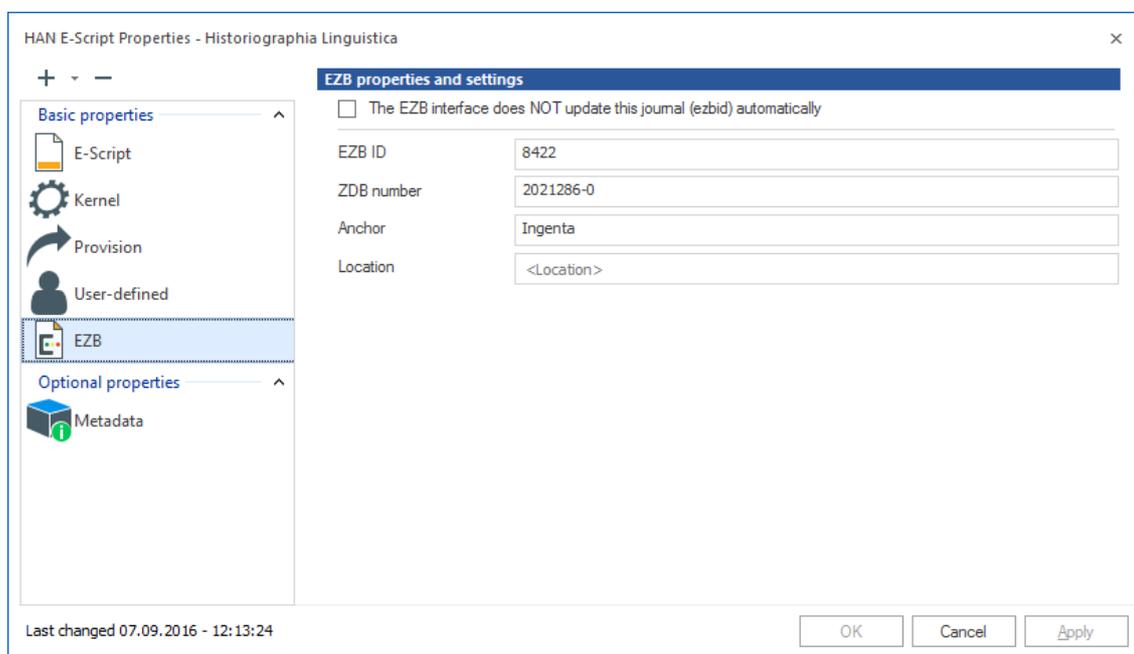
To set a property for all selected e-scripts, click the **Apply** or **OK** button to apply the property and close the e-scripts properties. For more information on how to set cumulative properties, see "[E-script properties](#)".

Notes regarding the e-script:

In the **E-script notes** field, you can store your choice of information regarding the e-script.

EZB

This page shows the EZB data in the e-script, and lets you deactivate the automatic EZB update feature:



This page is shown only if you activated the EZB module and the e-script was imported from the EZB. It contains information on the EZB data record for the e-script.

The **EZB interface does NOT update this journal (ezbid) automatically**. This setting disables automatic updating and collating with EZB data. For details on working with HAN and the EZB, see "[EZB and HAN](#)".



Values for the **EZB ID**, **ZDB number**, **Anchor** and **Location** fields are defined automatically by the EZB import and cannot be changed.

EZB ID. ID of the e-journal in the EZB database.

ZDB number. Number of the e-journal in the "Zeitschriftendatenbank" (ZDB) magazine database.

Anchor. The EZB anchor of the e-script.

Location. Location data.

Metadata

On this page, you can define various meta-properties of an e-script, such as source and publisher. This information is included in the e-script overview and in the A-to-Z list:

Additional e-script properties	
ISSN	<ISSN of the e-script>
E-ISSN	<E-ISSN of the e-script>
Periods	<Validity period of the e-script>
Subject	<Subjects of the e-script> ...
Source	<Sources of the e-script> ...
Publisher	<Publisher of the e-script> ...



You can edit the choice of subjects, sources and publishers in the Data Editor. For details on working with the Data Editor, see "[Providing Online Resources with HAN/E-Script Administration/Data Editor](#)".

ISSN. International standard serial number for collected editions in the e-script.

E-ISSN. Electronic international standard serial number for collected editions in the e-script.

Periods. Periodicity of the e-script.

Subject. Subject of the e-script. The **Select** button ("...") opens a selection dialog.

Source. Source for the e-script. The **Select** button opens a selection dialog. The **Edit** button (pencil) opens a dialog to edit the name and description of the source.

Publisher. Publisher for the e-script. The **Select** button opens a selection dialog. The **Edit** button opens a dialog to edit the name and description of the publisher.

Login

On this page, you can manage the login credentials required by providers of the resources you publish in HAN. HAN supports two login methods:

- HTTP login
- AJAX login

Both login methods are configured on this dialog page:

General login data

Login. Select the login method here: The following options are available:

- **by form login (default).** Login uses a form and is performed via HTTP.
- **by HTTP login (dialog box).** Login uses a dialog and is performed via HTTP.
- **by AJAX.** Login is performed via AJAX.

Login data. Defines how the user's login data is handled:

- **simple user mapping.** The user is simply logged in using the user credentials.
- **assign on session.** The user is assigned to the current session; on (unexpected) connection loss the connection to the session can be re-established.

User. Login name.

Password. Password for login.

Show. Shows the password in plain text.

AJAX login data

This section has three elements for login by AJAX: **User**, **Password** and **Submit**. In each field, you determined the identifier that designates the given element:

GetElementById. The element is addressed by its designated ID.

GetElementByName[0]. The first element detected that has the "Name" identifier is addressed.

GetElementByName[1]. The second element detected that has the "Name" identifier is addressed.

In the given input field, enter the HTML-ID or the name of the field in the HTML login page for which the value will be passed in an AJAX login.

Insert script in the following page (URL). URL of the login page (in regular expressions) from which the values will be passed in a Java script via AJAX login.

Include login script. Adds a login script in accordance with the option selected:

- **with each call.** The login script is inserted every time the e-script is called.
- **once.** The login script is inserted only once when the e-script is called. We recommend using this option, because repeated sending of a general URL expression can have undesirable side effects.

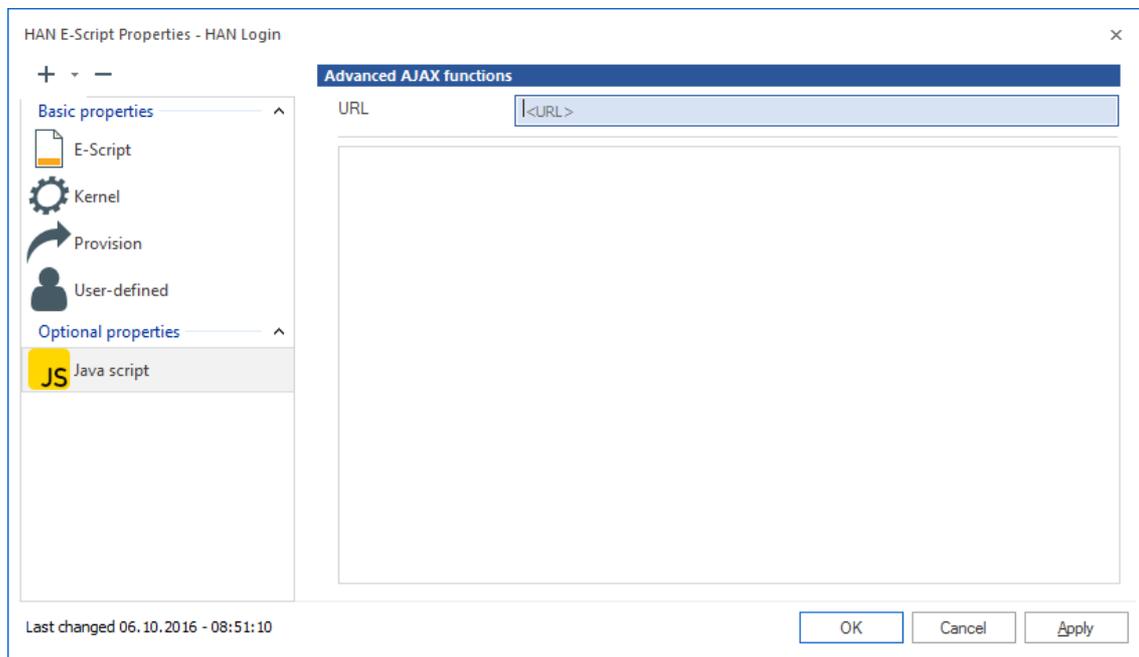
Send login data to this domain. Domain over which the AJAX login is performed. This setting is optional, and has to be set only if a different web server is used for login.

Login script. A user-defined login script, assigned to the e-script.

If you use flexible login credentials, they are managed on these pages. This is also where stored access data can be edited. For details on using flexible access data and on using the login, see "[Providing Online Resources with HAN/Using Flexible URL Parameters](#)". For details on configuring the AJAX login method, see "[AJAX Login](#)".

Java Script

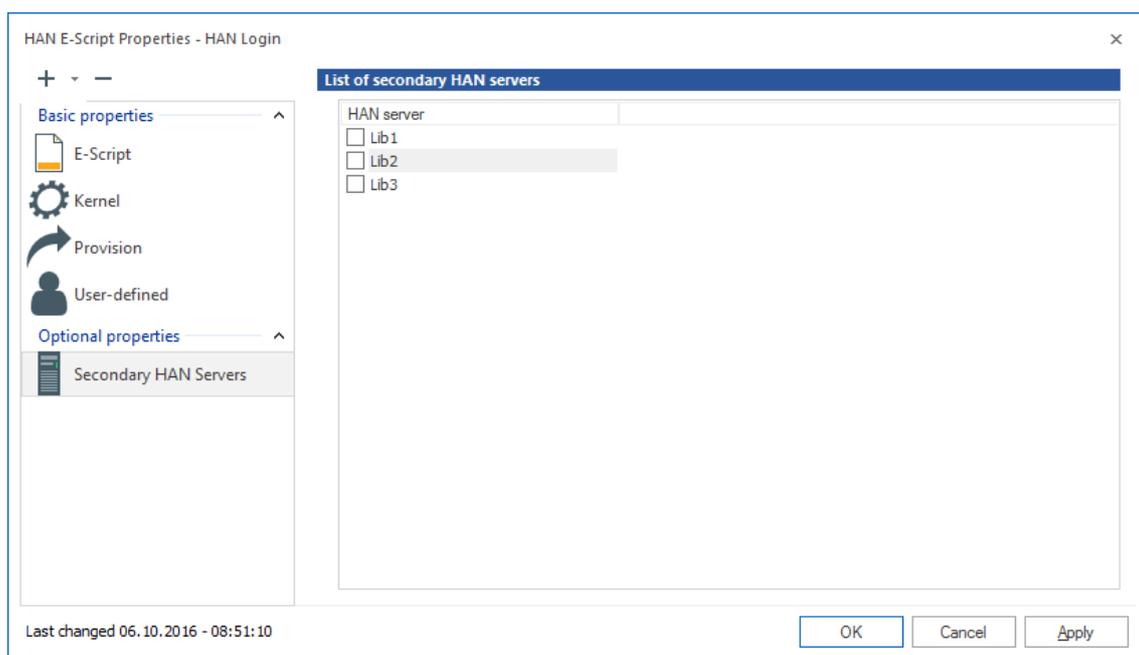
On this page, you create a custom javascript that performs an AJAX login:



Under **URL** enter the login URL. In the input field, enter the Java script.

Secondary HAN Servers

On this page you choose from the list the secondary HAN servers that are available for the selected e-script:



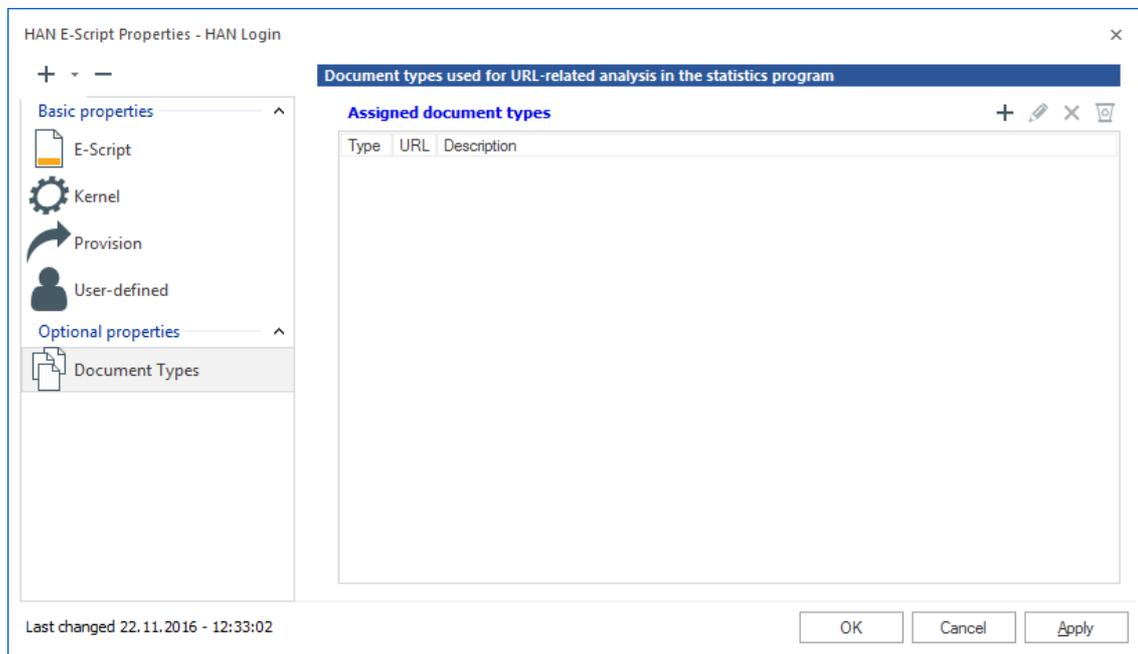
Which HAN servers you can choose from in this list is determined by your configurations in the **Login** section of the HAN Settings, on the [Authentication](#) page.

Document Types

Defining document types in HAN lets you run statistical analyses in accordance with COUNTER standards (Counting Online Usage of NeTworked Electronic Resources). On this e-script property page, you can assign document types to your URL templates:



Document types are only assigned in the e-script properties; to add new document types, use the Data Editor. For details on creating document types in the Data Editor, see "[Data Editor/Document Types](#)".



Use the buttons at the top of this list of document type assignments to edit the list:

New. Opens the window for assigning a type. Specify the URL template and assign one of the existing document types. For details on document type designations, see "[Event Logging and Statistical Analysis/Document Types](#)".

Edit. Lets you edit the selected assignment.

Delete. Delete the selected entry from the list.

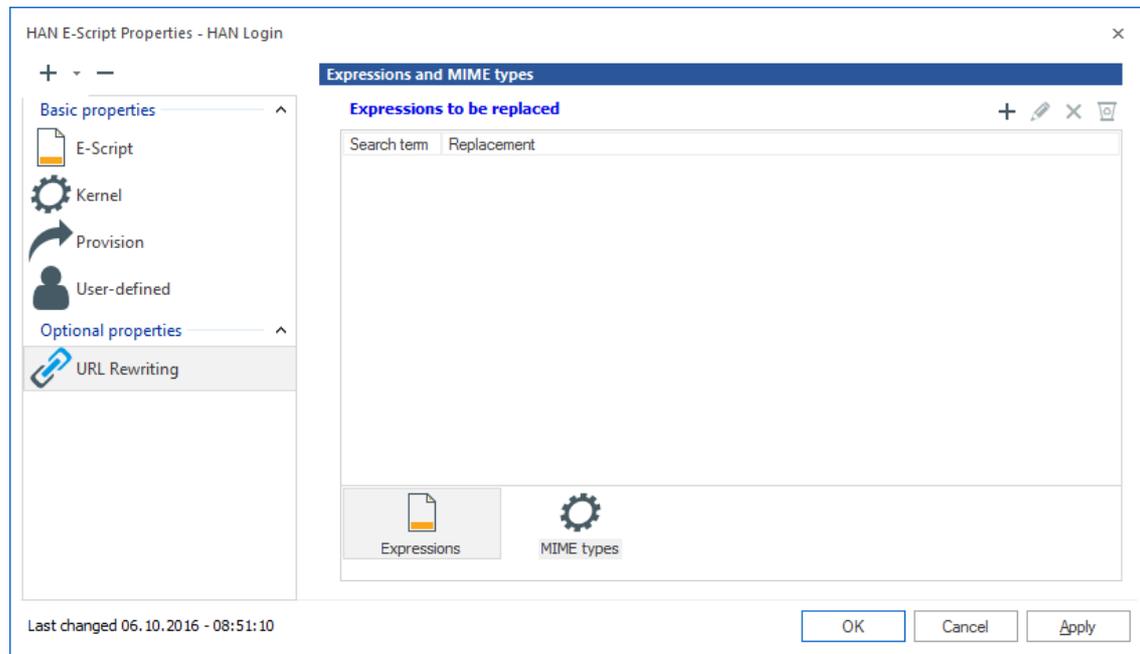
Delete all. Deletes all items from the list.

URL Rewriting

On this page, you can configure substitutions that HAN will make in the addresses of the e-scripts:



URL Rewriting is supported only by the HAN DNS kernel mode (HAN 3).



The URL Rewriting function complements the other mechanisms in HAN for modifying links in HTML source text. It lets you define regular expressions as search and replace expressions for additional changes in the source text of a web page.

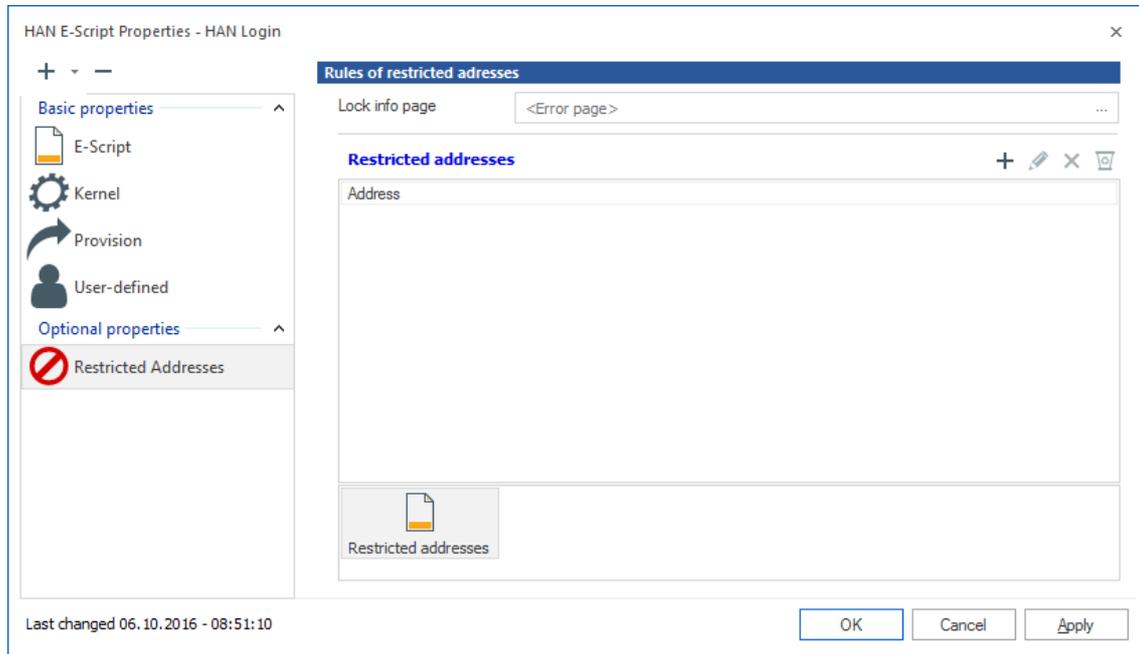


Your input is checked for errors in syntax, but not in content.

In the **Expressions to replace** list, enter the search expression and the replacement. HAN searches only in documents with defined MIME types, such as HTML, Java script, etc. Enter the MIME type in the **MIME type** list. You switch between the lists with the buttons below the list box.

Restricted Addresses

This page defines addresses that cannot be called using an e-script:



Restriction info page. The HTML page entered here informs the user that the page opened by him is blocked.

In the **Restricted addresses** list, enter the addresses to which access will be restricted. Use the buttons at the top of this list to edit the list:

New. Generates a new restricted address.

Edit. Lets you edit the selected restricted address.

Delete. Deletes the selected restricted address.

Delete all. Deletes all restricted addresses from the list. You are prompted to confirm this command before the parameters are deleted.

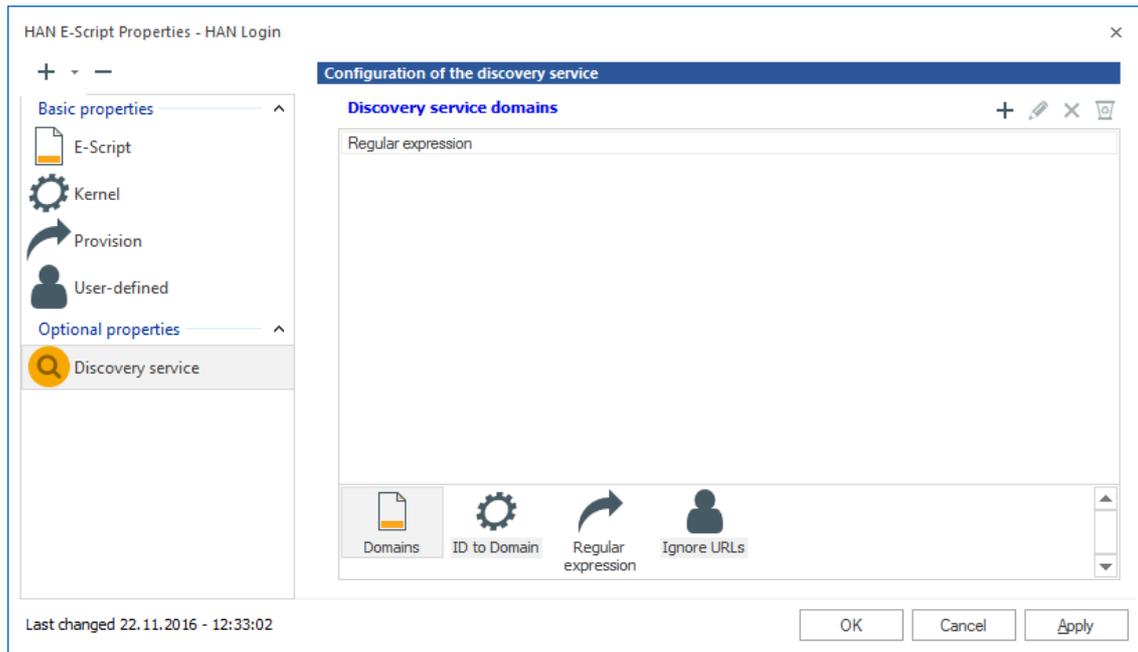
For e-scripts that use the URL kernel mode (HAN 2), the list **Allowed domains** is also available on this page:

Discovery Services

Using HAN as a Discovery Service allows the connection of HAN to meta search engines such as Google Scholar. On this page, you configure the Discovery Service feature of HAN:



Use the HAN Discovery Service feature wisely. No LinkOut check for domains in the **Discovery service domains** list!



The site has the following lists:

Discovery service domains. Contains the domains of the search engine as a regular expression.

ID to domain. Assigns a domain to a HAN ID. The goal is to apply the settings of an existing e-script to the LinkOut to this domain.

Regular expression. Allows further specification of URLs, e.g., with respect to the full-text identifier. The syntax could be, for example, `http\://www\.domain\.com/([^\/*]+)/`. Such a string tells HAN which part of a URL to search for is crucial for the fulltext call.

Ignore URLs. Defines external online resources that are excluded from the search for an appropriate e-script because they are meaningless to the search (e.g., graphic or stylesheet files). The definition is a regular expression.

The page has four buttons to switch between the individual lists:

Domains. Opens the Discovery Service Domains list.

ID to domain. Opens the ID to domain list.

Regular expression. Opens the Regular expression list.

Ignore URLs. Opens the Ignore URL list.

Edit the lists with the buttons above the lists:

New. Creates an entry.

Edit. Edits the selected entry.

Delete. Deletes the selected entry.

Clear all. Deletes all entries in the list.

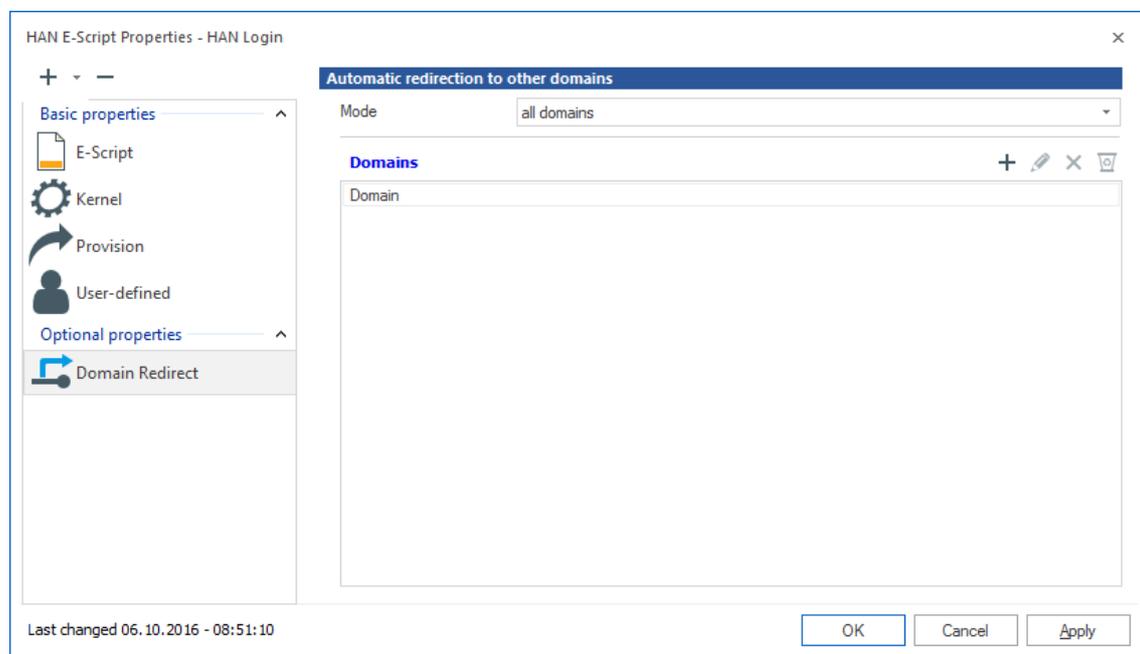
How to configure a Discovery Service is described in the chapter "[HAN as a Discovery Service](#)".



To make sure that the user does not need to authenticate twice, configure the "AuthDS" authentication service. For an example of configuring AuthDS, see the chapter "[HAN Web API/HAN as a Discovery Service](#)". To configure authentication services, see chapter "[Configuration/Authentication services](#)".

Domain Forwarding

Domain forwarding ensures that when a particular e-script is called, it is automatically routed to a specific domain, or certain domains are excluded from forwarding:



Under **Mode**, first select the mode that applies to the domain list:

- **all domains.** Domain forwarding includes all domains.
- **Listed domains.** The domain extension includes only the listed domains.
- **Ignore listed domains.** The listed domains are excluded from forwarding.

Edit the domain list with the buttons above the list:

New. Creates an entry.

Edit. Edits the selected entry.

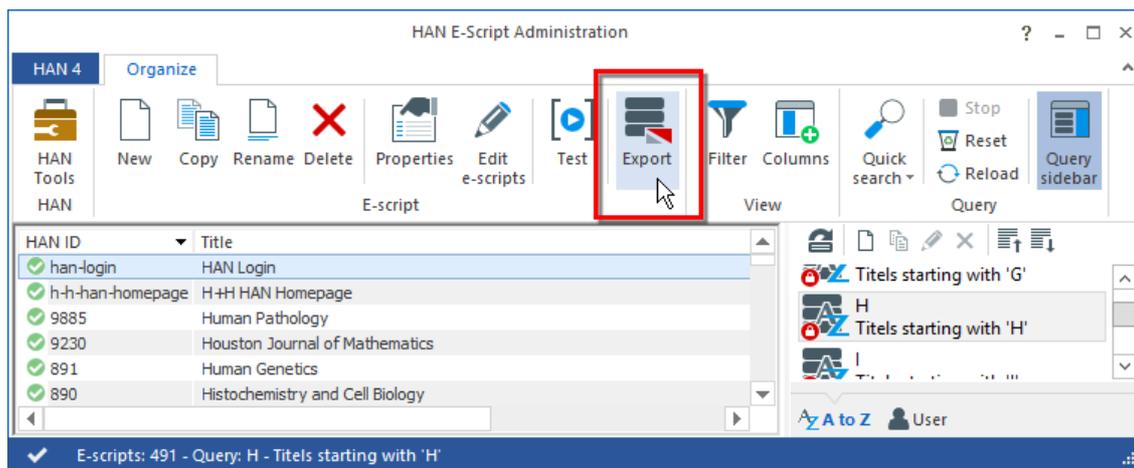
Delete. Deletes the selected entry.

Clear all. Deletes all entries in the list.

Exporting E-Scripts

You can export existing e-scripts at any time in XML format (.hanex) for archiving or exchange. E-script export is handled in the E-Script Administration program:

1. In E-Script Administration, select the e-scripts you wish to export.
2. Click on **Export** in the ribbon:



HAN saves the selected e-scripts in the E-script exchange folder (default: `Documents\HAN\exchange`). The HAN ID is used as the name.



To open the E-script exchange folder at a later point, select **Options/E-script exchange folder** from the Program Menu.

3. At the end of the export operation, you are prompted to open the E-script exchange folder if desired. Be sure to check whether all e-scripts have been exported correctly.

Importing E-Scripts

This chapter describes how to import e-scripts. For details on exporting e-scripts, see "[Exporting E-Scripts](#)". For details on importing e-scripts from the EZB, see "[EZB and HAN](#)".

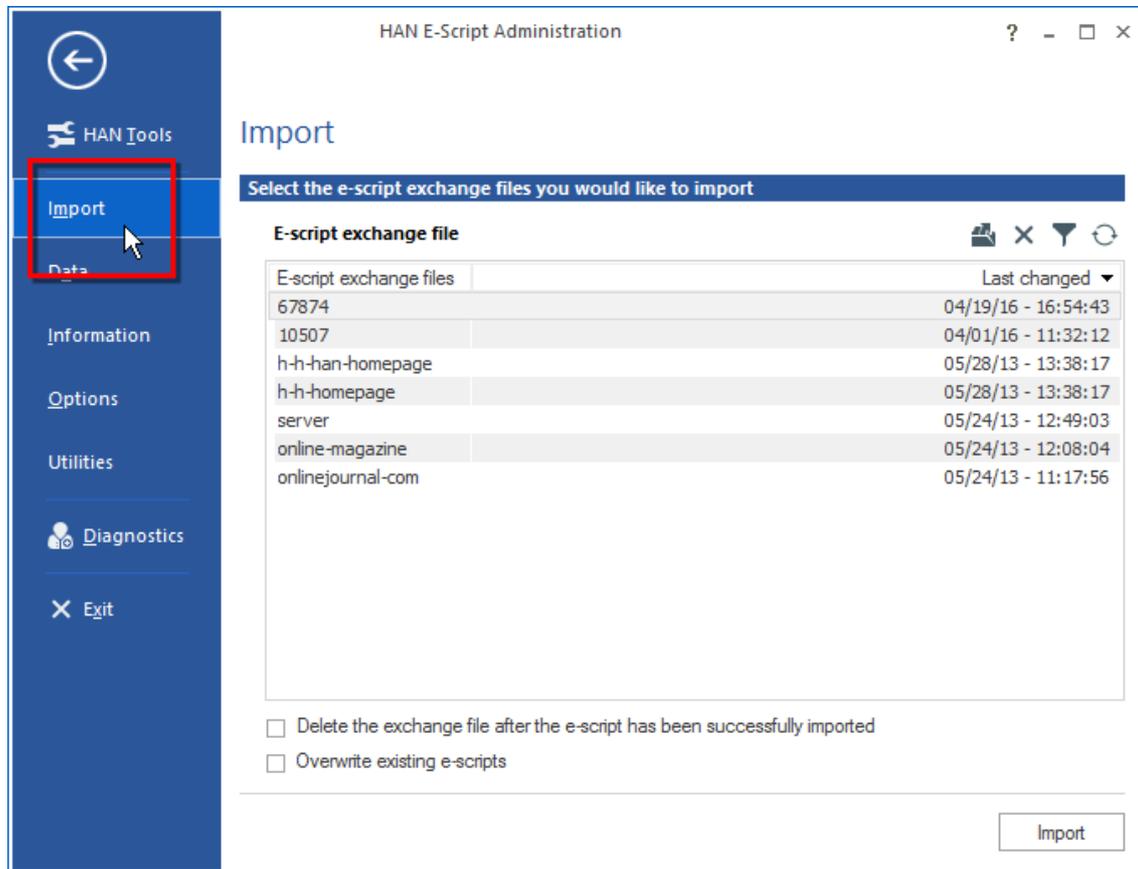
HAN permits e-script import from two sources:

- An e-script exchange file that was exported from HAN (.hanex). This lets you re-import your e-scripts to replace lost data, or to add them to a new HAN installation. For details on importing e-scripts from an exchange file, see "[Importing from an e-script exchange file](#)".
- A CSV file. This enables exchange of HAN e-script data outside of HAN. For details on importing data from a CSV file, see "[Importing from a CSV file](#)".

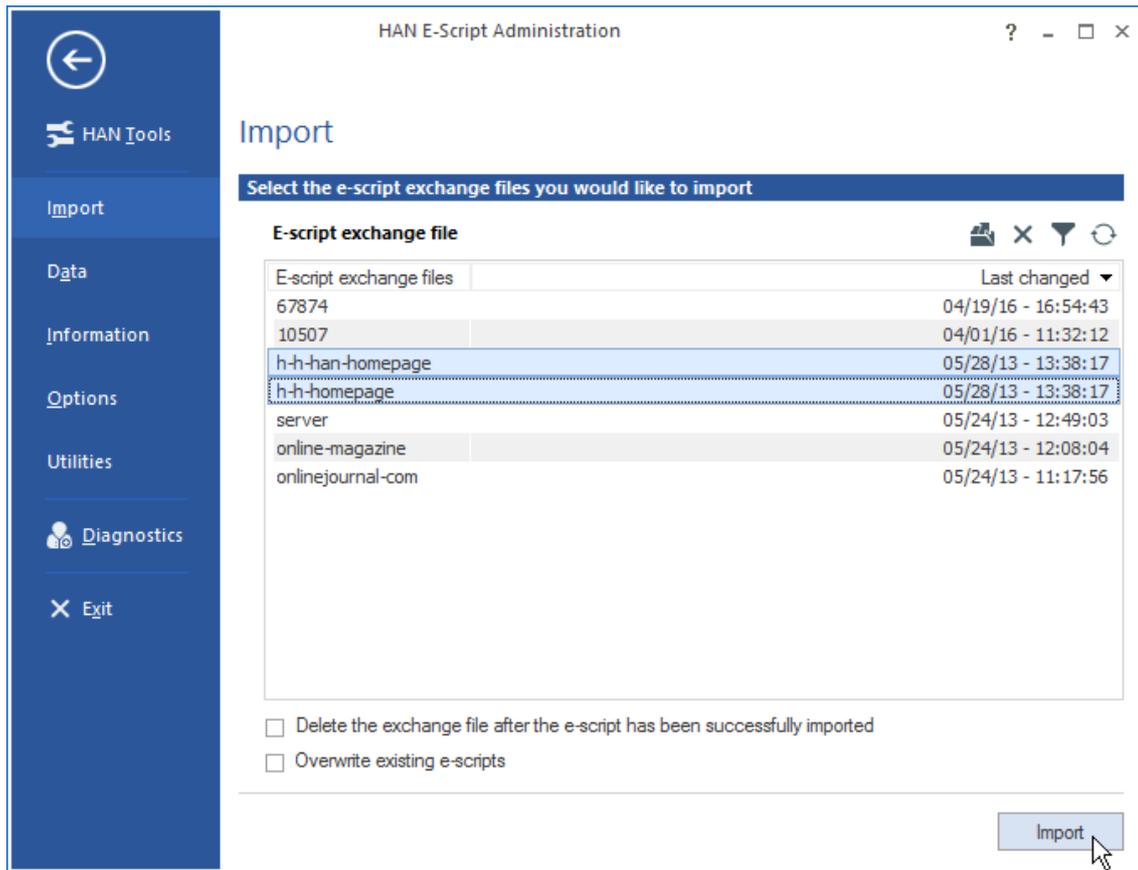
E-scripts are imported in E-Script Administration.

Importing from an e-script exchange file:

1. In E-Script Administration, open the Program Menu and select **Import**:



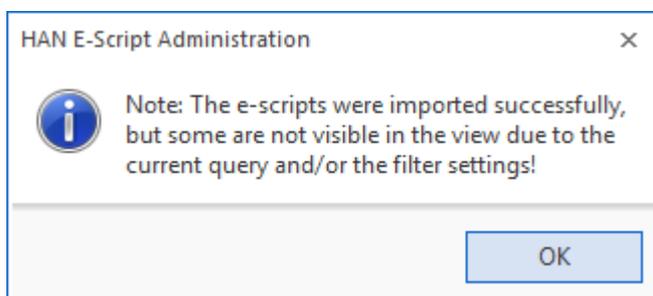
2. The **E-script exchange file** list shows all files in the exchange folder. Select the desired exchange files and click on the **Import** button:



Delete the exchange file after the e-script has been successfully imported. Deletes all imported exchange files from the e-script exchange folder.

Overwrite existing e-scripts. If there are e-scripts in the exchange file that already exist (identified by HAN_ID) in the importing HAN system, the existing e-scripts are overwritten by the imported e-scripts.

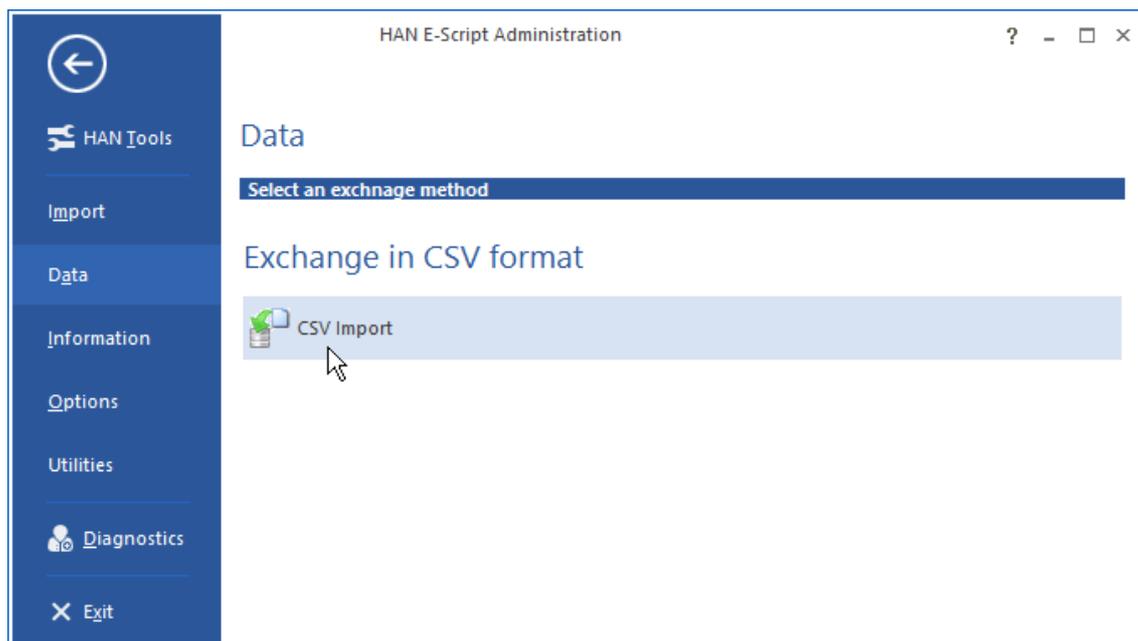
3. Click on **OK** to confirm your selection. The exchange file data are imported and are now available as e-scripts. If you had activated a query, keep in mind that all imported e-scripts might not be shown. If this is the case, HAN shows a warning message:



Importing from a CSV file:

Use the CSV Import utility to import data from CSV files.

1. In E-Script Administration, open the Program Menu and select **Data/CSV Import**:



2. Click on the **Select** button next to the **CSV file** field and select the desired file:



The CSV file must be accessible in Unicode format. If the file is not Unicode formatted, open it for editing (e.g. in the Windows Editor) and save it in Unicode format prior to import. To open the file for editing, click on the **Edit** button next to the **CSV file** field.



For a complete description of all configuration options, see "[Providing Online Resources with HAN/E-Script Administration](#)".

3. In the **1st property** field, you have the option of entering a property to be set for all e-scripts imported, which can then be used to group these e-scripts in a query.

4. Under **Separator**, specify the character used in the CSV file to separate fields.

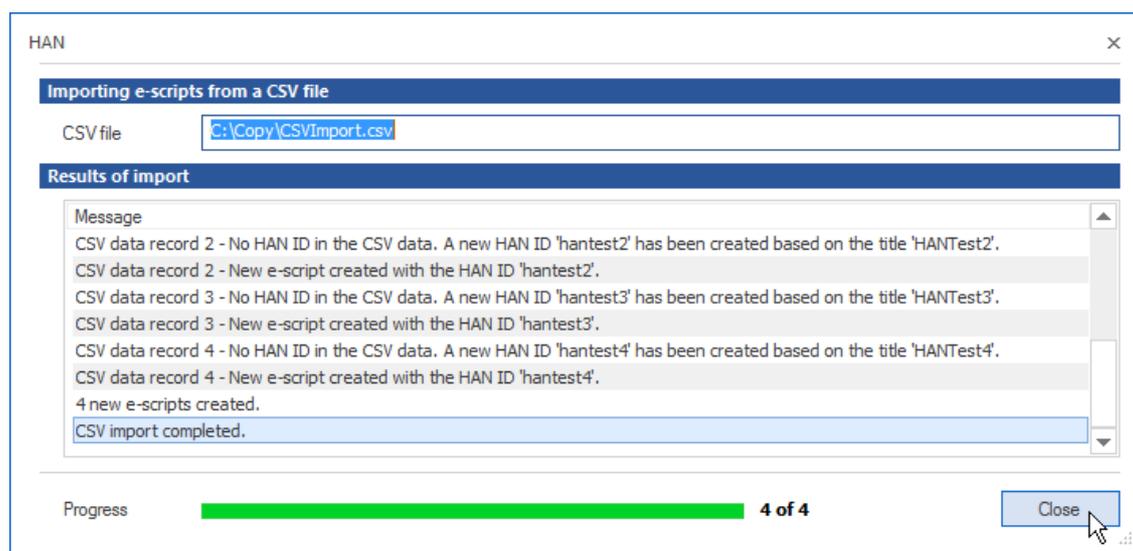
5. Use the tables to specify which columns the CSV file contains. The **Title** and **Root URL** columns are mandatory. If your CSV file has column headers, activate the **The first data record in the CSV file contains the column headers** option. This forces HAN to ignore the first data record when reading the CSV file. The buttons above the tables let you move the column names from one table to the other. All column names listed in the **CSV data columns** table must be found in the CSV file and will be assigned to the corresponding HAN fields.



Decide before activating the import how duplicate e-scripts are to be handled. Duplicate e-scripts are data records with identical titles. In the **Existing IDs** field, you can choose from the following options:

- **will be created with a new unambiguous ID.** HAN creates the e-script in spite of the identical titles, but gives it a new HAN ID.
- **will be overwritten (note: the root URL will not be overwritten!).** HAN overwrites the existing e-script. Note that the root URL cannot be overwritten; thus the root URL in the existing script is retained.
- **will be skipped.** If a duplicate is found in the target location, the e-script is not imported.

6. Click on **Import** to continue. HAN imports the CSV file and saves the data records as e-scripts. The **Importing e-scripts from a CSV file** dialog shows a progress bar indicating the progress of the import operation:



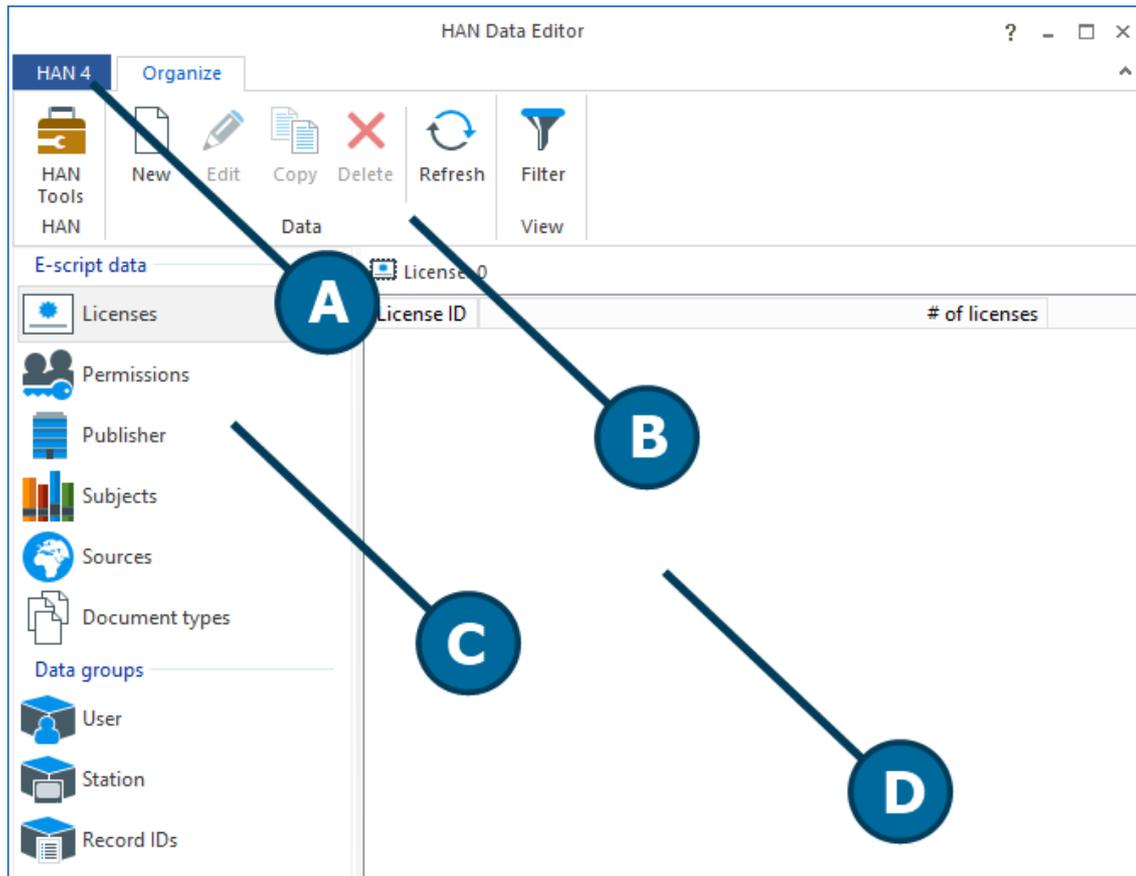
In this example, the e-scripts already exist, so HAN creates a temporary HAN ID. Because this ID already exists in the database, the second step is for HAN to create a new ID by adding a sequential numeral to the temporary HAN ID. In the last step, the e-script is created.

Following the import operation, a dialog opens to report where the log file of the operation is stored.

Data Editor

In the Data Editor you can edit various data element types that are assigned to e-scripts as global properties. Open the Data Editor from **HAN Tools**. The main window of the Data Editor gives you access to following data element types:

- Licenses
- Permissions
- Publishers
- Subjects
- Sources
- Document types
- Data groups in the Statistics program



The Data Editor consists of the following components:

- A. Program menu.** Access to program functions and utilities.
- B. Ribbon.** Access to the central tasks in the Data Editor.
- C. Data selection.** For selection of the property to be edited.
- D. Object list.** Lists the individual data objects of the selected data element type.

Commands in the Ribbon

HAN Tools. Opens the HAN Tools.

New. Creates a new object of the data element type selected in the Data selection pane (on the left).

Edit. Lets you edit the object selected in the Object list.

Copy. Creates a copy of the object selected in the Object list.

Delete. Deletes the object selected in the Object list.

Refresh. Updates the Object list.

Filter. Opens a filter bar so you can search for specific objects.

Object list

The Object list shows the existing data objects of the type selected in the Data selection pane. What columns are shown depends on the type of data element:

- Licenses: License ID/Number of licenses

- Permissions: Permission ID/Description/HTML page. The list contains permissions and global permissions. Global permissions can be inserted into other permissions. For details on nested permissions, see „[Inserting global permissions into permissions \(nested permissions\)](#)“.
- Publishers: Publisher/Description
- Subjects: Subject/Description
- Sources: Source/Description
- Document types: Type/Description



The individual rights within a Permission object are not shown in the Object list. They are shown in the dialog that opens when you edit the permission object. The Object list shows only the permission ID, a description and the error page to be shown for failed logins. For more information on editing permissions, see "[permissions](#)".

Furthermore, the group called **Data groups** contains data groups that aggregate data records in Statistics:

- User: Groups the data by user.
- Station: Groups the data by station.
- Record ID: Groups the data by record ID.

The advantage of grouping data is in the aggregate calculation of data records that have something in common. For example, you can calculate the total usage data over all users in a particular department. To do this, create a "User" data group named, for example, after the department and add it to your users. Data collected from the users in the group can be calculated by selecting the ID you assigned (e.g., the department name). For details on creating data groups, see "[Data Groups](#)".

Title bar

The title bar of the Object list shows the total number of objects of the selected data element type.

Details on creating each type of data element are given in the following sections:

- "[Licenses](#)"
- "[permissions](#)"
- "[Publishers](#)"
- "[Subjects](#)"
- "[Sources](#)"
- "[Document Types](#)"
- "[Data Groups](#)"

Inserting global permissions into permissions (nested permissions)

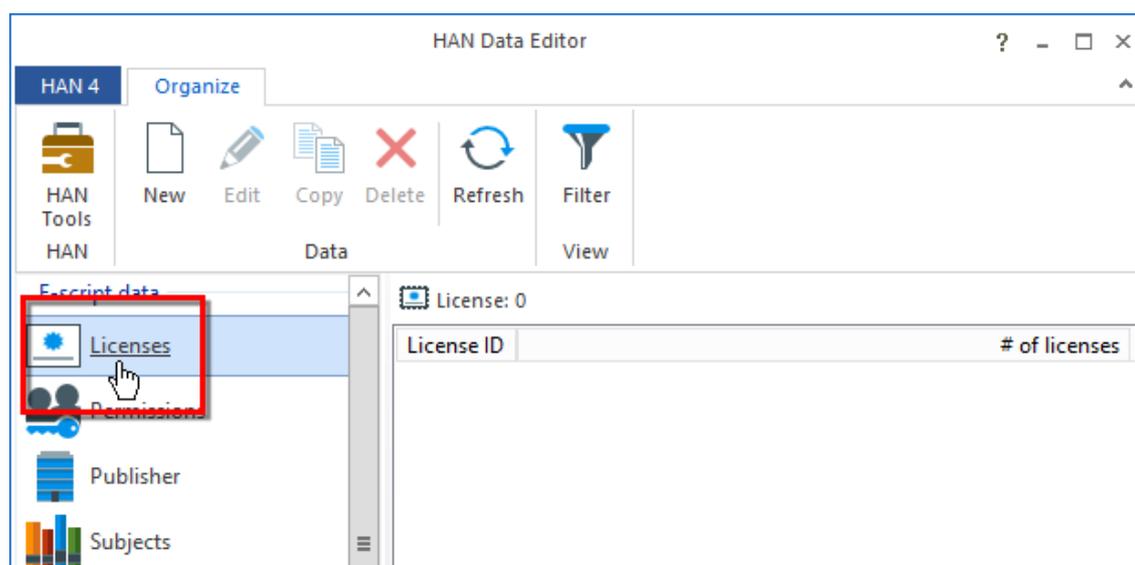
The list contains permissions and global permissions. Global permissions can be inserted into other permissions. Both types of permissions can be used globally in HAN. When creating HAN permissions, make sure to create permissions that you will want to insert into other permission as global permissions. When creating permissions, HAN will ask what kind of permission you want to create. For global permissions, select **Global Permission**. For details on defining permissions, see "[Defining Permissions](#)".

Licenses

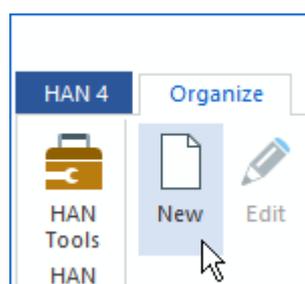
HAN lets you limit the parallel usage of HAN resources by assigning usage licenses. These are data objects that you can define yourself; for example, based on the number of licenses you have obtained for a certain e-journal. This section provides details on how to define licenses.

Begin by defining License objects in the Data Editor. Open the Data Editor from **HAN Tools**:

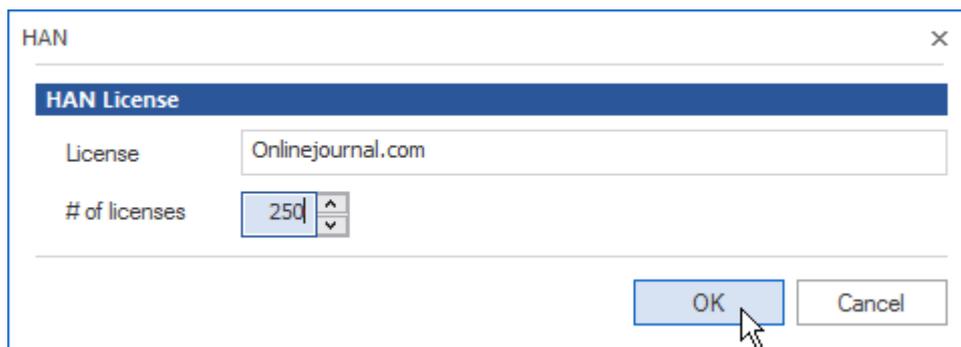
1. In the Data Editor, select **Licenses** in the "E-script data" sidebar:



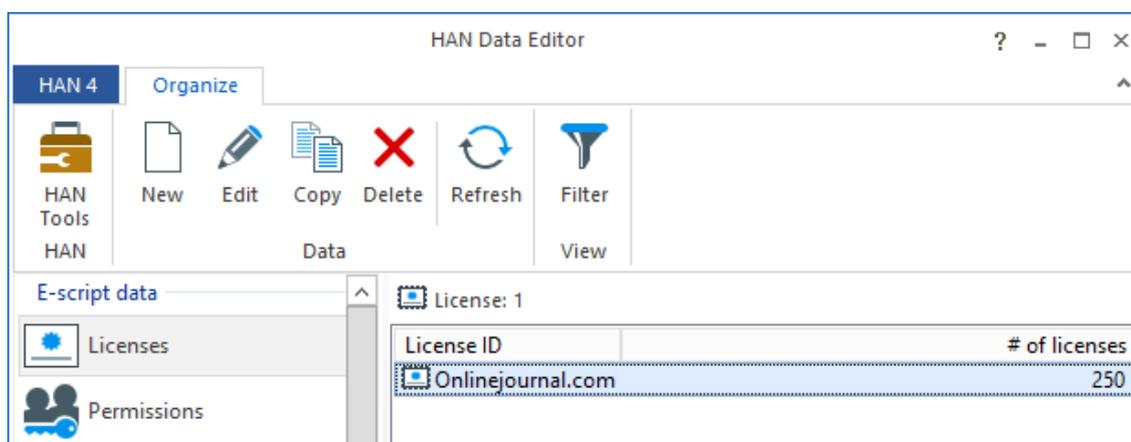
2. Click on the **New** button in the Ribbon:



3. In the **HAN License** dialog, enter a meaningful name for the new license in the **License** field and select the desired number of licenses under **# of licenses**:



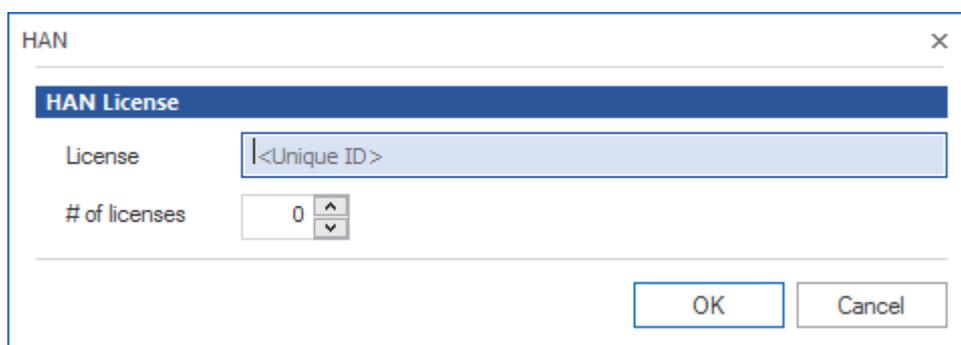
4. Click on **OK** to confirm. The license is created and added to the Object list:



Once it has been created, you can assign the license to the desired e-script. For details on assigning licenses, see "[Assigning Licenses](#)".

The HAN License dialog:

In the **HAN License** dialog, you can create new licenses and edit existing ones. There are two ways to open this dialog: To create and edit a new license object, select **Licenses** in the "E-script data" sidebar in the Data Editor and then click on **New** in the ribbon. To edit an existing license object, select the desired object in the Object view and click on **Edit** in the ribbon:



License. ID of the license selected in the Object list.

of licenses. Number of licenses available.

Enter a meaningful name for the license in the **License** field; this is the License ID. Select the desired number of licenses in the **# of licenses** field. Confirm the settings by clicking on **OK**. The license can now be assigned to the desired e-script using its ID.

Permissions

In the **Permissions** dialog, you can create new permissions and edit existing ones. There are two ways to open this dialog: To create and edit a new permission object, select **Permissions** in the Data Selection pane of the Data Editor (sidebar on the left) and then click on **New** in the Ribbon. To edit an existing permission object, select the desired permission in the Object view and click on **Edit** in the Ribbon:



The **HAN Permission** dialog is the only place to see the rights defined in a Permission object, as this level of detail is not shown in the Data Editor's Object list.

Permission. ID for the permission.

Description. Description; shown in the Object list.

HTML page. Error page that opens when a user does not have permission to access the given e-script. Click on the **browse** button ("...") to find the page you wish to use for this purpose.

Permissions. You can define the individual rights that make up this permission in this table. The table has the following columns:

- **Type.** Type of permission; e.g., IP address.
- **is (not).** The condition of the corresponding right ("is" or "is not")
- **Value.** Value that the right must have or must not have.
- **and/or.** The relationship of the right to the subsequent right in the list.



The rights are processed in the order in which they are listed here, from top to bottom.

Use the buttons at the top of this list to edit the list:

New. Create a new right. The button opens a drop-down menu from which you can select the type of right to be created.

Edit. Lets you edit a selected right.

Delete. Deletes the selected right.

Delete all. Deletes all selected rights.

Up. Moves a right one position higher in the list.

Down. Moves a right one position lower in the list.

A permission is created by specifying the type of right and a value, and then whether or not the type of right must have or must not have this value. If you define a permission using multiple rights, select logical **and** or **or** operators to configure the relationship of each right to the subsequent right. Once you have defined the desired rights, confirm the settings by clicking on **OK**. The permission can now be assigned to the desired e-script using its ID.

Types of rights:

There are six types of rights in HAN:

Host name. Permission is based on a specified host name.

IP address. Permission is based on a specified IP address or range of addresses.



You can use a wildcard (asterix) when specifying IP addresses and host names.

Variable. Permission is based on whether or not a certain environment variable has a certain value.

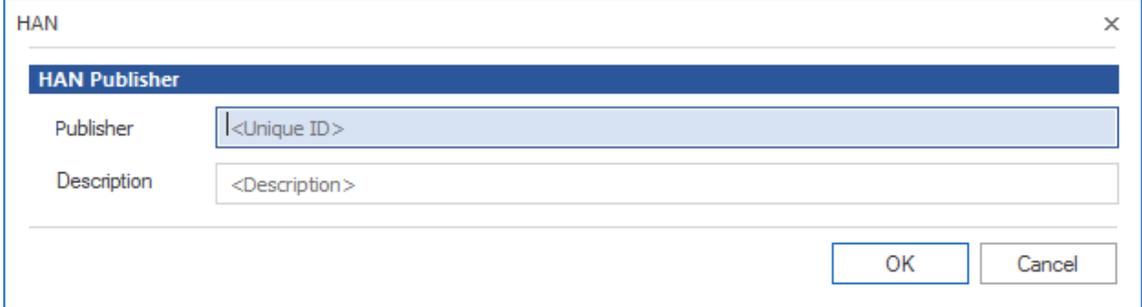
AD user. Permission is based on a specified AD user account.

AD user group. Permission is based on a specified AD user group.

User OU. Permission is based on a specified user OU.

Publishers

In the **Publishers** dialog, you can create new publisher objects and edit existing ones. There are two ways to open this dialog: To create and edit a new publisher object, select **Publishers** in the Data Selection pane of the Data Editor (sidebar on the left) and then click on **New** in the Ribbon. To edit an existing publisher object, select the desired publisher in the Object view and click on **Edit** in the Ribbon:



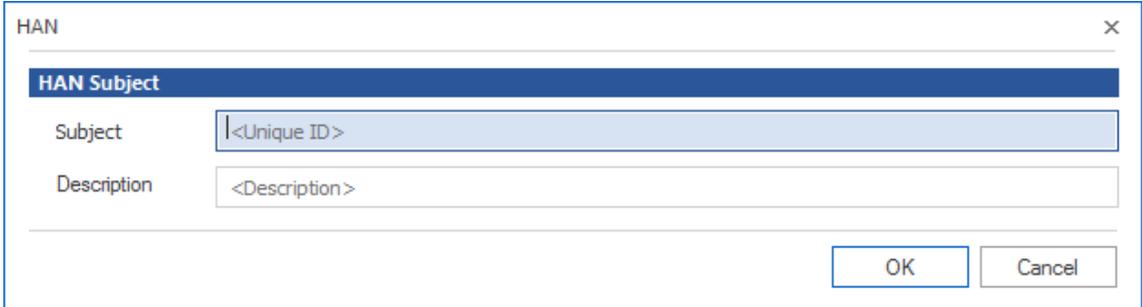
Publisher. ID of the publisher object selected in the Object list.

Description. Optional description of the publisher.

Enter the name of the publisher in the **Publisher** field and, if desired, enter a meaningful description in the **Description** field. Confirm the settings by clicking on **OK**. The publisher can now be assigned to the desired e-script using its ID.

Subjects

In the **Subjects** dialog, you can create new subject objects and edit existing ones. There are two ways to open this dialog: To create and edit a new subject object, select **Subjects** in the Data Selection pane of the Data Editor (sidebar on the left) and then click on **New** in the Ribbon. To edit an existing subject object, select the desired subject in the Object view and click on **Edit** in the Ribbon:



Subject. ID of the subject selected in the Object list.

Description. Optional description of the subject.

Enter the name of the subject in the **Subject** field and, if desired, enter a meaningful description in the **Description** field. Confirm the settings by clicking on **OK**. The subject can now be assigned to the desired e-script using its ID.

Sources

In the **Sources** dialog, you can create new source objects and edit existing ones. There are two ways to open this dialog: To create and edit a new source object, select **Sources** in the Data Selection pane of the Data Editor (sidebar on the left) and then click on **New** in the Ribbon. To edit an existing source object, select the desired source in the Object view and click on **Edit** in the Ribbon:



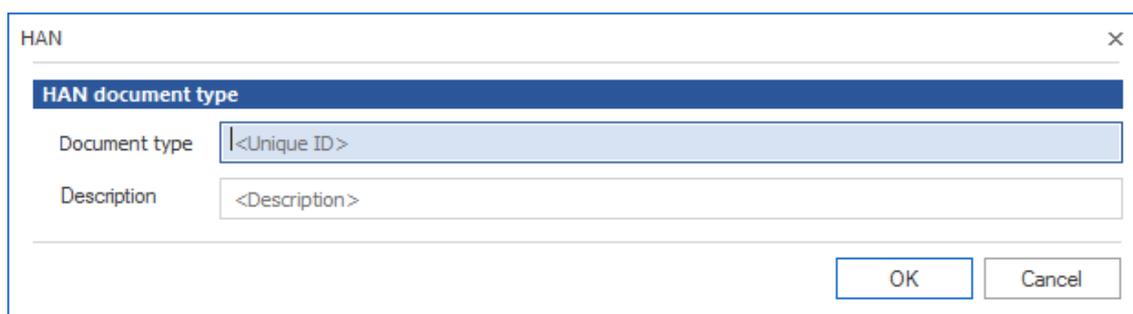
Source. ID of the source selected in the Object list.

Description. Optional description of the source.

Enter the name of the source in the **Source** field and, if desired, enter a meaningful description in the **Description** field. Confirm the settings by clicking on **OK**. The source can now be assigned to the desired e-script using its ID.

Document Types

In the **Document type** dialog, you can create new document type objects and edit existing ones. There are two ways to open this dialog: To create and edit a new document type object, select **Document types** in the Data Selection pane of the Data Editor (sidebar on the left) and then click on **New** in the Ribbon. To edit an existing document type object, select the desired document type in the Object view and click on **Edit** in the Ribbon:



Document type. ID of the document type object selected in the Object list.

Description. Description of the document type.

Enter the name of the document type in the **Document type** field and a meaningful description in the **Description** field. Confirm the settings by clicking on **OK**. The document type can now be assigned to the desired e-script using its ID.

Data Groups

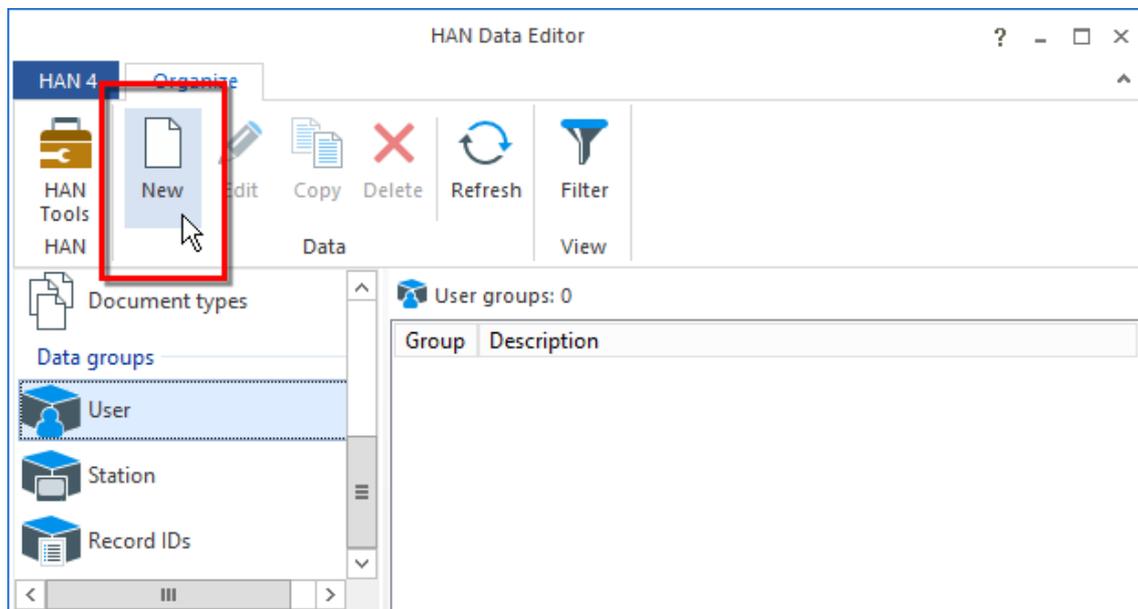


You can create data groups to group users, stations or record ids for aggregated statistical calculations. The users you put together are referred to here as grouped users, stations as grouped stations, and record IDs as grouped record IDs.

This chapter explains how to [create](#) data groups and shows the options made available through the use of [HAN data groups](#).

Creating data groups:

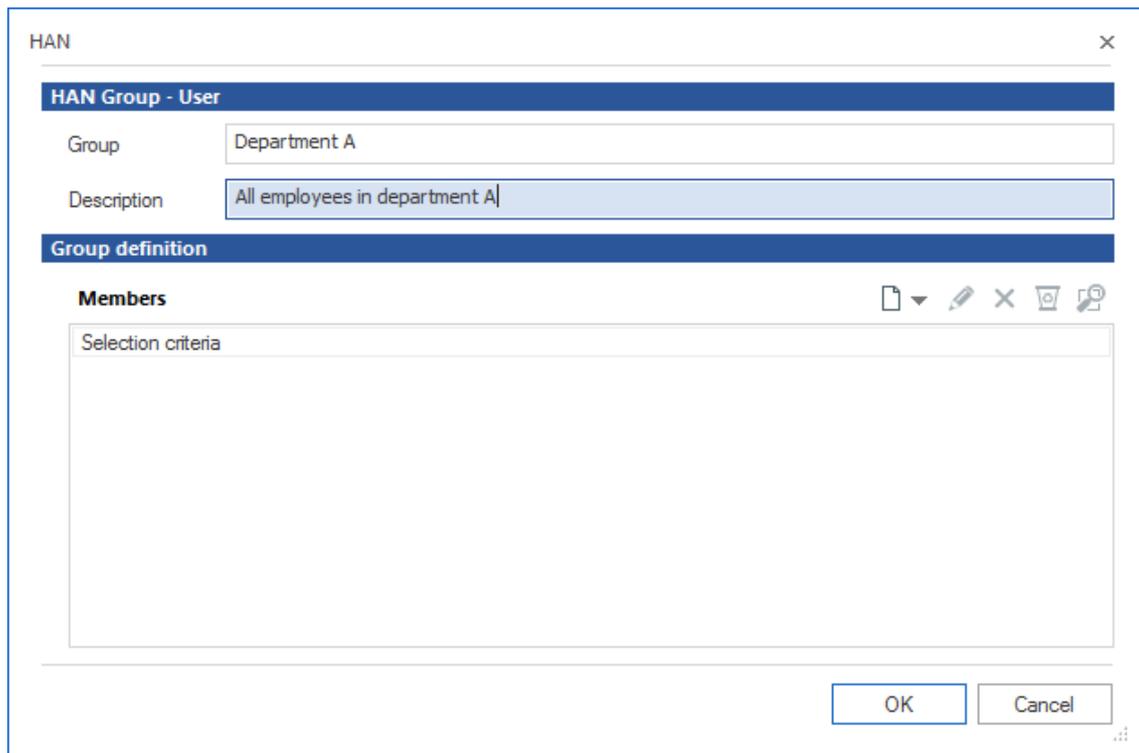
1. In the Data Editor, under **Data groups**, select the desired element and click on **Create** in the ribbon. In this example, we select **Users** to create grouped users:



2. In the **HAN Group - Users** dialog, enter a name for the group in the **Group** field and, if desired, a description in the **Description** field:



For a description of the elements in the **HAN Group** dialogs, see "[HAN Data Group dialog](#)".



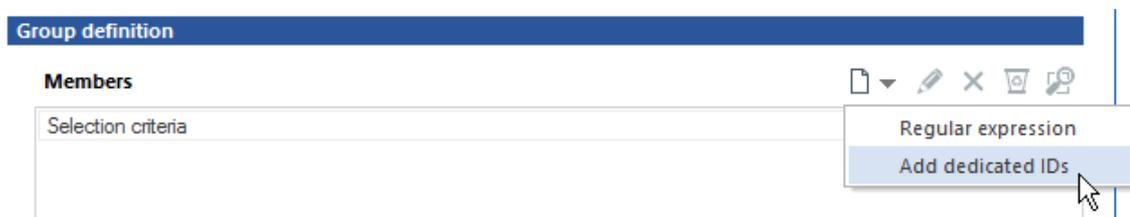
3. To add members (in this case, users) to the data group, click on the **New** button at the top of the **Members** list and select the desired users, or enter a regular expression to define the users to be added:



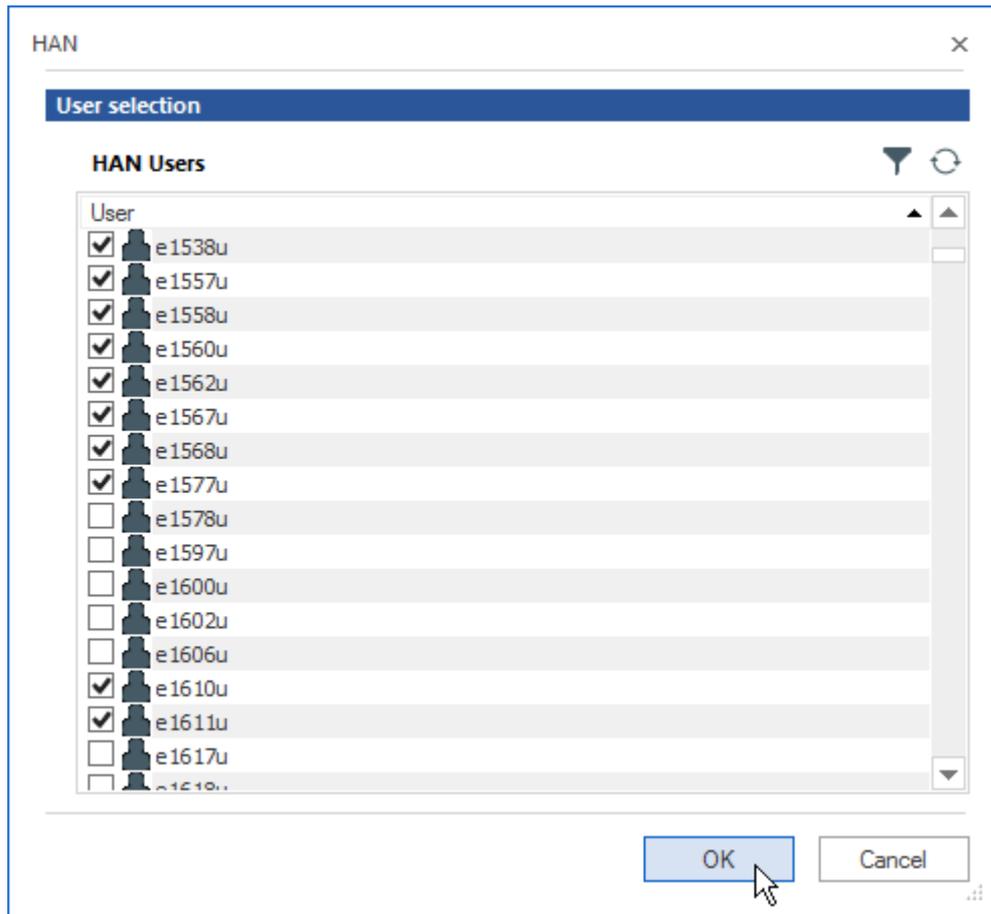
You can combine both explicit users and regular expressions defining users in a single data group if desired.



Multiple assignments of objects is not possible; in other words, each data object (user, station, etc.) can be a member of only one data group.



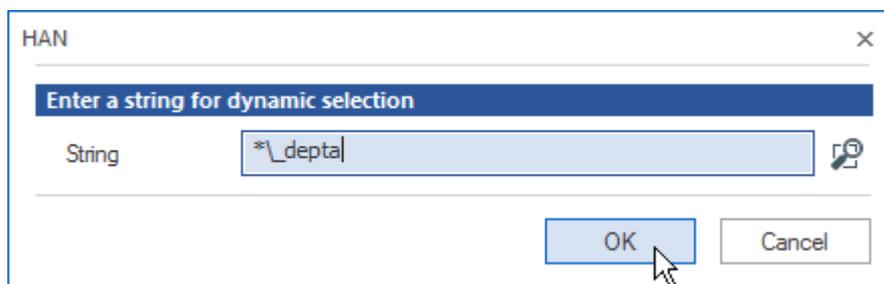
4. To add individual users, select **Add dedicated IDs** and select the desired users from the list. You can select multiple users in this list:



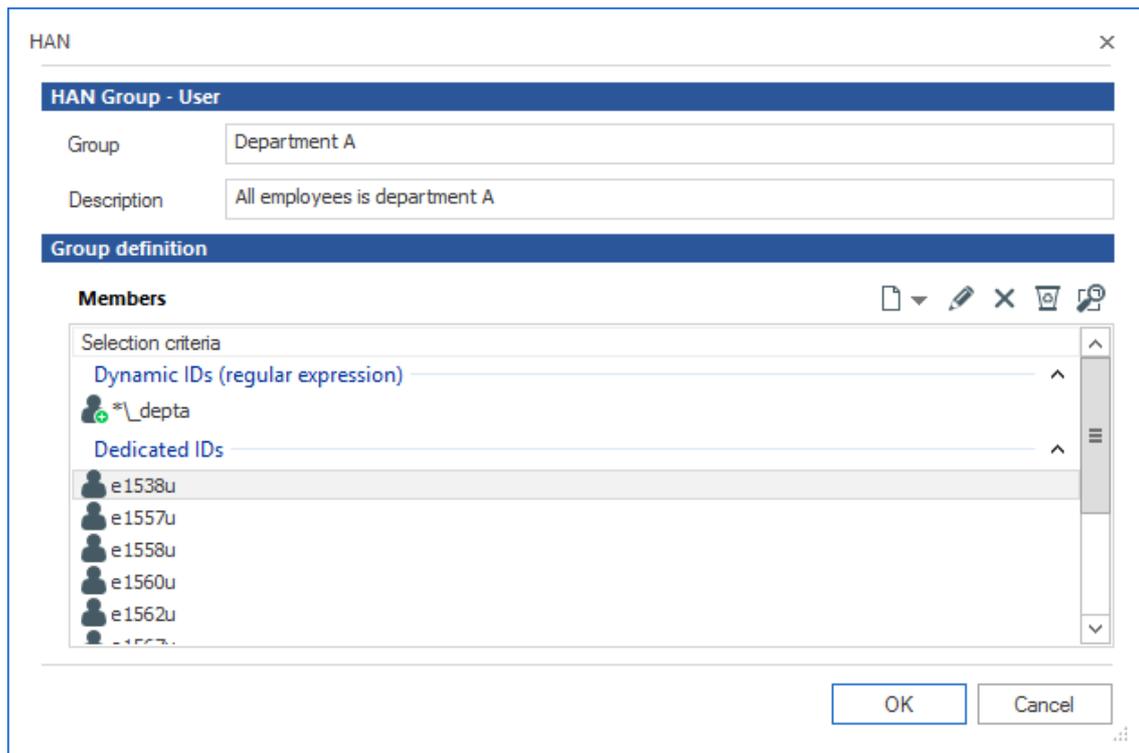
To define and add users with regular expressions, select **Dynamic expression** and enter the regular expression in the **String** field:



Data group member definitions using regular expressions are dynamic; any new element that corresponds to the definition in the regular expression will automatically be added to the data group. The automatic addition of data objects is recorded in the HAN event log.



5. Click on **OK** to confirm. The rule or users are added to the new grouped users:



6. Click on **OK** to confirm. The new grouped users are added to the HAN database. This may take a few moments, depending on the number of data records and rule definitions. Once the data group has been added, it is shown in the object list.

HAN data group dialog:

Define the properties of your new data group here:



Please keep in mind that you cannot modify a data group that is open.

The screenshot shows a dialog box titled "HAN" with a close button in the top right corner. The dialog is divided into several sections:

- HAN Group - User**: A header section containing two text input fields: "Group" (with the value "Department A") and "Description" (with the value "All employees is department A").
- Group definition**: A section containing a "Members" list. Above the list are icons for adding, editing, deleting, and refreshing. The list is divided into two categories:
 - Dynamic IDs (regular expression)**: Contains one entry, "*\depta", with a plus icon to its left.
 - Dedicated IDs**: Contains five entries, each with a person icon to its left: "e1538u", "e1557u", "e1558u", "e1560u", and "e1562u".
- At the bottom right, there are "OK" and "Cancel" buttons.

Group. Name of the new data group.

Description. Description of the new data group. Input here is optional.

Members. The list shows the regular set for the data group. This is made up of dynamic and/or specific IDs. Use the buttons at the top of this list to edit the list.

Commands for the member table:

New. Generates a new entry in the regular set:

- **Dynamic expression.** Generates a new rule defined by a regular expression.
- **Add dedicated IDs.** Shows the specific data objects to choose from in the database. Multiple selection is permitted.

Edit. Lets you edit the rule associated with the selected object.

Delete. Deletes the selected object from the rule.

Delete all. Deletes all rules from the regular set.

Detail. Shows detailed information on the regular set. Click here to view all of the objects defined by the rules in regular set.



It may take a few moments for the detailed information window to open, depending on the definition of the regular set.

Using Queries



With queries, you can use your choice of e-script properties as search arguments for finding e-scripts. You can also use queries to group the e-scripts that match your choice of criteria and then adjust the properties of all e-scripts in the group at once. Unlike the results from a normal search operation, a query is a persistent object and is available for use until you explicitly delete it. At the same time queries are dynamic objects as well, in that new e-scripts that match a given query are automatically added to that query.

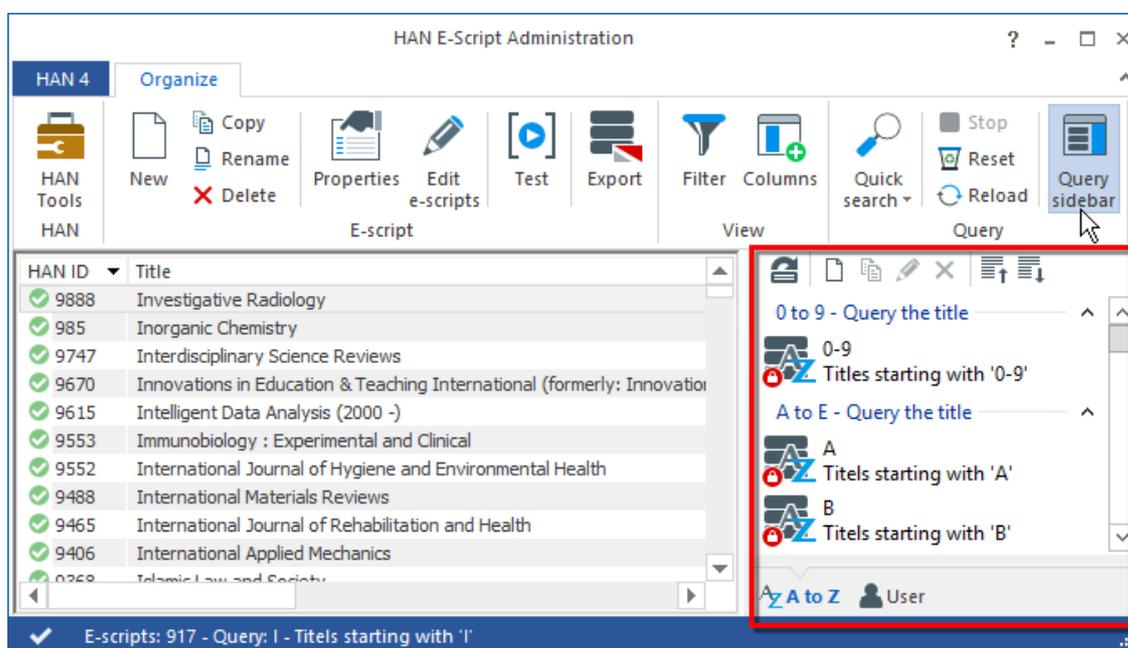
In combination with the selection of multiple e-scripts, you can assign common properties to the e-scripts within a particular query. Query objects, however, do not have individual properties. This chapter explains how to open the query sidebar and how to apply queries to the e-scripts in the E-Script Selection. The information is presented in the following sections:

- For details on creating new database queries and editing existing ones in the **Query** dialog, see "[Providing Online Resources with HAN/E-Script Administration/Managing Queries](#)".
- For details on defining queries, see "[Defining Queries](#)".
- For more on using queries and multiple e-script selection to assign shared properties, see "[Allocating Properties](#)".

Queries can be selected from the query sidebar in E-Script Administration:



To show or hide the query sidebar in the E-Script Administration window, click on the **Query sidebar** button in the ribbon.



Select the desired query and click on the **Apply** button in the toolbar in the Query sidebar section of the ribbon. The E-Script Selection now shows only those e-scripts which match the query criteria. For more on the options available in the query sidebar, see "[Providing Online Resources with HAN/E-Script Administration](#)".

Defining Queries

Queries are defined in the E-Script Administration program. All commands for editing queries are available in the toolbar of the query sidebar.

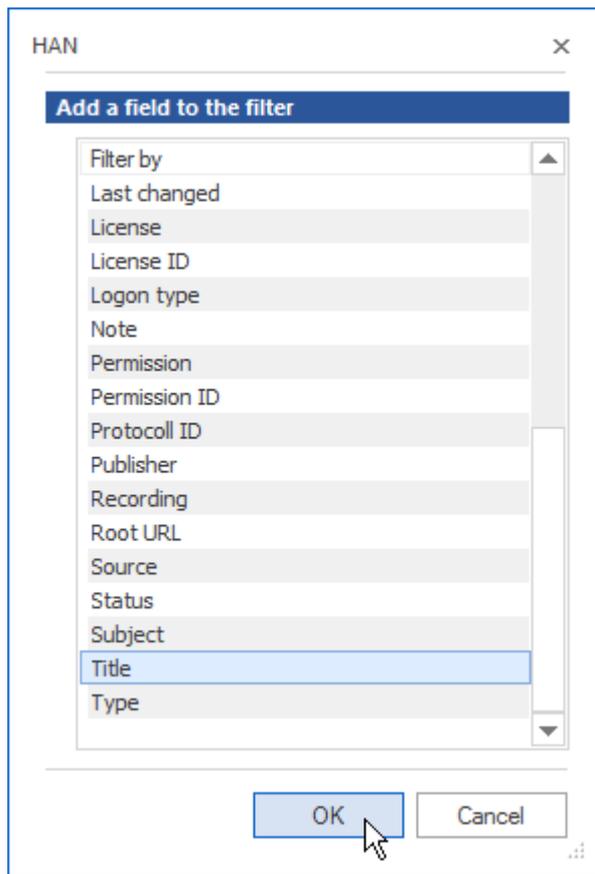
1. In E-Script Administration, click on the **New** button in the query sidebar.
2. In the **User-defined HAN e-script query** dialog, enter a name for the query in the **Query** field. Entering a description in the **Description** field is optional:

The screenshot shows a dialog box titled "HAN" with a close button (X) in the top right corner. The dialog is divided into two main sections. The first section, titled "User defined HAN e-script query", contains two text input fields: "Query" with the value "H+H E-scripts" and "Description" with the value "All e-scripts from H+H Software". The second section, titled "Query definition", contains a "Filter expressions" table. The table has four columns: "Filter by", "Rule", "Value", and "and/or". Below the table are "OK" and "Cancel" buttons.

3. Define filter expressions in the **Filter expressions** table. Click on the **New** button at the top of the table to create a new expression:



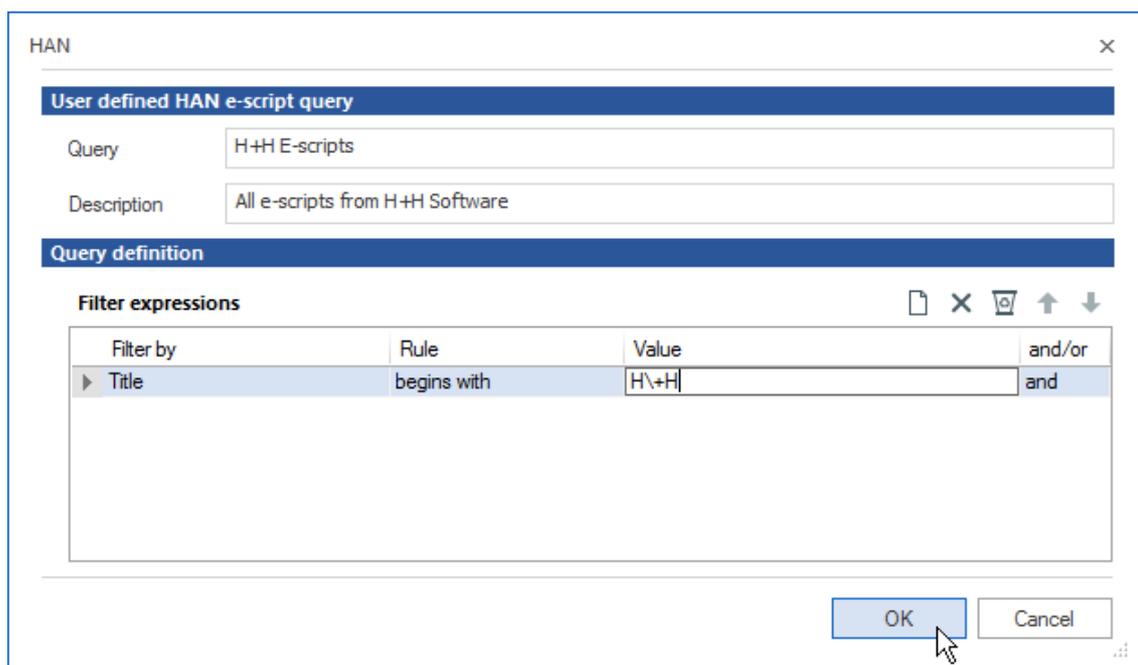
4. In the **Add a field to the filter** dialog, specify the property to be queried in the e-scripts. In our example, we select "Title":



5. In the **Filter expressions** table, define the new expression:

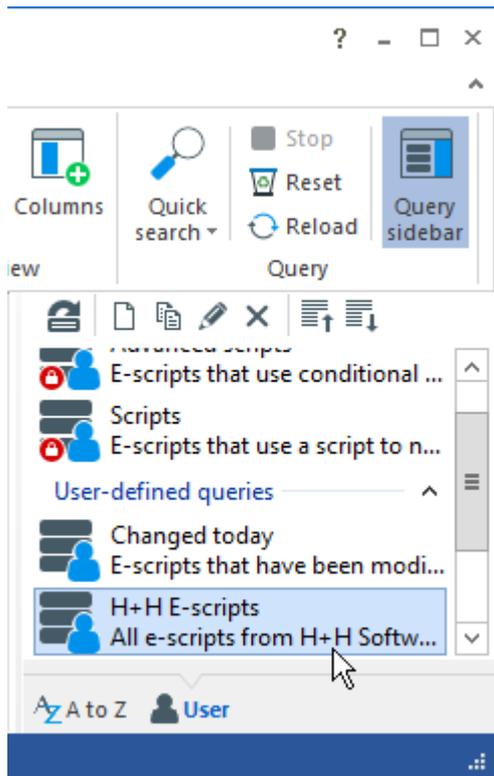


This is a regular expression. If you use control characters, make sure the syntax is correct.

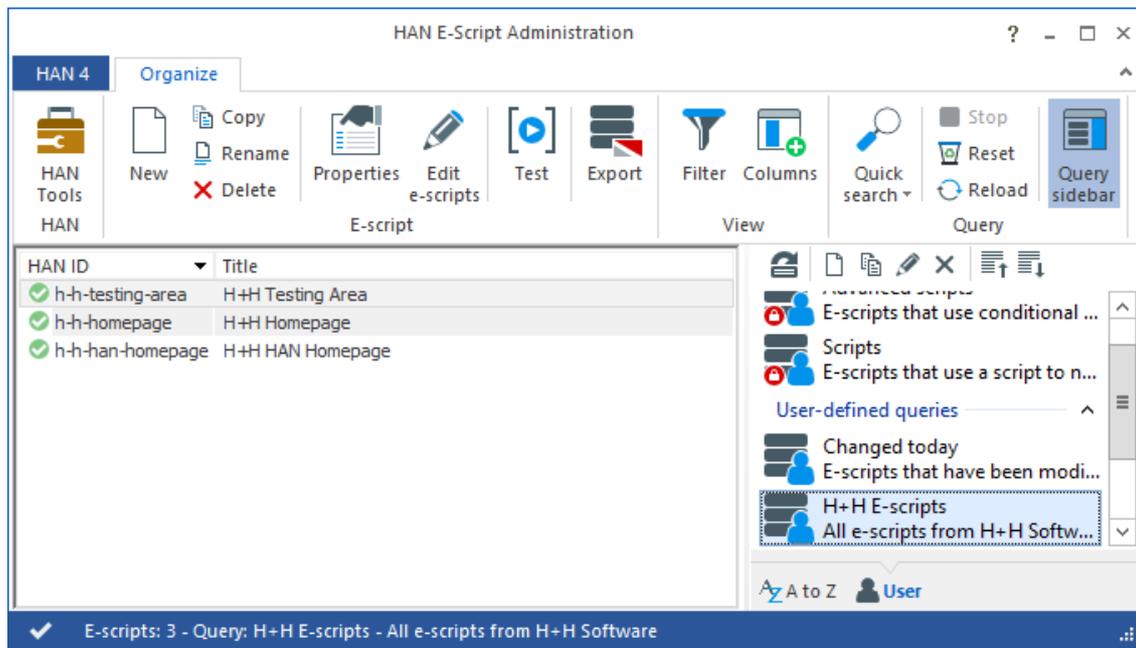


In the **Rule** column, we select **begins with**, and in the **Value** column we enter "H\+H" to find all e-scripts that have titles beginning with the characters "H+H", even if other characters follow. The backslash is important, as it defines the "+" as a regular character; otherwise, it would be handled as a control character.

6. Define further filter expressions if desired. Once all expressions have been defined, click on **OK**. The new query is shown in the query sidebar of the E-Script Administration window, on the **User** page:



Double-click on the query to apply it. To reset the use of the query, click on the **Reset** button in the **Query** section of the ribbon. Once our sample query has been applied, only those queries that have titles beginning with "H+H" are shown:

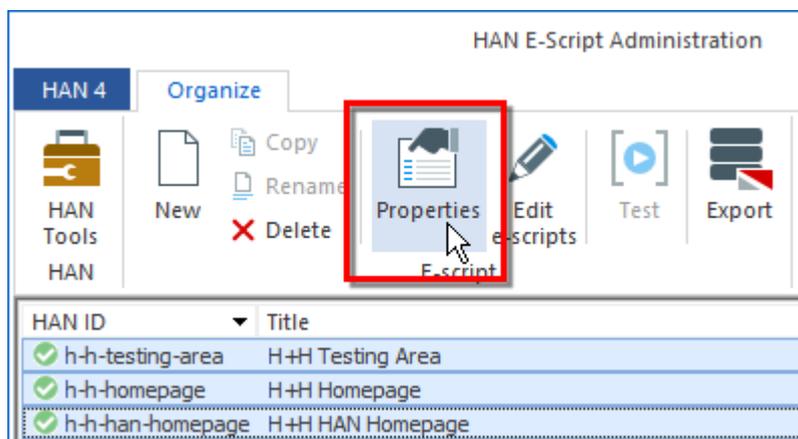


To reset the use of the query, click on the **Reset** button in the **Query** section of the ribbon.

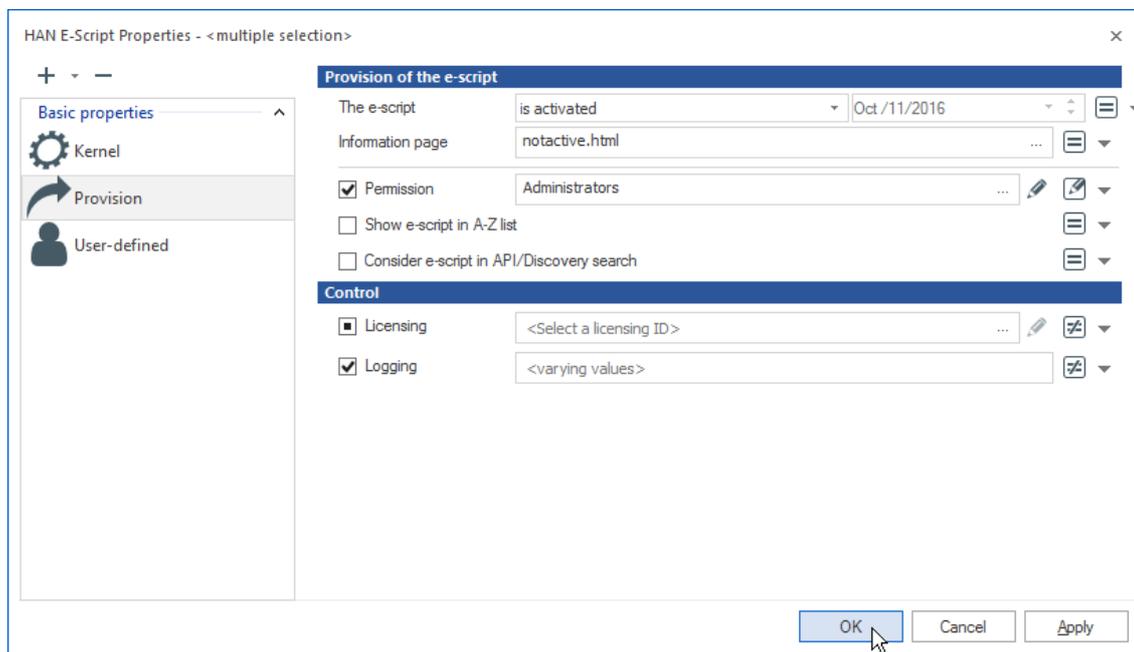
Allocating Properties

To assign cumulative properties to e-scripts, select the desired e-scripts in E-Script Administration and click on **Properties** in the ribbon. It is useful to combine this procedure with the use of queries, because a query can reduce the display to only a defined set of e-scripts. For example, you can define a query that returns exactly the set of e-scripts to which you wish to assign a common property. For details on defining queries, see "[Defining Queries](#)". To assign common properties to e-scripts, proceed as follows:

1. In the E-Script Administration program, select the e-scripts to which you wish to assign cumulative properties and then click **Properties** in the ribbon:



2. In the e-script properties, you can see the cumulative properties shared by all selected e-scripts; this is indicated by **E-script properties: <Multiple selection>** in the title bar. Open the dialog page of the e-script properties on which you wish to configure settings:



In the example, we assign "Administrator" permissions for all "H+H" e-scripts. Configure the desired property. The function for setting properties cumulatively is set automatically when you configure a property. For a detailed description of how to set cumulative properties, see "[E-Scripts/E-Script Properties](#)".

3. Click on **OK** to confirm your input. The cumulative properties are allocated to the e-scripts.

A-to-Z List

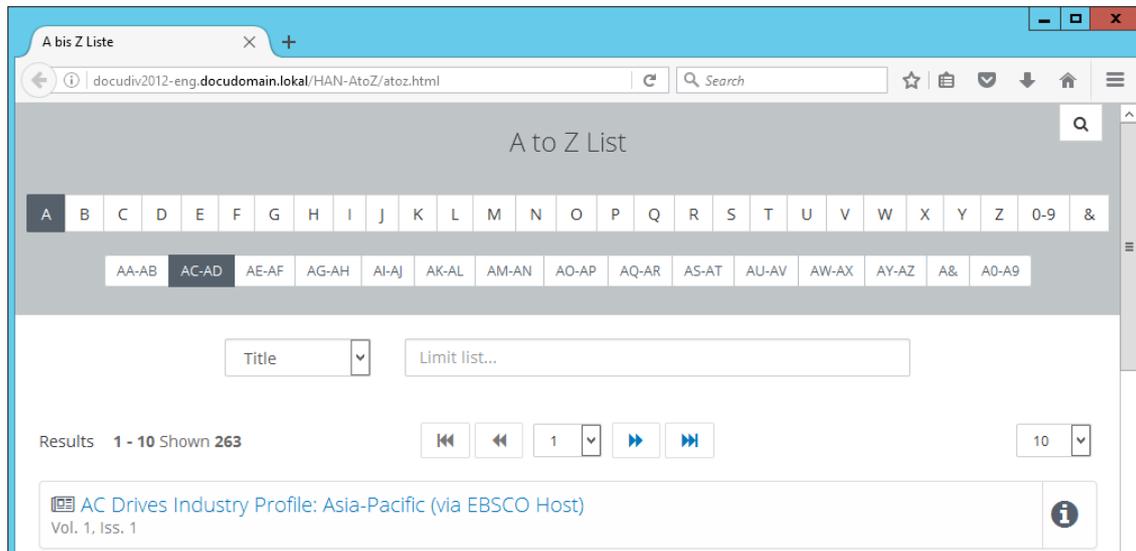
The A-to-Z list in HAN gives you a web-based interface for viewing and searching for HAN e-scripts. In this interface, e-scripts can be sorted alphabetically or opened directly using the search function. You can also integrate the A-to-Z list in existing HTML pages. To do this, embed the following URL: `http://<HANserver>/HAN-AtoZ/atoz.php`.



Die A-bis-Z-Liste verfügt über eine Variante für kleinere Umgebungen mit weniger E-Skripten. Wenn Ihre Institution über weniger als 1000 E-Skripte verfügt und deshalb viele der vorgegebenen Suchbereiche der A-bis-Z-Liste leer bleiben, verlinken Sie auf `http://<HAN-Server>/HAN-AtoZ/atoz-complete.html`. In dieser Ansicht werden immer alle E-Skripte gelistet und nicht in Kategorien geteilt. Die „Complete“-Variante der A-bis-Z-Liste verfügt über eine Filterfeld, mit dem die Liste nach bestimmten Titeln, ISSNs oder Zeiträumen gefiltert werden kann. Die „Complete“-Variante zeigt maximal 1000 Einträge, weitere Einträge werden abgeschnitten.

To change functionalities in the alphabetical list (such as language defaults, for example), please contact H+H Software.

To open the A-to-Z list in Windows, double-click the desktop shortcut **HAN Tools** and select **HAN A-Z List**:

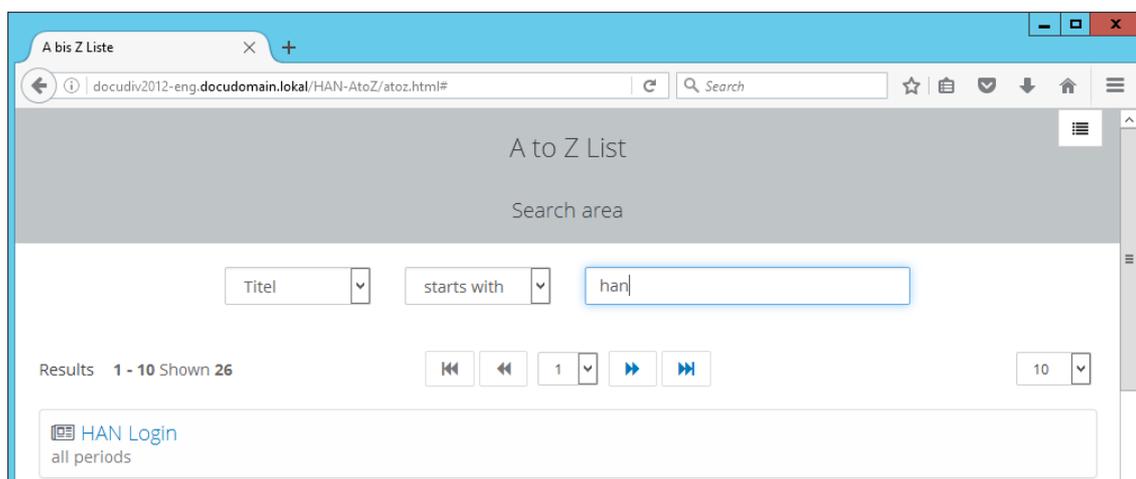


The A-to-Z List has two options for viewing:

- The A-to-Z list shows all existing e-scripts in alphabetical order.
- The search function opens a view in which you can search for specific e-scripts.

You can switch from one display to the other using the **List** and **Search** buttons.

Search function view:



The search view of the A-to-Z list lets you search for e-scripts by title, ISSN, URL or DOI.

HAN Web API

The new HAN web API enables HAN to replace the interfaces to the individual online systems of earlier HAN versions. This is an open interface that can conjoin all online systems currently on the market, and all future systems, to HAN. The following chapters explain how to use the web API:

- "[Determining the HAN ID](#)". How the HAN ID is automatically determined when a resource is called.
- "[Sending supplemental information](#)". How to pass supplemental information regarding an existing HAN ID, such as status, permissions, ISSN.
- "[Creating E-Scripts](#)". How to have a HAN e-script created if no existing HAN ID was found.

Functioning of the HAN web API

The HAN web API actually consists of three individual interfaces that combine the following functions:

- Connecting the link resolver to HAN: Regardless of what link resolving system is used, HAN has the capability to communicate with the system and provide location-specific access to content in the accustomed manner.
- Communicating additional content: HAN can query additional content, such as license information, from the database and present it transparently in the user's operating environment (e.g. OPAC).
- Creating e-scripts based on data from a link resolver: Calls for full-text resources are redirected over the HAN server. If there is no e-script in HAN for the requested resource, one is created automatically.

Connecting the link resolver to HAN

The HAN web API makes it possible to connect any link resolver with HAN. The advantage is that calls to external resources are redirected over HAN, and thus will also function outside the library or university network. The HAN server, once it is connected with the link resolver, will check each external resource link to see whether there is a corresponding e-script and, if so, will provide access to the e-journal in question. What happens if no such e-script is found depends on your configuration.

Creating e-scripts based on data from a link resolver

If the e-journal is available through the link resolver but not through an e-script in HAN, HAN can automatically read the data of the e-journal and create an e-script accordingly.

Communicating additional content

With HAN, you have the option of assigning permissions or licenses to control access to restricted resources. HAN will then grant or deny access in accordance with the rules you define. To let the user know what's going on, HAN can communicate with the user's operating environment and display information regarding access limitations or licensing directly in the interface, so that the user knows right away if permission to access the particular resource is denied, for example, or if all access licenses are currently in use.

HAN as a Discovery Service

HAN uses the mechanisms of the Web API to take over the task of a Discovery Service itself. For this purpose, use a correspondingly adapted e-script, which checks for existing E-scripts in the case of a LinkOut. A correspondingly configured authentication service allows easy login to the target resource.

EZB and HAN

HAN has an interface to the "Electronic Journals Library", or EZB, the electronic journal library at the University of Regensburg. This means your HAN server can provide direct access to your institution's pages at the EZB. With this interface, you can have a HAN e-script created or updated every time one of your users calls a journal from the EZB page. Options are also available for manual and automatic import of EZB links. Furthermore, HAN (v2 and later) offers optional support for licensing time periods as well as for managing multiple e-scripts—with different starting URLs—for a single e-journal.



The EZB interface is available only if the EZB module was selected for setup when installing the HAN software suite. HAN 3 Beta does not include the EZB module. For details on installing HAN and the EZB module, see "[Configuring EZB Access](#)".

The following sections describe the use of the EZB interface in detail:

- "[EZB and HAN](#)" provides an overview over the functions of the EZB interface.
- "[EZB Import](#)" describes the functions in the **EZB Import** program.
- "[EZB Configuration in HAN](#)" provides details on configuring the EZB interface in the HAN Settings program.
- "[Manual Import from EZB](#)" explains how to initiate EZB imports manually.
- "[Automatic Collation of HAN E-Scripts with the EZB](#)" describes how to configure HAN so that existing e-scripts are automatically collated with the data pool at the EZB.
- "[Discussion: Rules for EZB Updates](#)" explains the rules by which HAN determines whether an e-journal has been modified, requiring an update of the associated e-script.

Detecting the HAN ID

The web API uses a standardized method for determining the HAN ID for an online resource. The existing (full text) URL is parsed in a series of steps to determine the associated HAN ID:

1. Search by unambiguous criteria (e-ISSN/ISSN or journal name)
2. Search by digital object identifier (DOI)
3. Search by URL
4. Search by domain

If a resource call is found in this manner to have a corresponding a HAN e-script, the call is redirected to the corresponding HAN URL. If multiple possible e-script are found, the first one found is used. If no e-script is found, the URL that had been passed is returned.

Rather than a URL, a JSON object may be returned; for example, in the case of EZB titles with different license periods. This makes it possible to provide the user with information for the next step. If the requesting system cannot process JSON objects, an HTML template may be returned instead, with data inserted dynamically in placeholders. In particular with AJAX calls, this makes more sense than to use a JSON object.

Functioning of the API

The API is accessed through a virtual directory: `http://<HAN server>/hanapi/action`.

The `method` parameter defines the requested method. The interface for determining a HAN ID is accessed using the `getHANID` value. Additional parameters can be appended as URL parameters using the HTTP `GET` method, or sent as JSON objects using the HTTP `POST` method.

The following additional parameters are available:

url. Target URL

eissn. E-ISSN (In SFX this is stored as the **ISSN** parameter, but in EZB it is called **E-ISSN**.)

title. Name of the journal

doi. DOI of the full text

id. ID of the configured API

The **eissn** and **doi** parameters are optional. The search is more precise, however, when the E-ISSN is included.



All parameters must be passed in URL-encoded form.

Examples

Example of an URL-based request:

```
http://handemo.hh-software.com/hanapi/action?  
method=getHANID&id=search&url=http%3a%2f%2fwww.nature.com
```

The structure of a JSON object is similar to that of the URL parameters, and the same parameter names are used:

```
{  
method : getHANID,  
url : <URL>,  
eissn : <E-ISSN>,  
doi : <DOI>,  
title : <title>,  
return : <return method>  
}
```

When using a JSON object, the default return value is the redirect. This is the return type when no method is specified.

Return of the search result

The **return** parameter defines the type of return. The values to choose from are as follows:

- 0 (redirect)
- 1 (JSON)
- 2 (template)

The default value is 0, which redirects to the HAN URL; when no parameters are entered the interface always responds with a redirect.

The "1" value causes HAN to return the following JSON object:

```
{  
count : <number of e-scripts found>,  
scripts : <array, one object per e-script>
```

```
}
```

If no result is found, the value for the `count` parameter is "0". If an e-script is found, it is returned in the following form as a JSON object:

```
{  
  hanid: <HAN ID>,  
  description: <description>,  
  status: <0|1|2>,  
  expiredate: <milliseconds since 1.1.1970, output only if status=2>  
  permission: {  
    active: <false|true>,  
    description: <description of the permission>  
  },  
  eiisn: <E-ISSN>,  
  issn: <ISSN>,  
  periods: <periods>,  
  subjects: [ <subject description> ],  
  publisher: <publisher>,  
  provider: <source>,  
  license: {  
    active: <false|true>,  
    number: <number of licenses>,  
    used: <number of licenses in use>  
  },  
  fulltext: <HAN URL>,  
  payment: {  
    type: <pricing model>,  
    fee: <cost>  
  }  
}
```

If multiple e-scripts are found, the corresponding number of JSON objects are returned.

Requesting Supplemental Information

The web API permits sending of supplemental information to an e-script. You can choose to have the additional information displayed for the user. To prevent the display of sensitive data in the HAN database, the data fields are defined with information and cannot be configured. The following information about a script can be sent:

- HAN ID
- Description
- Status (activated, deactivated, limited (includes date))
- Permission and, if assigned, its description
- E-ISSN
- ISSN
- Periods
- Subject
- Publisher
- Source
- Licensed (total no. of licenses, no. of licenses in use)
- HAN URL
- Pricing and cost

If a HAN ID is passed without an underline, there may be various licensing periods for the e-script. If so, all of the variously licensed scripts are returned. For example, a search for HAN ID "100039" would return all three e-scripts: 100039, 100039_0, and 100039_1.



IDs with an underscore are only generated with an EZB import. If you do not have a connection to the EZB, your HAN IDs do not contain an underscore.

Functioning of the API

The API is accessed through a virtual directory: `http://<HAN server>/hanapi/action`.

The `method` parameter defines the requested method. The interface for determining a HAN ID is accessed using the `getHANInfo` value. Additional parameters can be appended as URL parameters using the HTTP `GET` method, or sent as JSON objects using the HTTP `POST` method.

The following additional parameters are available:

`hanid`. HAN ID about which additional information is sought.



In the event that the requesting system cannot determine the HAN ID, you can have the HAN URL sent as well by configuring this option in the HAN Settings.

Examples

Example of an URL-based request:

```
http://handemo.hh-software.com/hanapi/action?  
method=findCreateHANID&id=create&hanid=test
```

The structure of a JSON object is similar to that of the URL parameters, and the same parameter names are used:

```
{
method : getHANInfo,
hanid : <HAN ID>,
hanurl : <HAN URL>,
return : <return method>,
id: <ID of the configured API>
}
```

When using a JSON object, the default return value is the redirect. This is always the type of return used when no method is specified.

Return of the search result

There are two ways to have supplemental information about a HAN ID/an e-script returned. The **return** parameter defines the type of return. The values to choose from are as follows:

- 0 (JSON object)
- 1 (HTML template)

The default return option returns the following JSON object:

```
{
count : <number of e-scripts found>,
scripts : <array, one object per e-script>
}
```

If no result is found, the value for the **count** parameter is "0". If an e-script is found, it is returned in the following form as a JSON object:

```
{
hanid: <HAN ID>,
description: <description>,
status: <0|1|2>,
expiredate: <milliseconds since 1.1.1970, output only if status=2>
permission: {
active: <false|true>,
description: <description of the permission>
},
eissn: <E-ISSN>,
issn: <ISSN>,
periods: <periods>,
subjects: [<subject description>],
publisher: <publisher>,
provider: <source>,
}
```

```

license: {
  active: <false|true>,
  number: <number of licenses>,
  used: <number of licenses in use>
},
fulltext: <HAN URL>,
payment: {
  type: <pricing model>,
  fee: <cost>
}
}

```

If multiple e-scripts are found, the corresponding number of JSON objects are returned. If the requesting system cannot process JSON objects, an HTML template may be returned instead, with data inserted dynamically in placeholders. In particular with AJAX calls, this makes more sense than to use a JSON object. If no e-script is found, an error code is returned.

Creating E-Scripts

If there is no e-script for a requested online resource, HAN can create one automatically using the available information. This function is carried out only after HAN has checked for an existing e-script. For details about this checking process, see "[Determining the HAN ID](#)". If none is found, an e-script is created.



There is an element of risk involved in writing data from an outside source to the HAN server. To protect communication with the HAN server from unauthorized intrusions during external data exchange, a ticketing mechanism is used. This ticketing mechanism is configured in the HAN Settings.

Functioning of the API

The API is accessed through a virtual directory: `http://<HAN server>/hanapi/action`.

The `method` parameter defines the requested method. The interface for determining the HAN ID or, if none is found, for creating an e-script, is addressed using the `findCreateHANID` value.

The following additional parameters are available:

`url`. Target URL

`eissn`. E-ISSN (In SFX this is stored as the ISSN parameter, but in EZB it is called E-ISSN.)

`title`. Name of the journal

`doi`. DOI of the full text

`id`. HAN ID, if no e-script was found

`property`. First object property

`group`. Assignment of preferences; similar to anchor

`timestamp`. Time at which the request was created (in seconds); prevents a stored link from being called at a later point in time. For example, for a validity period of 5 minutes, add a `timestamp` parameter of 300 seconds.

hash. <checksum>; the 'hash' parameter is calculated from all previous parameters: Hash (including salt) = (url=<>&eissn=<>...). For the greatest possible flexibility, the hash is calculated for control of the entire parameter string.

The **eissn**, **property**, **group**, **timestamp** and **doi** parameters are optional. The **url**, **id** and **title** parameters, on the other hand, are required – if any of these is missing, an error message is returned.



All parameters must be passed in URL-encoded form.

Examples

Example of an URL-based request:

```
http://handemo.hh-software.com/hanapi/action?
method=findCreateHANID&title=Nature&url=http%3A%2F%
2Fwww.nature.com&hanid=nature&id=create&return=0&hash=eea25975f5e2d78ad5
daebbc8acd541a
```

The structure of a JSON object is similar to that of the URL parameters, and the same parameter names are used:

```
{
method : getHANID,
url : <URL>,
eissn : <E-ISSN>,
doi : <DOI>,
title : <title>,
id: <ID of the configured API>
hanid : <HAN ID, if an e-script has to be created>,
property : <first object property>,
timestamp : <time stamp>,
hash : <hash calculated from all parameters in the same manner as when
sent as a URL parameter>,
return : <return method>,
group: <group ID for assignment of preferences>
}
```

When using a JSON object, the default return value is the redirect. This is the return type when no method is specified.

Return of the search result

The **return** parameter defines the type of return. The values to choose from are as follows:

- 0 (redirect)
- 1 (JSON)
- 2 (template)

The default value is 0, which redirects to the HAN URL; when no parameters are entered the interface always responds with a redirect. The return of results then proceeds in the same manner as if an e-script had initially been found. For details about the return of results, see "[Determining the HAN ID](#)".

HAN as Discovery Service

If you use a Discovery service like Google Scholar, Summon or EBSCO in your company, you can connect it to HAN via the Discovery Service function. HAN uses the Web API mechanisms to check for existing e-scripts in a LinkOut.

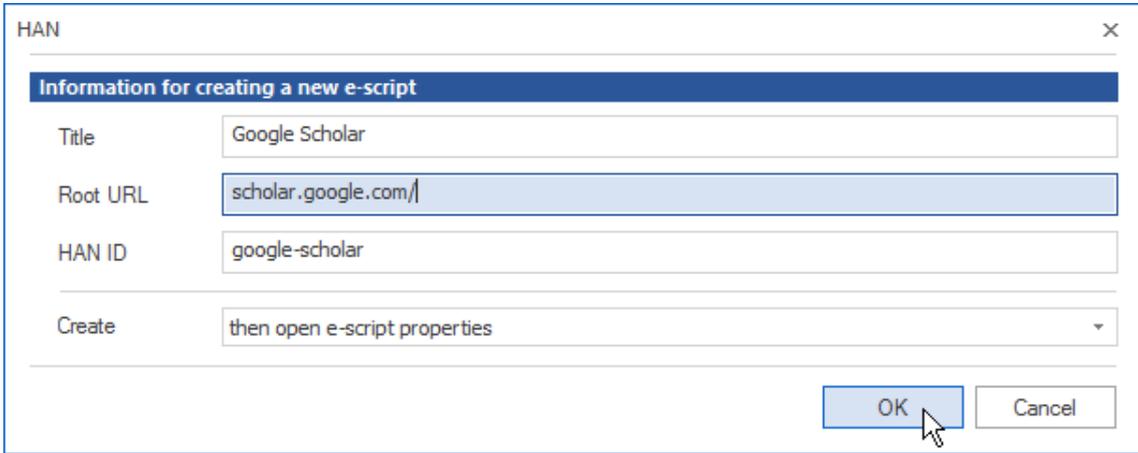
The following prerequisites apply for the configuration of the HAN Discovery Service function:

- As a start-up URL, select your entry point in the search engine.
- Use the URL kernel mode for the e-script.
- On the Discovery Service page of the e-scripts properties, use regular expressions.

This chapter shows you how to configure HAN as a [Discovery Service](#) and an associated [authentication service](#) that requires login only when a full-text link is opened.

Configure Discovery Service:

1. Create a new e-script that points to the startup URL of your Discovery Services. In the example, we use the Google Scholar's general page and therefore, in the **Root URL** entry field, we enter the address `scholar.google.com/`:



The screenshot shows a dialog box titled "HAN" with a close button (X) in the top right corner. The dialog has a blue header bar that reads "Information for creating a new e-script". Below the header, there are four input fields and a dropdown menu:

- Title:** Google Scholar
- Root URL:** scholar.google.com/ (This field is highlighted with a blue border and a mouse cursor is pointing at it.)
- HAN ID:** google-scholar
- Create:** then open e-script properties (This is a dropdown menu with a downward arrow.)

At the bottom right of the dialog, there are two buttons: "OK" and "Cancel". A mouse cursor is pointing at the "OK" button.

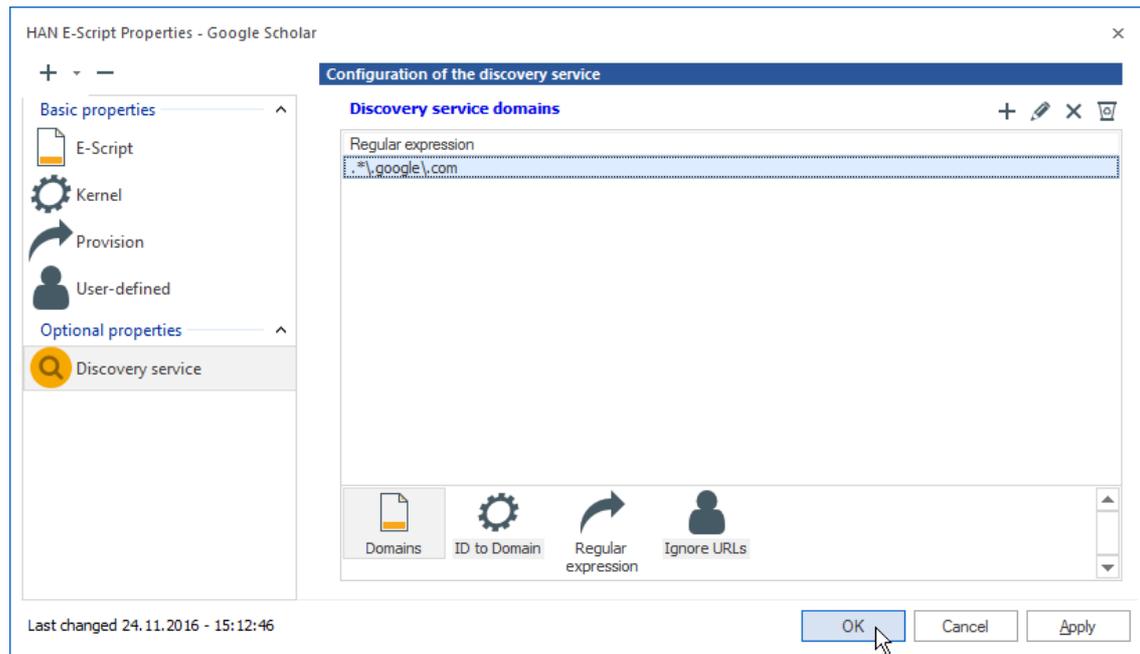
2. Next to **Create**, select **then open e-script properties**. This opens the e-scripts properties after creation.

3. Confirm by clicking **OK**.

4. In the e-scripts properties, switch to the **Kernel** page.

5. Next to **Use** select **URL kernel mode**.

6. Add the **Discovery Services** property page to the e-scrip properties. To add pages to the e-script properties, see "[E-script properties](#)".
7. On the **Discovery Services** page, above the **Discovery service domains** click the **New (+)** button.
8. Enter the Discovery Services domain as a regular expression. In our example, we choose Google Scholar's general page `.*\google\.com`:



Confirm your entries by clicking **OK**.

Configure Authentication:

To ensure that the user does not have to authenticate twice, configure the AuthDS authentication service. When the AuthDS authentication service is configured, the user does not authenticate until he opens the full text link.



Caution: Be careful when configuring AuthDS. An incorrectly configured authentication service can leverage the entire HAN authentication mechanism!

1. To configure AuthDS Authentication Service, open the HAN settings in the section **Login** on the **Authentication page**.
2. In the Authentication Services list, click the **New** button to add a new service.
3. In the **Select Authentication Service** dialog, select **AuthDS** and confirm with by clicking **OK**.

4. In the **Configure Authentication Service** dialog box, next to **Label**, enter an authentication service ID. In our example, we choose `GOOGLESCHOLAR`.

5. In the **Service configuration** list, enter the HAN ID of the created e-script as the value for the **ID** parameter. In our example, we choose `google-scholar`:

The screenshot shows a dialog box titled "H+H HAN" with a close button (X) in the top right corner. It is divided into two main sections:

- Authentication service configuration:**
 - Activate service
 - Description: AuthDS
 - Label: GOOGLESCHOLAR
 - Use persistent cookies for login
 - Validation (hours): 0
- Service configuration:**

Parameter	Value
Id	google-scholar

At the bottom right, there are "OK" and "Cancel" buttons. A mouse cursor is pointing at the "OK" button.



If you use the authentication service for multiple meta search engines (multiple e-scripts), the correct syntax is the value: (`<HAN ID>|<HAN ID>|<HAN ID>| . . .`).

6. Confirm your entries by clicking **OK**. The new authentication service is added to the **Authentication services** list.



To use the authentication service, authentication must be enabled. To activate authentication and which options you have, see the chapter "[HAN components/HAN settings/login/authentication](#)".

7. Save the settings by clicking the **Save and Close** button. After these changes, the HAN Web server must be restarted. To restart the Web server, see the chapter "[HAN Components/HAN System Settings/HAN Webservice](#)".

EZB and HAN

HAN supports the import and administration of e-scripts from the EZB. There are three methods for importing and updating EZB data:

- Manual import (full or partial imports)
- Automatic import (full or partial imports)
- Import/update when EZB content is accessed

When an e-script is created automatically through an import operation, it includes a data field containing the EZB anchor. Thus the imported e-script can be found using an anchor field query.

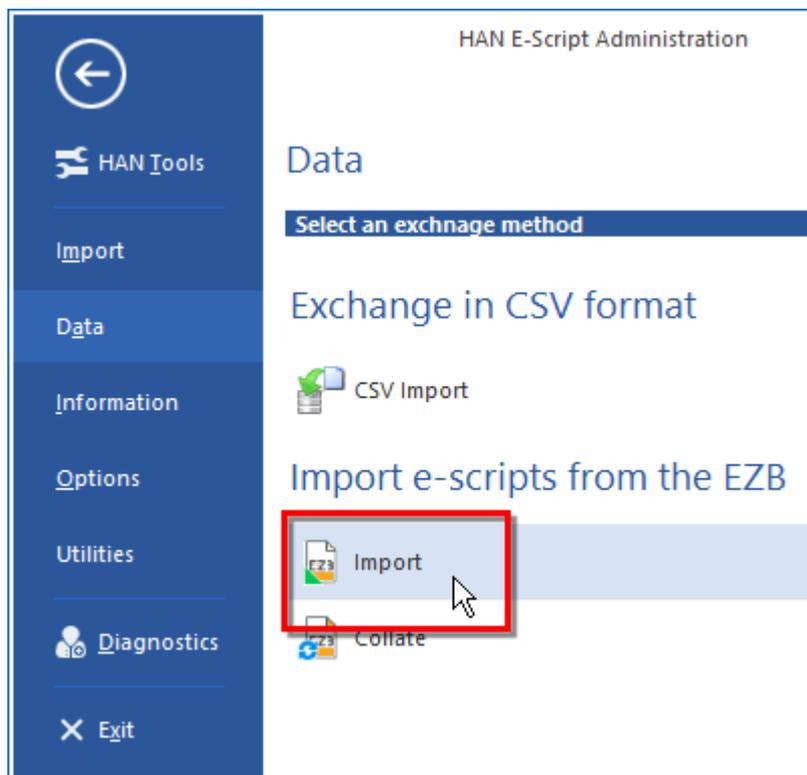
In HAN v2 and later, you can have multiple different starting URLs for a single e-journal. This means that access to an e-journal may consist of multiple e-scripts. You can also specify certain anchor-based properties (permissions, data logging, etc.) to be assigned automatically to new e-scripts imported from the EZB.

The following steps are required for configuring the EZB interface in HAN:

1. Activate the EZB module in the HAN Settings
2. Configure the location, including EZB access credentials, in the HAN Settings
3. Import the EZB title list into HAN
4. Configure HAN settings in EZB Preferences
5. Select the e-journals to be offered through HAN in EZB License Administration
6. Set up automatic data collation

EZB Import

The EZB import function imports e-journals from the EZB. In the process, an e-script is automatically created for the e-journal which HAN uses to provide the e-journals to your users. The EZB import function is a HAN utility. To run the EZB import function, open the Program Menu in E-Script Administration, select **Data** and then click on **Import**:



On the **Import from EZB** dialog page, configure the settings to be used when importing the e-journal:

EZB import. Specifies which settings will be applied:

- **use global settings.** The global settings configured under **Preferences** in the **EZB** section of the HAN Settings are applied.
- **use custom import settings.** User-defined import settings are applied.

Permission. The e-scripts imported are granted the permission selected here. Use the **Select** button ("...") to select the desired permission.

Data logging. Defines how data on the imported e-scripts is logged:

- **Title.** The title is used as the record ID.
- **Anchor.** The EZB anchor is used as the record ID.
- **Value.** A user-defined value, specified in the **Value** field on the right, is used as the record ID.

Value. User-defined value to be used as the record ID for data logging.

Import type. For selecting the type of import:

- **process as a complete import.** All accessible e-journals in the EZB are imported.
- **use selected settings.** Only those e-journals are imported that match the settings in the section below this one.

Publisher. Only e-journals from the selected publisher are imported. Use the **Select** button ("...") to select the desired publisher.

Anchor. Only e-journals with the selected anchor are imported. Use the **Select** button to select the desired anchor.

Subject. Only e-journals on the selected subject are imported. Use the **Select** button to select the desired subject.

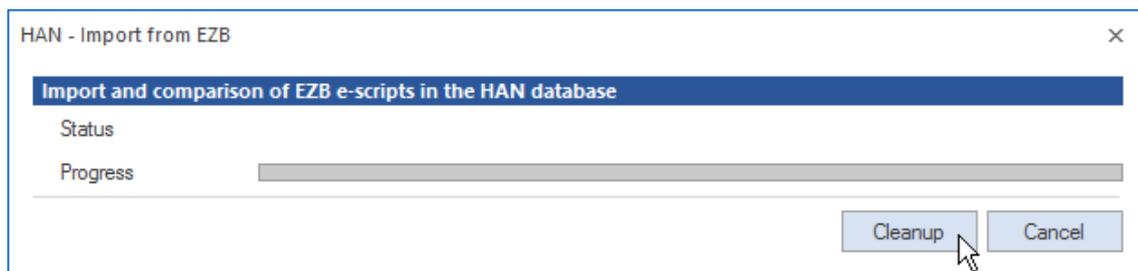
Action. Shows the type of import selected.

Progress. Indicates the progress of the import operation.

Click on the **Import** button to start importing e-journals from the EZB.

Collating e-scripts manually:

In addition to automatic comparison with the EZB, which is a property of individual e-scripts, you can initiate the comparison manually. To do this, open the Program Menu, select **Data** and click on **Collate**. This opens the **Import and comparison of EZB e-scripts** dialog. Once the comparison is completed, click on **Cleanup** to both update existing e-scripts and remove those from your database which were not found at EZB:



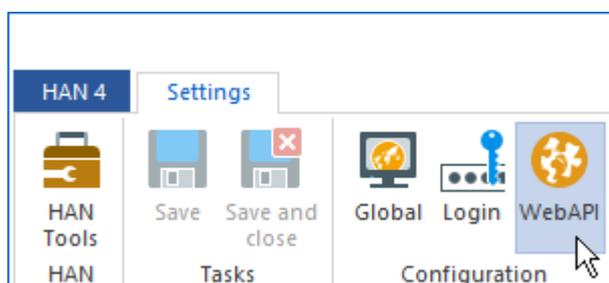
For details on automatic EZB e-script collating, see "[Automatic Collating](#)" in the HAN manual.

EZB Configuration in HAN

Settings for the interaction between HAN and the EZB are configured in the HAN Settings. Open the **HAN Tools** desktop shortcut and select **HAN Settings**:



In the HAN Settings, select the **Web API** section:



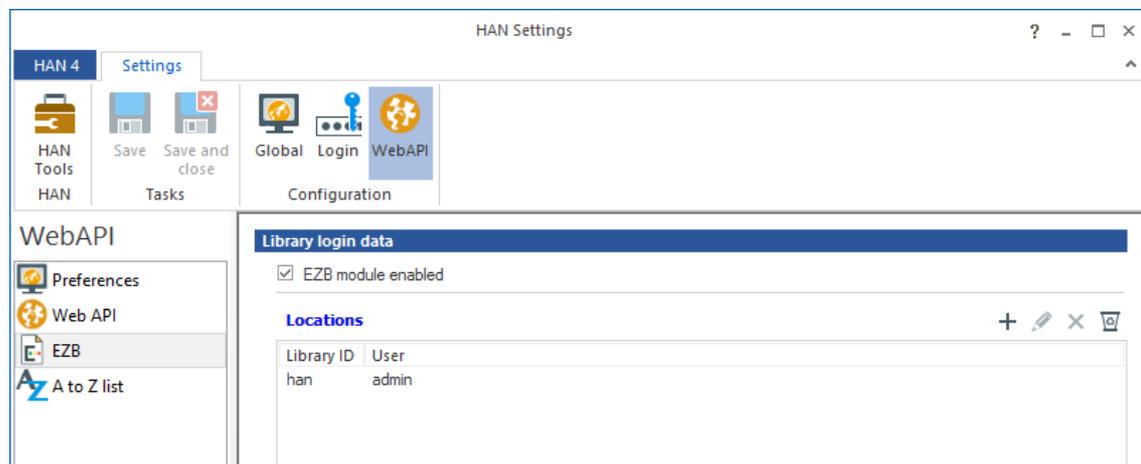
Settings for the EZB interface are divided into the following pages:

- EZB

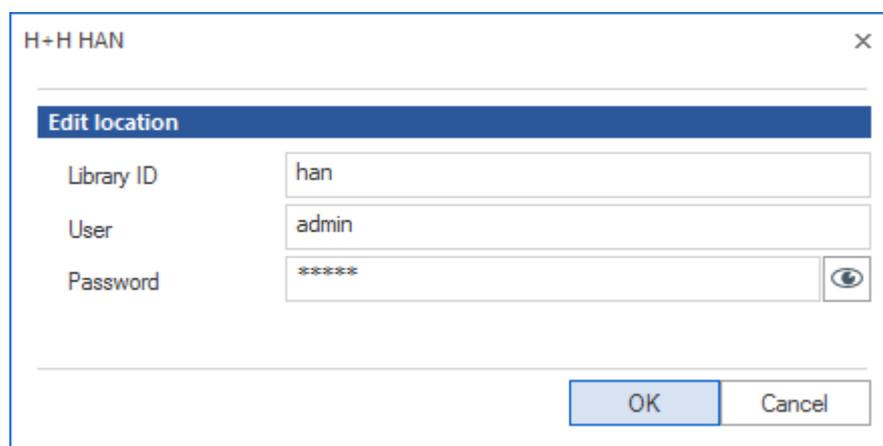
- Preferences

"EZB" page:

This is the page for configuring EZB access:

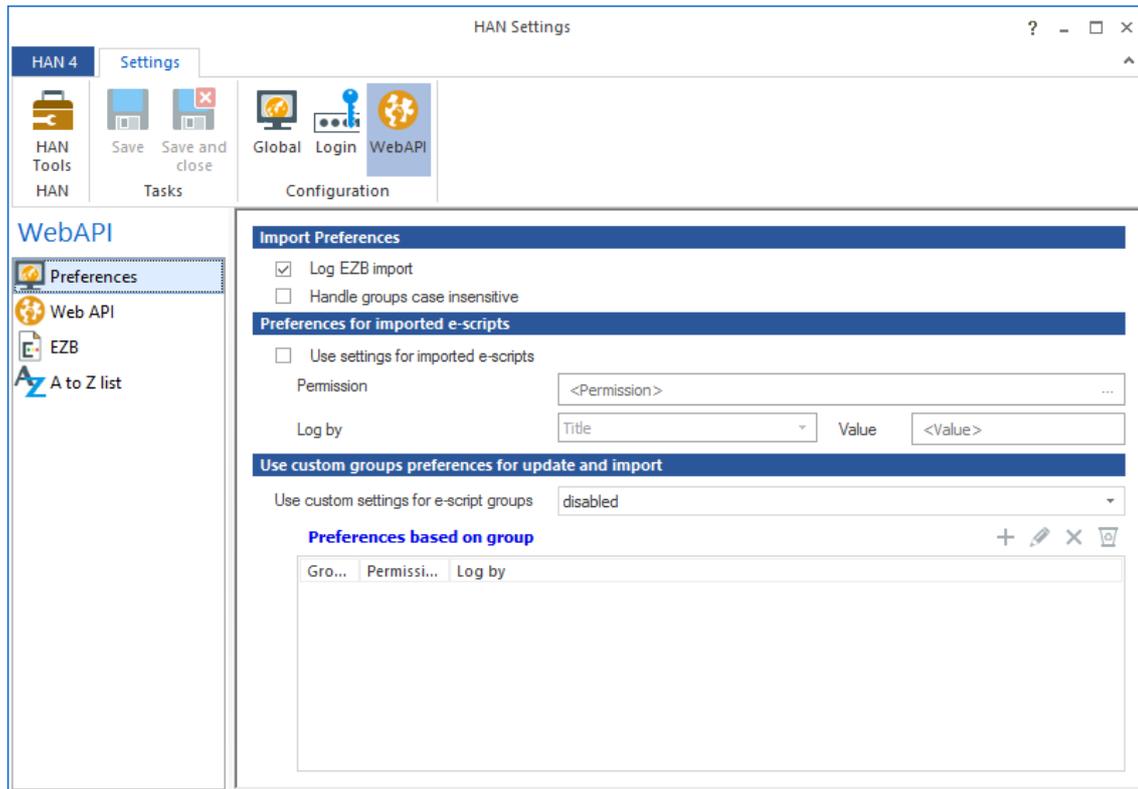


This page opens first by default. This is where you need to activate the EZB module following HAN installation. Your EZB locations are also configured here, together with the corresponding EZB login credentials:



"Preferences" page:

Configure your preferences for EZB imports on this page:



You can configure whether HAN writes a log file of import operations, whether certain settings (such as permissions) are set automatically in imported e-scripts, and whether anchor-specific settings are applied to imported e-scripts. For details on each of the options available here, "[HAN Components/HAN Settings/Web API/Preferences](#)".

Configuring HAN Settings in EZB Administration

This chapter describes how to configure your EZB access in the EZB administration settings for use with HAN:

1. In EZB Preferences, under **Settings** (on the left), click on the **Library Settings** link.
2. Click on **Edit settings for HAN server pages**.
3. Under **HAN Server Settings**, enter `http://<HAN server>/ezb/start?`. Replace the expression `<HAN server>` with the name of your HAN server:

HAN-server settings

HAN-server` s URL:

In EZB License Administration, select the e-journals to be accessed through HAN:

After you have entered the HAN server in EZB Preferences, you need to specify which e-journals are to be called over the HAN server:

1. In EZB Preferences, under **License Administration** (on the left), click on the **Edit** link.
2. Specify the desired criteria on the Search page and open the Results page. You should see a new column, with the header **Journal via HAN**:

Journal Selection						
Title	Journal via HAN	Consortium / National license	New/Delete entry for own licenses	edit licenses	License complete	Traffic lights
BSHM Bulletin: Journal of the British Society for the History of Mathematics / Taylor & Francis			■			●
CES Discussion Paper Series / Center for Economic Studies, Leuven / Center for Economic Studies, Leuven			■			●

3. Select the e-journals that the EZB will provide over the HAN server. Activate the **All licenses over HAN** checkbox if you wish to select all e-journals for use with HAN.

Manual Import from EZB

Use the manual EZB import function if you have not imported e-journals from the EZB before, or if you are looking for particular e-journals. Start the EZB import via E-Script Administration:

1. Open the program menu, select **Data** and click on **Import**.
2. In the **Import from EZB** dialog, specify which e-journals to import with which settings:

In this example, a full import from the EZB is performed. You can also use the EZB import function to import only e-journals that match specified criteria. To perform this type of selective import, proceed as follows:

1. Select the **use custom import settings** option in the **EZB import** field:
2. Specify your preferences in the **Publisher**, **Anchor** and **Subject** fields. Input in the **Anchor** field is user-definable, and the "*" wildcard is permitted. In the **Publisher** and **Subject** fields, choose from existing data objects. Data objects are created and managed in the HAN Data Editor. For details on working with the Data Editor, see "[Managing HAN Resources/Data Editor](#)". Input in these fields is optional; you can use some or all of the fields.
3. Once you have defined your settings, click on the **Import** button. The import begins. The **Progress** bar indicates the progress of the import operation. When the import operation is completed, click **Exit** to exit the EZB import function.

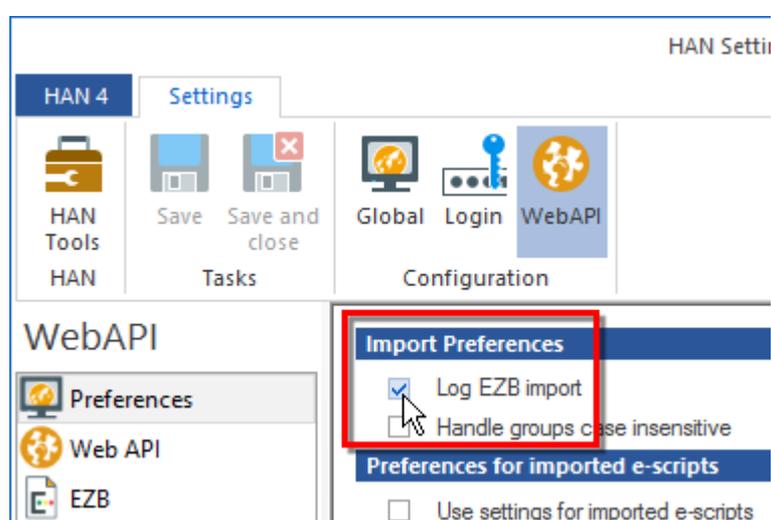


For a description of all the options available here, see "[EZB Import](#)".

If you want to assign common properties to the e-scripts imported from the EZB, configure the corresponding settings before you run the import. For details on defining global preferences for e-scripts, see "[EZB Configuration in HAN](#)". To assign common properties to multiple e-scripts after import, use the query function. For details on using queries, see "[Managing HAN Resources/Using Queries](#)".



The EZB import operations are logged in the HAN Event Log. This is a default setting. You can deactivate this data logging function in the HAN Settings if desired. To do this, open the **Web API** section, select the **Preferences** page and deactivate the **Log EZB import** option:



After your first EZB import, you can configure HAN to update and collate EZB titles automatically. For details on configuring HAN for automatic collation, see "[Automatic Collating](#)".

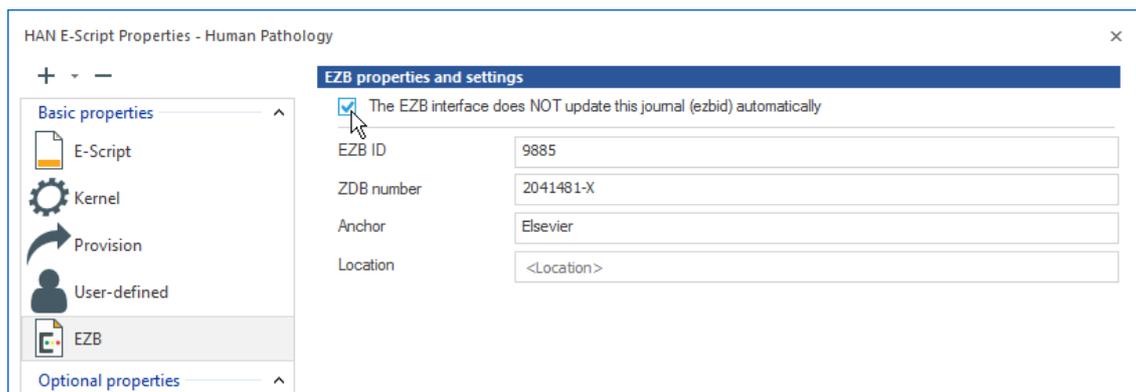
Automatic Collating

In addition to the function for importing EZB titles manually, you can configure HAN to collate EZB e-scripts with online EZB data automatically at regular intervals. During automatic collation, HAN updates existing e-scripts and checks whether any e-journals have been added to or deleted from EZB license administration. For new e-journals, HAN automatically creates e-scripts. When e-journals are deleted from the EZB, HAN automatically deletes the corresponding HAN e-scripts.



In automatic collating, the global settings for EZB imports are applied.

Automatic collating is a property configured for each e-script. With the default settings, HAN automatically collates e-scripts imported from the EZB with online EZB data. If you do not want a particular EZB e-script to be updated automatically, disable the automatic collating. On the **EZB** page, select the **The EZB interface does NOT update this journal (ezbid) automatically** check box:



HAN E-Script Properties - Human Pathology

EZB properties and settings

The EZB interface does NOT update this journal (ezbid) automatically

EZB ID: 9885

ZDB number: 2041481-X

Anchor: Elsevier

Location: <Location>

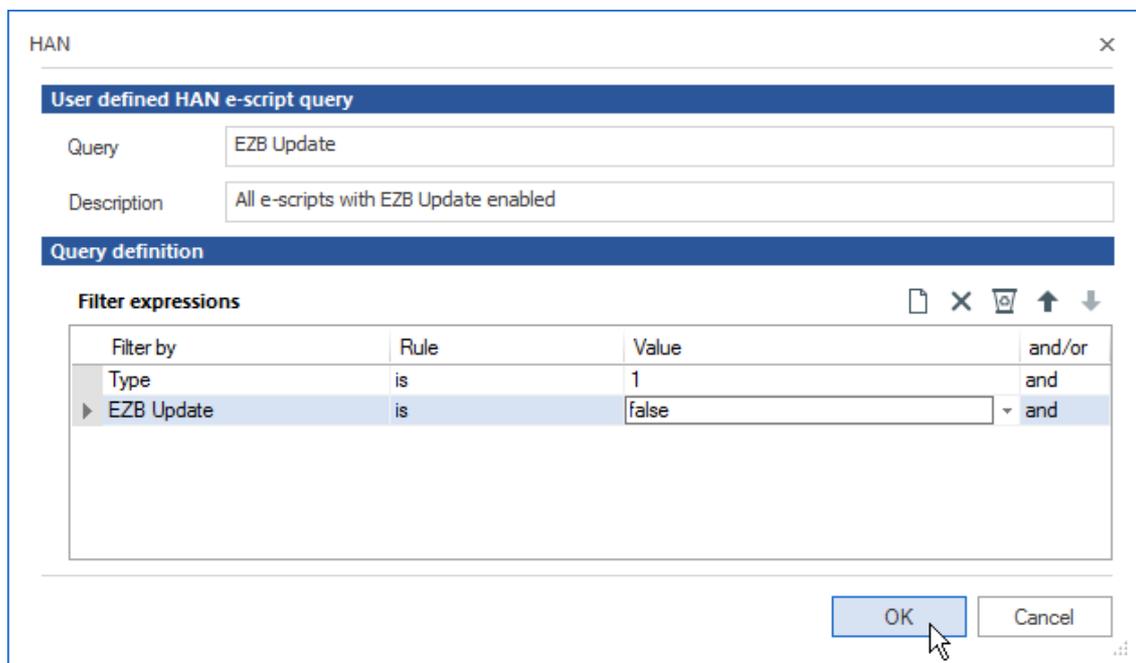
If you wish to deactivate automatic collating for a number of e-scripts at once, use the cumulative properties function.



HAN offers the option of assigning cumulative properties to e-scripts. Using queries is the easiest way to view a particular group of e-scripts. Define a query that queries the desired e-scripts from the HAN database. Assign cumulative properties to the e-scripts in the query. For details on using queries, see "[Managing HAN Resources/Using Queries](#)".

To deactivate automatic collating for all of the e-scripts in HAN at one time, proceed as follows:

1. In the E-Script Administration program, create a new user-defined query that finds all e-scripts for which automatic EZB collating is active:



HAN

User defined HAN e-script query

Query: EZB Update

Description: All e-scripts with EZB Update enabled

Query definition

Filter expressions

Filter by	Rule	Value	and/or
Type	is	1	and
▶ EZB Update	is	false	and

OK Cancel

For example, the expression "Type is 1" finds all e-scripts that were imported from the EZB. The expression "EZB update is false" checks whether automatic updating has been disabled. With this

value set to **false**, the query returns e-scripts for which the option disabling EZB updates is not activated.

2. Apply the query as described. The E-Script Selection now shows only those e-scripts for which automatic EZB collating is active.
3. Select all e-scripts in the E-Script Selection and click on **Properties** to open the e-script properties. This may take a few minutes, depending on how many EZB e-scripts have been imported.
4. On the **EZB** page, activate the **The EZB interface does NOT update this journal (ezbid) automatically** option:



5. Click on **OK** to confirm your settings. Automatic EZB collating is now disabled for the selected e-scripts.



It may take a few minutes for HAN to set this option, depending on how many e-scripts are selected.

Once the automatic EZB updating has been switched off, the e-scripts affected will no longer be found using the same query. Any new imports from the EZB, however, will be found using this query. Thus you can use the same method later to deactivate automatic updating of new EZB e-scripts as well.

Discussion: Rules for EZB Udate

This section explains the rules by which automatic EZB collating is performed in HAN. This background information is provided for anyone interested; it is not required for operation or administration of your HAN system.

One of the basic difficulties in collating data between HAN and the EZB is determining when an e-script has been modified or when a new e-script should be created for a new licensing period. Because there is no unambiguous criterion, HAN needs a set of rules that forms a basis for interpreting the data received during updates. Four properties in EZB e-scripts are designated as fixed criteria: title, anchor, licensing period and URL. The rules are as follows:

If any of the following apply, the e-script will be updated rather than replaced:

- Three of the four criteria (title, anchor, license, URL) are unchanged.
- The root URL has changed.
- The licensing period has changed.
- The anchor and the URL have changed. Exception: If no licensing period has been defined (i.e., the corresponding field is empty) and the anchor and URL have changed, a new e-script is created.

In all other cases, a new e-script is created.



When EZB updating is blocked for a certain e-script, it is also blocked for the entire e-journal that the e-script accesses. The journal is identified by its EZB ID. This means that no changes are made for a blocked journal; not only is no update performed; no new e-script is created for a new licensing period either, nor will the e-script be deleted if it no longer exists in the EZB.

Furthermore, the E-Script Administration program detects whether an EZB e-script has been modified manually in the administration program (such as a change in the root URL or the addition of URLs) and, if so, informs the user that this change will be overwritten during the next update if updating is not disabled for this e-script. The only way to prevent such modifications to an e-journal from being overwritten is to disable automatic updating for the e-script in question.

Event Logging and Statistical Analysis

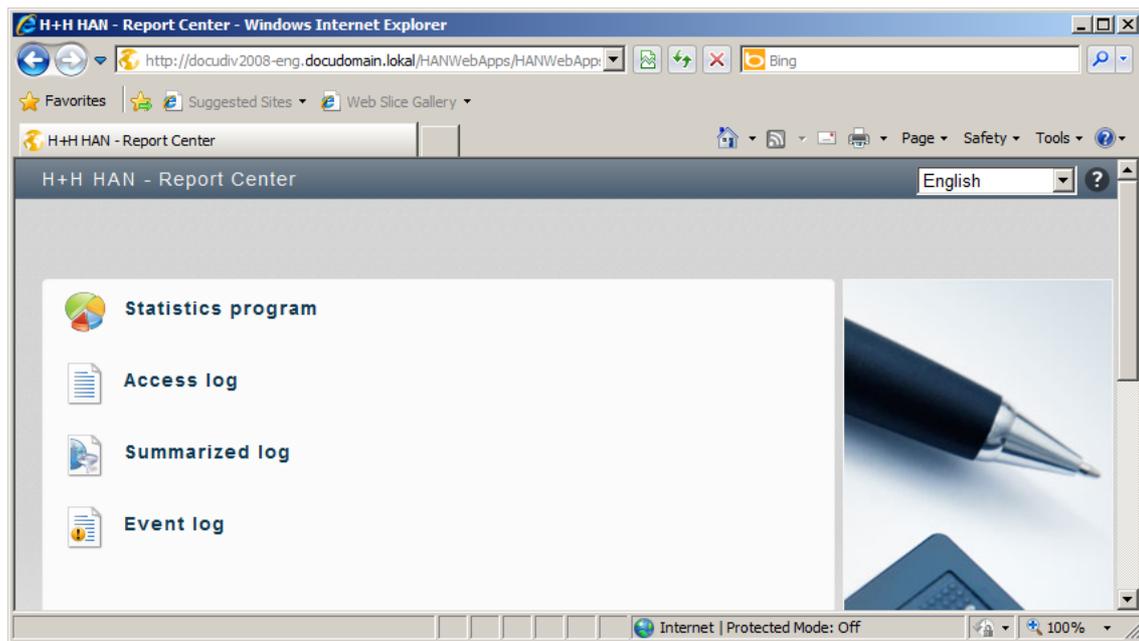
This chapter describes how to maintain records of the usage of your HAN system and how to run statistical analyses of the recorded data. The results of these analyses provide you with well-founded, reliable usage statistics. The statistical evaluation tools include options for selecting time periods, generating custom charts of usage data, and analyzing aggregate data using metadata objects.

All statistics functions can be accessed through the HAN Report Center. The Report Center gives you a range of web-based tools for monitoring and evaluating usage of your HAN system. Open the Report Center from the **HAN Tools** desktop shortcut, **HAN Report Center** option.

The starting screen of the Report Center shows the tools available.



If a certificate error is reported when loading the Report Center or the Statistics program, that means no valid certificate has been registered for the web server. For details on requesting and importing certificates, see "[HAN System Settings/HAN Web Server/ Requesting and Importing Certificates](#)". Still, there is no harm in loading the page at this point; simply select **Continue loading the page**.



Statistics program. Statistical evaluation of usage data, with numerous analytical functions.

Access log. Overview of raw data on e-script usage.

Summarized log. E-script usage data by session.

Event log. All events in your HAN system, sorted by relevance.

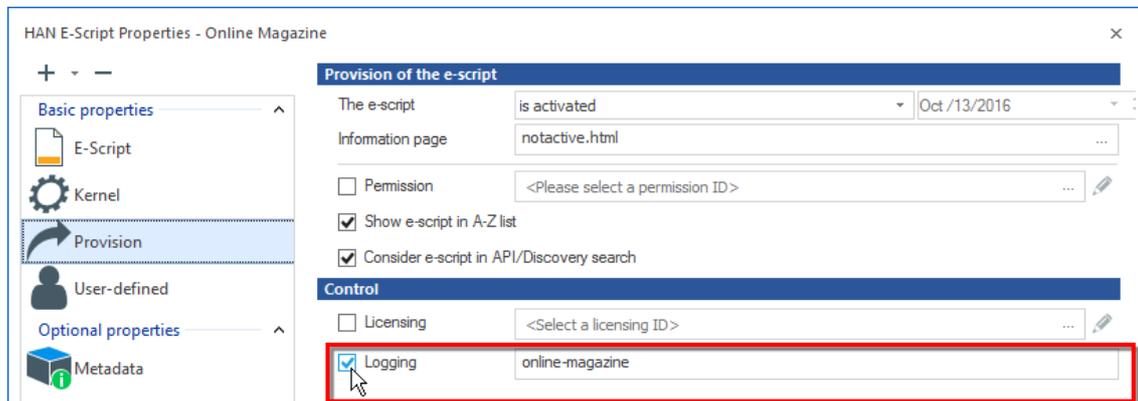
User change. Login with another user account.

For details on data logging and statistical evaluation, see the following chapters:

- "[Data Logging](#)" describes the configuration and use of data logging functions.
- "[Statistics](#)" provides details on working with the Statistics application.
- "[Total Usage](#)" explains how to calculate data on the overall usage of your HAN system.
- "[Concurrent Use](#)" describes how to calculate data on parallel usage of e-scripts in your HAN system.
- "[Document Types](#)" explains how to calculate data on the e-script usage by document type.
- "[Usage per Cost Center](#)" describes how to calculate e-journal usage per cost center.

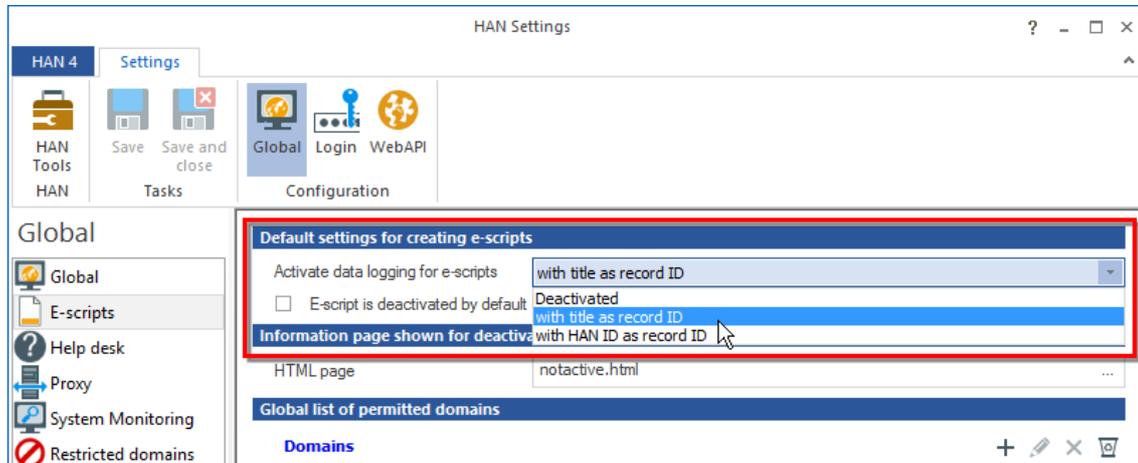
Data Logging

This chapter describes in detail how to activate data logging and how to work with the HAN Access Log. Whether or not usage data is logged each time a given e-script is called. Data logging is configured in e-script properties. For each e-script you can define whether access data are logged and, if so, which record ID the data are assigned:



Click in the **Logging** checkbox and enter your choice of record ID in the input field.

You also have the option of making this the default setting for all new e-scripts, so that it is automatically active when a new e-script is created. To do this, open the HAN Settings, select the **Global** section and open the **E-Scripts** page:



Tick the checkbox next to **Activate data logging for e-scripts (with title as ID)**. Usage of all e-scripts created subsequently will be recorded in the access log, using the e-script title as record ID. With the HAN default settings that are active immediately following installation, this setting is activated. Even when this setting is active, you can use your choice of record ID rather than the e-script title. To do this, simply specify the record ID in the e-script's properties. The record ID you select overwrites the global setting.

The HAN Access Log gives you a direct overview of all usage data. We also refer to this display as the raw data. To open the HAN Access Log, select it in the Report Center.

The HAN Access Log lists all instances of e-script access. Each record is given a sequential number. The newest data record is at the top. Use the navigation buttons to scroll through the data records. The access log contains all data records. The summarized log, on the other hand, shows all

usage data sorted by session ID. You can analyze the usage data with the HAN Statistics application. For details on using the Statistics application, see "[Statistics](#)".

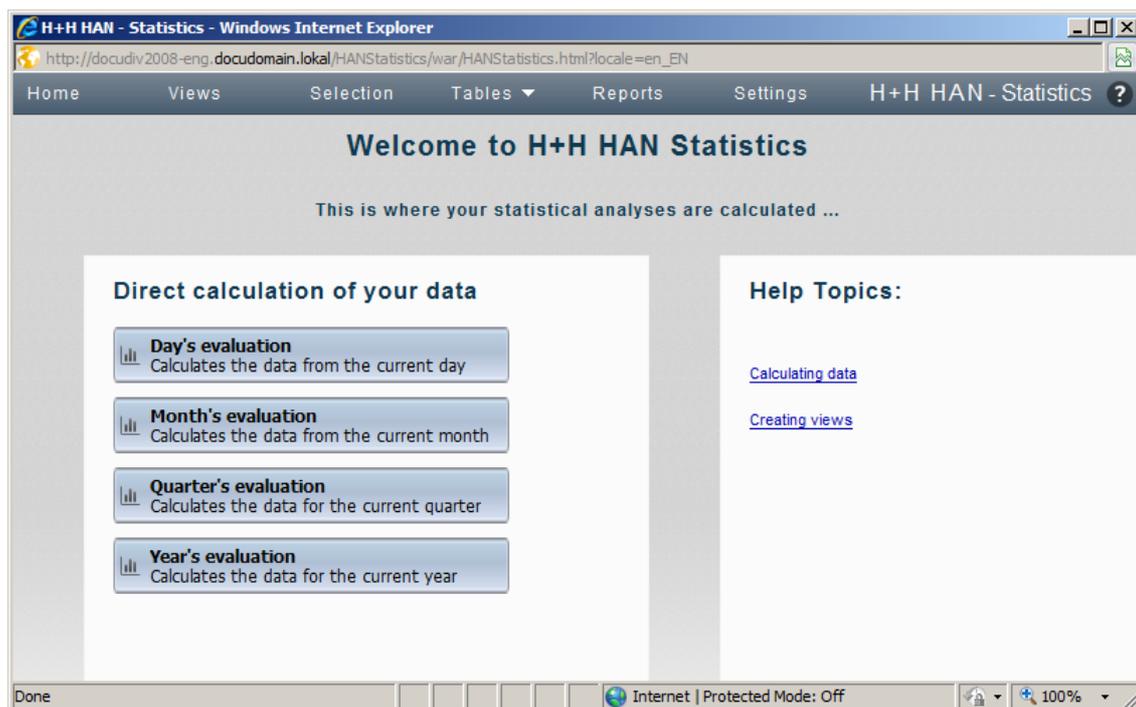
Statistics

The HAN Statistics application is a tool you can use to analyze the usage of your HAN e-scripts. You can calculate exactly who used which online resources when, how often and for how long. HAN Statistics also tracks concurrent use (or license usage), providing you with invaluable data for budget planning. The more you know about the number of licenses you need for a given online resource, the better you can streamline your licensing costs. Thus the Statistics utility can help your enterprise save money.

HAN Statistics is a web-based application. Open it from the HAN Report Center:



The main window of the Statistics application gives you access to the following basic functions:



Direct calculation of your data lists options for quick access to standard calculations. For example, you can select **Day's evaluation** to view a main table of the current day's usage. Under **Calculate the most recently used Views** is a list of the sets of data most recently calculated. Further options are available in the horizontal menu:



The menu is the same on every page of the Statistics program, but the options available may vary. The menu contains the following commands:

Home. Shows the "Welcome" page.

Views. Lets you select an existing View. A View is a selection of criteria which defines a particular set of data, and which can be saved and reused so you can calculate statistics for the same set of data without having to define the criteria again. For details on creating views, see "[Creating views](#)".

Selection. Opens the Selection window, in which you can choose criteria to define the data you wish to calculate, if you wish to run a user-defined calculation rather than using a standard template. For details on selecting criteria, see "[Selection window](#)".

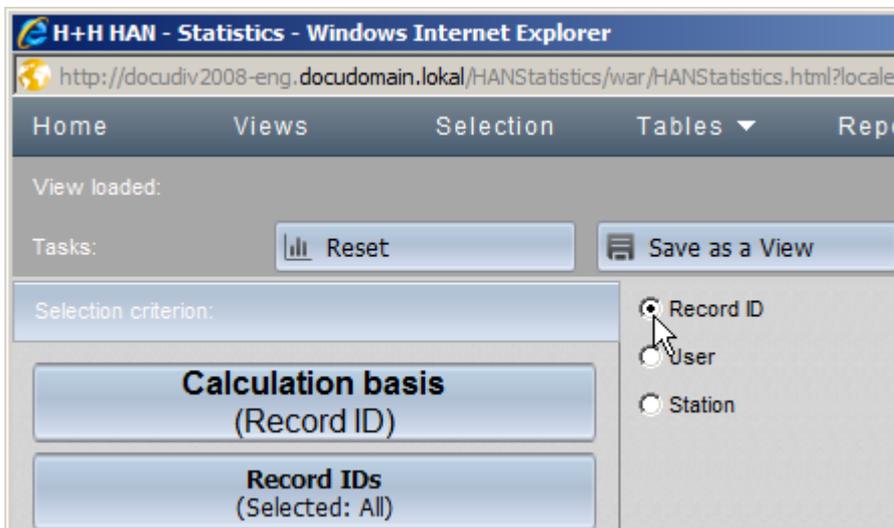
Tables. Lets you choose from a list of all tables calculated in the current browser session. You can switch from one table to another quickly and easily.

Reports. Saves the results of the current calculation as a report which you can archive and share. For details on creating reports, see "[Creating reports](#)".

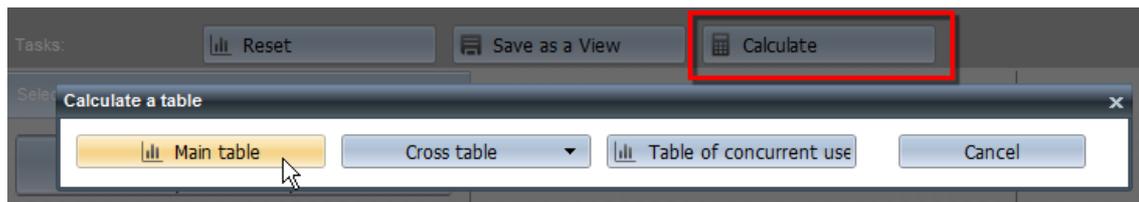
Settings. Settings for the Statistics application.

Selection window:

In the Selection window you can select your choice of criteria for the calculation of data:



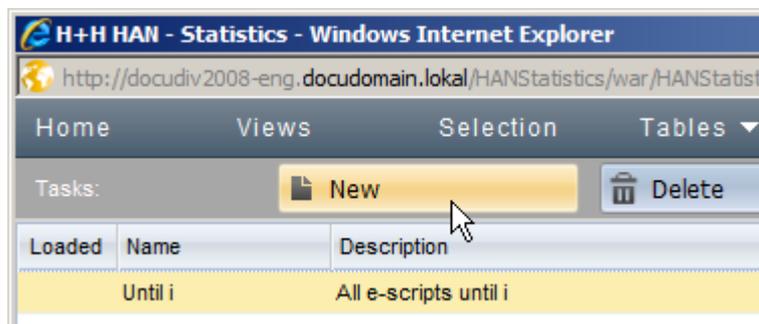
Select the type of criterion on the left, and the setting itself on the right. Once you have selected the desired criteria, click on **Calculate** and select a table; HAN does the rest:



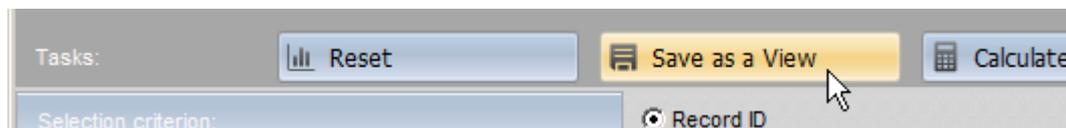
For details on calculating a main table, see "[Total Usage](#)". For details on calculating a table of concurrent use, see "[Concurrent Use](#)".

Creating views:

To create a view, begin by clicking on **Views** in the menu bar. In the Views window, click on **New** in the task bar:



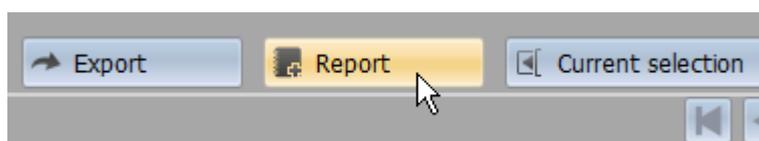
The Views window now shows a list of existing views. When you click **New**, the Selection window opens and you are prompted to select the desired criteria. In the Selection window, select the desired settings for the new view and click on **Save as a View**:



You can also save a new view without first opening the Views window and clicking on "New." Any time you are working in the Selection window and modify the selection of criteria, simply click on **Save as a View** in the task bar to save the new View.

Creating reports:

Reports save current calculation results. You can archive them and at the same time make them available to others. To save a report, click on **Report** in the task bar of the table you are working on:



A report includes all of the calculations created at the time the button is clicked, but does not save graphs or charts. Once you save a report, it is automatically listed in the Report window. To open the Report window, click on **Reports** in the menu bar:



The Report window shows all existing reports:

Home Views Selection Tables Reports Settings				
Tasks: ↔ Load 🗑 Delete				
Name	Description	Table type	Generated on	Generated by
July 2013	Monthly calculation: July 2013	Main table,Cross table,Table of concurrent use	17.07.2013 10:49:14	HH
June 2013	Monthly calculation: June 2013	Main table	16.07.2013 13:37:59	HH

Click on **Load** to load the selected report. The **Table type** column shows the type(s) of table contained in the report.

Total Usage

You can carry out statistical analyses on usage data with HAN Statistics. The type of table used to display total HAN usage is called a main table. This chapter shows you how to run [standard](#) and [user-defined](#) calculations on the total-usage data. It also provides details on aggregating [metadata](#), using the [single-record view](#) to get more information on a particular dataset, comparing calculations using [cross tables](#), [creating reports](#) to archive results, creating [charts and graphs](#) of your data, and saving a selection of criteria as a [View](#) for later calculation:

Performing a standard calculation of the total usage:

The four predefined options in HAN all calculate total usage over all record IDs, users and stations, broken down into four different time periods. You can use these options at any time for a quick tally of usage:

1. Open the **HAN Tools** desktop shortcut and select the Report Center.
2. In the Report Center, select **Statistics** to open the Statistics application.
3. The Statistics main window lists the predefined options for data evaluation under **Direct calculation of your data**. In this example, we select the evaluation of the day's data:

Direct calculation of your data

- Day's evaluation**
Calculates the data from the current day
- Month's evaluation**
Calculates the data from the current month
- Quarter's evaluation**
Calculates the data for the current quarter
- Year's evaluation**
Calculates the data for the current year

4. In the **Calculate a table** dialog, we select **Main Table**:



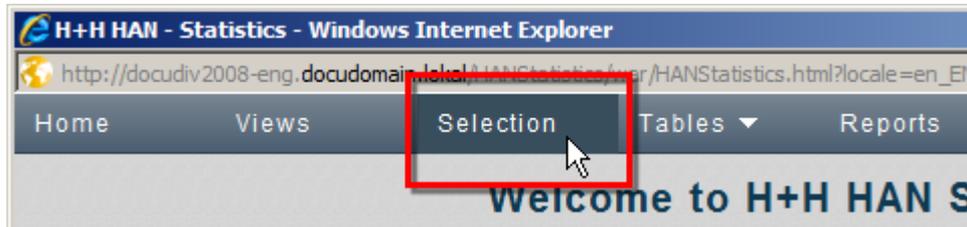
5. HAN now calculates the total usage for the current day and shows the results in the main table:

Record ID	Total usage	Total calls	Bytes	Use per call	Bytes per call	Percentage c
▶ 10 Minute Guide to Paying for	00:00:06	1	58.678	00:00:06	58.678	
▶ ACS (American Chemical Society	00:34:40	5	7.941.647	00:06:56	1.588.329	
▶ African American Review.	02:19:17	1	37.504.754	02:19:17	37.504.754	
▶ African Americans.	00:00:36	1	257.481	00:00:36	257.481	
▶ Algorithmica.	00:00:09	1	82.298	00:00:09	82.298	
▶ Analytical Biochemistry.	00:00:05	1	229.621	00:00:05	229.621	
▶ Analytical Chemistry.	00:05:03	1	653.464	00:05:03	653.464	
▶ Angewandte Chemie Internationa	00:00:04	1	385.106	00:00:04	385.106	
▶ Applied Mathematics Letters.	00:01:42	1	1.116.796	00:01:42	1.116.796	
▶ Archive for Rational Mechanics	00:00:18	1	672.865	00:00:18	672.865	
▶ Biochemistry.	00:01:11	1	3.740.821	00:01:11	3.740.821	
▶ Biorheology.	00:00:16	1	28.933	00:00:16	28.933	
▶ Black American Literature Foru	00:00:49	1	336.811	00:00:49	336.811	
▶ Cambridge Scientific Abstracts	00:00:19	2	85.928	00:00:09	42.964	

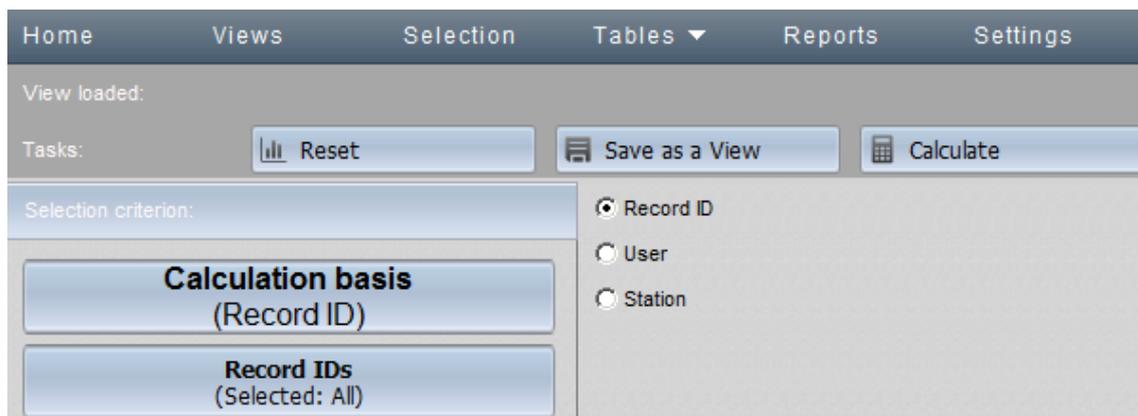
Performing a user-defined calculation of the total usage:

You can create a user-defined calculation any time the predefined standard calculation templates do not meet your needs – for example, if you want only the data pertaining to certain record IDs, users, or stations, or if you want to chart data from other time periods.

1. In the main window of the Statistics application, click **Selection** in the menu bar to open the Selection window:



2. In the Selection window, define the basis for the calculation of your main table. Open **Basis for calculation** to define the basis for the statistical analysis – record ID, users or stations. Your selection here determines which rows are included in the table:



3. Click on **Record ID** to select the record IDs to be included in the calculation. You can select some or all record IDs.

4. The **Users** and **Stations** options let you choose which user and station data are included in the calculation.

5. Click on **Attributes** to select which attributes are included in the calculation.



The attributes in questions are data record attributes. A data record attribute is assigned to the record of an e-script call when the corresponding condition is met:

- None – E-script calls without attributes are included in the calculation.
- /NA – The e-script called was inactive.
- /NL – No license was available when the e-script was called.
- /NR – The user did not have permission to use the e-script.

The NA, NL and NR attributes are automatically allocated by HAN if the corresponding condition is met when an e-script is called. In addition to these standard attributes, document types can also function as attributes in this sense. For details on creating document types, see "[Managing HAN Resources/Data Editor/Document Types](#)".

6. The **Periodicity** section lets you select the type of period to be covered in the calculation. You can select months, quarters, half-years, years, or no periodicity.

7. Under **Period** you can select the period, within the parameters of your chosen periodicity, that will form the basis of the calculation.



If you select "None" for periodicity, you can specify a starting date and ending date using the "calendar" buttons to the right of the corresponding input fields.

8. Under **Minimum/maximum** you can define additional filter arguments to specify which e-scripts are included in the calculation: This filter lets you set maximum and minimum values for the total number of times an e-script was called, the duration of use, and the number of bytes transferred. Thus you can exclude e-script calls that did not entail any actual usage:

Selection criterion:	Calls, from: <input type="text" value="1"/>
Calculation basis (Record ID)	Calls, to: <input type="text"/>
Record IDs (Selected: All)	Usage, from: <input type="text"/> Hr. <input type="text" value="1"/> Min. <input type="text"/> Sec.
Grouped record ID (Selected: None)	Usage, to: <input type="text" value="12"/> Hr. <input type="text"/> Min. <input type="text"/> Sec.
Users (Selected: All)	Bytes from: <input type="text"/>
Grouped users (Selected: None)	Bytes to: <input type="text"/>
Stations (Selected: All)	
Grouped stations (Selected: None)	
Attributes (Selected: All)	
Document types (Selected: All)	
Cost locations (Selected: None)	
Periodicity (Months)	
Period (September 2007)	
Minimum/maximum	

9. Once you have configured the desired settings, click on **Calculate** in the task bar.

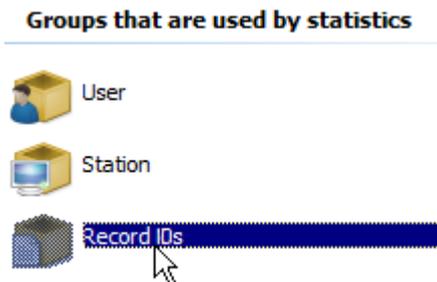
10. In the **Calculate a table** dialog, select **Main table**. HAN calculates the usage statistics in accordance with your settings and displays the results in a table.

Data groups:

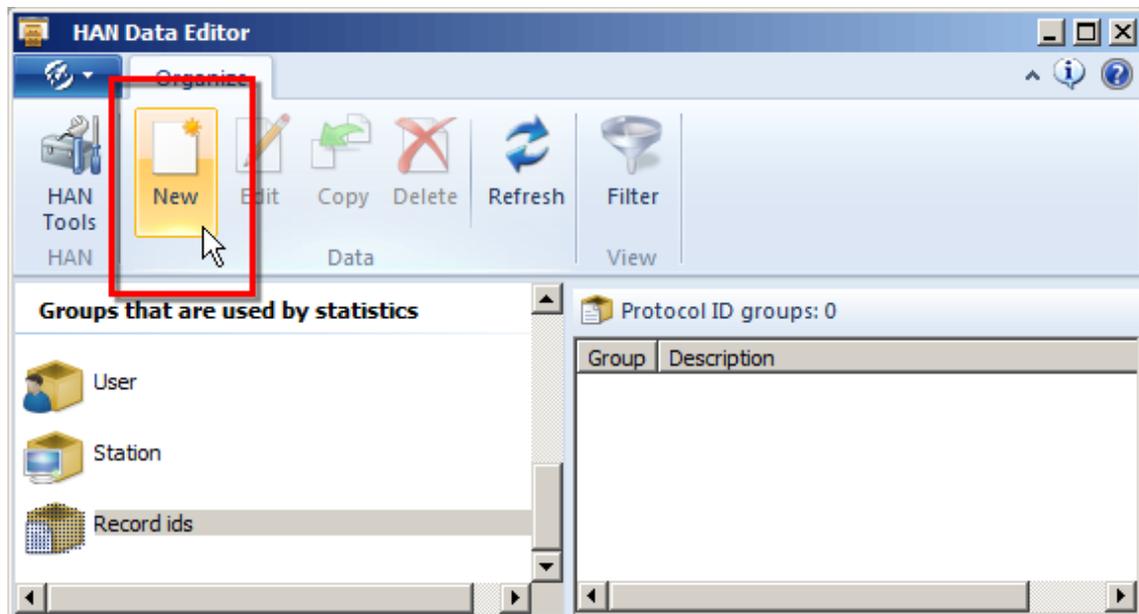
With data groups on record IDs, users and stations you can automatically aggregate the values of individual data records. The resulting values are shown in the spreadsheet under the name of the data group. Data groups are created in the HAN Data Editor:

1. Open the Data Editor from the **NetMan Tools** desktop shortcut.

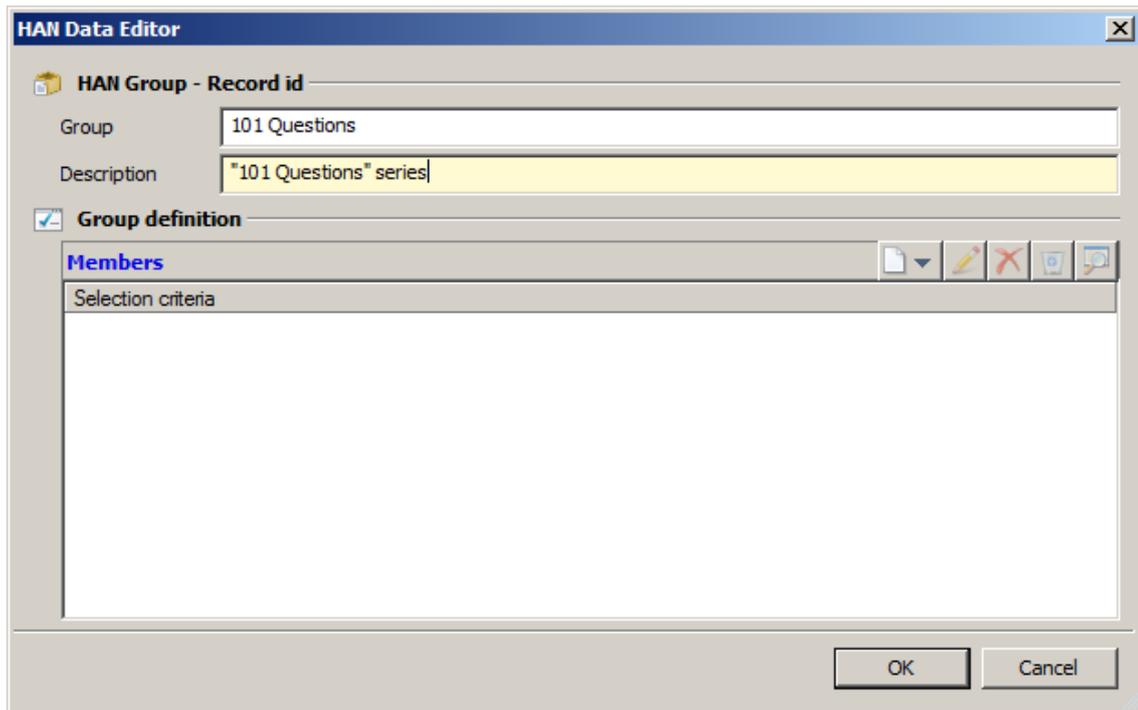
2. In the Data Editor, select the desired type of data group from the **Groups that are used by statistics** category on the left. In our example, we create a data group for record IDs and select "Record IDs":



3. To create a new data group, click on **New** in the ribbon:



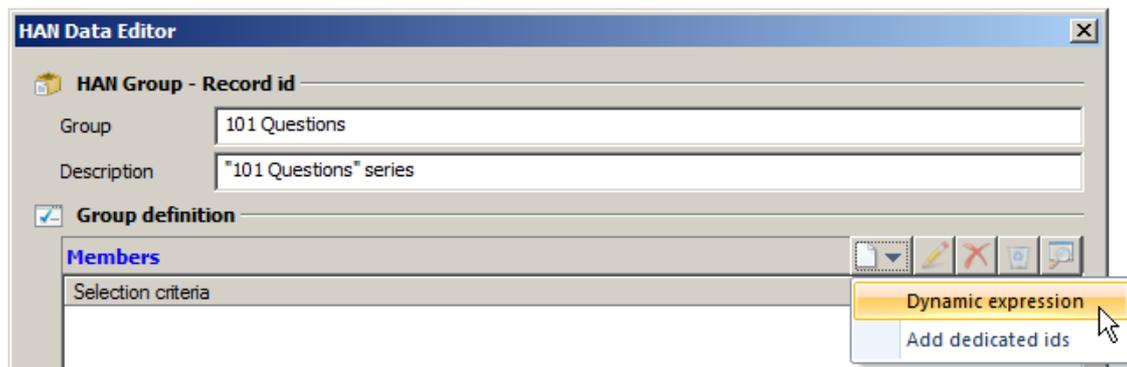
4. In the **HAN Group** dialog, enter a name for the group in the **Group** field and, if desired, a description in the **Description** field:



5. Under **Group definition** define the members of the data group. In our example, we want to calculate the usage data on all of the "101 Questions" publications. We click on the **New** button and select **Dynamic expression** from the menu to define the desired record IDs using a regular expression:



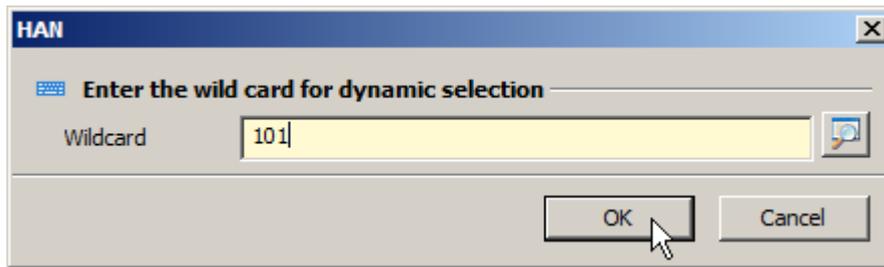
For details on creating group definitions, see "[Managing HAN Resources/Data Editor/Data Groups](#)".



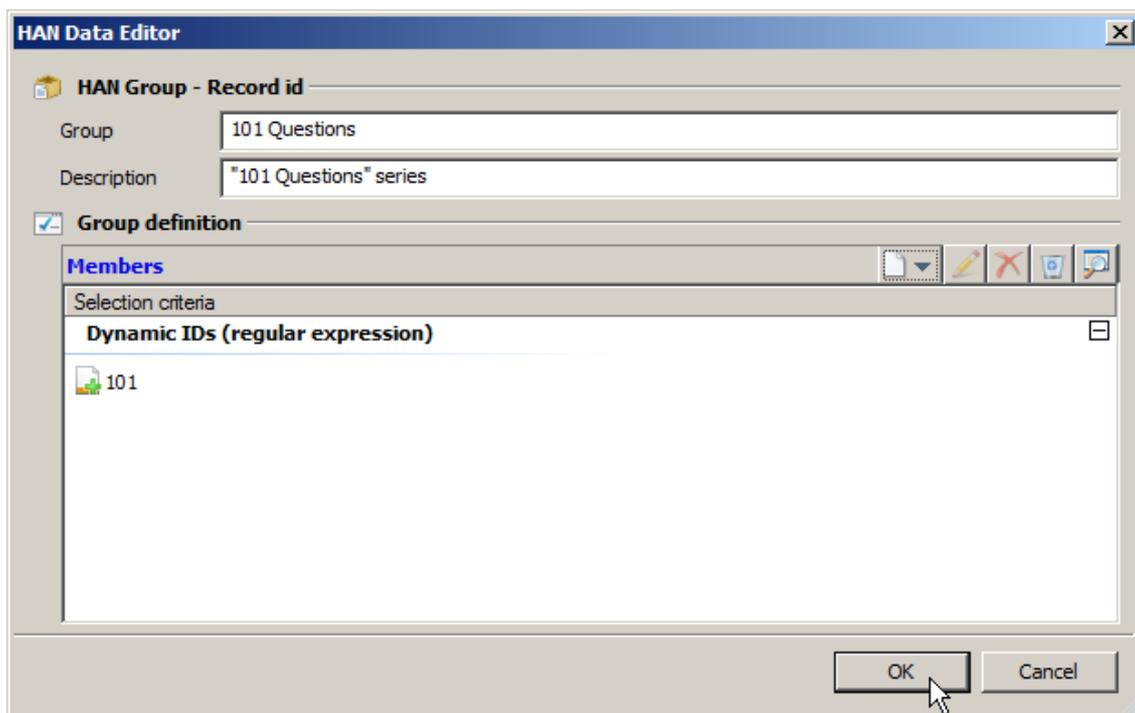
6. After entering the expression, we click on **OK**.



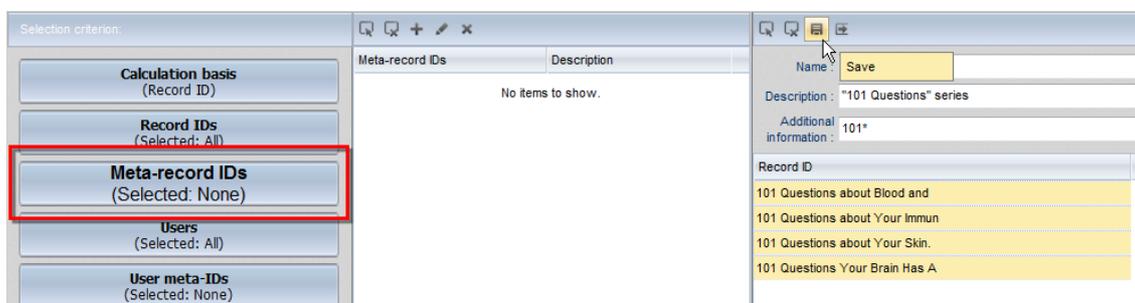
If all of the desired record IDs begin with the same string, simply enter the characters. HAN automatically adds all record IDs that begin with this string.



7. The expression is added to the group definition. Click **OK** to confirm and create the HAN data group:



The new data group is shown in the object list and is available starting immediately for use in the HAN Statistics program. To calculate a data group, add it to the your selection to the Statistics program:



Single-record view:

You can open a complete breakdown of the data in any element (ID) in the main table. "Origin" is the default selection, which shows the origin of the data record – each instance of usage listed separately. The other options are breakdown by periods and, depending on your basis of calculation, by record ID, user, station or cost center. To view the data broken down into individual line items, click on the arrow next to the desired ID. The details are generated when you open the single-record view. If you change the calculation basis, the record view must be closed and then opened again to generate a view of the corresponding breakdown.

The breakdown shows details on the usage, total number of calls, etc. sorted by the selected item. In the following example, "Elsevier Science electronic journals" is the chosen item:

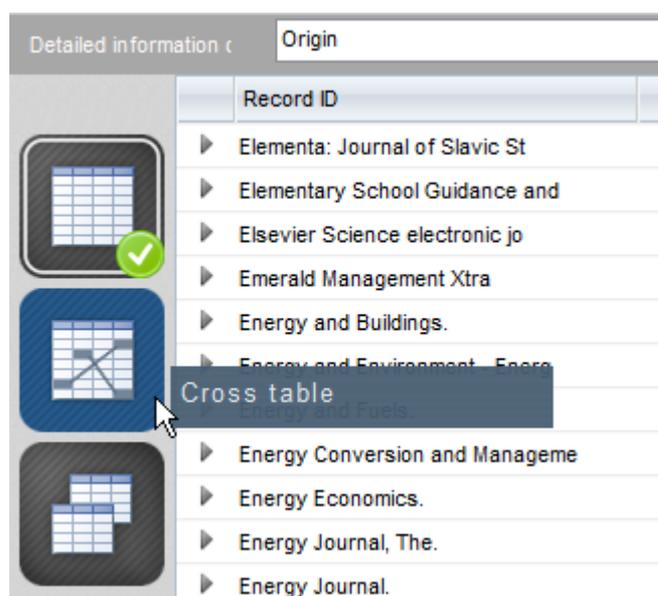
Record ID	Started	Ended	User	Station	Bytes
Elsevier Science electronic jo	06.06.2006 10:36:40	06.06.2006 10:40:07	UNI LIBRARY	194.29.157.206	69.730
Elsevier Science electronic jo	06.06.2006 10:31:01	06.06.2006 10:48:37	UNI LIBRARY	194.29.157.2	1.907.426
Elsevier Science electronic jo	06.06.2006 10:31:01	06.06.2006 10:42:53	UNI LIBRARY	194.29.152.181	5.035.035
Elsevier Science electronic jo	06.06.2006 10:22:15	06.06.2006 10:43:02	UNI LIBRARY	194.29.172.118	5.909.147
Elsevier Science electronic jo	06.06.2006 10:19:47	06.06.2006 10:43:49	UNI LIBRARY	194.29.133.171	4.328.352
Elsevier Science electronic jo	06.06.2006 10:06:16	06.06.2006 10:10:36	E5343U	62.179.0.13	346.053

Cross table:

You can use cross tables to carry out additional calculations. Data can be cross-calculated as follows (in this example, "Record ID" is the calculation basis):

- Record ID/Periods
- Record ID/Users
- Record ID/Stations

To calculate a cross table, click on the "Cross table" icon in the sidebar to the left of the main table: HAN calculates a cross table from the selected data:



To change the calculation basis of the cross table, click on **Cross table** in the task bar and select the desired basis.



You can also calculate the cross table directly, as follows: select the desired criteria in the Selection window (or open a predefined View template) and, in the **Calculate a table** dialog, click on **Cross table**.

In this example, the period from May to June, 2006, has been selected. The following cross table was calculated on the basis of this data (record ID/period/usage):

Detailed information on:			
Record ID	May 2006	June 2006	Sum
Electronic Packaging and Produ	0,00	0,00	0,00
Electronics Letters.	0,00	0,00	0,00
Electronics Systems and Softwa	0,00	0,00	0,00
Electronics and Communications	0,00	0,00	0,00
Electrophoresis.	0,04	0,04	0,08
Elementa: Journal of Slavic St	0,00	0,00	0,00
Elsevier Science electronic jp	20,09	3,57	23,65
Emerald Management Xtra	0,99	0,01	1,00
Energy Conversion and Manageme	0,01	0,00	0,01
Energy Journal	0,00	0,00	0,00
Energy Sources.	0,00	0,00	0,00

This table shows that usage of the e-script(s) with the record ID "Elsevier Science electronic journal" accounted for 23.65% of all HAN e-script usage in those two months. Breaking this data down, we see that this record ID made up 20.09% of total usage in May 2006, and 3.57% in June 2006.

Reports:

To store the result of a calculation or make it available to others, you can save it in the form of a report. To do this, click on **Report** in the task bar. The results of the current calculation are saved as a report and can be opened in the Report window at any time. For details on working with reports, see "[Statistics](#)". For a description of the functions available in the Report window, see "[HAN Components/Report Center/Statistics/Creating reports](#)".

Graphical evaluation:

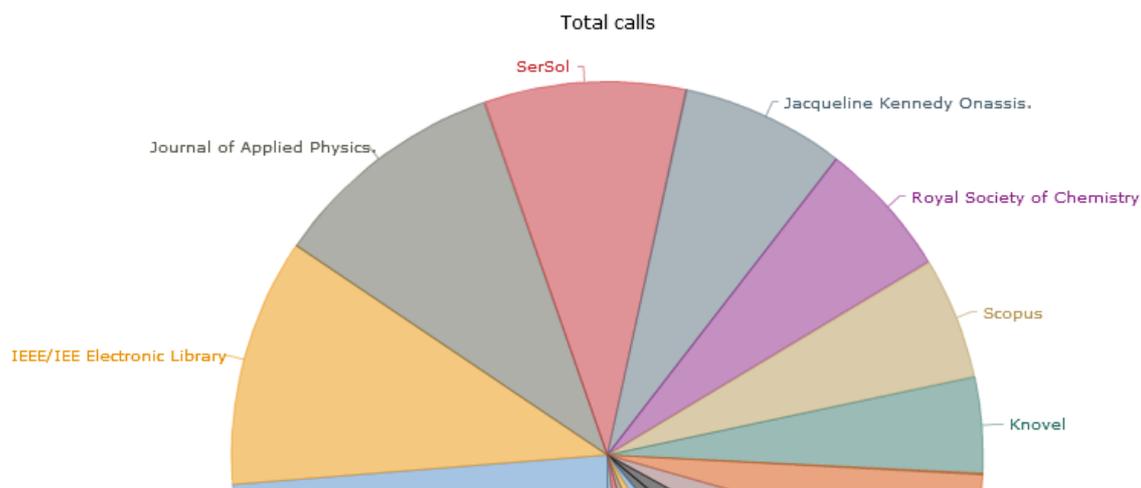
You can also use HAN to plot the usage data in charts and graphs.



Prerequisite for graphical evaluations in HAN Statistics is a current version of Adobe Flash player.

To create a graph, click on **Graph** in the task bar and select the desired calculation basis from the menu. HAN creates the desired graph of the current calculation. To change the type of graph used, click on **Graph types** in the menu bar and select the desired type.

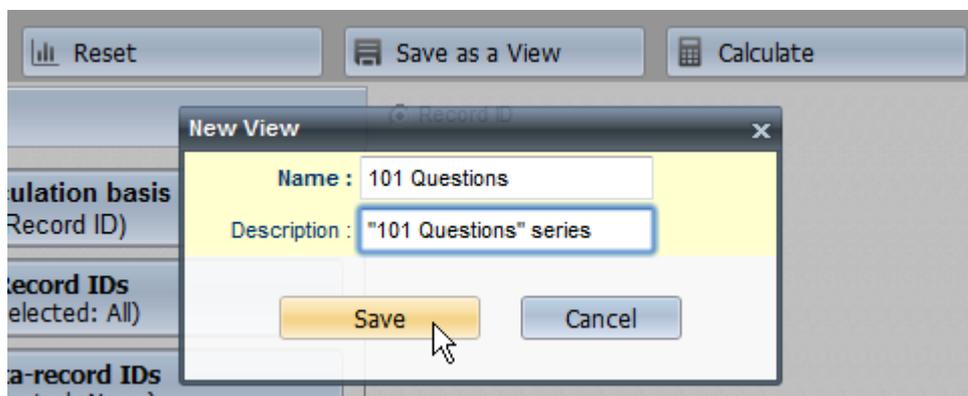
In this example, **Total calls** has been selected. To keep the graph to a manageable size, only those e-journals are selected that were called at least 20 times in June, 2006. The resulting graph appears as follows:



Views:

The options activated in the Selection window (specifying which data are to be included in the next calculation) can be saved in the form of a View. This is useful when you know you will want to perform the same calculations on future data sets, for example.

1. To store a set of calculation options in the form of a View, select the desired criteria in the Selection window and click on **Save as a View** in the task bar.
2. In the **New View** dialog, enter a name for the View and, if desired, a brief description as well:



3. Click on **OK** to confirm the settings. The View is created. To manage your Views and use them for calculations, click on **Views** in the menu bar.

Concurrent Use

The concurrent use table lets you compile data on simultaneous usage of online resources provided by HAN. This can be useful in determining the number of licenses you should acquire for a given e-journal.

Open the HAN Statistics application and select the criteria for calculation. For details on the predefined calculation options and on selecting the criteria manually, see "[Total Usage](#)". In the **Calculate a table** dialog, select **Table of concurrent use**:



If you have already calculated a main table, simply click on the **Table of concurrent use** icon in the table selection sidebar to calculate the concurrent use statistics from the data in the main table.



The table has the following columns:

- Record ID: For concurrent use tables, the record IDs is always the basis of calculation.
- Licenses: Optional value; the number of licenses allocated by HAN.
- Max: Highest number of simultaneous users.
- Days: Number of days on which the maximum concurrent use was reached.
- Duration: The longest period of concurrent use.

The five next lower values after "Max" are shown as well, to help you distinguish trends and anomalies. In the example below, the data from the examples in the "Total Usage" chapter form the basis for a calculation of concurrent use statistics for the month of June 2006:

Record ID	Max	Days	Duration	Max-1	Days-1	Duration-1	Max-2	Days-2	Duration-2	Max-3	Days-3	Duration-3
▶ IEEE/IEE Electronic Library	4	1	00:04:13	3	2	00:02:08	2	1	00:14:29	1	0	00:00:00
▶ Elsevier Science electronic jo	4	2	00:10:13	3	1	00:15:56	2	2	00:18:04	0	0	00:00:00
▶ Springer-ICM	3	1	00:05:20	2	1	00:01:21	1	3	00:43:44	0	0	00:00:00
▶ CRC Press: ENGnetBASE (Enginee	3	1	00:01:59	1	3	00:17:45	0	0	00:00:00	0	0	00:00:00
▶ Wiley InterScience	2	1	00:01:28	1	4	02:27:25	0	0	00:00:00	0	0	00:00:00
▶ SerSol	2	4	00:27:55	1	1	00:20:57	0	0	00:00:00	0	0	00:00:00
▶ Scopus	2	3	00:11:52	1	2	00:19:11	0	0	00:00:00	0	0	00:00:00
▶ SCI - Science Citation Index (2	1	00:02:40	1	3	01:09:15	0	0	00:00:00	0	0	00:00:00
▶ Royal Society of Chemistry	2	1	00:00:06	1	3	00:05:13	0	0	00:00:00	0	0	00:00:00
▶ Knovel	2	3	00:19:45	1	1	00:47:38	0	0	00:00:00	0	0	00:00:00
▶ INSPEC	2	1	00:02:44	1	4	01:09:03	0	0	00:00:00	0	0	00:00:00

The table shows concurrent usage of the "Elsevier Science electronic journal" e-script on 4 occasions, on each of 2 days, for a period of 10 minutes 13 seconds. It can also be seen that this

concurrent use was not an exceptional occurrence, as the following peak shows concurrent use 3 times on one day, for a total of more than 15:56 minutes.

Document Types



Document types group the calls from URLs that match the specified URL pattern. You can define any number of URL patterns for each document type.

The document-type table shows the usage of HAN resources in accordance with criteria used by web-counter programs. For example, you can view the number of times PDF files have been called. The following must be configured to enable use of this feature:

- Document types must be defined. Document types are defined in the HAN Data Editor. For details on defining document types, see "[Managing HAN Resources/Data Editor/Document Types](#)".
- URL patterns must be defined for the document types. URL patterns and document-type assignments are defined in the HAN Settings program (in the **Global** section, on the **Global document types** page). For details on assigning URL patterns, see "[HAN Components/HAN Settings/Global/Global Document Types](#)".

The usage of document types is calculated in the document-type table in HAN Statistics. Run the HAN Statistics program and select the desired calculation criteria. For details on using standard calculations or selecting user-defined criteria, see "[Total Usage](#)".



In the selection window, you can select a minimum or maximum value for downloaded bytes to further refine your search, if desired.

In the **Calculate a table** dialog, select **Document-type table** as the table type:



If you already have calculated a main table, select **Document-type table** in the table selection sidebar on the left to calculate the document-type table.



This example shows a calculation of PDF usage. All calls of PDF documents are grouped under the PDF document type using "*.pdf" as the URL template. This means all instances in which PDF documents were called are included in the statistics, regardless of the resource used to locate the document:

Table loaded: Table 3

Tasks: Graph | Graph types | Quartiles | Cross table | Print | Export

Detailed inf. on: Origin

Document type	Total calls	Bytes	Bytes per call	Percentage of IDs in total calls	Percentage of IDs in total bytes
PDF	2963	816.025.336	275.405	100,00	100,00
Sum	2963	816.025.336	275.405	100,00	100,00

In our example, a total of 2963 PDF documents were called in the month of June 2006. All documents together have a total data volume of approximately 816 MB. The average data transfer volume was about 275 KB per call. (To simplify calculations, 1 KB is defined as 1000 bytes in this example.) Open the single-record view for detailed information on the effective usage of the PDF documents:

Detailed inf. on: Origin

Document type	Total calls	Bytes	Bytes per call	Percentage of IDs in total calls	Percentage of IDs in total bytes		
PDF	2963	816.025.336	275.405	100,00	100,00		
Record ID	Started	Ended	User	Station	Bytes	Attribute	Document types
Elsevier Science ...	01.06.2006 10:1...	01.06.2006 11:3...	UNI LIBRARY	194.2...	36.741.000	GIF: Total calls:39, Bytes:41.040, J...	
Analytica Chemic...	01.06.2006 10:1...	01.06.2006 10:3...	UNI LIBRARY	194.2...	1.269.341	GIF: Total calls:6, Bytes:27.592; PD...	
Elsevier Science ...	01.06.2006 10:1...	01.06.2006 10:2...	UNI LIBRARY	194.2...	675.558	GIF: Total calls:15, Bytes:36.585; J...	
Eastman Chemica...	01.06.2006 10:1...	01.06.2006 10:5...	UNI LIBRARY	194.2...	6.457.492	GIF: Total calls:313, Bytes:447.699;...	
International Jour...	01.06.2006 10:1...	01.06.2006 10:2...	UNI LIBRARY	194.2...	1.987.648	CSS: Total calls:5, Bytes:20.700; GI...	
Springer-ICM	01.06.2006 10:1...	01.06.2006 10:3...	UNI LIBRARY	194.2...	939.420	GIF: Total calls:19, Bytes:3.169; PD...	
Elsevier Science ...	01.06.2006 09:1...	01.06.2006 10:1...	UNI LIBRARY	194.2...	2.322.246	GIF: Total calls:34, Bytes:123.637; ...	
SerSol	01.06.2006 08:5...	01.06.2006 09:0...	E5444U	157.2...	579.222	CSS: Total calls:1, Bytes:7.630; GIF...	
Elsevier Science ...	01.06.2006 08:5...	01.06.2006 08:5...	E3132U	194.2...	897.038	PDF: Total calls:6, Bytes:842.788	
International Jour...	01.06.2006 08:2...	01.06.2006 08:3...	UNI LIBRARY	194.2...	2.195.782	GIF: Total calls:6, Bytes:19.946; PD...	
Elsevier Science ...	01.06.2006 08:2...	01.06.2006 08:2...	E3132U	194.2...	652.859	PDF: Total calls:4, Bytes:599.000	
Analytica Chemic...	01.06.2006 02:1...	01.06.2006 02:2...	E4578U	193.2...	1.590.660	GIF: Total calls:7, Bytes:27.927; PD...	
SerSol	01.06.2006 00:3...	01.06.2006 01:2...	E1815U	83.31...	2.387.527	PDF: Total calls:28, Bytes:1.654.538	
Sum	2963	816.025.336	275.405	100,00	100,00		

The single-record view (by origin) shows details on the use of PDF documents. For example, "SerSol" was used on 1 June 2006 by the user called "E1815U" for just under an hour, from 00:34:27 hours (half-past midnight) to 01:22:00 hours. A total of approximately 2.3 MB was transferred, as shown in the **Bytes** column (2,387,527 bytes). The **Document types** column (PDF: Total calls: 28, Bytes: 1654538) shows that PDF was the only type of document transferred. This column shows the following data: <document type>: Total calls:<number of documents>, Bytes:<size in bytes>.

Other types of documents may be accessed during a given call; where this was the case, these are indicated in the **Document types** column as well, as shown in this example ("GIF: Total calls: 34, Bytes:123637; JPG: Total calls:1, Bytes: 8677; PDF: Total calls:2, Bytes: 569073").

As listed in this table, user "E1815U" called 28 PDF documents, with a total volume of approximately 1.6 MB, while using the "SerSol" HAN account. The next example shows how to determine which users loaded particularly large PDF documents. To do this, the **Bytes from** setting (**Maximum/minimum** in the selection pane to the left) is now set to 30,000,000 bytes (~30 MB):

Tasks:

Selection criterion:

Calculation basis
(Record ID)

Record IDs
(Selected: All)

Meta-record IDs
(Selected: None)

Users

Calls, from:

Calls, to:

Usage, from: Hr. Min. Sec.

Usage, to: Hr. Min. Sec.

Bytes from:

Bytes to:

After calculation, the following spreadsheet is opened:

Tasks:

Detailed inf. on:

	Document type	Total calls	Bytes	Bytes per call	Percentage of IDs in total calls	Percentage of IDs in total bytes
	PDF	831	317.722.758	382.337	100,00	100,00
	Sum	831	317.722.758	382.337	100,00	100,00

This table shows that a total of 831 PDF documents with a volume of more than 30 MB (each) were called. The **Database source** detail (single-record view) shows that the "Elsevier Science electronic journal" magazine was called five times by the "UNI LIBRARY" user, which is actually an ID under which all users located in the library are grouped:

Document type	Total calls	Bytes	Bytes per call	Percentage of IDs in total calls	Percentage of IDs in total bytes		
PDF	831	317.722.758	382.337	100,00	100,00		
Record ID	Started	Ended	User	Station	Bytes	Attribute	Document types
Elsevier Science el...	05.06.2006 13:11:40	05.06.2006 15:16:26	UNI LIBRARY	194.29...	49.713.992	HTM: Total calls:3, Bytes:22.944; PDF: Total calls:226, ...	
Elsevier Science el...	02.06.2006 14:09:14	02.06.2006 15:49:10	UNI LIBRARY	194.29...	69.598.753	PDF: Total calls:142, Bytes:62.053.760; GIF: Total calls:...	
Elsevier Science el...	02.06.2006 11:26:45	02.06.2006 12:25:13	UNI LIBRARY	194.29...	78.148.363	PDF: Total calls:158, Bytes:75.730.239; HTM: Total calls:...	
Elsevier Science el...	02.06.2006 11:03:08	02.06.2006 11:25:30	UNI LIBRARY	194.29...	38.566.380	GIF: Total calls:17, Bytes:19.259; JPG: Total calls:1, Byt...	
Materials Science a...	01.06.2006 11:08:10	01.06.2006 12:10:50	UNI LIBRARY	194.29...	44.533.255	GIF: Total calls:31, Bytes:78.102; PDF: Total calls:85, B...	
Elsevier Science el...	01.06.2006 10:18:59	01.06.2006 11:53:48	UNI LIBRARY	194.29...	58.141.863	GIF: Total calls:59, Bytes:41.845; JPG: Total calls:1, Byt...	

In each call, at least one PDF with at least 30 MB was loaded. On 2 June 2006 (14:09 to 15:49), 168 PDFs were called for a total data transfer of some 69 MB. Further details can be analyzed in the **Table of Users, Record IDs or Stations**.

Usage per Cost Center

You can define cost centers in HAN to create individual statistical analyses of usage per cost center. This function lets you calculate the costs of e-journal usage and assign them to the relevant departments at your institution.



Cost centers are user-definable in HAN. The definition is implemented as part of the user's authentication in the HAN system. The cost center must be included in the attributes of the login. To do this, open the **Global** section of the HAN Settings, select the **Global** page and define an environment variable in which the cost center will be stored. The HAN Access Log will read the cost center from this variable and save this value with each data record. Thus for purposes of statistical use analysis, a cost center is a property of the data records.

This chapter describes how to [configure](#) and statistically [evaluate](#) cost center-based data.

Configuring cost centers:

One of the parameters configured in the relevant authentication service must contain the cost center. The following example shows an ODBC login with the cost center defined in the "Import" parameter:

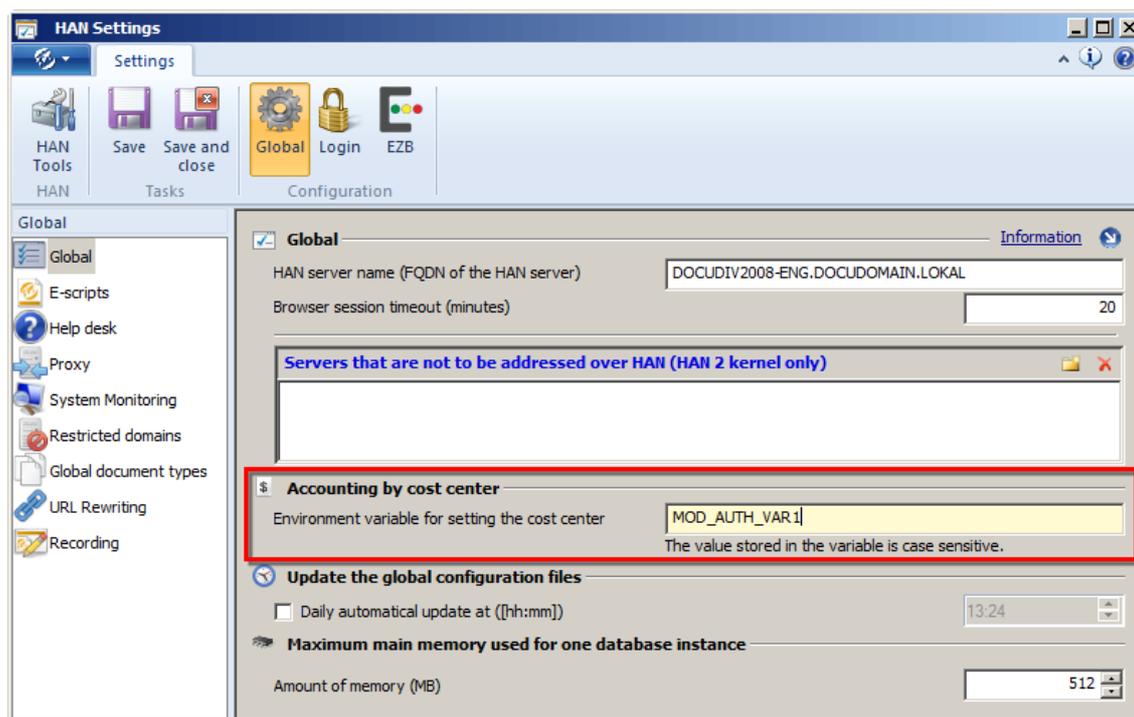


For details on configuring cost centers in another login service, please refer to the documentation on that service.

Parameter	Value
DBUser	
DSN	hanusers
UserField	username
TableName	users
where	
DBPasswd	
PasswordField	password
Import	usergroup=MOD_AUTH_VAR1

When using the ODBC service, the **Import** parameter is used to import a value which is then written in an environment variable. The value before the "equals" sign is the field name; the subsequent value must be the name of the environment variable in which the imported value is written.

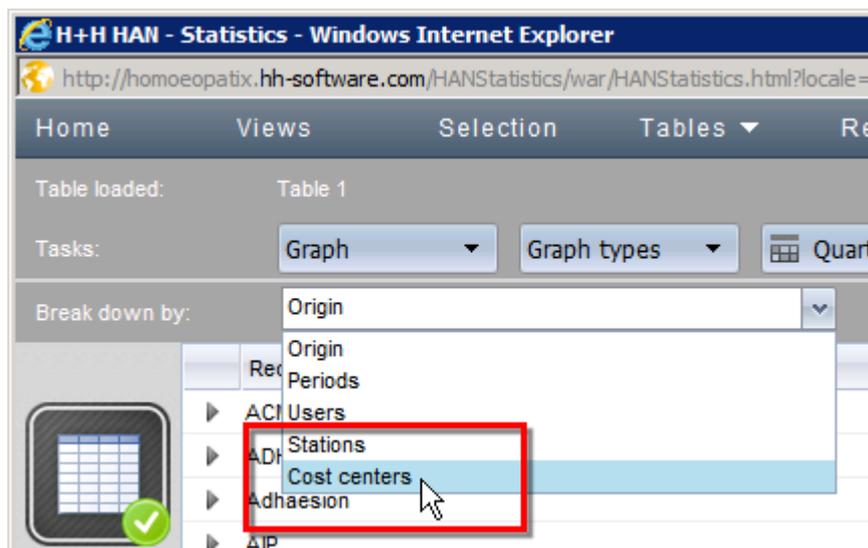
On the **Global** page of the **Global** section the HAN Settings, specify the environment variable in which the cost center is stored in the HAN environment. In this example, the environment variable is called **MOD_AUTH_VAR1**:



Once the authentication service and environment have been configured, the user's cost center is logged in the data records on e-journal usage.

Statistical usage per cost center:

To calculate usage by cost center in the Statistics program, begin by creating a main table. In the main table, open the **Break down by** menu and select **Cost centers**:



Now open the Detailed Information view for any data record. The details shown include which cost centers used the e-journal for how long, as well as the volume of data transferred:

ACM							401:02:47	13132
Cost centers	Total usage	Total calls	Bytes	Use per call	Bytes per call	Percentage of IDs in total use		
005829	00:00:02	2	148.757	00:00:01	74.378	0,00		
006838	00:00:09	1	569.424	00:00:09	569.424	0,00		
00B741	00:13:50	13	16.856.010	00:01:03	1.296.616	0,06		
00B742	00:03:55	5	3.396.909	00:00:47	679.381	0,02		
00B782	00:00:22	1	781.934	00:00:22	781.934	0,00		

The example shows that the cost center called "00B741" used the "ACM" e-journal for a total of thirteen hours and fifty minutes. There were a total of thirteen calls, during which some 16.8 MB of data were transferred. The average usage time per call was one hour and three minutes, with an average of about 1.3 MB of data transferred per call.

HAN Components

This chapter describes the components of the HAN system and provides details on their use and configuration options:

- „[HAN Roles and Users](#)“ describes the HAN roles and users concepts.
- „[HAN Client](#)“ describes the functions of the HAN Client.
- "[HAN Web Service](#)" describes the functions and operation of the HAN web service.
- "[HAN Settings](#)" provides details on the global settings in your HAN system.
- "[HAN System Settings](#)" explains the global system settings in HAN, including settings for the web server.
- "[Report Center](#)" describes the use of Report Center functions, which provide you with an overview of the usage of your HAN system.
- „[License Monitor](#)“ describes how to use the License Monitor to monitor the license capacity of your HAN system.
- "[Trace Monitor](#)" describes how to use the Trace Monitor to trace the processes running in HAN.
- "[Environment Monitor](#)" describes the functions of the Environment Monitor.
- "[Migration Wizard](#)" provides details on using the Migration Wizard to migrate your data from an earlier HAN installation into HAN 3.
- "[HAN Diagnostics](#)" explains how to create a diagnostics file with the HAN Diagnostics utility for inclusion in a request for technical support.

Customizing HAN user interfaces:

Most of the user interfaces in HAN are error messages. Another user interface is the HAN login dialog. You might need to customize these dialogs, for example to if you wish to offer users a language option that is not yet available from H+H software or if you wish to alter the error messages supplied with the software. All of the error messages and other user dialogs are stored in the `\HH\HAN\Bin\System\web\htdocs_user` directory.



Program files for the web-based HAN program are stored in the `\HH\HAN\Bin\System\web\htdocs` directory. Do not make any changes in these directories. All files in these directories are overwritten during program updates.

Available languages:

All HAN user interfaces and web-based programs are supplied in English and German. If you require another language, contact H+H software (supportHAN@hh-software.com). If you can send us the user interface files in the language you need, we can easily send you customized system files.

HAN Roles and Users

HAN has an integrated role and user concept which determines who gets access to what data in HAN and is allowed to work with which components. In general, HAN has two user types:

- **Database users.** Administrative users for the maintenance and care of the HAN system and system users used by the individual components of HAN to communicate with the database.
- **HAN users.** HAN users stored in the database who are allowed to work with HAN and can login into HAN components (the HAN client or the web interface) based on their role. HAN users are created by the HAN administrator.

Database users

HAN has four different types of database users. Users differ in the type of access rights they enjoy to different areas of the database.

Administrator: Full access to all functions and areas of the database.

The administrator is equivalent to the old (administrative) HAN 3 users. They log into the HAN server directly and have access to all administrative HAN programs. Their function includes maintenance and all associated functions such as backup, restore, repair, running scripts etc. Unlike HAN 3, administrators do not have access to non-administrative functions/components that do not serve maintenance purposes.

Service: Read access to all areas/data in the database. Write access only in areas where it is necessary for the maintenance and care of the HAN system.

The database user service is a system user which uses the HAN service and web components to interact with the database. This affects several HAN programs such as statistics and the A-to-Z list.

GUI: Full access to all data required to work with the graphical interface. This applies both to data needed for the programs in the HAN user interface to function and also data displayed in the HAN programs.

All programs of the HAN user interface (script management, data editor, etc.) use the database user to communicate with the database. Access is only provided to that data needed for the graphical interface to function. Communication takes place via the HAN client.

Setup: This user is used to distribute the HAN client via the database. It has read access to all data necessary for this purpose.

HAN user roles

A user's role defines which HAN data it can access. A HAN user can be assigned one or more roles. Users that are not assigned to any role cannot use any HAN client functions.



Basically, the choice is between the HAN administrator role and restricted access to HAN. The HAN administrator role automatically has access to all functions in HAN.

In addition to the HAN administrator role, HAN has four other predefined user roles:

Technician. Ensures operation of the HAN server. Users with the technician role have access to logs that are helpful for troubleshooting (e.g. event logs). They do not have any other access rights to HAN data.

E-script manager. Users with the e-script manager role can edit e-scripts and all data associated with e-scripts. Their tasks include creating, recording, and deleting e-scripts.

HAN user administrator. Has access to the HAN user management and can reset lost passwords.

Statistician. Users with the statistician role have full access to HAN statistics and all logs. They define and approve calculations.

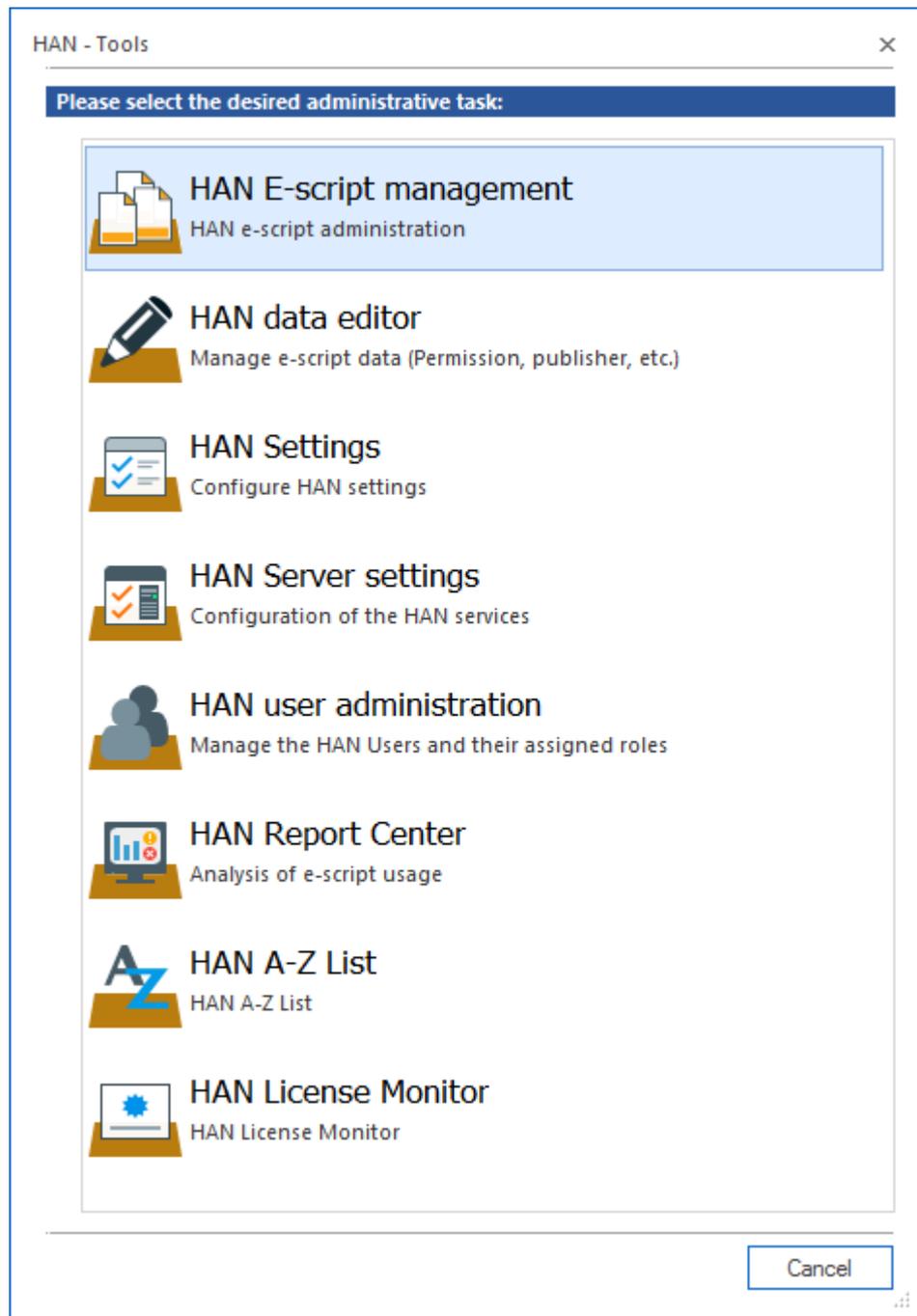
HAN Client

The HAN client is the client component of HAN. The HAN Client is installed through a standalone setup that can be executed on the server immediately after installing the server component. On client stations, setup is manually installed by the administrator via its own web page. To install the client, read the chapter "[Installing HAN Client](#)". After installing the client, you will find the shortcut **HAN Tools** on the Windows desktop:



When you first start HAN Tools after a manual installation, you must enter server and login data. For details see the section "[Server and login data](#)".

The HAN Tools contain all the HAN tools that you can access according to your HAN role:



For details on the programs you are starting through the HAN Tools see the section "[HAN Tools](#)". It is not possible to start programs bypassing the client. Each HAN program checks the permissions of the logged-in user and, if necessary, requests a separate login, if the permissions of the logged-on user should not be sufficient.



The password for accessing HAN may differ from the Windows login password.

The HAN client knows two different types of login:

- **Single Sign On.** The login is made transparently based on the SID of the logged on user.

- **Explicit registration.** If the user does not have sufficient permissions, an explicit login of the user with user name and password is required.



Even if a user is logged in using Single Sign-On, he can explicitly log on to HAN as a different user to obtain extended permissions. Prerequisite is that a password has been stored for the HAN user.

The HAN Client queries certain information about the user from the HAN database, e.g., username, password, and user role(s). After successful login, the user can work with the graphical interface, provided that he has been assigned to a role that authorizes him to do so. For this purpose, the HAN Client uses the database user "GUI" and opens the HAN Tools, which show the available HAN programs. For details on users and roles in HAN, see "[HAN Roles and Users](#)".

Server and login data

In the **HAN Login** dialog, enter the HAN server, the login method, and the login data:

HAN Server. Name of the HAN server.

Login. Login method:

- **User credentials.** Uses user data entered in the dialog.
- **Windows user login.** Uses the data of the Windows user login to log on to HAN.

User. User name.

Password. Password.

Login data. Validity period of the user registration:

- Use until the user logs off
- Used until the user specifies a new login
- Require a login for every program start

HAN Tools

The HAN Tools dialog shows a selection of HAN programs, available according to the users HAN role. The following programs are possibly available:

HAN E-script Management. Manages e-scripts. Displays all e-scripts present in the system and allows you to perform advanced administration tasks.

HAN e-script editing. Editing e-scripts.

HAN Data Editor. Edit data objects such as licenses or document types, or data groups.

HAN Report Center. Usage logging and statistics of e-scripts.

HAN Help. Program help for HAN.

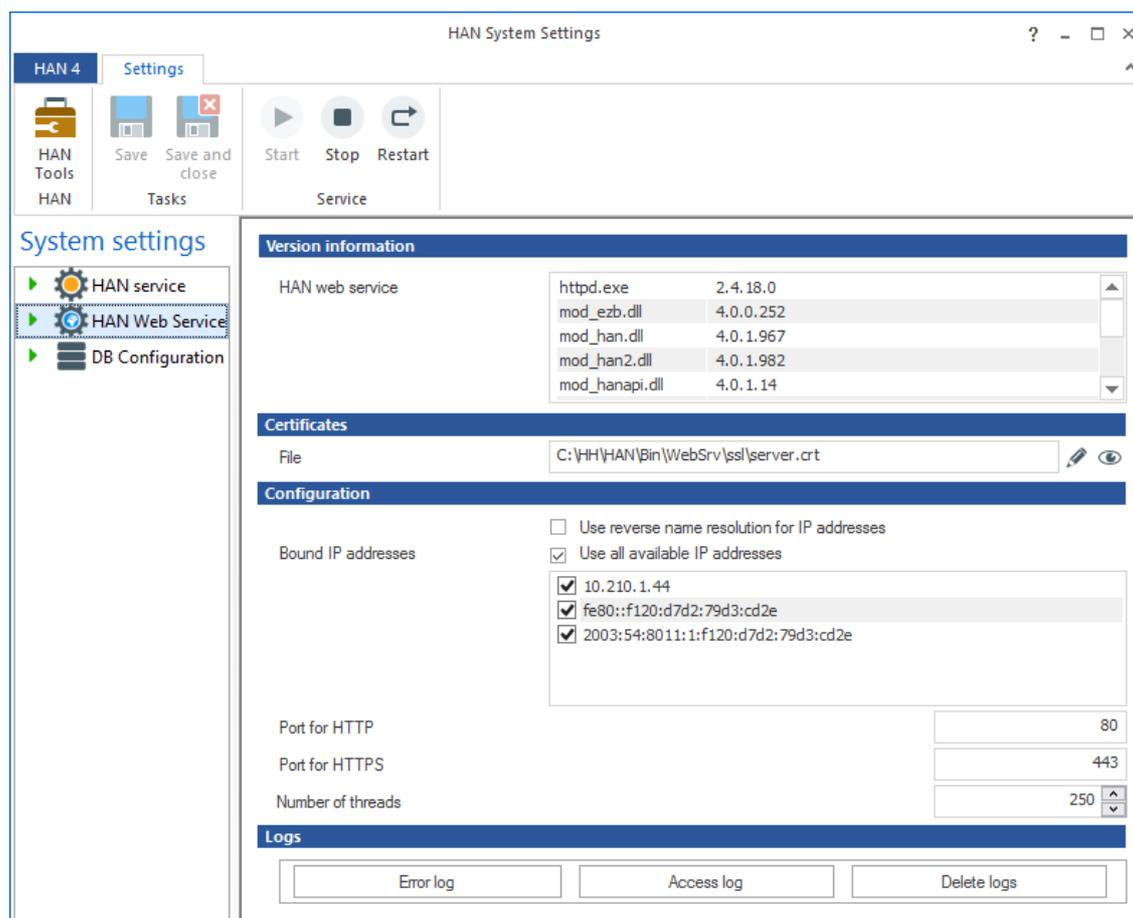
To start a program, click the corresponding entry.

HAN Web Service

The HAN web service implements all of the web-related functions in HAN. It is installed automatically when you install your HAN software. HAN's web service is configured in the HAN System Settings. The HAN System Settings are accessed from the Windows Control Panel, under **System and Security/H+H HAN**:



Open the HAN System Settings or, to open the HAN web service directly, select **HAN Web Service**. On the **HAN Web Services** page, you can configure settings for the HAN web service:



The following settings are configured here:

Service:

Controls for the web service are in the ribbon. The **Start**, **Stop** and **Restart** buttons start and stop the web service. The **Error log** and **Access log** buttons in the lower portion of the dialog open those logs, and the **Delete log** button deletes the log files.

Certificates:

The "File" field specifies which certificate file is used. Click on the **Edit** button to the right of this field to open a wizard for importing an official certificate or creating a self-signed (temporary) certificate. Click on the **Information** link to view detailed information on the certificate currently in use.



Self-signed certificates should be used for test purposes only.

For details on importing certificates, see "[HAN System Settings/HAN Webservices/Requesting and Importing Certificates](#)" in the HAN online help. For details on creating self-signed certificates, see "[HAN System Settings/HAN Web Services/Creating Self-Signed Certificates](#)" in the HAN online help.

Configuration:

In the **Configuration** section, specify the HTTP and HTTPS ports for HAN and define the IP addresses that HAN listens on.

HAN Settings

HAN has two settings programs for configuration of your HAN program:

- HAN Settings
- HAN System Settings

In the **HAN Settings** program, you can configure global settings for your HAN system. To open the HAN Settings, run HAN Tools (using the **HAN Tools** desktop shortcut) and select **HAN Settings**. The options in the HAN Settings program are grouped in various sections:

- [Global](#)
- [Login](#)
- [Web API](#)

The **HAN System Settings** program lets you configure system settings in HAN. The System Settings are accessed in the Windows Control Panel under **System and Security/H+H HAN**. The System Settings program has the following dialog pages:

- [HAN Service](#)
- [HAN Web Service](#)
- [DB Configuration](#)



You start and stop the HAN system services quickly and easily in the HAN System Settings. For details on starting and stopping services, see "[HAN System Settings](#)".

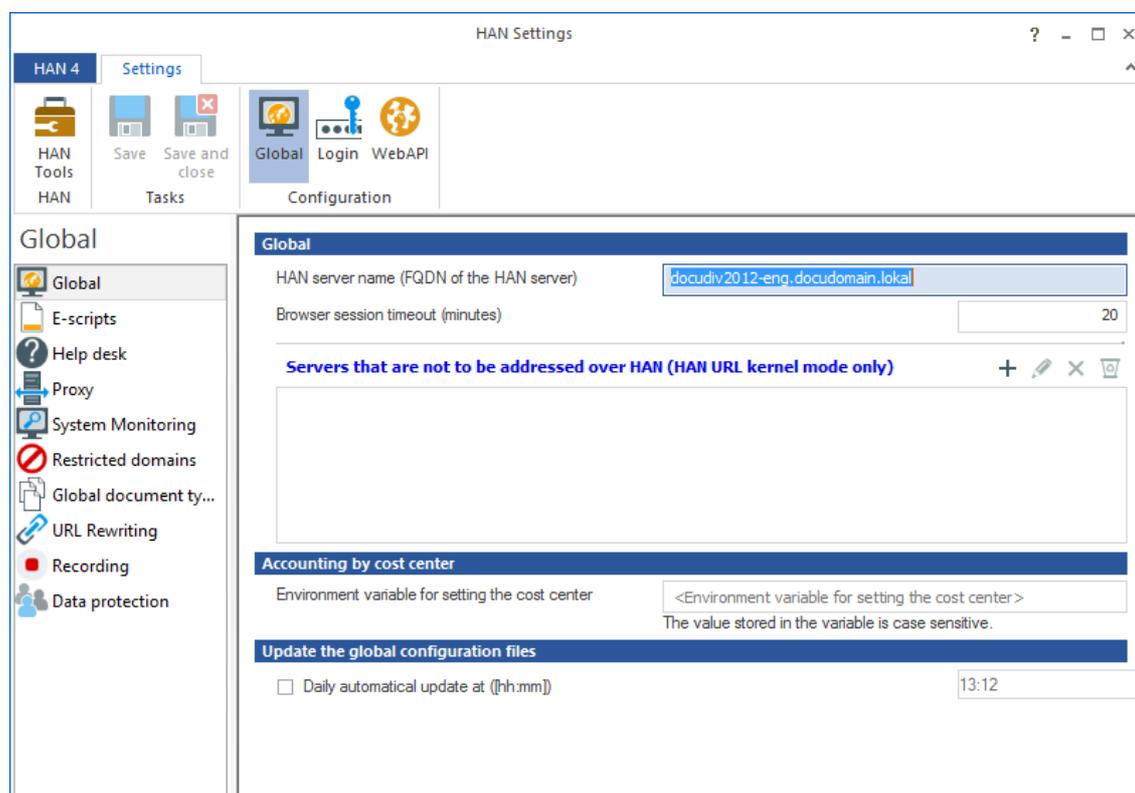
Global

In the **Global** section of the HAN Settings, you can configure all of the global and general settings in HAN. The settings are configured on the following pages:

- [Global](#). Contains the settings for general preferences in HAN.
- [E-Scripts](#). Defines the default settings for creating e-scripts.
- [Help Desk](#). Lets you configure the response of the HAN program in the event of failure, as well as the content of the error pages to be displayed.
- [Proxy](#). For configuring HAN's Internet connection, if you use a proxy server.
- [System Monitor](#). Configures the HAN System Monitor. You can define threshold values for the minimum available disk space, and how HAN reacts when this limit is reached.
- [Restricted Domains](#) (HAN 2 kernel only). Defines domains that are globally blocked from any access over HAN.
- [Global Document Types](#). Defines global document types for statistical analysis in accordance with the COUNTER standards.
- [URL Rewriting](#). Global definition of a template for HAN URLs.
- [Recording](#). Defines which domains are excluded from access when recording scripts.
- [Data Protection](#). For configuring HAN's privacy protection mechanism.

Global

General preferences for working with HAN are configured on the **Global** page:



HAN server name (FQDN of the HAN server). Fully qualified domain name of the HAN server.

Browser session timeout. Period of time for which a HAN session will remain open in the absence of user activity.



Web servers are designed to react to requests. In other words, the web server detects only user activity that is explicitly directed at it (for example, when a hyperlink is clicked). The server cannot detect whether the user is merely inactive or has actually closed the browser. Defining a maximum period of user inactivity (**browser session timeout**) helps conserve resources. If the specified time elapses with no detectable user activity, the server closes the session, logs the user off and frees up resources. If user activity is detected before the timeout period has elapsed, the session continues and the timeout period starts over the next time the user is inactive.

Thus the length of time selected for the browser session timeout affects the availability of HAN licenses. Specifically, once a license is put into use, it will remain in use for at least as long as the browser session timeout you set here. The license is not released again until after the entire timeout period has elapsed with no user activity and the HAN server logs the user off. If the timeout period is too short, the user might have to log in on HAN repeatedly to access online resources. The default value for the browser session timeout is 20 minutes.

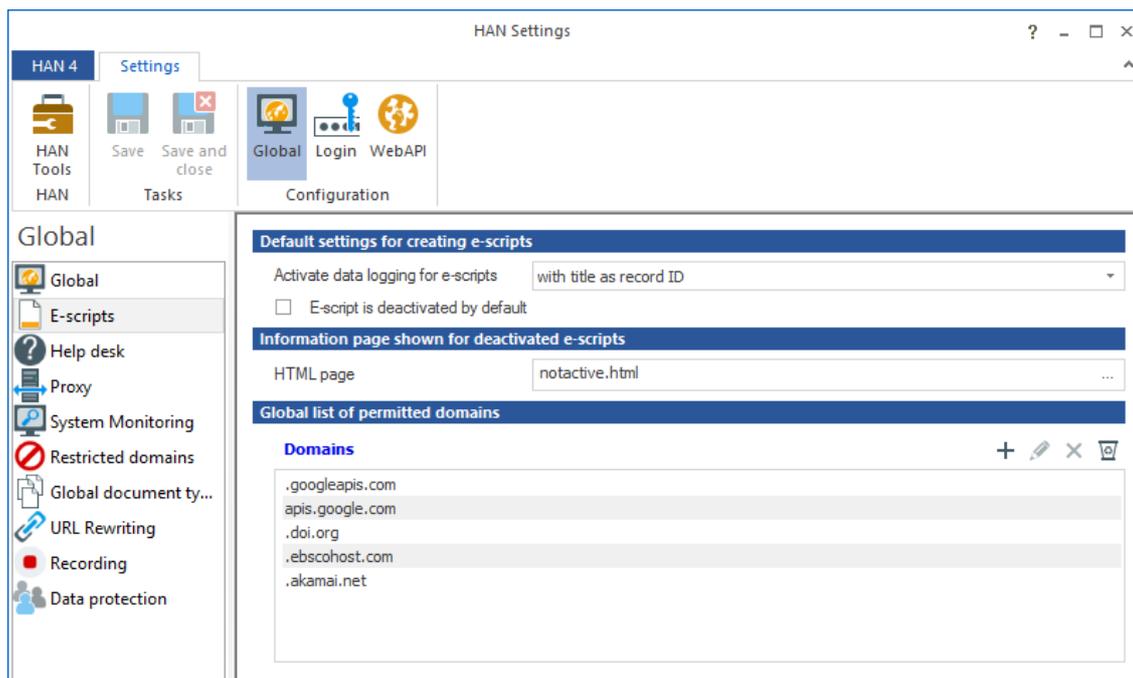
Servers that are not to be addressed over HAN. This list shows servers that reference external resources (such as bibliographies that reference external online resources). This option is available only if you use the HAN 2 kernel exclusively. Use the buttons at the top of this list to edit the list.

Environment variable for setting the cost center. Defines the environment variable in which the cost center is written in the HAN environment. This function lets you calculate usage for specific cost centers.

Daily automatic update at. Defines the time at which HAN connects with the central H+H Update Server to download updated configuration files.

E-Scripts

On this page, you can define the properties of and preferences for e-scripts:



Activate data logging. Data logging is activated (or not) for all newly created e-scripts in accordance with this setting:

- **Disabled.** Data logging is disabled by default for new e-scripts.
- **with title as record ID.** Data logging is enabled by default; the e-script title is used as the record ID.
- **with HAN ID as record ID.** Data logging is enabled by default; the e-script's HAN ID is used as the record ID.

E-script is deactivated by default. All newly created e-scripts are deactivated at the outset, and must be activated manually.

HTML page. The page displayed when a deactivated e-script is called. Use the **Select** button ("...") to select an HTML file.

Global list of permitted domains. Editable list of domains that are included/permitted in new e-scripts by default. You can use this list to enter the provider domains to which access is required for correct functioning of your e-scripts.

Use the buttons at the top of the excluded domains list to edit the list:

New. Creates a new entry in the list.

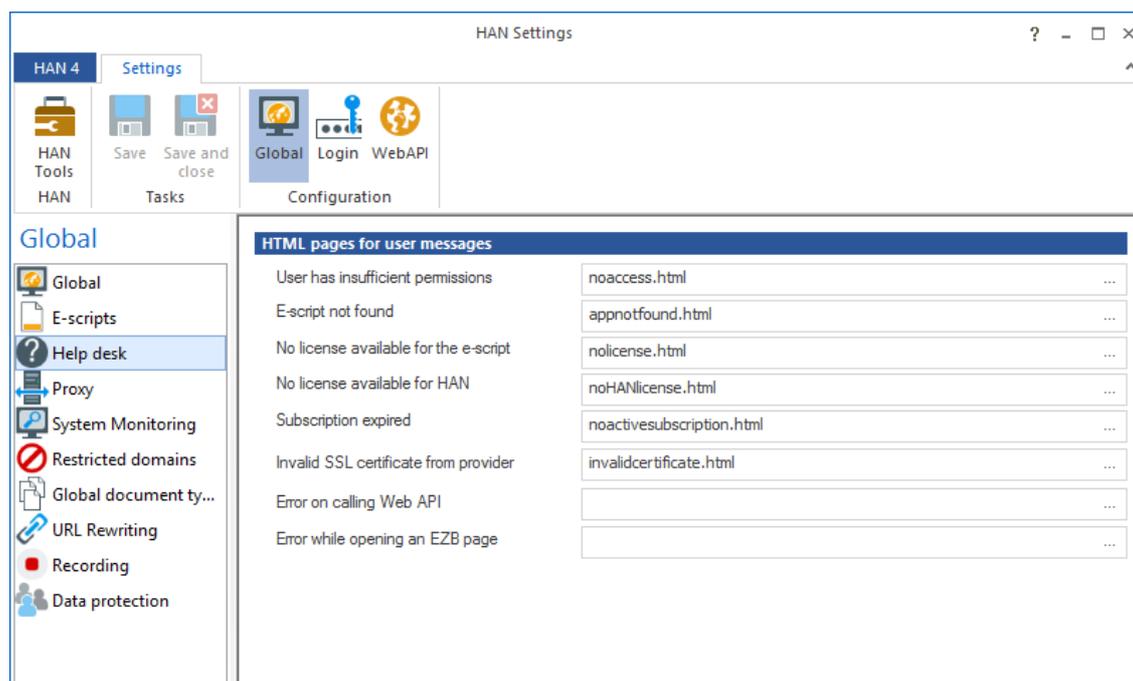
Edit. Lets you edit a selected domain.

Delete. Deletes the selected entry from the list.

Delete All. Deletes all entries from the list.

Help Desk

On the **Help Desk** page, you can define what information is displayed when an error occurs:



The **Select** buttons next to each input field open selection dialogs in which you can choose from various HTML pages.

User has insufficient permissions. This is the case when a user is not authorized to access the requested HAN resource. We recommend the following pages:

- No access (**noaccess.html**)
- Login again (**newlogin.html**). In the latter case, the user has the option of entering different login credentials.



You can have these settings superseded by others for specific permissions. For details on defining access permissions, see "[Defining Permissions](#)".

E-script not found. The page selected here will be displayed when the HAN URL called references a non-existent e-script.

No license available for the e-script. The HAN program lets you restrict parallel usage of e-scripts by allocating licenses. If the number of instances allowed for a requested e-script are already in use, this page is opened.

No license available for HAN. If all of your HAN user licenses are in use when another user requests a HAN resource, this error message is shown. To obtain additional user licenses, please contact your software vendor.



Open the HAN Administration program to see how many licenses are in use. For details on working with the HAN Administration program, see "[HAN Administration](#)".

Subscription expired. The subscription period has expired. You need to renew the subscription to enable HAN access.

Invalid SSL certificate from provider. This error message indicates that the e-journal provider's SSL certificate is invalid.

Error on calling Web API. This error message is shown when a Web API call fails. For details on using the Web API, see "[HAN Web API](#)".

Error while opening an EZB page. This error message is shown when an error occurs upon calling an EZB page. For details on using HAN with EZB, see "[EZB and HAN](#)".



This option is available only if the EZB module is installed. For details on installing the EZB module, see "[Installation](#)".

All of the HTML pages mentioned here are stored in `\HH\HAN\Bin\System\web\htdocs_user\haninfo`. You can add new files and edit existing files as desired. The selection lists that open for the input fields described here show all HTML files stored in the directory.

Proxy

On the **Proxy** page, you can configure the HAN server to access the Internet over a proxy server:

The screenshot shows the 'HAN Settings' application window. The title bar reads 'HAN Settings'. The interface includes a top navigation bar with 'HAN 4' and 'Settings' tabs. Below this is a toolbar with icons for 'HAN Tools', 'Save', 'Save and close', 'Global', 'Login', and 'WebAPI'. The left sidebar is titled 'Global' and lists various settings: Global, E-scripts, Help desk, Proxy (selected), System Monitoring, Restricted domains, Global document ty..., URL Rewriting, Recording, and Data protection. The main content area is titled 'Proxy' and contains the following configuration options:

- Use proxy server
- Proxy server, HTTP: Port:
- Proxy server, secure: Port:
- User:
- Password:
- Optimized login on the proxy (does not work with all proxy servers)
- Bypass proxy server for local addresses
- Excluded URLs:

Use proxy server. Activates the use of a proxy server. In case you need to deactivate the use of the proxy at some point, this setting lets you switch the function on and off without losing the settings stored for the proxy server.

Proxy server, HTTP. You can enter either the host name of the proxy server (HTTP) used, or its IP address.

Port. The port of the proxy server.

Proxy server, secure. You can enter either the host name of the proxy server (Secure) used, or its IP address.

Port. The port of the proxy server.

User. HAN can authenticate itself on the proxy server over a user account created for this purpose. Enter the user name in this field.

Password. The password associated with the user account.

Optimized login on the proxy. If you activate this option, HAN will not have to authenticate itself for every request, but only once at the beginning of the proxy server session.



This option is not supported by all proxy servers, and under some circumstances might not be available. Contact your network administrator for information on the configuration of the proxy in question.

Bypass proxy server for local addresses. To bypass the proxy server when local addresses are called (such as intranet pages), activate this option and define the URLs to be opened directly in the list of excluded URLs. Once you have activated this option, the buttons at the top of the list are activated for adding, editing and deleting URLs.

Excluded URLs. The list shows all URLs that are not addressed over the proxy server (e.g. local addresses).

Use the buttons at the top of the excluded URLs list to edit the list:

New. Creates a new entry in the list.

Edit. Lets you edit a selected URL.

Delete. Deletes the selected entry from the list.

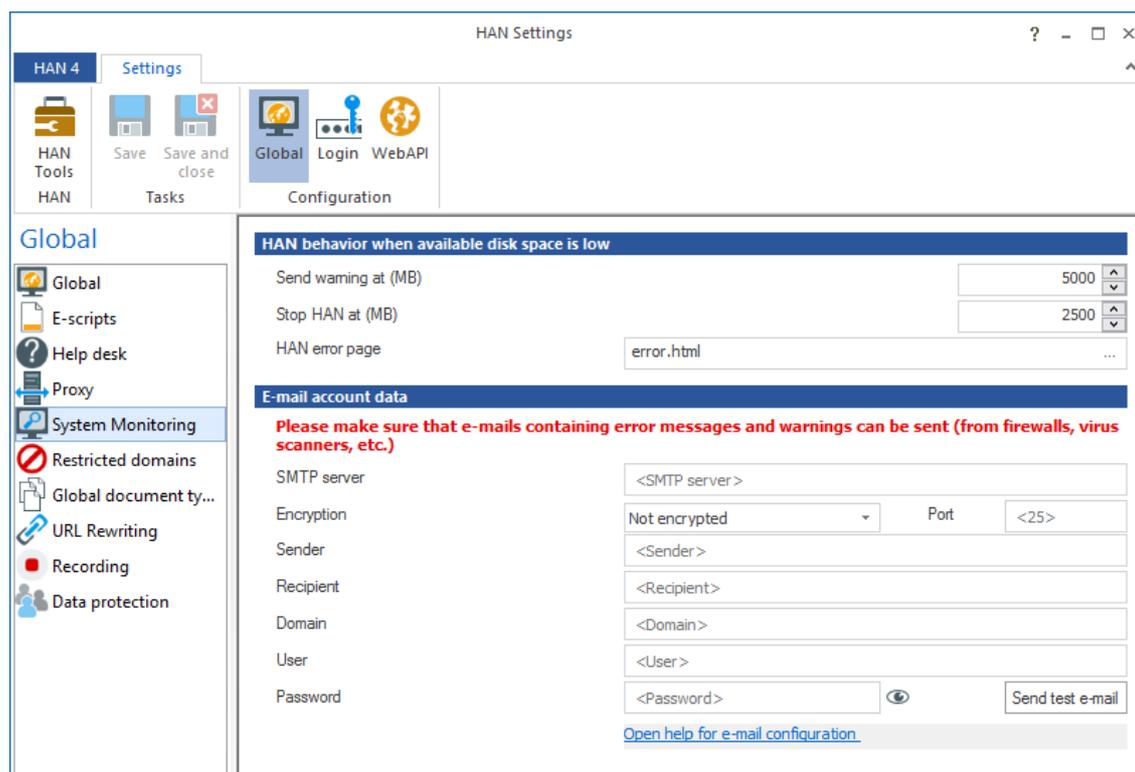
Delete All. Deletes all entries from the list.

System Monitoring

On the **System Monitor** page, you can define threshold values for the usage of your HAN system. When a threshold value is exceeded, HAN automatically sends an e-mail reporting the system status:



Note: If you are using a resident virus guard or software firewall, that program might classify these HAN system e-mails as "mass mailings" and block them. If this happens, you will need to configure the settings in your anti-virus software or firewall to allow e-mail from HAN. Otherwise, your HAN system might shut down unexpectedly, for example if resource availability drops below the lower limit and you do not receive the warnings. For details on configuring your virus guard or firewall, see "[Receiving system e-mail in a protected environment](#)" below.



Send warning at. Defines the minimum available disk space (in MB); when this level is reached, HAN sends an error message.

Stop HAN at. If this limit is reached, the HAN service is stopped; the only operation executed after this point is the display of the error message.

HAN error page. This page is displayed when the available space reaches the level at which the HAN service is stopped.

SMTP server. Used by HAN to send the e-mail with the system status report.

Encryption. Defines the e-mail encryption method.

Port. Port for the SMTP server.

Sender. Address used as sender of the e-mail.

Recipient. Address to which the e-mail warning is sent to report the critical system status.

Domain. If a login is required before the e-mail can be sent, enter the login domain here.

User. User name for the account from which the e-mail is sent.

Password. Password for the account from which the e-mail is sent.

Receiving system e-mail in a protected environment:

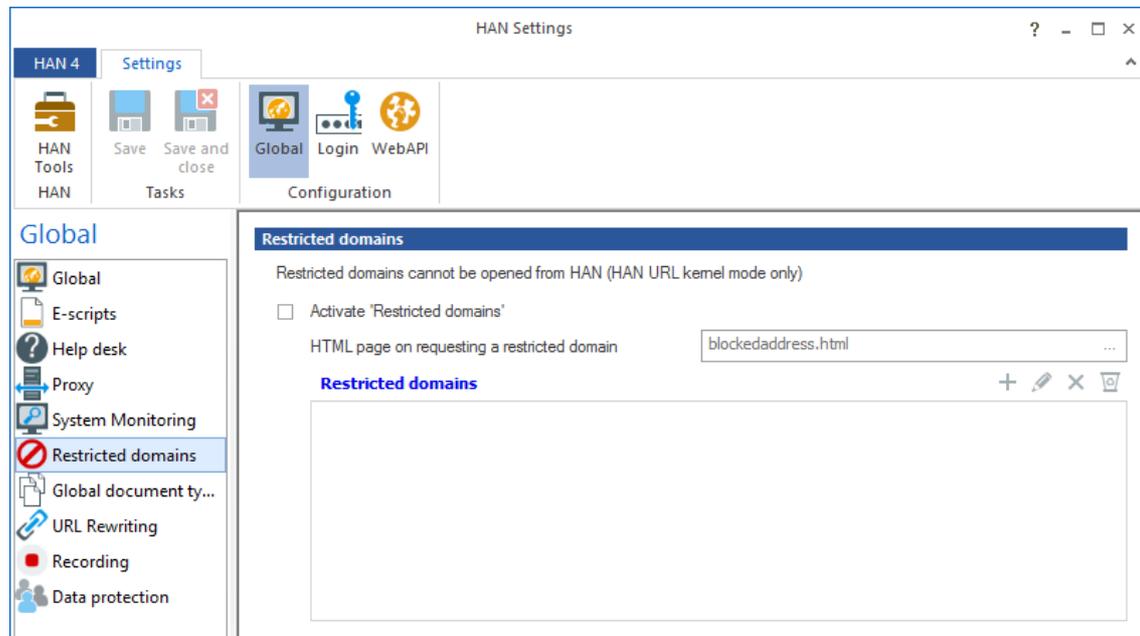
To ensure that HAN system e-mails are delivered in an environment that has a virus guard or software firewall, you need to define an exception in these programs for HAN. Otherwise, the protective program might classify HAN system e-mail as mass mail or a mass-mailing worm. To enable delivery of HAN system mail without deactivating the protective software, configure an exception for the **HANSett.exe** file (C:\HH\HAN\Bin\System\64) and add it to the existing rules. For details on how to define such an exception, please refer to the documentation of the protective program. Contact your network administrator if you do not have sufficient user rights to define the exception yourself.

Restricted Domains

On the **Restricted Domains** page, you can define which domains are globally blocked in HAN:



The settings on this page refer only to the HAN 2 kernel.



Activate 'Restricted domains'. Activates the restriction of specified domains.

HTML page on requesting a restricted domain. The information page selected here is displayed when a restricted domain is called.

Restricted domains. This lists shows all of the domains that are designated in HAN as restricted.

The buttons at the top of the list let you edit the list as follows:

New. Creates a new entry in the list.

Edit. Lets you edit a selected restricted domain.

Delete. Deletes the selected entry from the list.

Delete All. Deletes all entries from the list.

Global Document Types

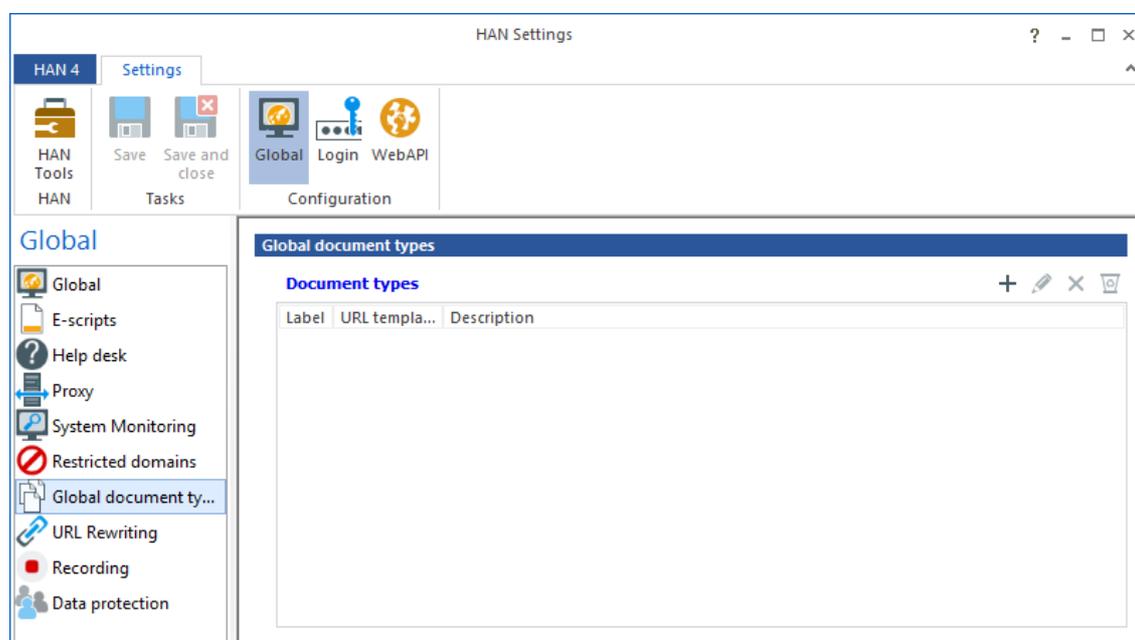
On the **Global Document Types** page, you can define the document types to be analyzed with the HAN Statistics program in accordance with the COUNTER standards (Counting Online Usage of NeTworked Electronic Resources). Document types assign document-type designations to URL templates that are logged by HAN:



You have to define a document type before you can create the URL template. Document types are defined in the Data Editor. For details on defining document types in the Data Editor, see "[Managing HAN Resources/Data Editor/Document Types](#)".



Formulate the URL template with regular expressions.



You can assign a document type to one or more URLs or URL templates. (Templates pool URLs according to your criteria.) The document type is then used by the Statistics program as a criteria for the evaluation of usage. For example, you can analyze all calls of PDF documents by defining a document type called "PDF" and assigning it to a URL template defined as ".*\.\pdf". In the document type table of the Statistics program, you can analyze all calls logged for the "PDF" document type to determine the total number of times that PDF documents were called. The **Document types** list shows all of the document types you have defined. Use the buttons at the top of this list of document types to edit the list:

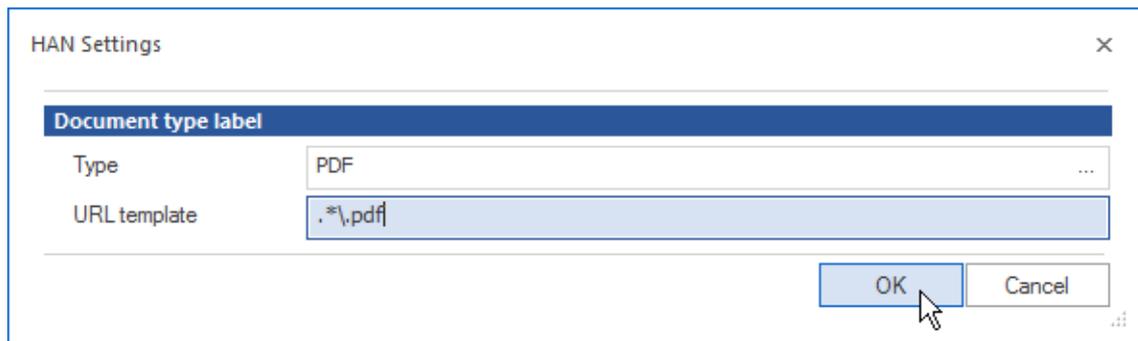
New. Opens the [Document type label](#) dialog, in which you can select a document type.

Edit. Lets you edit the selected document type.

Delete. Deletes the selected entry from the list.

Delete All. Deletes all entries from the list.

Selecting a document type:



Type. Label indicating the document type. Click on the **Select** button ("...") to select a document type by its label. Document types are created and edited in the Data Editor. For details on editing document types in the Data Editor, see "[Managing HAN Resources/Data Editor/Document Types](#)".

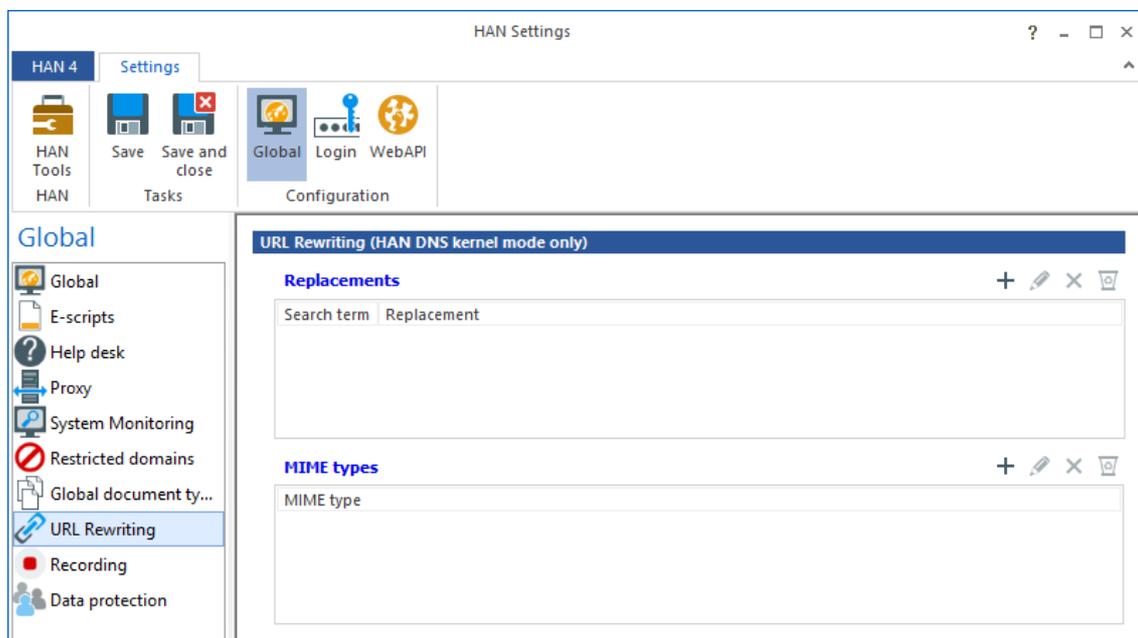
URL template. Template that defines which documents belong to the specified type. Use regular expressions to define the URL template.

URL Rewriting

On the **URL Rewriting** page you can define the global template for HAN URLs as well as for HAN MIME types:



URL Rewriting is supported only by the HAN 3 kernel.



URL Rewriting lets you configure HAN to automatically replace certain elements in specified documents. To do this, you need to define in which documents HAN makes replacements, and exactly which elements are replaced by which expressions.



URL Rewriting is supported only by the HAN 3 kernel.

Replacements. Shows what is searched for and what the search expression is replaced with.

MIME types. Shows the MIME types of the documents in which replacements will be made.

Use the buttons at the top of the lists to edit the lists:

New. Creates a new entry in the list.

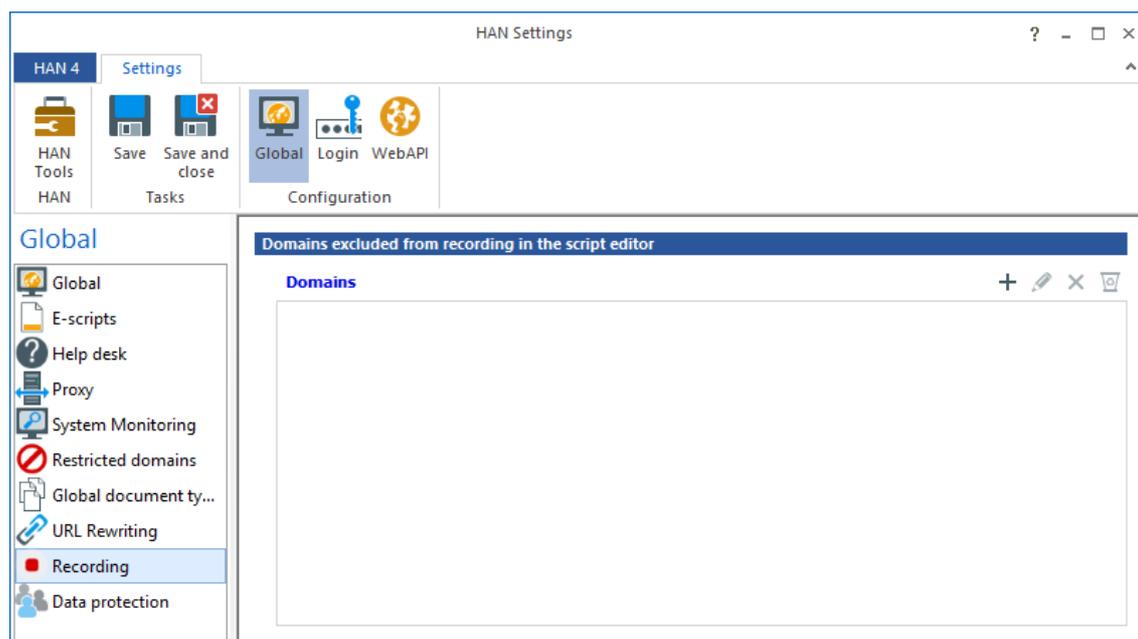
Edit. Lets you edit a selected list element.

Delete. Deletes the selected entry from the list.

Delete All. Deletes all entries from the list.

Recording

On the **Recording** page, you can maintain a list of the Internet domains that are always to be excluded when recording e-scripts. These may include, for example, the domains of advertising agencies or social networking sites:



The **Domains** list shows all of the domains that will not be included in any script recording process. Use the buttons at the top of this list to edit the list:

New. Creates a new entry in the list.

Edit. Lets you edit a selected domain.

Delete. Deletes the selected entry from the list.

Delete All. Deletes all entries from the list.

Data Protection

On the **Data Protection** page, you configure the anonymization/pseudonymization of log data:

The screenshot shows the 'HAN Settings' window. The left sidebar has a 'Global' section with 'Data protection' selected. The main content area has three sections:

- Password protection for privacy settings:** A blue header bar. Below it, a text box explains that two separate passwords are required for privacy settings. A status bar indicates 'Password protection NOT active - settings are accessible!'. Two buttons, 'Define passwords' and 'Make settings accessible', are visible.
- Anonymization/pseudonymization of logged data:** A blue header bar. Below it, a warning states that anonymized/pseudonymized data cannot be restored. A dropdown menu shows 'Anonymization is NOT ACTIVATED' and a 'Simulation mode' button. A text input field is set to '30' days, with an 'Exceptions' button.
- Rules for user and computer names:** A table with columns for Field, Rule, Value, and Conversion.

Field	Rule	Value	Conversion
User	all	<no value necessary>	\$hash\$
Computer	all	<no value necessary>	\$hash\$

Password protection for privacy settings. The anonymisation/pseudonymization settings are protected by the principle of double checking. They define two different passwords, with each password only known to one person. This then requires two people to unlock the privacy settings, which ensures a high degree of security. The following buttons provide access to the password protection:

Define passwords. Defines two passwords.

Make settings accessible. Unlocks the privacy settings. The entry of two passwords is required.

Anonymization/Pseudonymization of logged data. In the selection field, select anonymization or pseudonymization status:

- **Anonymization is NOT ACTIVATED.** Anonymization/Pseudonymization is disabled.
- **Anonymization is ACTIVATED.** Anonymization/Pseudonymization is enabled. The rules defined in the **rules for user and computer names** apply.

Simulation mode. Starts the simulation mode for anonymization/pseudonymization based on the defined rules and exceptions.



Before you activate anonymization/pseudonymization, you must run a simulation to test your settings. If a simulation is not run, the anonymization/pseudonymization will not be enabled. This protects your data from misconfigurations because, once anonymized/pseudonymized, data cannot be recovered. If you make changes to the rules or exceptions at a later time, you will have to run another simulation.

Anonymization/Pseudonymization of logged data after (days). Runs the privacy function after the specified number of days. Data with personal reference will be made anonymous or pseudonymous depending on the rules you have defined.

Exceptions. Defines exceptions for data that you expressly do not want changed.

Rules for user and computer names. Defines rules for personal data to be protected.



For details on defining rules to protect your data, see "[Anonymization/Pseudonymization of Record Data](#)".

The list is processed from top to bottom. The buttons at the top of the list let you edit the list as follows:

New. Creates a new entry in the list.

Edit. Lets you edit a selected rule.

Delete. Deletes the selected entry from the list.

Delete All. Deletes all entries from the list.

Up. Moves the selected entry one position higher in the list.

Down. Moves the selected entry one position lower in the list.

Login

In the **Login** section of the HAN Settings, you can configure various login options for your HAN system:

- **Authentication.** Configures the general login in HAN, such as whether authentication is required to use HAN and, if so, which login page is used. Also configures the authentication services used in your HAN system and permits access from secondary HAN servers.
- **LDAP.** Defines access to an LDAP server that HAN uses for reading and evaluating LDAP access privileges.



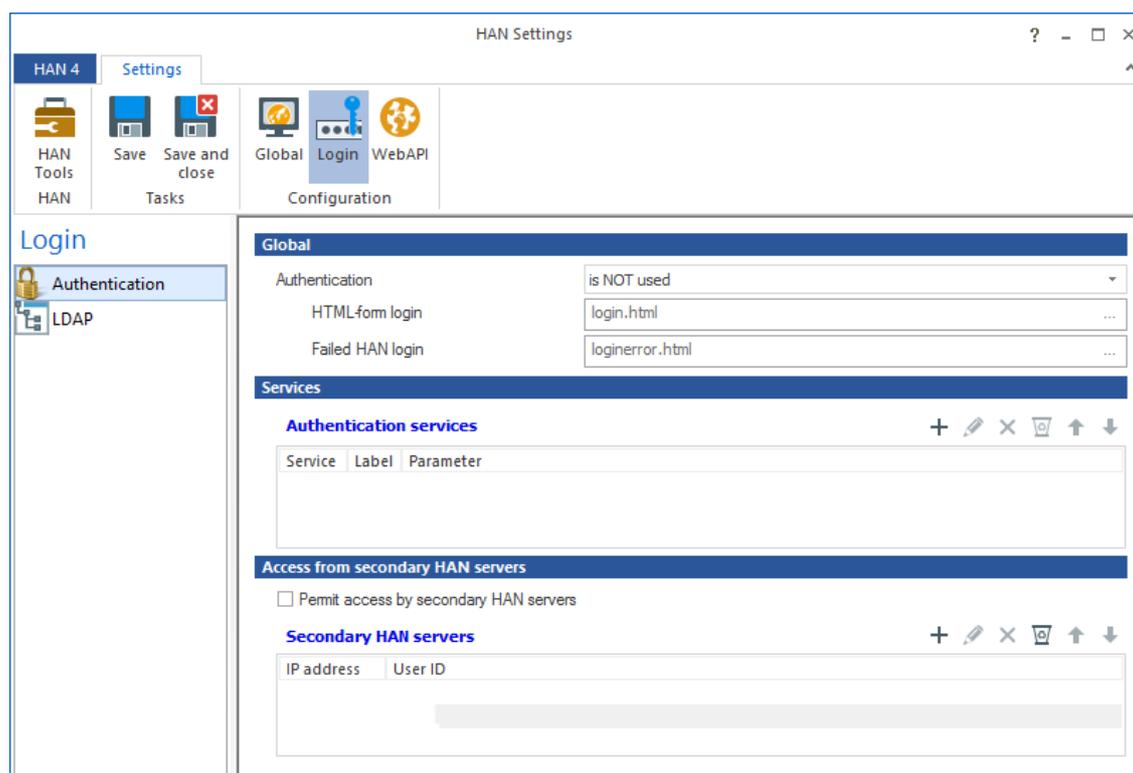
Changes made on pages in the Login section are not applied until after you restart the HAN web server. For details on restarting the HAN web server, see "[HAN System Settings](#)".

Authentication

On the **Authentication** page, you can regulate HAN authentication and access to your HAN system by configuring authentication services:



Changes made on the **Authentication** dialog page are not applied until you restart the HAN web server. For details on restarting the HAN web server, see "[HAN System Settings](#)".



Authentication. Activates or deactivates the authentication in HAN:

- **is NOT used.** Authentication in HAN is not activated; this means anyone can freely access the resources offered over your HAN system. This setting is not recommended.
- **Use HAN authentication.** HAN authentication is applied, with the authentication services entered in the table. Users must login on the HAN system to obtain access to resources.
- **Use SSPI authentication.** HAN uses a web server extension that enables single sign-on to a Windows domain for authentication. Prerequisite is that users log on to the same domain that contains the HAN server. Afterward, the Windows login is passed to the HAN server for authentication. Keep in mind that the use of single sign-on requires that the settings in the user's browser permit the use of the integrated Windows authentication.
- **Use HAN authentication without cookie check.** Select this option for authentication if your users login on HAN over an IP service. In this case, HAN does not check for session cookies.

HTML form login. Defines the HTML form to be used for HTML login on HAN. Click on the **browse** button ("...") to find the form you wish to use.

Failed HAN login. Error page that opens when login is not successful. Click on the **browse** button ("...") to find the page you wish to use.

Authentication services. Lists all configured authentication services. For details on which authentication services HAN supports and on configuring authentication services, see "[Authentication services](#)".

Permit access by secondary HAN servers. The 'HAN over HAN' function lets you pass requests for online resources from a secondary to a primary HAN server, whereby the latter actually provides the resource. Keep in mind that only a single reference to a primary HAN server is permitted; you cannot build up a chain in which multiple HAN servers refer to one another.

Secondary HAN servers. Lists all secondary HAN server which are permitted to request resources from the primary HAN server. For details on a entering a secondary HAN server, see "[Entering secondary HAN servers](#)".

Authentication services:

The following authentication services can be used with HAN:

- NT login
- IP address/host name check
- LDAP login
- ADS login
- ODBC interface to an ODBC-compatible database
- ODBC (SHA1 protected)
- SISIS
- LBS
- Aleph login
- XServer login
- AuthDS

For details on each of the authentication services, see the appendix entitled "[Authentication Services and their Modules](#)". For details on configuring authentication services, see "[Configuring authentication services](#)".

Use the buttons at the top of the Authentication Services list to edit the list:

New. Creates a new entry in the list.

Edit. Lets you edit a selected authentication service.

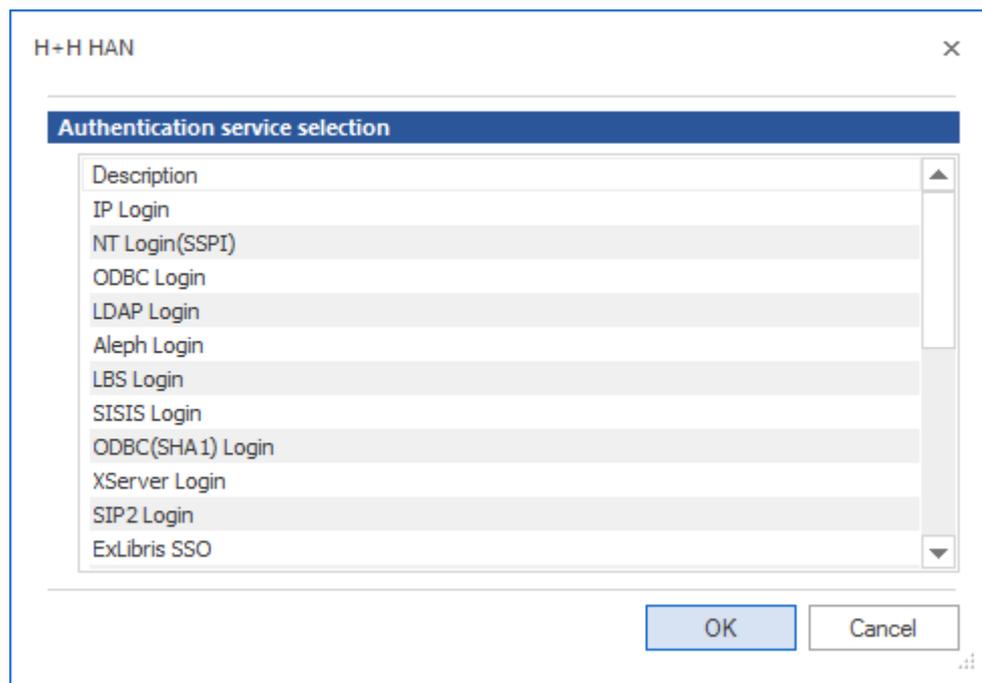
Delete. Deletes the selected entry from the list.

Delete All. Deletes all entries from the list.

Up. Moves the selected entry one position higher in the list.

Down. Moves the selected entry one position lower in the list.

Click on the **New** button to open a list of the available authentication services:



Select the authentication service you wish to configure and click on the **OK** button. This opens the **Edit Authentication Service**:

H+H HAN

Authentication service configuration

Activate service

Description: ODBC Login

Label: <Label>

Use persistent cookies for login

Validation (hours): 0

Service configuration

Parameter	Value
DBUser	
DSN	
UserField	
TableName	
where	
DBPasswd	
PasswdField	
Import	

OK Cancel

Activate service. Activates the authentication service. This control lets you preconfigure services without putting them in use, for example, or deactivate a service temporarily.

Description. You can enter a meaningful description of the authentication service.

Label. Unambiguous ID for the authentication service; used internally by the HAN system.

Use persistent cookies for login. Allows persistent cookies to be stored for login using this authentication service.

Validity (hours). Period of time that persistent cookies remain valid.

Service configuration. Defines the parameters of the authentication service and their values.

Editing an IP-based authentication service:

For IP-based authentication services (IP), you can define permitted and excluded IP address ranges by editing a defined configuration file (**CfgFile** parameter):

The screenshot shows the 'H+H HAN' configuration window. It is divided into three main sections:

- Authentication service configuration:**
 - Activate service
 - Description:
 - Label:
 - Use persistent cookies for login
 - Validation (hours):
- Service configuration:**

Parameter	Value
CfgFile	
- IP configuration:**
 - Permitted:** A table with columns 'IP address' and 'User ID'. Above the table are icons for adding (+), editing (pencil), deleting (X), and moving (up/down arrows).
 - Restricted:** A table with columns 'IP address' and 'to'. Above the table are icons for adding (+), editing (pencil), deleting (X), and moving (up/down arrows).

At the bottom right, there are 'OK' and 'Cancel' buttons.

In the list **Service configuration**, define the value for the parameter **CfgFile** as the file in which the permitted and restricted addresses are stored. You can configure the allowed and restricted addresses under **IP configuration**:

Permitted. Enter the IP ranges or host names to which access is allowed in this list. The use of wildcards is allowed, and the CIDR addressing scheme is supported. Each IP address range/host name is assigned a user ID which is used for login.

Restricted. Enter the IP ranges or host names to which access is generally NOT allowed in this list. The use of wildcards is allowed, and the CIDR addressing scheme is supported.

The lists have the following columns:

IP address. First IP address in a range of addresses, or host name.

to. Last address in an IP address range.

The **Permitted** list additionally has the following column:

User ID. Assigns a user ID to the IP address. This setting enables user login with an anonymous user account.

Use the buttons at the top of the lists to edit the lists of permitted and excluded IP ranges:

New. Creates a new entry in the list.

Edit. Lets you edit a selected IP address range.

Delete. Deletes the selected entry from the list.

Delete All. Deletes all entries from the list.

Up. Moves the selected entry one position higher in the list.

Down. Moves the selected entry one position lower in the list.

Entering secondary HAN servers:

A secondary HAN server is a HAN server that is permitted to request e-scripts from the current (primary) HAN server. Secondary HAN servers that are allowed to connect to the primary HAN server must be entered in the **Secondary HAN servers** list:



Use the buttons at the top of the list to edit the list:

New. Creates a new entry in the list.

Edit. Lets you edit a selected secondary HAN server.

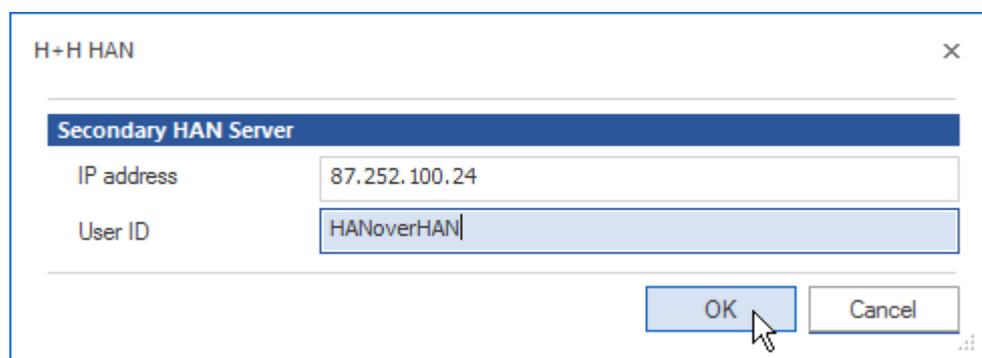
Delete. Deletes the selected entry from the list.

Delete All. Deletes all entries from the list.

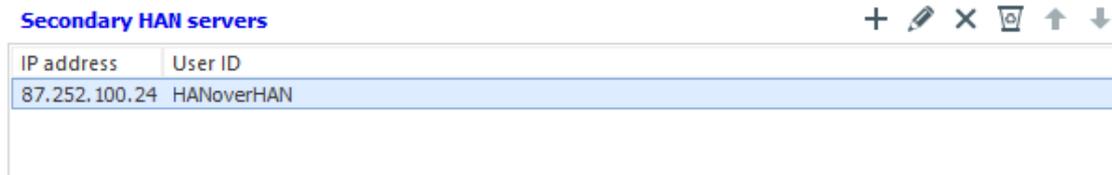
Up. Moves the selected entry one position higher in the list.

Down. Moves the selected entry one position lower in the list.

To enter a secondary HAN server, click on the **New** button. In the **Secondary HAN server** dialog, enter the IP address and a user ID. You can enter a user ID of your choice. This ID is used to identify the server in the access log, so that it is clear in statistical evaluations that the access came from a HAN server rather than from a regular user.



Click on **OK** to confirm your input. The secondary HAN server is entered in the list as a permitted source for HAN-over-HAN access:

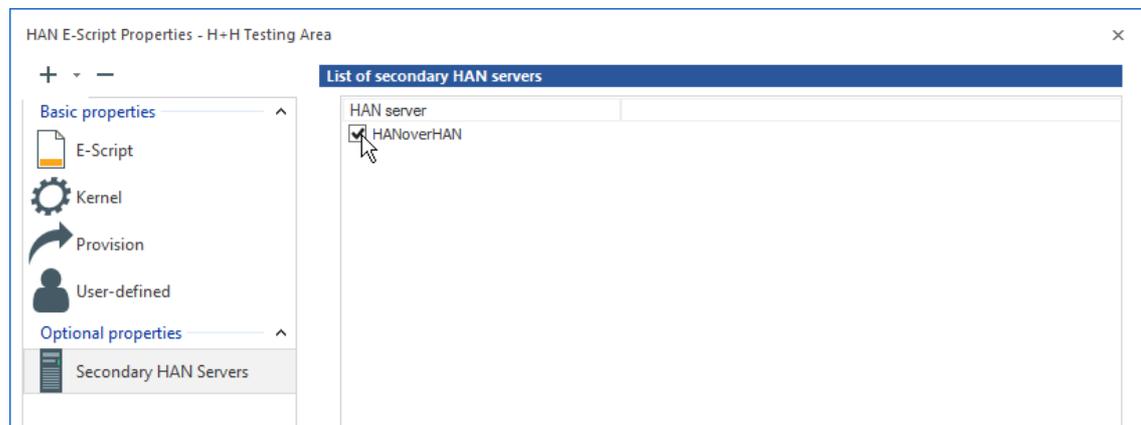


IP address	User ID
87.252.100.24	HANoverHAN

On the primary server, the secondary server is now available to all e-scripts:



Please note that the **Secondary HAN Servers** page is optional and you have to add it before you can configure properties.



For details on configuring HAN over HAN, see "[HAN over HAN](#)".

LDAP

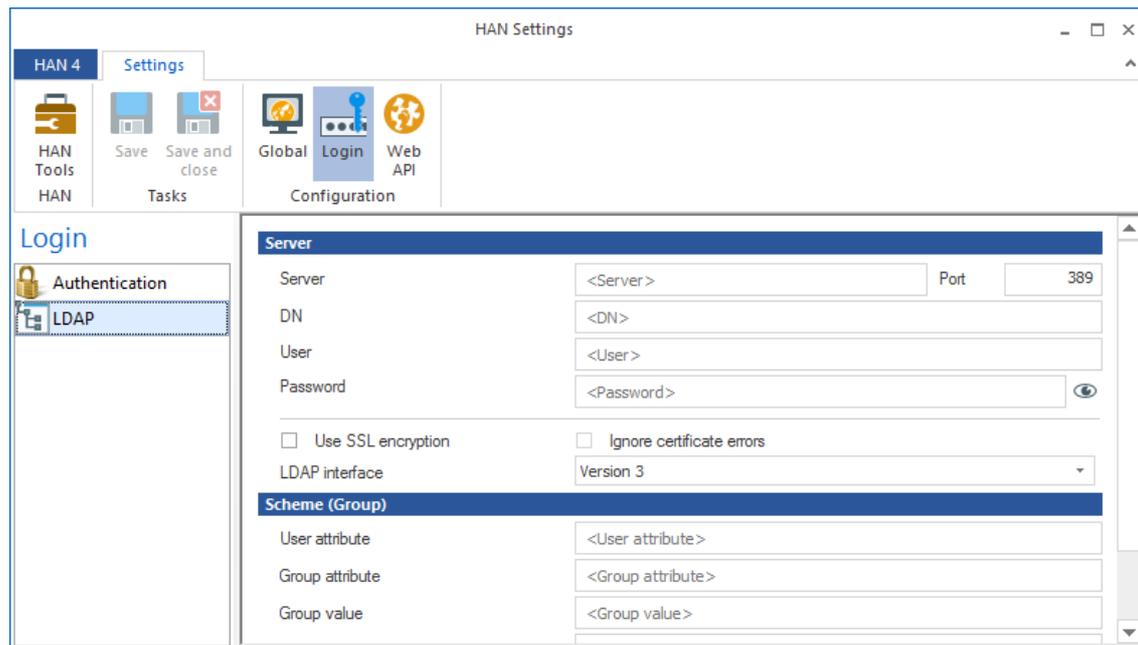
HAN supports the request of user data from a central directory with the following request types:

- Microsoft LDAP
- OpenLDAP
- Netscape LDAP

The **LDAP** dialog page lets you define the access used by HAN to read and check LDAP permissions:



Changes made on the **LDAP** dialog page are not applied until you restart the HAN web server. For details on restarting the HAN web server, see "[HAN System Settings](#)".



Server. Name of the LDAP server.

DN. Distinguished name of the directory in which the user is stored.

User. User name for login on the LDAP server.

Password. Password for login on the LDAP server.

Use SSL encryption. Activates SSL encryption for login.

LDAP interface. Defines the LDAP interface version.

User attribute. Attribute, that identifies users in the DNS.

Group attribute. Name of the attribute.

Group value. Value that defines whether the user is a group.

Members. Attribute in which members are defined.

Click on **LDAP default** to enter default settings for the LDAP server. You can choose from three groups schemas: 1) Microsoft LDAP server, 2) Netscape LDAP server and 3) OpenLDAP server. If the settings required differ from the defaults, check with the administrator of the LDAP server before entering data here.

You can use SSL encryption if desired.

The **Test** button opens a dialog for connecting to the LDAP server with the values entered here, and displays a list in accordance with the settings. If the values shown here do not match your LDAP settings, then the data entered for LDAP access was incorrect.

The following is an example of LDAP configuration (name of the domain controller: DC01; domain: library.local, Windows 2003 domain):

Server	
Server	DC01 Port 389
DN	DC=library,dc=local
User	User@library.local
Password	*****
<input type="checkbox"/> Use SSL encryption	
LDAP interface	Version 3 ▼
Scheme (Group)	
User attribute	sAMAccountName
Group attribute	objectClass
Group value	group
Members	member
LDAP default ▼ Test	

Server = DC01
 Port = 389
 DN = DC=library,dc=local
 User = User@library.local

The following is an example of OpenLDAP configuration:

Server	
Server	DC01 Port 389
DN	dc=library,dc=local
User	cn=user,dc=library,dc=local
Password	*****
<input type="checkbox"/> Use SSL encryption	
LDAP interface	Version 3 ▼
Scheme (Group)	
User attribute	cn
Group attribute	objectClass
Group value	groupofnames
Members	member
LDAP default ▼ Test	

Server = DC01
 Port = 389
 DN = DC=library,DC=local

User = cn=user,dc=library,dc=lokal

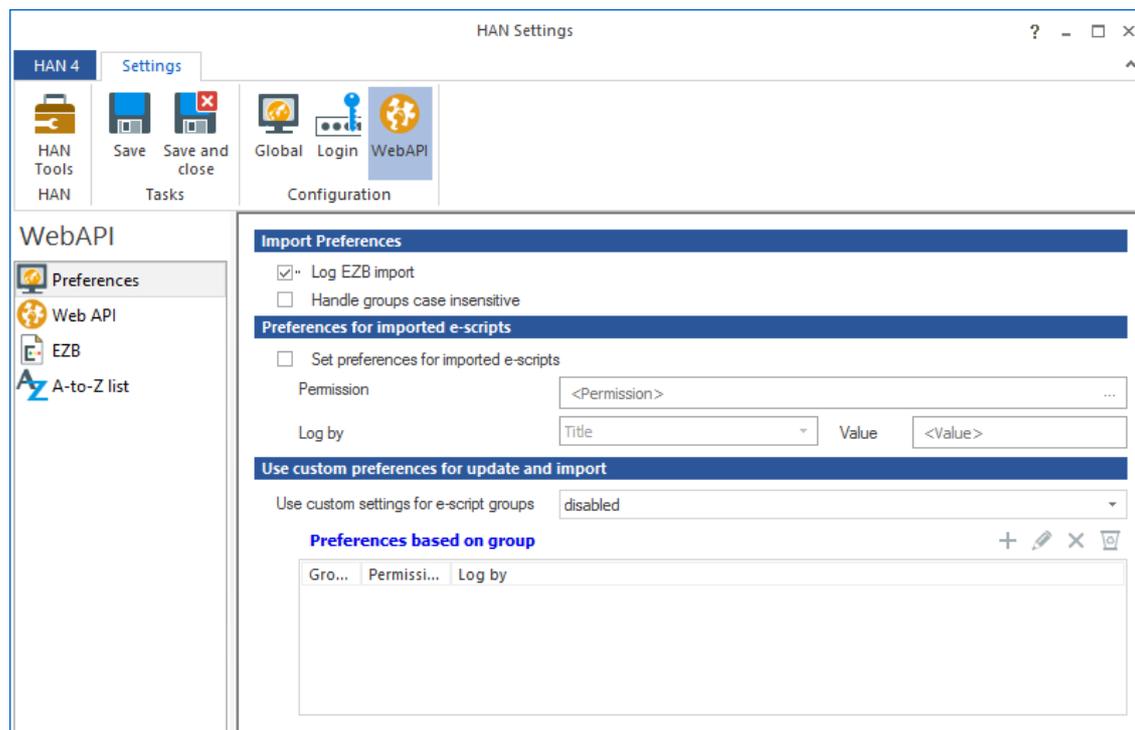
Web API

In the **Web API** section, configure the HAN Web API. This is a programmable interface, that connects HAN to external linksolvers and also enables HAN to be used as a discovery service. For details on how to work with the HAN Web API, see "[HAN Web API](#)". The following chapters describe the individual settings for the HAN Web API. In addition, you will find a description of the configuration possibilities in the interaction of HAN and the Electronic Journals Library of the University of Regensburg (EZB):

- [Preferences](#). Preferences for e-scripts from the EZB relating to imports, permissions and data logging are configured on this page.
- [Web API](#). Configures the HAN Web API.
- [EZB](#). Configures the EZB access (locations).
- [A-to-Z list](#). Defines the return values used by the A-to-Z list.

Preferences

On the **Preferences** page, you can configure preferences for EZB imports. These settings configure the import itself, and also the permissions and data logging as well as user-defined anchor settings:



For EZB imports, you can define fixed preferences relating to permissions and data logging that apply to all e-scripts imported from the EZB. Alternatively you can import e-scripts from the EZB which do not have general fixed preferences, but which store the anchor of the e-script as an e-script property. This lets you define different settings that are applied based on anchor. For example, you can configure settings that apply only to e-scripts with the "Springer" anchor.

Log EZB import. Logs the EZB import in the HAN database.

Handle groups case insensitive. Ignore the upper and lower case of the group names when importing, in order not to create unnecessary duplicates.

Set preferences for imported e-scripts. Activates the use of the preferences defined here for the e-scripts to be imported from the EZB.

Permission. A permission that is allocated to all imported e-scripts. Use the **Select** button to the right of the input field to locate and select a permission.

Log by. Defines the data logging functions for the imported e-scripts. Possible e-script properties by which HAN can log the e-script data:

- **Title.** Title of the e-script.
- **Anchor.** The EZB anchor of the e-script.
- **Value.** The value you define in the **Value** field is used as the record ID.

Value. A user-defined value, implemented as the record ID for all e-scripts imported from the EZB.

Use custom settings for e-script groups. Lets you define custom permission and data logging settings that are applied based on e-script group:

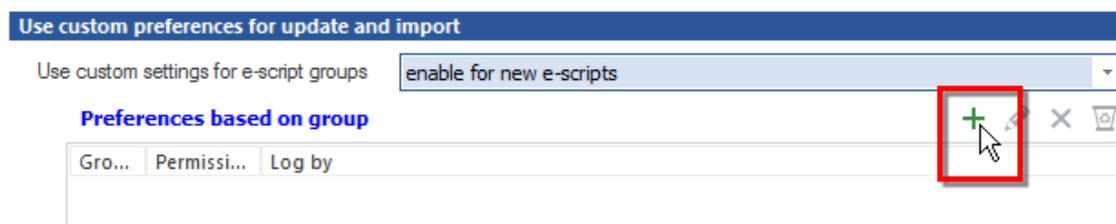
- **disabled.** Group-specific settings are disabled.
- **enable for new e-scripts.** Custom group-specific settings are enabled when a new e-script is created.
- **always enabled.** Custom group-specific settings are enabled when a new e-script is created and when existing e-scripts are updated.

Depending on the group, access permission and a record ID can be allocated to each imported e-script.

Preferences based on groups. Lists all user-defined preferences for e-script groups.

Editing individual group-based properties:

Use the buttons at the top of the list to edit the list:



1. To create individual new properties, click on the **New** button.
2. In the **Edit group** dialog, enter the group and specify a permission and the data logging method:

The individual property is added to the list.

Web API

Configure the HAN Web API on this page. The HAN Web API adds a discovery service function to HAN:

Use Web API. Enables the use of the HAN Web API.

Configured interfaces. Lists all interfaces configured via the Web API to search system providers.

Edit the list of configured interfaces using the buttons above the list:

New. Creates a new entry in the list.

Edit. Edits the selected interface.

Delete. Deletes the selected entry in the list.

Delete all. Deletes all entries in the list.

Create Web API

1. Click the **New** button above the list.
2. In the **Create Web API** dialog, select the type of API:
 - **Forwarding to HAN URL:** Retrieves a possible HAN ID for a selected URL at a LinkOut and opens the resource via HAN if successful. For details on the functionality of this API, see "[HAN Web API/Detecting the HAN ID](#)".
 - **Information on a HAN e-script:** Queries additional information on e-scripts that are, e.g., displayed in the A-to-Z list. For details on the functionality of this API, see "[HAN Web API/Requesting Supplemental Information](#)".
 - **Creating and forwarding:** Determines on LinkOut whether a HAN e-script for the URL already exists. If there is no e-script, it is created. For details on the functionality of this API, see "[HAN Web API/Creating E-Scripts](#)".
3. In the **Configure Web API** dialog, configure the Web API:



The options of the dialog are based on the selected API. All options are displayed only if you choose **Creation and Forwarding**:

ID. Unique identifier of the new Web API.

Description. Description of the new Web API.

Return value. Values that are queried by the Web API via the e-script and further processed by HAN.

Search mode. Criteria used by HAN to determine a potential e-script.

Advanced Settings. Opens the Advanced Settings dialog, where you can refine the search mode. For a description of the settings, see the section "[Search mode - Advanced settings](#)".

Hidden salt (on creation only). On creation, the transfer of data to the HAN server is encrypted to prevent unauthorized access to the HAN server. For this, the salt is used, encoded with the selected hash algorithm.

Hash algorithm. Algorithm that encrypts the data transfer to the HAN server when creating e-scripts.

Search mode - Advanced settings

In the **Advanced Settings** dialog, manually specify the HAN search mode that looks for e-scripts in the HAN database for LinkOut URLs:

Web API - Advanced Settings

Create allocations

HAN ID allocation to a domain

HAN ID	Domain
--------	--------

Create reg. expressions

Reg. expression to determine a HAN ID

regular expression

OK Cancel

Assign a HAN ID to a domain. Assigns domains to specific HAN IDs.

Reg. Expression for determining a HAN ID. Extending the search mode to a schema that searches URLs.

Edit the lists with the buttons above:

New. Creates a new entry.

Edit. Edits the selected entry.

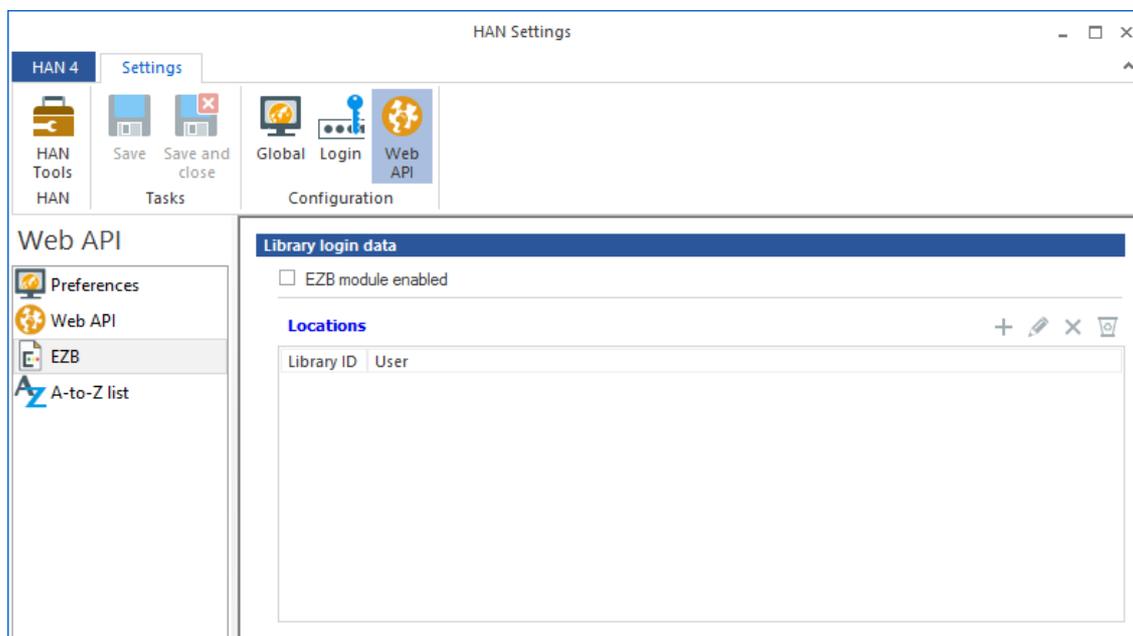
Delete. Deletes the selected entry.

Delete all. Deletes all entries in the list.

For details on the functionality of the individual Web APIs, see "[HAN Web API](#)".

EZB

On this page you activate the EZB module and manage your EZB access:



EZB module enabled. Enables the use of the EZB module.

Locations. List your EZB accesses.

You edit the **Locations** list using the buttons above:

New. Creates a new EZB access.

Edit. Edits an EZB access.

Delete. Deletes an EZB access.

Creating EZB Access:

1. Above the Locations list, click the button **New**.
2. In the **Edit Location** dialog, enter your EZB access data:

Library ID. Library ID in the EZB.

User name. User name in the EZB.

Password. Password for access to the EZB.

3. Confirm your entries by clicking **OK**. The EZB access is entered in the **Locations** list.

A-to-Z List

On this page you configure the A-to-Z list:

Description. The description of the A-to-Z list.

Return values. HAN shows the selected values of the e-scripts as additional information behind the entries in the A-to-Z list.

For details on the A-to-Z list see "[Managing HAN Resources/A-to-Z-List](#)".

HAN System Settings

The HAN System Settings program lets you configure system functions in HAN. Start the system settings via the desktop shortcut **HAN Tools**:

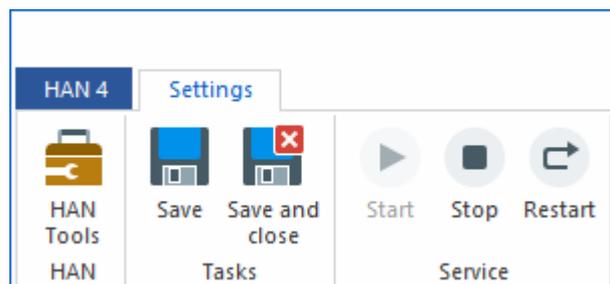


If the desktop shortcut **HAN Tools** is not available, start the server settings via the Windows Control Panel. Select **System and Security/H + H HAN**.



Commands in the Ribbon:

Three central HAN services are edited in the System Settings: the HAN service, the web service and the database service. The Ribbon contains controls (buttons) for starting, stopping and restarting these services:



HAN Tools. Opens the HAN Tools.

Save. Saves changes in the settings.

Save and close. Saves changes and closes the System Settings.

Start. Starts the given service.

Stop. Stops the given service.

Restart. Restarts the service.

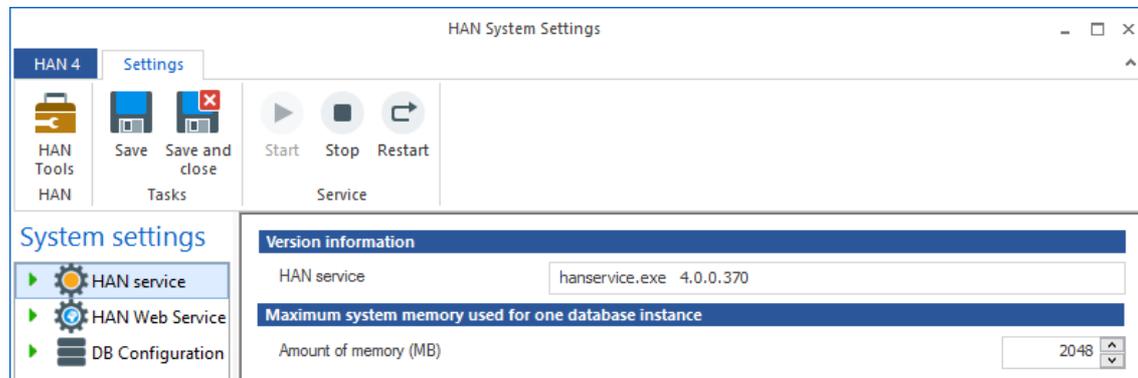
Dialog pages:

The System Settings program has the following dialog pages:

- [HAN Service](#). Shows the version of the HAN service.
- [HAN Web Services](#). Configures the HAN web server, e.g. its certificates and ports.
- [DB Configuration](#). Configures the database and offers additional features, such as the database backup function.

HAN Service

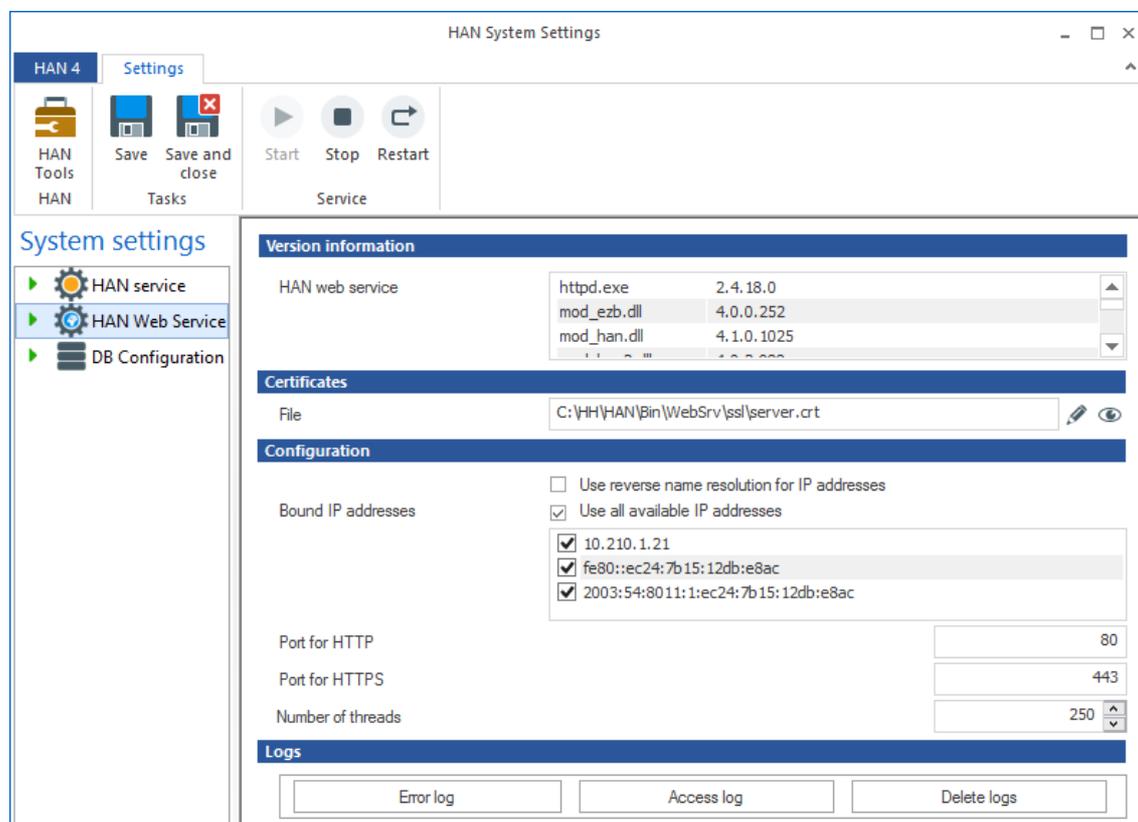
This dialog page of the HAN System Settings shows you the version number of the HAN service and the used amount of main memory:



The version number of the currently installed HAN service is shown in the **HAN service** field. Under **Amount of memory (MB)**, define how much main memory the HAN service is allowed to use.

HAN Web Service

On this page, you can configure the HAN web server:



HAN Web Services. Version number of the currently installed web service.

File. Certificate file used by the HAN web server. Click on the **Edit** button (pencil icon) to open Certificate Wizard for editing the HAN web server certificate. For details on using the Certificate Wizard, and on requesting and importing certificates, see "[Requesting and Importing Certificates](#)". With HAN, you can also create self-signed certificates for testing purposes. These are valid for a limited time. For details on creating self-signed certificates, see "[Creating Self-Signed Certificates](#)". Click on the **Details** button (blank page icon) to view information on the currently installed certificate.

Use reverse name resolution for IP addresses. Activates reverse name resolution for IP addresses, so a host name can be assigned to an IP address.

Bound IP addresses. Lists all IP addresses bound to the web server. Tick the box next to an IP address to activate use of that address with HAN.

Use all available IP addresses. Ticks all of the boxes to activate use of all bound IP addresses in the list.

Port for HTTP. HTTP port on the HAN web server.

Port for HTTPS. HTTPS port on the HAN web server.

Number of threads. Number of threads that the web service opens/uses.

Error log. Opens the HAN web server's error log; in the event of a failure, for example, this can help you locate the source of error.

Access log. Opens the HAN web server's access log.

Delete logs. Deletes the contents of both log files.

Requesting and Importing Certificates

Using an official server certificate involves two steps:

1. [Request a certificate](#): You need to create a certificate request and send it to a certificate authority. The certificate authority checks the request for correctness and issues the certificate.
2. [Import the certificate](#): Once the certificate has been issued by the certificate authority, you need to import it to your server.

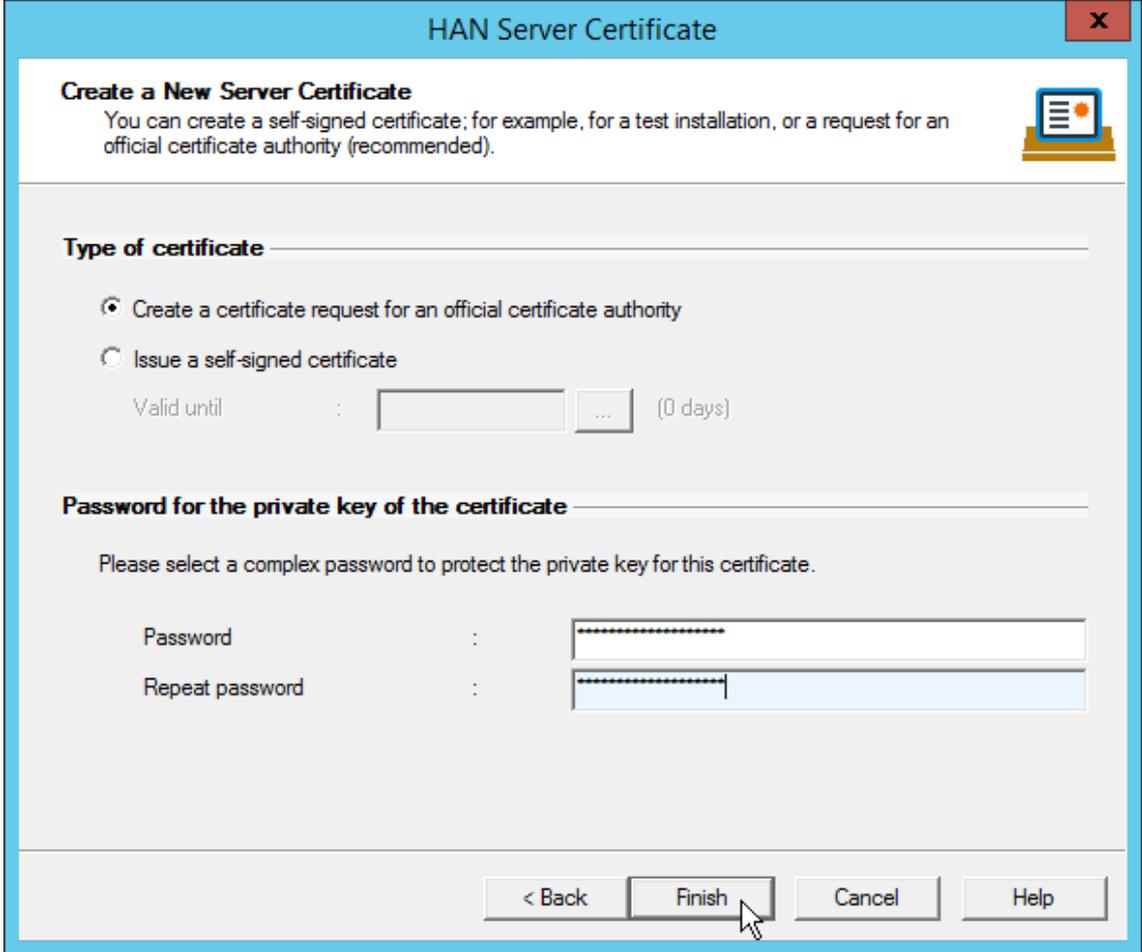


You can also use the Certificate Wizard to create self-signed certificates for testing purposes. For details on creating self-signed certificates, see "[Creating Self-Signed Certificates](#)".

Requesting a certificate:

1. In the HAN System Settings, open the **HAN Web Service** page.
2. Under **Certificates**, click on the **Edit** button to the right of the **File** input field. This opens the HAN Certificate Wizard.
3. Select the **Create or request a new server certificate** option and confirm by clicking on **Next**.
4. Enter the data requested and click on **Next**.

5. As the certificate type, select **Create a certificate request for an official certificate authority** and enter a password for the private key:



6. Click on **Finish** to create and view the certificate request. To submit the certificate request to your certificate authority, you can copy and paste it into the web form at the CA website, or send a file containing the certificate request (by e-mail, for example). This completes the certificate request. When you receive the certificate from the certificate authority, proceed with the import procedure as follows.

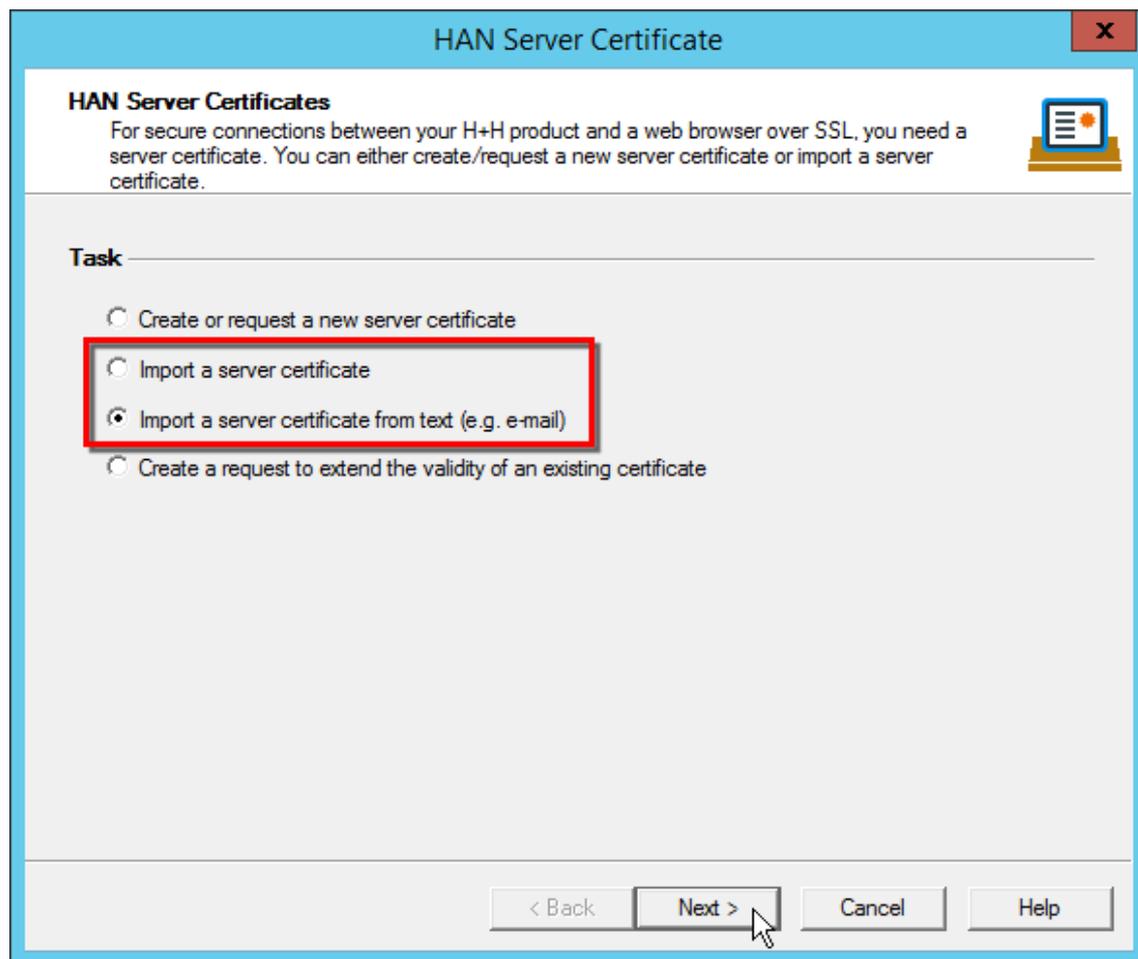
Importing the certificate:

1. Under **Certificates**, click on the **Edit** button to the right of the **File** input field to open the Certificate wizard.

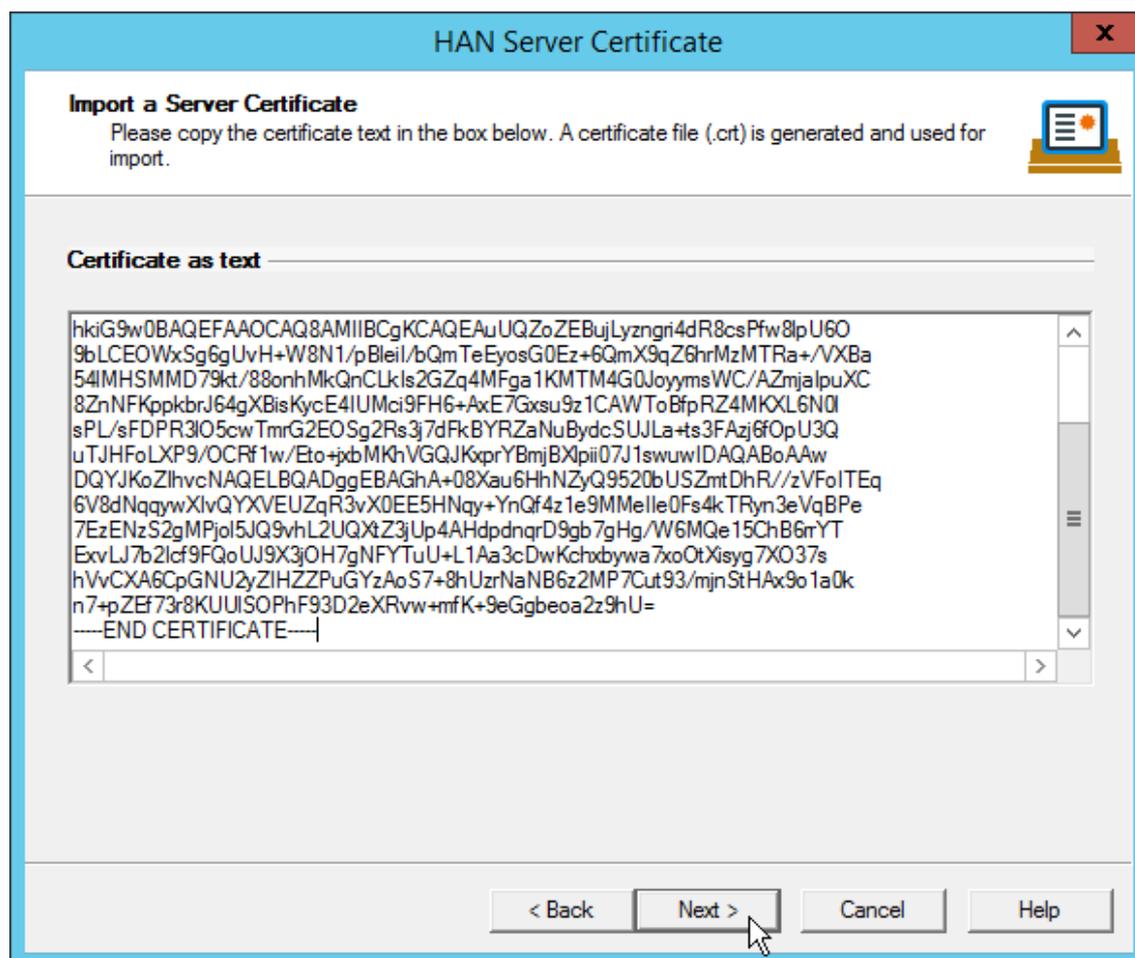
2. As a rule, you will receive the certificate in plain text. In this case, select **Import a server certificate from text (e.g. e-mail)** and confirm by clicking on **Next**:



If you received a file, rather than plain text, select **Import a server certificate** and import the file. For details on importing a file, skip to Step 4.



3. Paste the certificate text into the input field and click **Next**:



4. The Certificate Wizard creates a certificate file from the certificate and enters its name in the **File with the certificate (.crt)** input field. If you received a file, rather than plain text in an e-mail, browse to the CRT file you received and select it. Enter the password for the private key:



The HAN system uses the DER format for certificate files, requests and private keys.

HAN Server Certificate

Import a Server Certificate
Please specify the file containing the certificate to be imported. The automatically generated private key will be applied. Alternatively, you can specify a separate file containing the private key to be used.

Files containing the certificate and the associated private key

File with the certificate (.cert)
C:\server.crt

Alternative file with the private key (.key)

Password for the Private Key of the Certificate

< Back Finish Cancel Help

The **Alternative file with the private key (.key)** setting is not relevant unless the certificate file and private key were both created using other tools, rather than using the HAN wizard for creating the certificate request.

5. Click on **Finish** to create the certificate and integrate it in the web server. Your changes will not take effect until after you restart the HAN web service.

Creating Self-Signed Certificates

With HAN, you can create temporary self-signed certificates for the HAN web server, for testing purposes. In regular operation of HAN, you will need an official certificate for the web server. For details on requesting and importing official certificates, see "[HAN System Settings/HAN Web Server/Requesting and Importing Certificates](#)".

- 1.** In the HAN System Settings, open the **HAN Web Service** page.
- 2.** Under **Certificates**, click on the **Edit** button to the right of the **File** input field. This opens the HAN Certificate Wizard.
- 3.** Select the **Create or request a new server certificate** task and click on **Next**.

4. Enter the data requested:

Server's FQDN. The fully qualified domain name of the server on which you have installed HAN. The name entered here must match the name under which server is reached over the Internet. If the server name is "han", for example, the FQDN might be **www.han.com**.



Do not use an alias from your intranet as FQDN to request certificates, as the resulting certificate would not be valid.

Name of the company. The name of your company or organization.

Name of the department. You can use this field to specify a particular department or section of your company or organization (for example, the data processing center).

City. The city in which your organization is located.

State. The state in which your organization is located.

Country code. Enter the two-letter code for your country (see ISO 3166; for example, US for the United States, UK for the United Kingdom, DE for Germany, etc).

E-mail address. The e-mail address for contacting your company.

Key length (Bits). Defines the length of the key in bits.

Signature algorithm. Defines the encryption algorithm of the certificate.

SAN (Subject Alternative Names). Defines the alternative object names (subjectAltName; SAN). For example, mail addresses, URIs, or IP addresses associated with the certificate.

5. Click on **Next** to continue. In the next dialog, you can specify whether you wish to create a self-signed certificate or send a certificate request to an official certificate authority. Select **Issue a self-signed certificate**, enter a date for the period of validity, and enter a password for the private key.

6. Click on **Finish** to create the certificate and integrate it in the web server. Your changes will not take effect until you restart the HAN web service.



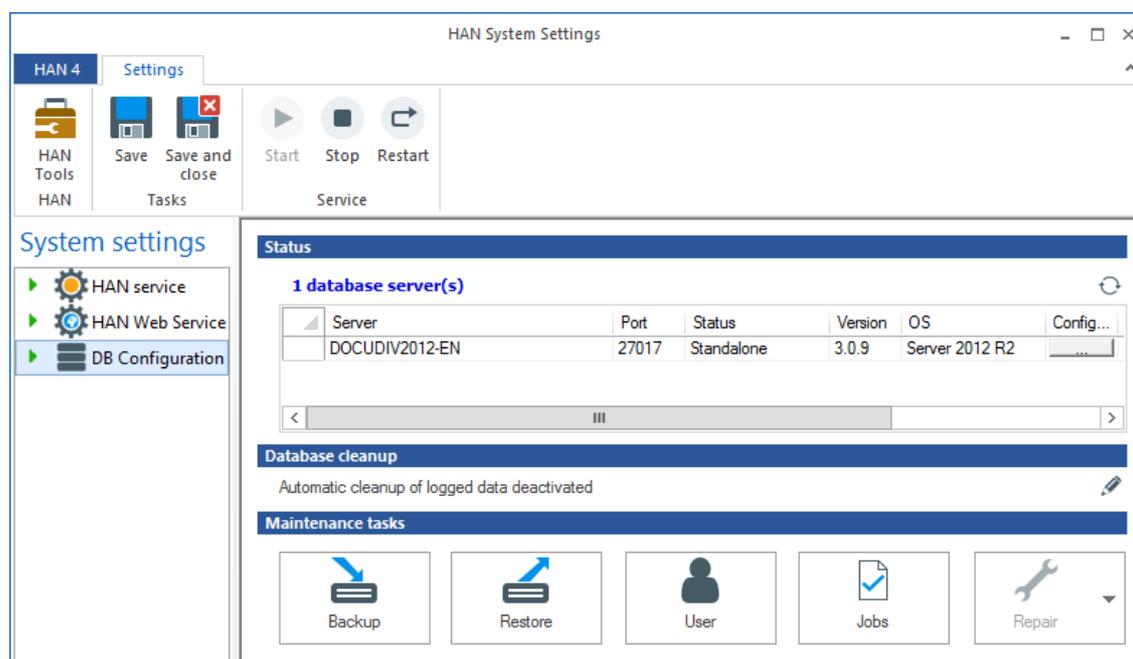
The HAN System Settings program does not currently support certificate chaining. If you want to use a chain of certificates, it must be configured manually. To do this, navigate to the `\HH\HAN\Bin\System\web\bin` directory and open the `sslhan.conf` file. The `[SSL]` section shows the `#SSLCertificateChainFile` entry. Delete the Comment character ("`#`") from this entry to enable certificate chaining:

```
[SSL]
#Server Certificate Chain:
#Point SSLCertificateChainFile at a file containing the
#concatenation of PEM encoded CA certificates which form the
```

```
#certificate chain for the server certificate. Alternatively
#the referenced file can be the same as SSLCertificateFile
#when the CA certificates are directly appended to the server
#certificate for convenience.
SSLCertificateChainFile conf/ssl.crt/ca.crt
```

DB Configuration

On this page, you can configure the HAN Database service:



Status. Shows details on the HAN database server, including server name, port, database version, operating system of the database server, and any parameters. Click on the **Update** button to update the list.

Database cleanup. Displays the status of automatic database cleanup. If you click the **Edit** icon after the status message, the **Database cleanup** dialog box opens where you configure the intervals for the automatic deletion of log data. For details on configuring the automatic deletion intervals, see "[Database cleanup](#)".

Backup. Stores a backup copy of the database. The database cannot be used while the backup operation is running. The HAN system is likewise unavailable during this operation. For details on backing up the database, see "[Backing up data](#)" below.

Restore. Restores a version of the database that had been backed up. For details on restoring a previous database version, see "[Backing up data](#)" below.

User. Edits the database authentication. In the dialog **Database users** edit users who have access to the database. To edit database users, see the section "[Edit database users](#)".

Jobs. Starts jobs for database maintenance. In the **Database Maintenance Jobs dialog**, select which job you want to run. Currently starting the following jobs:

- **HAN Prepare statistics for anonymization.** Prepares existing HAN log data for anonymization.

- **Display the status of the HAN system tasks.** Shows HAN system tasks executed in the database and their current status.

To run a job, click the **Execute** icon above the list.

Repair. Repairs the database. For details on the repair options in HAN and on how to repair the database, see "[Repairing the Database](#)".

Database cleanup

Automatic database cleanup helps you meet data protection requirements and keep your system performing by automatically deleting older log data at a certain interval. Configure the database cleanup by clicking the **Edit** button on the **DB Configuration** page. In the **Database cleanup** dialog box, enable the automatic deletion of log data by checking the **enable automatic cleanup of log data** check box:

The screenshot shows a dialog box titled "Database Maintenance" with a sub-section "Database Cleanup". It contains a checked checkbox for "Enable automatic cleanup of log data". Below this, there are two dropdown menus for "Remove logged data older than:". The first dropdown is set to "2" with the text "years, one year is calculated with 365 days". The second dropdown is set to "0" with the text "month, one month is calculated with 30 days". At the bottom of the dialog, there is a status line that reads "Automatic cleanup of logged data older than 712 days". There are "OK" and "Cancel" buttons at the bottom right, with a mouse cursor pointing at the "OK" button.

Delete the log data that is older than. The defined delete interval:

- **Years, one year is calculated as 365 days.** Defines the years after which data is deleted, one year always being counted as 365 days.
- **Month, one month is calculated as 30 days.** Defines the months after which data is deleted, with one month always being counted as 30 days.

Under the settings area, you see a status line in the form **Automatically delete log data older than [X] days.**

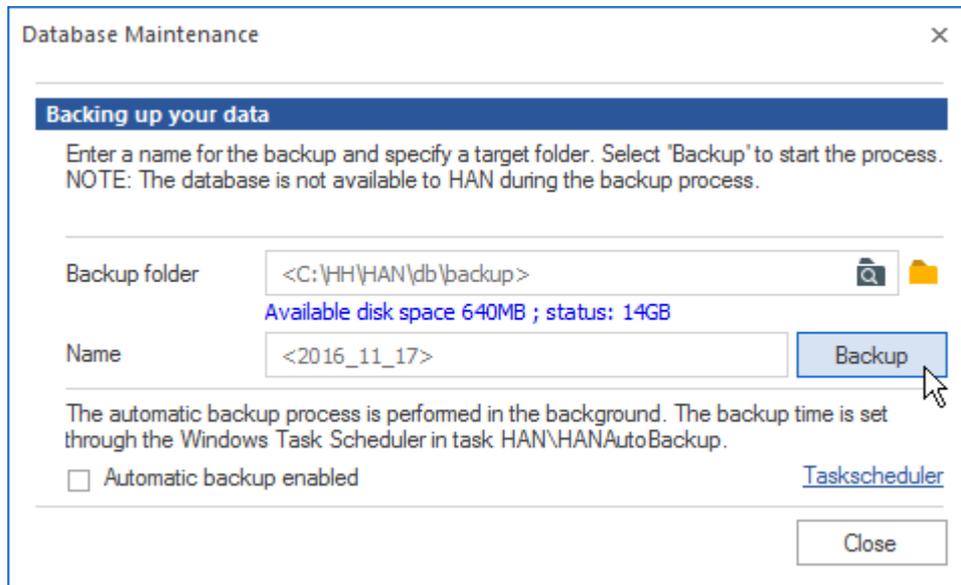
Backing up and restoring databases:

The database backup function lets you transport HAN data to a newly installed system, for example, or make it available to a separate HAN server. In addition, regular backups can help prevent data loss in the event of a system failure.

Backing up data

1. Click on **Backup** under **Maintenance tasks.**

2. In the **Backup** dialog, you can enter a name for the backup in the **Name** field and specify the location for your backup in the **Backup folder** field:



Entering a user-defined name and folder is optional. By default, HAN generates a backup name from the current date and stores the backup in the `\HH\HAN\db\backup` folder.

3. When both fields contain the desired data, click on **Backup**. The backup is created. The **HAN database maintenance** dialog shows an overview of tasks executed.



Click on **Open the log file** to view a log of the individual backup operations.

Click the **Close** button when all tasks have been completed.

Automatically backing up data:

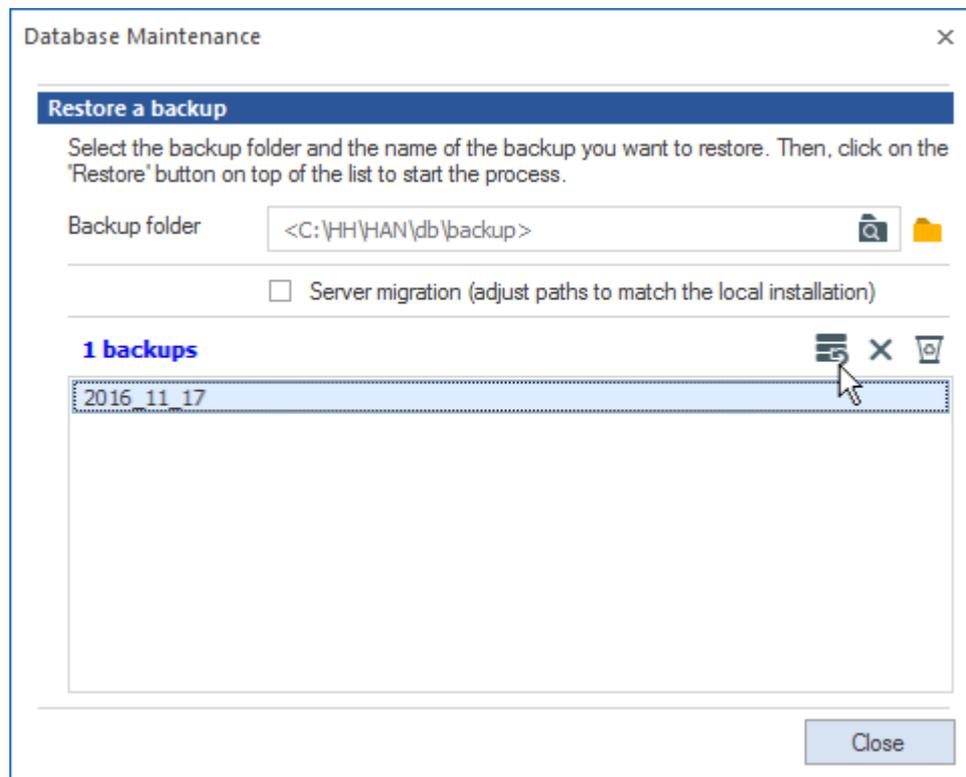
In the **Backup Data** dialog, you can also configure the automatically backup of the database:

1. Click the link **Task Scheduler**. This opens Windows Task Scheduler.
2. In the Task Scheduler, open **Task Scheduler Library/HAN**.
3. Configure the task **AutoBackup** according to your needs.
4. In the **Backup Data** dialog box, select the **Automatic backup enabled** check box.

Restoring data

1. Under **Maintenance tasks**, click on **Restore**.

2. In the **Restore Backup** dialog, select the backup from the list and click the **Restore** icon above the list:



The selected backup is restored. You will see the progress in a command-line window that you exit after completing the restore with any key.

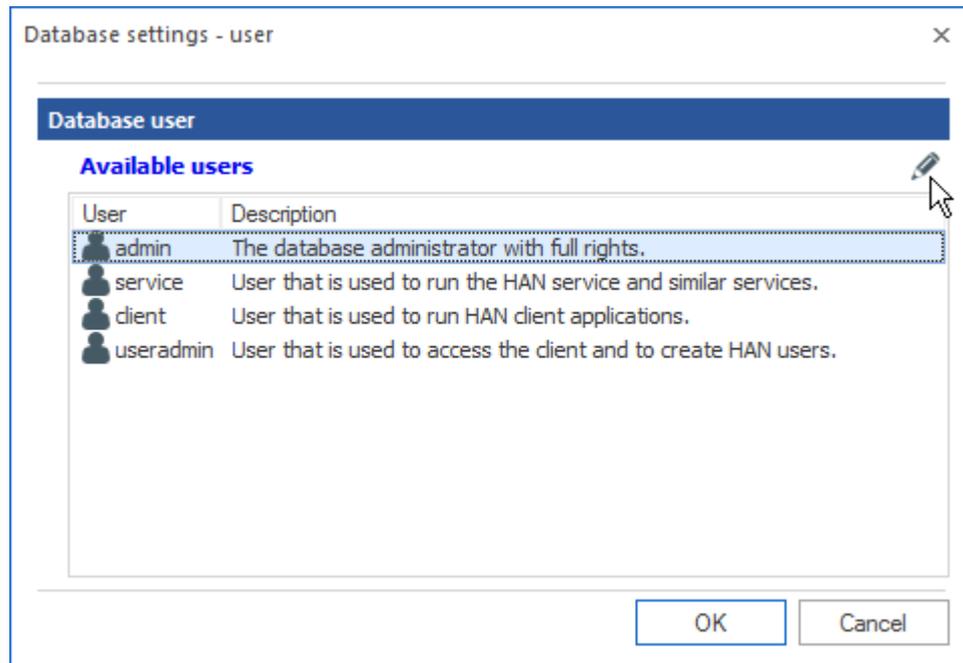
Server migration

To move your HAN database to a new server, proceed as follows:

1. Back up your data as described in the "[Backing up data](#)" section.
2. Install HAN on your new server as described in the "[Installation](#)" chapter.
3. Start data restoring as described in the "[Restoring data](#)" section.
4. Activate the **Server migration (adjust paths to match the local HAN installation)** option.
5. Select the backup folder where you provide the database backup of your previous HAN server.
6. Select the backup from the list and click the **Restore** icon above the list. The new HAN installation imports the HAN database of the previous server.

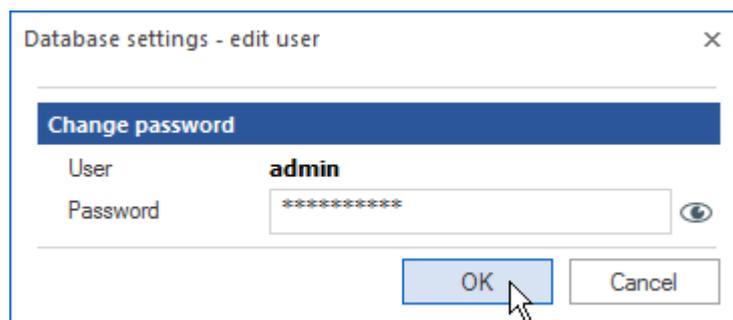
Edit database users

In the **Database Users** dialog, change the password of users who have access to the database:



The users can also be HAN system services. Users who are used by HAN system services should be left with default values.

1. To change a password, click the **Edit** icon above the list.
2. In the **Change Password** dialog, enter a new password:



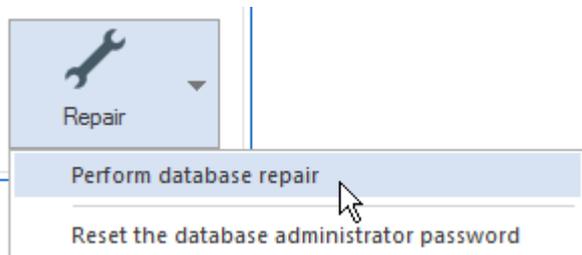
3. Confirm the new password with by clicking **OK**. After changing the password, the new password is written to the database.

Repairing the database

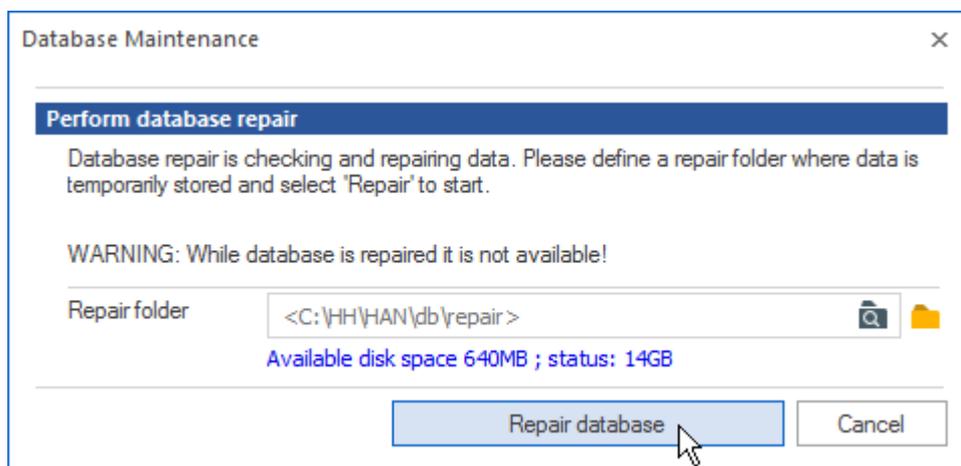


Before you can repair the database, you need to stop the database service. It is not possible to repair the database while the database service is running. To stop the database service, click on the **Stop** button in the Ribbon.

1. To repair the database, click on the **Repair** button under **Maintenance tasks**.
2. In the drop down menu select **Perform database repair**:



3. In the **HAN Database Repair** dialog, select a repair folder. If you do not mind, you can simply use the default folder:



4. Click the **Repair Database** button. The progress of the repair operation is shown in a command line window.
5. After completing the repair, close the command line window by pressing any key.

User Administration

In this chapter, you will learn how to work with the HAN user administration. One of the first configuration steps after the installation is to create an administrative user account to manage HAN.

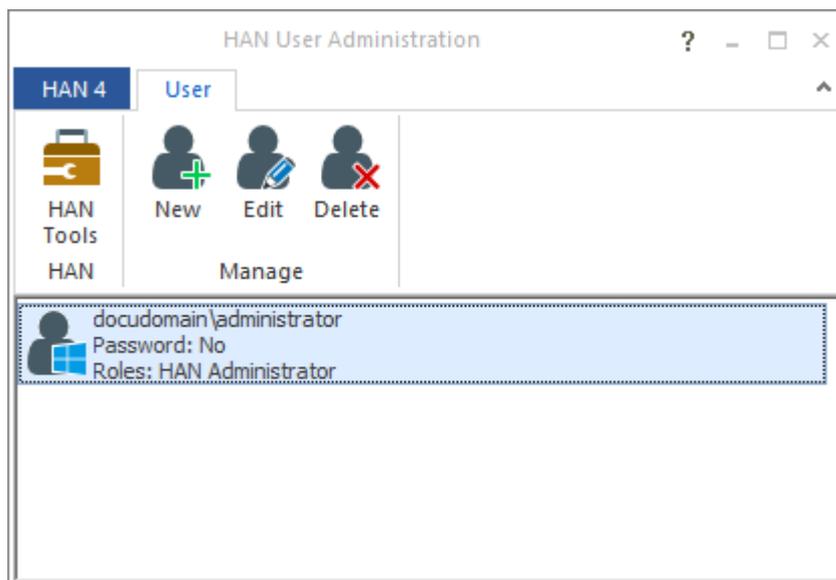


HAN user accounts are not equal to Windows or AD user accounts. These are HAN internal user objects that are authorized to perform certain tasks in HAN according to the HAN role concept. For an introduction to the HAN role and user concept, see "[HAN roles and users](#)".

Start the HAN user administration via the desktop shortcut **HAN Tools**:



Immediately after installation, the system administrator is entered as the HAN administrator in the main user administration window:



However, no password is set yet. You have to define a password so that you can use the user productively. To learn how to create an administrative user, see "[Creating an Administrative HAN User](#)".

Commands in the ribbon:

HAN Tools. Opens the HAN tools.

New. Opens the [Change User Data](#) dialog to create a new user.

Edit. Opens the [Change User Data](#) dialog to edit a selected user.

Delete. Deletes the selected user.

Create/edit users:

Create and edit users in the dialog **Change User Data**:

User. User name of the HAN user. This can be entered freely, or the name of a Windows or AD user can be selected to create a HAN user of the same name. Only the user name, not the password, is accepted!

Password. The login password. The password can be the same as the Windows login password, or different.

Show. Displays the password in plain text.

Remove an existing password. Select this check box to remove the existing password for the selected user. Confirm with the **OK button** The password is deleted and can be reset.

Roles. Defines the role of the user. The user role defines the rights of a user:

- **None (disabled user).** The user is not assigned a role. It is thus deactivated in HAN.
- **HAN administrator.** The user is marked as a HAN administrator. All roles are automatically activated under **Assigned Roles**.
- **Restricted functionality.** In the **Assigned Roles** list, select the roles the user is performing in HAN.

Report Center

The HAN Report Center is where you can view the usage data pertaining to your HAN e-scripts. But the Report Center is far more than just a log.



To start the report center, you need an authorized user account, which is authorized to work with log data and statistics. To do this, the user must have the role administrator or statistician. You create users with the HAN user administration. If you can not log on as an administrator, check whether a password has been set for the HAN Administrator! For information on how to use HAN user administration, see "[User Administration](#)". A description of the HAN role and user concept can be found in the chapter "[HAN Roles and Users](#)".

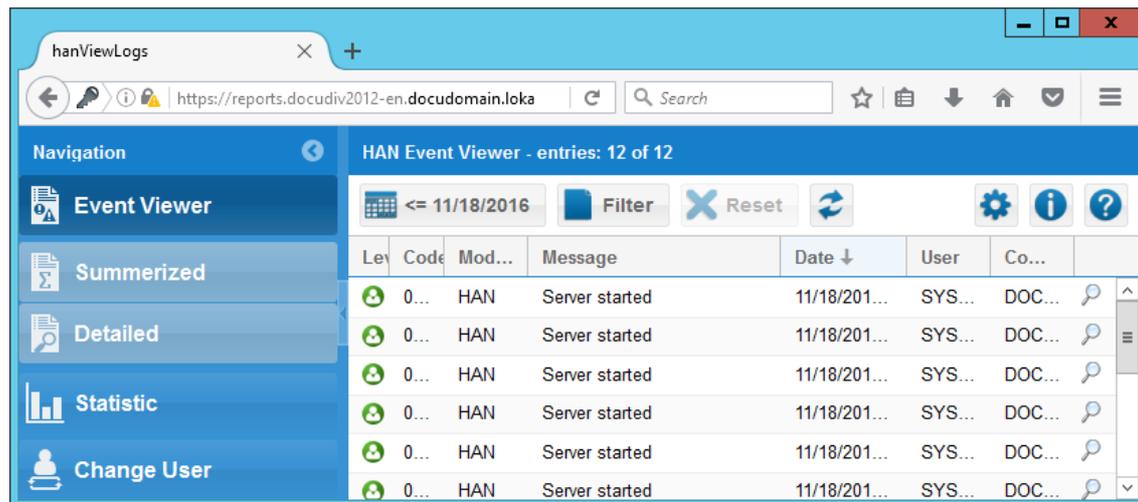
It comes with a range of tools for sophisticated data analysis:

- **Event Viewer:** Lets you view general system messages from your HAN system. For a clear overview of the status of error messages, the view is divided into categories. For details on the categories and how to use the event viewer, see "[Event Viewer](#)".
- **Summerized Access Log:** The summarized log presents summaries of usage categorized by browser session and by HAN ID (the ID of the HAN e-script). This can make usage reports far easier to comprehend. For details on working with the summarized access log, see "[Summarized Access Log](#)".
- **Detailed Access Log:** The access log shows all usage entries (access instances) with the associated information. For details on working with the access log, see "[Detailed Access Log](#)".
- **Statistics:** With the Statistics program you can compile detailed usage reports on your e-scripts. For details on using the Statistics program, see "[Statistics Program](#)".
- **Change User:** Reports the current user and allows a re-login. This is useful if you have rights with the current user account.



If a certificate error is reported when loading the Report Center or the Statistics program, that means no valid certificate has been registered for the web server. For details on requesting and importing certificates, see "[HAN System Settings/HAN Web Server/Requesting and Importing Certificates](#)". Still, there is no harm in loading the page at this point; simply select **Continue loading the page**.

The report center displays all logs. In addition, you have access to statistics and user change:



The navigation bar on the left allows you to view the different log, start the statistics program and initiate a user change. You can minimize the navigation bar by clicking on the left-arrow button in its title bar. The action bar above the log display contains controls for various tasks, such as filtering the data records for display. The following controls are in the action bar:

Jump to date. Shows all data records written on or since a specified date.

Filter. Filters the queried data to show only those records which match the specified filter criteria.

Reset. Resets the filter.

Reload. Updates the displayed content.

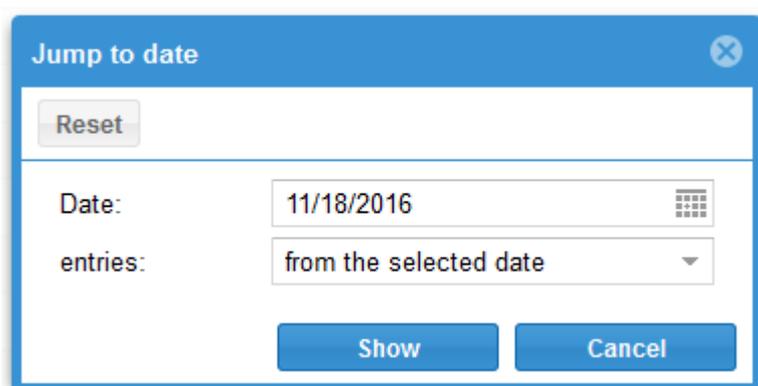
Settings. Opens the Settings program.

Information. Shows information about the program.

Help. Opens the Help program.

Jump to date:

This function filters the queried data based on date. You can view either all data records written on the specified date, or all records written on or after the specified date.



Date. Date for filtering the data.

Entries. Specifies the query mode:

- **from the selected date.** Loads all data records written on or after the selected date.
- **for the selected date.** Loads all data records written on the selected date.

Click on **Show** to load the filtered data in the Log Viewer.

Filter:

This function filters the queried data based on date. Which options are available here depends on the type of log file displayed:

Event Viewer:

Level. Severity level of the event., such as "Warning" or "Error."

Code. Error code.

Module. (NetMan) module in which the event occurred.

Message. Shows only data records with message-field values containing the character string entered here.

User. Shows data records with user-name values containing the string entered here.

Computer. Shows data records that have computer-name values containing the string entered here.

Summarized Access Log:

Record ID. Filters by the selected record ID.

Session. Filters by the selected session.

User. Filters for users whose names contain the string you entered.

Computer. Filters for computers whose names contain the string you entered.

Cost Center. Filters for cost centers whose names contain the string you entered.

Record ID group. Filters by the record ID group.

User group. Filters by the user group.

Station group. Filters by the station group.



Record ID groups, user groups, and station groups are data groups that group multiple record IDs, users, or stations into a group that is then logged as a stand-alone object. The common data logging of certain groups, e.g., the workstations of a floor or department, can dramatically increase the clarity of statistical data. Create data groups in the data editor. For information on how to work with the data editor, see "[Data Editor](#)".

Detailed Access Log:

Record ID. Filters by the selected record ID.

Session. Filters by the selected session.

User: Filters for users whose names contain the string you entered.

Computer. Filters for computers whose names contain the string you entered.

Status. Filters for a specific status code.

URL. Filters for URLs that contain the string you type.

Settings:

In the **Settings** dialog you can define the maximum number of data records that can be loaded in the Log Viewer display:

The default settings is 1000. Keep in mind that the number of data records loaded affects the response time of the Log Viewer: the higher the number, the longer it takes to process the records.

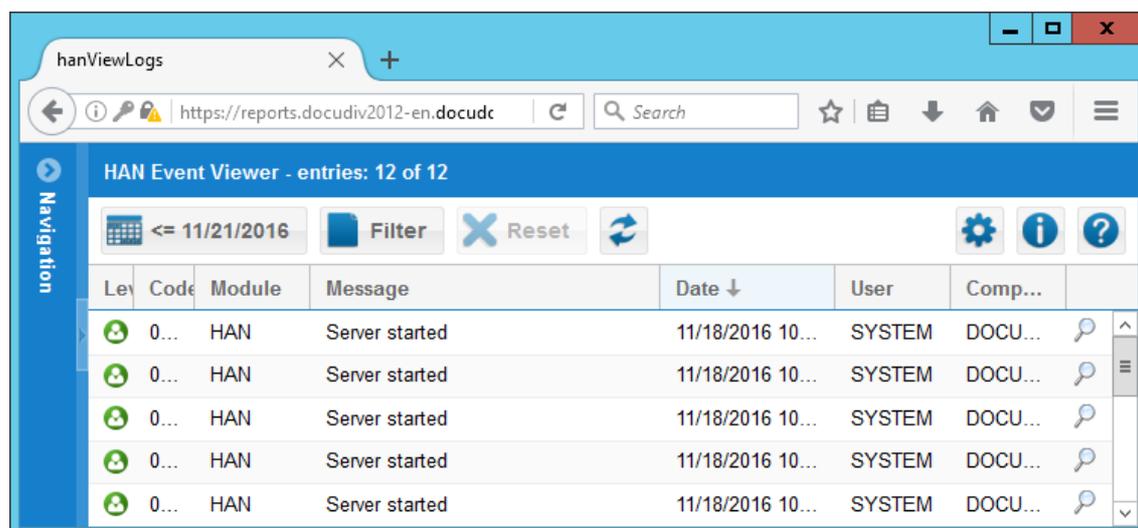
Event Viewer

The HAN event viewer shows all events in your HAN system. You can open the event viewer in the HAN Report Center. To do this, open the HAN Tools program using the desktop shortcut of the same name, and select **HAN Report Center**.



The HAN Report Center is opened via the HAN web server. If a certificate error is reported when loading the usage log or the Statistics program, that means no valid certificate has been registered for the web server. For details on requesting and importing certificates, see "[HAN System Settings/HAN Web Server/Requesting and Importing Certificates](#)". Still, there is no harm in loading the page at this point; simply select **Continue loading the page**.

In the Report Center, select **Event Viewer** to open the event viewer:



Events are divided into five types of entry, depending on the status level of the event:

-  **Error**. Indicates a system-critical event that prevents a process from executing.
-  **Warning**. Indicates an event that could prevent a process from executing.
-  **Message**. Indicates a message from the system that is not critical.
-  **Privacy**. Identifies all data protection events.
-  **Unknown**. Indicates an event to that no status could be assigned.

Columns in the table:

Level. Level of the event.

Code. Error code.

Module. HAN module in which the event occurred.

Message. Message describing the event.

Date. Date and time at which the event occurred.

User. ID of the user active at the time of the error.

Computer. ID of the station on which the event was triggered.

To view details, click on the **Show details** button (magnifying glass) to the right of the respective row. This opens a separate window showing all information about the corresponding dataset. The entries in the detail view correspond to the columns of the event log.

Summarized Access Log

The summarized access log shows the use of your e-scripts, summarized by browser session and HAN ID. For details on logging e-script access data, see "[Statistics](#)". You can open this log in the HAN Report Center. To do this, open the **HAN Tools** program using the desktop shortcut of the same name, and select **HAN Report Center**.



The HAN Report Center is opened via the HAN web server. If a certificate error is reported when loading the usage log or the Statistics program, that means no valid certificate has been registered for the web server. For details on requesting and importing certificates, see "[HAN System Settings/HAN Web Server/Requesting and Importing Certificates](#)". Still, there is no harm in loading the page at this point; simply select **Continue loading the page**.

In the Report Center, select **Summarized** to open the summarized log. The summarized log shows all data records pertaining to e-scripts for which data logging is enabled, summarized by browser session and HAN ID. The newest data record is at the top:

Record ID	Size	Time taken	Date ↓	User	Computer
heise	1.940.986	00:00:16	02/01/2017 1...	te1#LDAP	62.225.136.131
heise	0	00:00:00	02/01/2017 1...	te1#LDAP	62.225.136.131
isw	371.517	00:00:02	02/01/2017 0...	hh	62.225.136.131
isw	458.845	00:00:05	02/01/2017 0...	hh	62.225.136.131
isw	458.845	00:00:06	02/01/2017 0...	hh	62.225.136.131

Columns in the table:

Record ID. Record ID of the e-script that was launched.

Size. Number of bytes transferred during usage.

Time taken. Time required to transfer the data.

Date. Date and Time execution began.

User. ID of the user that launched the e-script.

Computer. ID of the station on that the e-script was launched.

To view details, click on the **Show details** button (magnifying glass) to the right of the respective row. This opens a separate window showing all information about the corresponding dataset:

Record ID. Record ID of the e-script that was launched.

Session. Session ID of the session in that the e-script was launched.

Size. Number of bytes transferred during usage.

Time taken. Time required to transfer the data.

Date. Date and Time execution began.

Stop date. Date and time when execution ended.

User. ID of the user that launched the e-script.

Computer. ID of the station on that the e-script was launched.

Cost Center. Cost center that the station launching the e-script belongs to.

Record ID group. Data group of the launched e-script.

User group. Data group of the user launching the e-script.

Station group. Data group of the station launching the e-script.



Record ID groups, user groups, and station groups are data groups that group multiple record IDs, users, or stations into a group that is then logged as a stand-alone object. The common data logging of certain groups, e.g., the workstations of a floor or department, can dramatically increase the clarity of statistical data. Create data groups in the data editor. For information on how to work with the data editor, see "[Data Editor](#)".

Detailed Access Log

The access log shows all data records pertaining to the e-scripts for which data logging is enabled. For details on logging e-script usage data, see "[Statistics](#)". You can open this log in the HAN Report Center. To do this, open the HAN Tools using the desktop shortcut of the same name and select **HAN Report Center**.



The HAN Report Center is opened via the HAN web server. If a certificate error is reported when loading the usage log or the Statistics program, that means no valid certificate has been registered for the web server. For details on requesting and importing certificates, see "[HAN System Settings/HAN Web Server/Requesting and Importing Certificates](#)". Still, there is no harm in loading the page at this point; simply select **Continue loading the page**.

In the Report Center, select **Detailed** to open the log. The HAN log shows all data records from e-scripts for which data logging is enabled. The newest data record is at the top:

The screenshot shows a web browser window titled 'hanViewLogs' with the URL 'https://reports.homoeopati.hh-software.com/hanViewLogs/index.html'. The page displays 'HAN Detailed - entries: 1000 of 35720'. A navigation sidebar on the left is labeled 'Navigation'. The main content area features a filter bar with a date selector set to '<= 02/02/2017', a 'Filter' button, a 'Reset' button, and a refresh icon. Below the filter bar is a table with the following columns: Record ID, Size, Date ↓, User, Comp..., Status, and URL. The table contains six rows of log entries, each with a magnifying glass icon to its right.

Record ID	Size	Date ↓	User	Comp...	Status	URL
isw	950	02/01/2...	hh	62.225....	200	www.isw-linz.at/images/white5.png
isw	10.896	02/01/2...	hh	62.225....	200	www.isw-linz.at/images/iyaml/logos/isw_logo_ne...
isw	10.056	02/01/2...	hh	62.225....	200	www.isw-linz.at/media/jui/js/jquery-migrate.min.js
isw	27.251	02/01/2...	hh	62.225....	200	www.isw-linz.at/images/wiso_titel_w150.jpg
isw	1.260	02/01/2...	hh	62.225....	200	fonts.googleapis.com/css?family=Droid+Serif.40...
isw	2.412	02/01/2...	hh	62.225....	200	www.isw-linz.at/modules/mod_ppc_fastfont/js/fas...

Columns in the table:

Record ID. Record ID of the e-script that was launched.

Size. Total number of bytes transferred.

Date. Date and time execution began.

User. ID of the user that launched the e-script.

Computer. ID of the station on that the e-script was launched.

Status. Status of the connection.

URL. The URL called.

To view details, click on the **Show details** button (magnifying glass) to the right of the respective row. This opens a separate window showing all information about the corresponding dataset:

Record ID. Record ID of the e-script that was launched.

Session. Session ID.

Size. Total number of bytes transferred.

Date. Date and time execution began.

User. ID of the user that launched the e-script.

Computer. ID of the station on which the e-script was launched.

Status. Status of the connection.

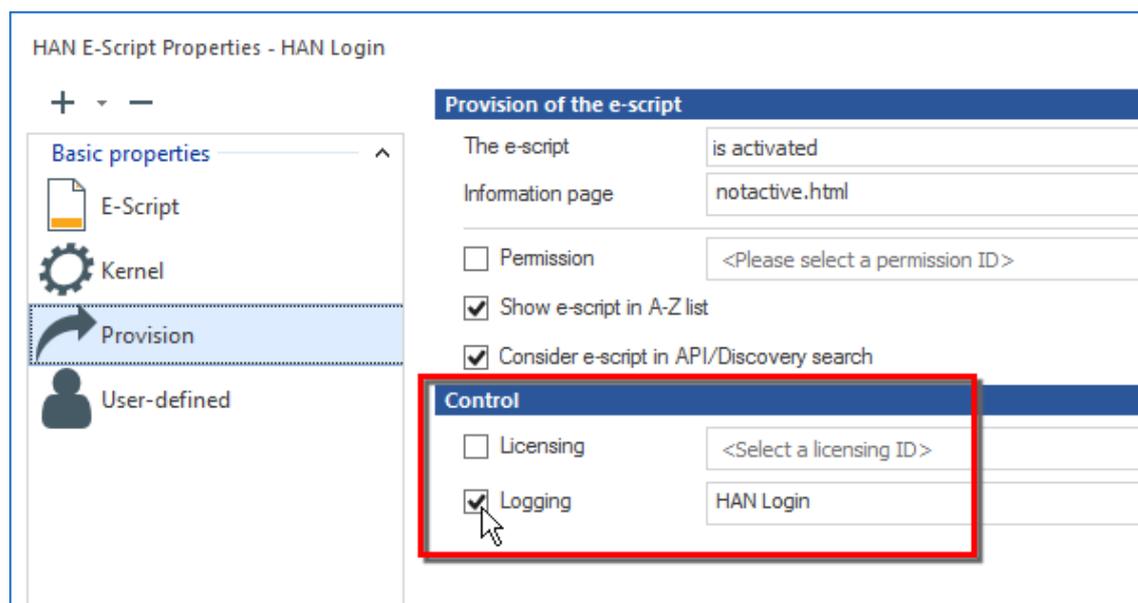
URL. The URL called.

Statistics Program

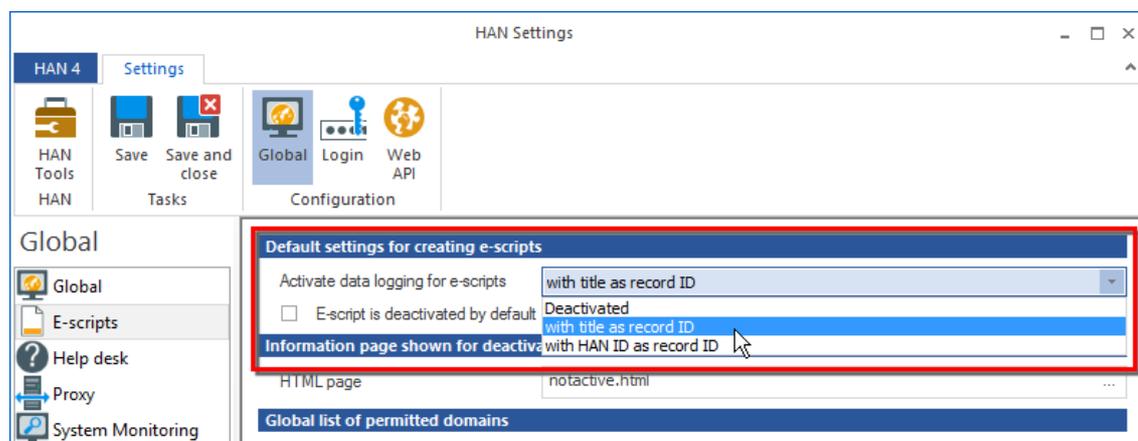
The HAN Statistics program can give you detailed analyses of e-script usage in your system. Simply put, it can show you who used what, where, and for how long. In addition, the statistics program provides tools for analyzing and even charting the data. Prerequisite is that you configure HAN to keep a log of e-script usage. This section describes how to [activate data logging](#), run the [Statistics program](#), and use the [basic functions](#) in the Statistics program. It also describes the quick access function for [directly calculating](#) statistical data.

Activating data logging:

Data logging of an e-script is activated in the e-script properties. Open the e-script properties, select the **Provision** page and tick the box next to the **Logging** option:



You can also have all newly created e-scripts logged by default. To do this, open the HAN Settings and, on the **E-Scripts** page, activate the first option: **Activate data logging for e-scripts (with title as ID)**. With this setting activated, all newly created e-scripts are automatically logged, with the e-script title used as the record ID:



Running the Statistics program:

Select this program in the HAN Report Center. You can open the Report Center from the **HAN Tools** desktop shortcut.



You must log on to the report center with a correspondingly authorized user. For details on how to log on to the Report Center, see "[Report Center](#)".

In the Report Center, select **Statistics**.

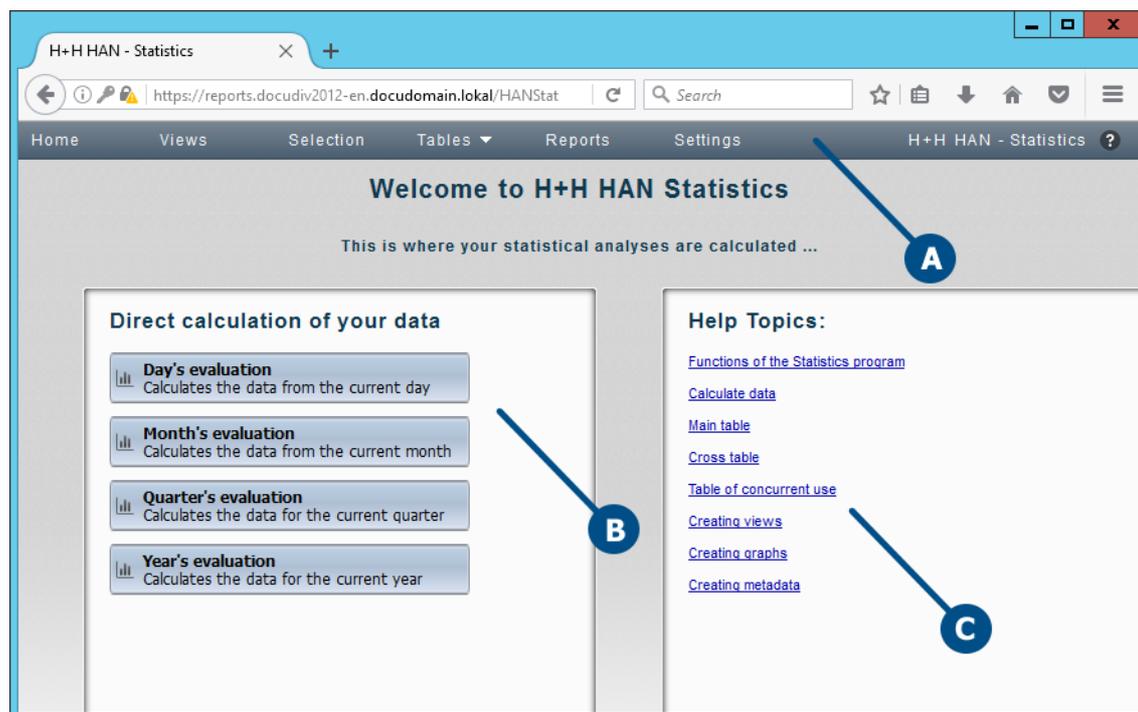


The HAN Report Center is opened via the HAN web server. If a certificate error is reported when loading the Report Center or the statistics program, that means no valid certificate has been registered for the web server. For details on requesting and importing certificates, see "[HAN System Settings/HAN Web Server/Requesting and Importing Certificates](#)". Still, there is no harm in loading the page at this point; simply select **Continue loading the page**.

Once the Statistics program launches, you have access to its full range of functions.

Functions in the Statistics program:

The main window of the Statistics program gives you access to the following functions:



A. Menu bar. In the menu bar you can select optional functions such as Views or Reports, or open the Settings program.

B. Analysis periods. Here you can select an analysis of data over a defined period.

C. Help Topics. This area presents a selection of help texts on relevant topics.

Commands in the menu bar:

Views. Opens the View browser for managing your saved views.

Selection. Opens the selection view, where you can select criteria for creating a calculation.

Tables. Gives you fast access to calculated tables.

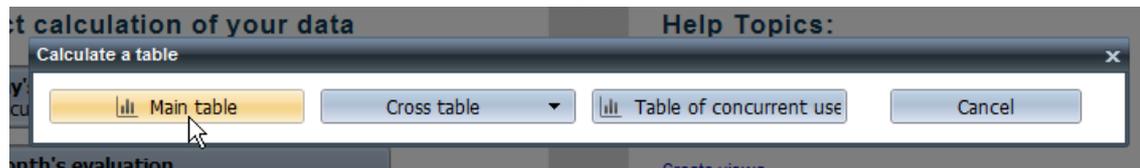
Reports. Opens the Report browser for managing your reports.

Settings. Opens the Settings program for the HAN Statistics.

Calculation with the defined analysis periods:

The analysis period selection pane gives you fast access to predefined calculation tables. With just a few mouse clicks, you can calculate, for example, the day's usage data:

1. In the analysis periods pane, click on **Day's evaluation**.
2. In the **Calculate a table** dialog, select the desired table:



3. This opens an evaluation of the day's usage data in the main table:

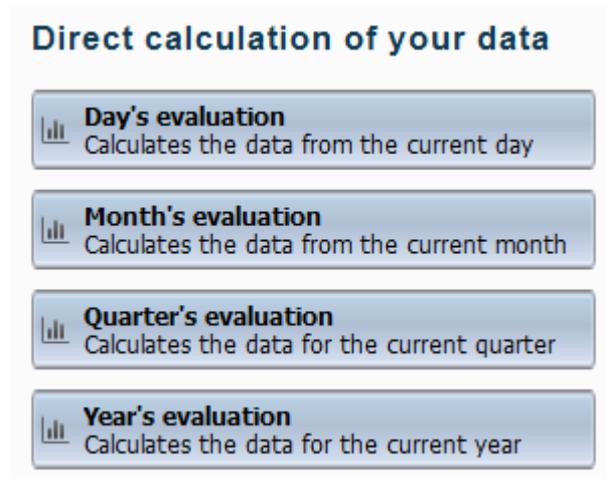
Record ID	Total usage	Total calls	Bytes	Use per call	Bytes per call	Percenta
▶ 10 Minute Guide to Paying for	00:00:06	1	58.678	00:00:06	58.678	
▶ ACS (American Chemical Society)	00:34:40	5	7.941.647	00:06:56	1.588.329	
▶ African American Review.	02:19:17	1	37.504.754	02:19:17	37.504.754	
▶ African Americans.	00:00:36	1	257.481	00:00:36	257.481	
▶ Algorithmica.	00:00:09	1	82.298	00:00:09	82.298	
▶ Analytical Biochemistry.	00:00:05	1	229.621	00:00:05	229.621	
▶ Analytical Chemistry.	00:05:03	1	653.464	00:05:03	653.464	
▶ Angewandte Chemie Internationa	00:00:04	1	385.106	00:00:04	385.106	
▶ Applied Mathematics Letters.	00:01:42	1	1.116.796	00:01:42	1.116.796	
▶ Archive for Rational Mechanics	00:00:18	1	672.865	00:00:18	672.865	
▶ Biochemistry.	00:01:11	1	3.740.821	00:01:11	3.740.821	
▶ Biorheology.	00:00:16	1	28.933	00:00:16	28.933	
▶ Black American Literature Foru	00:00:49	1	336.811	00:00:49	336.811	

The following chapters provide details on using the Statistics program functions:

- "[Calculate Data](#)" describes how to analyze data records with the HAN Statistics program.
- "[Main Table](#)" describes all functions of the main table.
- "[Cross Table](#)" describes all functions of the cross table.
- "[Document-type table](#)" describes all functions of the document-type table.
- "[Table of Concurrent Use](#)" describes all functions of the concurrent use table.
- "[Create Views](#)" explains how to create and use views.
- "[Create Graphs](#)" explains how to make graphs, charts and diagrams based on your tables.
- "[Create Data Groups](#)" explains how to aggregate data in grouped data records.
- "[Create Reports](#)" describes the use of reports.
- "[Settings for the Statistics Program](#)" describes the settings program for the HAN Statistics utility.

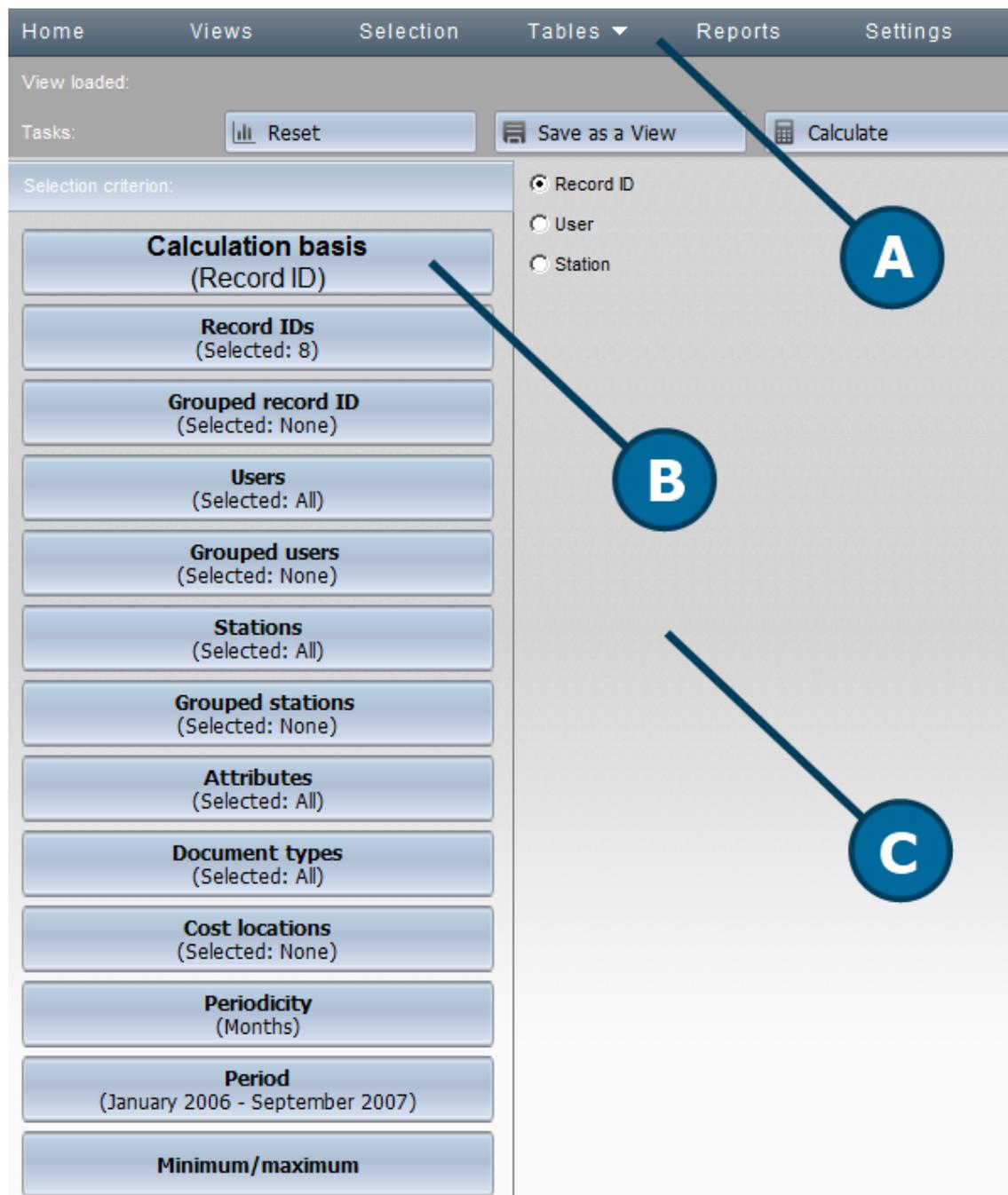
Calculating Data

The quickest way to calculate statistics from the usage data is described under "[Statistics Program](#)". The method illustrated in that chapter uses the analysis options offered on the start page of the HAN Statistics application:



The only criterion that varies among those options is the periodicity. If you want to calculate the data using other sets of criteria, you can select the criteria yourself as follows:

1. In the main window of the Statistics application, click **Selection** in the menu bar.
2. In the Selection window, select your choice of criteria:



A. Task bar. Contains commands for tasks such as calculating data and saving Views.

B. Selection sidebar. Contains buttons for selecting calculation criteria.

C. Detail window. Contains the values available for the selected criterion.

Commands in the task bar:

Reset. Restores the previous selection options, or the previously loaded View.

Save as a View. Saves the selected calculation criteria as a View. For details on using Views, see "[Creating Views](#)".

Calculate. Calculates a table using the selected criteria.

For more about the available calculation criteria, see "[Calculation criteria](#)".

3. After selecting your criteria, click on **Calculate** in the task bar.

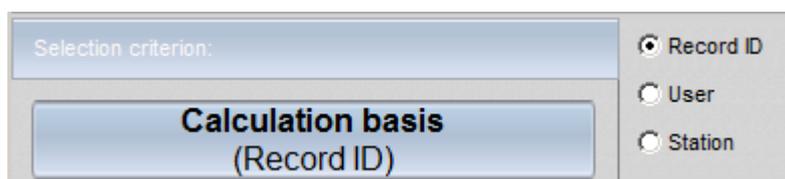
4. In the **Calculate a table** dialog, select the desired table.

The table is created on the basis of the selected criteria. For details on the various types of table, see "[Main Table](#)", "[Cross Table](#)" and "[Table of Concurrent Use](#)". To use the same set of criteria repeatedly for calculating tables, click on **Save as a View** in the task bar to save the current selection of criteria. For details on using Views, see "[Creating Views](#)".

Calculation criteria:

The selection sidebar has buttons for defining the calculation criteria (the selected basis is shown in parentheses on the buttons):

Calculation basis:



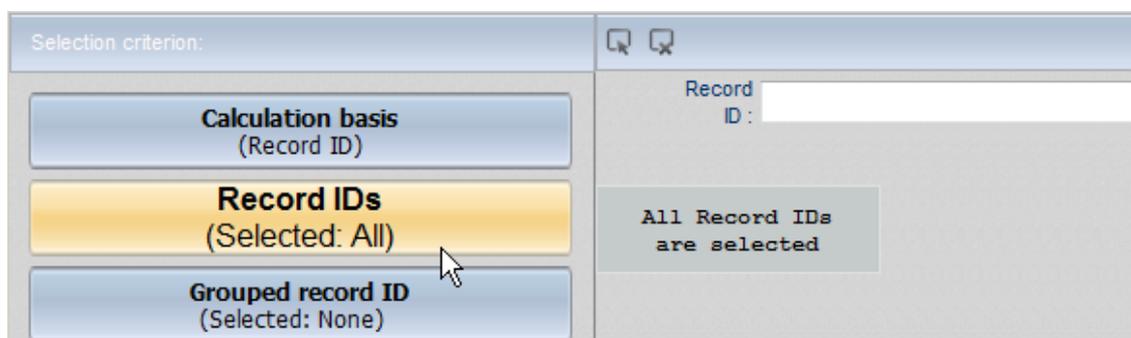
Record ID. Your calculations are made based on record IDs (usage per e-script).

Users. Your calculations are made based on usage per user.

Station. Your calculations are made based on usage per station.

Record IDs:

Click here to select the record IDs to be included in the calculation. With the default settings, all record IDs are selected. When this is the case, the specific record IDs are not listed; instead, a message indicates that all of them are selected.

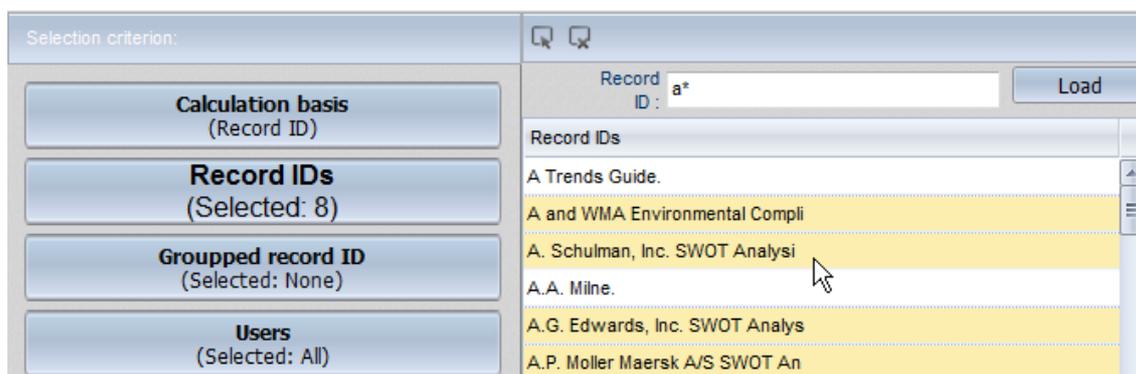


To select individual record IDs, you need to begin by deselecting all. Right click on the message and select the appropriate option:



You can enter a string in the **Record ID** input field to search for particular record IDs. The list then includes only the data records that match your input:

! With the default settings, the results are restricted to the 1000 most recent data records. (The same limit is applied for all selection criteria.) This limits the amount of time it takes for HAN Statistics to query the database. You can modify this setting, if desired, in the Statistics program settings by changing the value in the **Number of data records** field. You also have the option of deactivating this restriction altogether. If you have a very large number of data records, however, deactivating the limit will make the query process considerably slower.

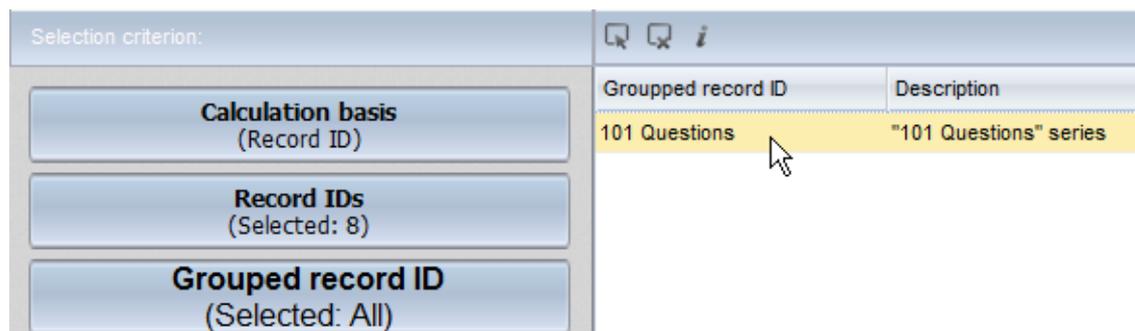


Click on a record ID to select it or deselect it. The buttons at the top of the detail window let you select or deselect all records at once. Yellow highlighting marks the IDs that are selected in the list.

Grouped record IDs:

! Data groups (grouped record IDs, stations, or users) are cumulative data records that are calculated together. Whenever you group data records for a particular set of calculations, you are creating data groups. Data groups are created in the HAN Data Editor. For details on creating and editing data groups, see "[Creating Data Groups](#)".

Grouped record IDs are user-defined groupings of record IDs:



The buttons at the top of the list let you select all, deselect all, and view information on grouped data records:

Select all. Selects all grouped record IDs.

Deselect all. Deselects all grouped record IDs.

Info. Opens the detailed information window. The detail window shows the rules and IDs that define the grouped record ID.



Data groups are dynamic: The rules you define are applied not only to all existing data objects, but new objects, too, are automatically assigned to a data group if they match the criteria you define. For more details on data groups, see "[Managing HAN Resources/Data Editor/Data Groups](#)".

Users:

Click here to select the users to be included in the calculation. The detail window lists the users in all record sets. Use of the selection function in the shortcut menu and the filter function in the input field are described under "[Record IDs](#)" above.

Grouped users:

Grouped users are user-defined groupings of user IDs. The buttons at the top of the detail view let you select grouped users.

Stations:

Click here to select the stations to be included in the calculation. The detail window lists the stations in all record sets. Use of the selection function in the shortcut menu and the filter function in the input field are described under "[Record IDs](#)" above.

Grouped stations:

Grouped stations are user-defined groupings of station IDs. The buttons at the top of the detail view let you select grouped stations.

Attributes:

Click here to select the attributes to be included in the calculation.

Document types:

Lets you select the document types used in the calculation. Statistics on document types are calculated in the document type table.

Cost centers:

Lets you select the cost centers used in the calculation. You can enter regular expressions in the input field above list to filter the database query. Usage per cost center is a property of the respective data record. To show usage by cost center, calculate a main table and select **Cost centers** from the

Break down by drop-down menu. The detailed information window then shows the usage broken down by cost center.

Periodicity:

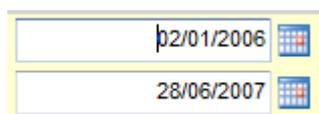


None
 Months
 Quarters
 Half-years
 Years

Periodicity defines the time periods to be applied in the breakdown of data by periods. The default periodicity of data compilation in HAN Statistics is "Daily." This is the periodicity applied when the setting is **None**. To apply a different periodicity, click on the **Periodicity** button and choose from the options in the detail window: months, quarters, half-years, and years.

Period:

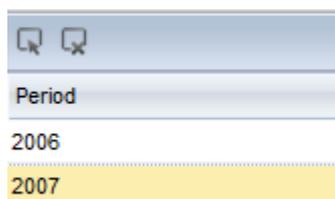
Click here to define the period over which data are calculated. With the default settings, HAN Statistics calculates the entire period from the oldest to the newest data records. The options in the detail list correspond to the selected periodicity. If the setting for periodicity is **None**, you can define the period by selecting a starting and ending date.



To do this, click on the calendar icons to the right of the input fields.

If the periodicity is "Years", the detail list shows the years available to choose from.



Period
 2006
 2007

Minimum/maximum:

Your HAN database may contain records that do not represent actual usage. For example, when a user walks away from a session and leaves the browser open, the data record may show an inordinately long duration of use (even 12 hours or more!) when only the first 30 minutes involved real usage. Similarly, data records that show less than one minute of use generally indicate that the e-script was opened and then closed again, without any usage taking place. These data records may provide useful information for error analysis, but not for your usage statistics. That is why HAN Statistics gives you the option of defining minimum and maximum criteria ("from" and "to"). Only the data records that fall within the limits thus defined will be included in the calculation:

Calls, from :

Calls, to :

Usage, from : Hr. Min. Sec.

Usage, to : Hr. Min. Sec.

Bytes from :

Bytes to :

- Calls: Defines minimum and maximum values for the absolute number of calls.
- Usage: Defines minimum and maximum values for the duration of use.
- Bytes: Defines minimum and maximum values for the number of bytes downloaded.

The settings in the example above define a minimum of 1 for the absolute number of calls, with the result that e-scripts which were not called at all within the defined time period are not included in the calculation. A minimum duration of use of 5 minutes is also specified, as well as a maximum of 10 hours. This means that e-scripts which were "in use" during the period analyzed for less than 5 minutes or more than 10 hours are excluded from the calculation.

Main Table

The main table shows detailed usage statistics on variables such as period of use, number of calls or time in license queue calculated on a basis of either record ID, user or station, or user-defined metadata records. For details on calculating a main table, see "[Calculating Data](#)". This chapter shows you the options available for calculating a main table. Once you have run the calculation, the main table is displayed as follows:

Record ID	Total usage	Total calls	Bytes	Use per call	Bytes per call	Percenta
▶ 10 Minute C...	00:00:06	1	58.678	00:00:06	58.678	
▶ ACS (American Chemical Society	00:34:40	5	7.941.647	00:06:56	1.588.329	
▶ African American Review.	02:19:17	5	37.504.754	00:19:17	37.504.754	
▶ African Americans.	00:00:36	1	257.481	00:00:36	257.481	
▶ Algorithmica.	00:00:00	1	82.298	00:00:00	82.298	
▶ Analytical Biochemistry.	00:00:00	1	229.621	00:00:00	229.621	
▶ Analytical Chemistry.	00:00:00	1	653.464	00:05:03	653.464	
▶ Angewandte Chemie Internationa	00:00:04	1	385.106	00:00:04	385.106	
▶ Applied Math...	00:01:42	1	1.116.796	00:01:42	1.116.796	
▶ Archive for P...	00:00:18	1	672.865	00:00:18	672.865	
▶ Biochemistry.	00:01:11	1	3.740.821	00:01:11	3.740.821	
▶ Biorheology.	00:00:16	1	28.933	00:00:16	28.933	
▶ Black American Literature Foru	00:00:49	1	336.811	00:00:49	336.811	
▶ Cambridge Scientific Abstracts	00:00:19	2	85.928	00:00:09	42.964	

A. Menu bar. In the menu bar you can select optional functions such as Views or Reports, or open the Settings program. For a description of the menu bar, see "[Statistics Program](#)".

B. Task bar. The task bar has commands for all of the functions available in the main table.

C. Navigation bar. In the navigation bar you can change the criteria by which data is broken down in the single-record view, and navigate through existing tables.

D. Column header. The column headers let you sort the data records by the contents of the desired column. Click on the header to toggle between ascending and descending order.

E. Table selection sidebar. The controls in the table selection sidebar let you switch the type of table calculated. The data contained in the active main table are re-calculated as a cross table or a table of concurrent use when you click on the corresponding icon.

F. Table. The table window shows all of the calculated data records. You can open a single-record view to see details on any of the data records in the table. For details on using the single-record view, see "[Single-record view](#)".

Commands in the task bar:

Graph. Opens a menu for selecting the basis for a graph.

Graph Types. Opens a menu of graphs types to choose from. For details on a creating graphs, see "[Creating Graphs](#)".

Quartiles. Activates the display of quartiles, which highlights the cells in different colors so that you can distinguish quartiles and their highs and lows at a glance.

Cross table. Opens a menu for selecting the basis for a cross table.

Print. Prints the active table or graph

Export. Exports your data in a spreadsheet-compatible format, which you can open e.g. in Excel.

Report. Saves the results of the current calculation as a report.

Current selection. Opens a window showing the current calculation criteria.

Elements in the navigation bar:

Break down by. Specifies how data are broken down in the single-record view. For details on using the single-record view, see "[Single-record view](#)".

The navigation buttons on the right let you navigate existing tables and graphs.

Elements in the table selection sidebar:

Main table. Calculates a main table.

Cross table. Calculates a cross table. For details on calculating a cross table, see "[Cross Table](#)".

Concurrent use table. Calculates a table of concurrent use. For details on calculating a concurrent use table, see "[Table of Concurrent Use](#)".

Varying elements:

Graph. Shows an existing graph. For details on a creating graphs, see "[Creating Graphs](#)".

Single-record view:

You can open a single-record view for any data record, to view the usage details on that particular record. To do this, click on the "expand" arrow to the left of the data record listing:

▶ EIFL-EBSCO	02:16:18	20
◀ Elsevier Science electronic jo	44:21:52	221
Record ID	Started	Ended
Elsevier Science electronic jo	06.06.2006 10:36:40	06.06.2006 10:40:07
Elsevier Science electronic jo	06.06.2006 10:31:01	06.06.2006 10:48:37
Elsevier Science electronic jo	06.06.2006 10:31:01	06.06.2006 10:42:53

The single-record view shows all of the data contained in a particular data record. You can modify the display of data in the single-record view by changing the setting in the **Break down by** field in the navigation bar.



If a single-record view is already open, a change in this setting will not be reflected until after you close the record view and then open it again.

The following example shows a single data record with the data broken down by periods:

▶ Optics and Lasers in Engineeri				00:00:07			5
▲ Physical Review E: Statistical				00:22:50			5
Period	Total usage	Total calls	Bytes	Use per call	Bytes per call	Percentage of ID:	Percentage of ID:
June 2006	00:22:50	5	1.978.756	00:04:34	395.751	100,00	100,00
Sum	00:22:50	5	1.978.756	00:04:34	395.751	100,00	100,00

Cross Table

You can use cross tables to see the relationships between selected variables in your calculations; for example, which protocol IDs were used how often, or for how long, in which periods. The following can be used as independent variables:

- Record ID
- Users
- Stations

The following can be used as dependent variables:

- Periods
- Users
- Stations

You can calculate the following in cross tables:

- Total values for usage
- Usage time as percentage of total use
- Usage time as percentage of total use for the ID
- Absolute values for calls
- Calls as percentage of total calls
- Calls as percentage of total calls for the ID

Thus the HAN cross table shows relationships between variables, for example between record IDs and users, to answer questions such as "Which e-script was used by which users, and how often?".

For details on calculating a table, see "[Calculating Data](#)". This chapter shows you the various functions available in a cross table. Once calculated, a cross table shows the following output:

Record ID	January 2006	February 2006	March 2006	April 2006	May 2006	June 2006	Sum
1-800 FLOWERS.C	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00
10 Minute Guide to Paying for	00:00:00	00:00:44	00:00:11	00:00:06	00:03:33	00:00:06	00:04:40
10 Tips for Better Hearing.	00:00:00	00:01:24	00:00:00	00:03:13	00:01:33		00:06:10
100 Best Careers for the 21st	00:00:26	00:01:21	00:01:01	00:01:14	00:00:00		00:04:02
10 Questions Your Brain Has A	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:18
101 Questions about Blood and	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:49
101 Questions about Your Immun	00:00:00	00:00:00	00:00:00	00:00:00	00:00:46	00:00:00	00:00:46
101 Questions about Your Skin.	00:00:00	00:00:22	00:00:00	00:00:00	00:00:00	00:00:00	00:00:22
21st Century Fuels.	00:00:00	00:00:46	00:00:00	00:03:05	00:00:51	00:00:17	00:04:59
28 Days to a Better	00:00:00	00:01:20	00:00:00	00:00:00	00:00:00	00:00:00	00:01:20
3M SWOT Analysis.	00:00:01	00:03:25	00:00:20	00:00:00			00:03:46
99 CENTS Only Stores SWOT Anal	00:00:00	00:00:00	00:01:15	00:00:00			00:01:15
A Trends Guide.	00:00:16	00:00:20	00:31:38	00:00:00			00:32:14
A and WMA Environmental Compli	02:49:28	02:02:37	01:40:43	00:08:34	00:51:26	00:00:49	07:33:37

A. Menu bar. In the menu bar you can select optional functions such as Views or Reports, or open the Settings program. For a description of the menu bar, see "[Statistics](#)".

B. Task bar. The task bar has commands for all of the functions available in the main table.

C. Column header. The column headers let you sort the data records by the contents of the desired column; click on the header to toggle between ascending and descending order.

D. Table selection sidebar. The controls in the table selection sidebar let you switch the type of table calculated. For example, you can calculate a main table or a table of concurrent use from the data records.

E. Table. The table window shows all of the calculated data records.

Commands in the task bar:

Cross table. Opens a menu for selecting the basis for a cross table.

Print. Prints the active table or graph.

Export. Exports your data in a spreadsheet-compatible format, which you can open e.g. in Excel.

Report. Saves the results of the current calculation as a report.

Current selection. Opens a window showing the current calculation criteria.

Elements in the navigation bar:

The navigation buttons on the right let you navigate existing tables and graphs.

Elements in the table selection sidebar:

Main table. Calculates a main table. For details on calculating a main table, see "[Main table](#)".

Cross table. Calculates a cross table.

Concurrent use table. Calculates a table of concurrent use. For details on calculating a concurrent use table, see "[Table of Concurrent Use](#)".

Varying elements:

Graph. Shows an existing graph. For details on a creating graphs, see "[Creating Graphs](#)".

Table of Concurrent Use

You can use HAN concurrent use tables to calculate license usage. In general, a table of concurrent use shows parallel usage. Specifically, you can use this output to determine the number of user licenses required for the various online resources accessed by HAN, so that you do not obtain more licenses than you need. For details on calculating a table, see "[Calculating Data](#)". This chapter gives you an overview of the functions available in the table of concurrent use. Once calculated, a table of concurrent use shows the following output:

Record ID	Max	Days	Duration	Max-1	Days-1	Duration-1	Max-2	Days-2	Duration-2
▶ Elsevier ScienceDirect	17	1	00:02:38	15	1	00:06:09	14	1	00:03:41
▶ EFL-EBSCO	12	1	00:00:00	9	1	00:00:04	4	1	00:00:01
▶ SCI - Science Citation Index (9	1	00:00:00	8	1	00:15:05	3	4	00:06:20
▶ Compendex Engineering Village	8	2	00:00:00	4	1	00:03:50	3	3	00:00:47
▶ Knovel	7	1	00:01:38	4	2	00:01:38	3	3	00:04:43
▶ INSPEC	7	1	00:01:32	3	2	00:07:57	2	25	00:35:43
▶ Springer	6	1	00:00:02	3	2	00:01:58	2	10	00:06:47
▶ IEEE/IEE Electronic Library	5	4	00:05:48	4	15	00:08:59	3	49	00:34:43
▶ CRC Press: Engineering Index (Engineer	4	1	00:00:01	3	1	00:01:59	2	23	00:59:28
▶ AIChE Journals	4	1	00:01:46	2	1	00:00:01	1	32	00:45:39
▶ ACS (American Chemical Society)	4	1	00:00:04	3	5	00:00:04	2	42	00:27:56
▶ Wiley InterScience	3	1	00:00:02	2	21	00:00:02	1	101	02:27:25
▶ Springer-ICM	3	2	00:05:20	2	14	00:05:20	1	38	01:02:17
▶ SerSol	3	3	00:01:42	2	18	00:30:47	1	4	00:28:06

A. Menu bar. In the menu bar you can access optional functions such as Views or selection of calculation criteria, or open the Settings program. For a description of the menu bar, see "[Statistics](#)".

B. Task bar. The task bar has commands for all of the functions available in the main table.

C. Navigation bar. In the navigation bar you can change the criteria by which data is broken down in the single-record view, and navigate through existing tables.

D. Column header. The column headers let you sort the data records by the contents of the desired column. Click on the header to toggle between ascending and descending order.

E. Table selection sidebar. The controls in the table selection sidebar let you switch the type of table calculated. The data contained in the active main table are re-calculated as a cross table or a table of concurrent use when you click on the corresponding icon.

F. Table. The table window shows all of the calculated data records. You can open a single-record view to see details on any of the data records in the table. For details on using the single-record view, see "[Main Table](#)".

Commands in the task bar:

Graph. Opens a menu for selecting the basis for a graph. For details on a creating graphs, see "[Creating Graphs](#)".

Quartiles. Activates the display of quartiles, which highlights the cells in different colors so that you can distinguish quartiles and their highs and lows at a glance.

Cross table. Opens a menu for selecting the basis for a cross table.

Print. Prints the active table or graph.

Export. Exports your data in a spreadsheet-compatible format, which you can open e.g. in Excel.

Report. Saves the results of the current calculation as a report.

Current selection. Opens a window showing the current calculation criteria.

Elements in the navigation bar:

Break down by. Specifies how data are broken down in the single-record view. For details on using the single-record view, see "[Single-record view](#)".

The navigation buttons on the right let you navigate existing tables and graphs.

Elements in the table selection sidebar:

Main table. Calculates a main table. For details on calculating a main table, see "[Main table](#)".

Cross table. Calculates a cross table. For details on calculating a cross table, see "[Cross Table](#)".

Concurrent use table. Calculates a table of concurrent use.

Varying elements:

Graph. Shows an existing graph. For details on a creating graphs, see "[Creating Graphs](#)".

Columns in the table:

Record ID. The ID of a data record. This e-script was used.

Max. Maximum concurrent use of the ID, or of the e-script.

Days. Number of days on which this maximum concurrent use was reached.

Duration. Duration of the maximum concurrent use.

Max-1. Second highest concurrent use of the ID, or of the e-script.

Days-1. Second highest number of days on which this level of concurrent use was reached.

Duration-1. Second longest duration of this concurrent use.

Max-2. Third highest concurrent use of the ID, or of the e-script.

Days-2. Third highest number of days on which this level of concurrent use was reached.

Duration-2. Third longest duration of this concurrent use.

The first five levels of concurrent use are calculated in this manner.

Elements in the table selection sidebar:

Main table. Calculates a main table. For details on calculating a main table, see "[Main table](#)".

Cross table. Calculates a cross table.

Concurrent use table. Calculates a table of concurrent use. For details on calculating a concurrent use table, see "[Table of Concurrent Use](#)".

Varying elements:

Graph. Shows an existing graph. For details on a creating graphs, see "[Creating Graphs](#)".

Document-type Table

The document-type table is implemented in HAN specifically for performing COUNTER-compliant usage analysis. Calculations are performed on a specified document type, such as PDF. For details on calculating tables, see "[Calculating Data](#)". This chapter gives you an overview of the functions available in the document-type table. Once calculated, a document-type table shows the output as follows:

Document type	Total calls	Bytes	Bytes per call	Percentage of IDs in total calls	Percentage of IDs in total byte:
▶ CSS	80901	549.336.715	6.790	5,61	1,21
▶ DOC	10	3.444.678	344.467	0,00	0,01
▶ GIF	1065263	2.104.889.122	1.975	73,83	4,62
▶ HTM	35159	778.120.677	22.131	2,44	1,71
▶ JPG	93169	871.536.061	9.354	6,46	1,91
▶ PDF	165940	41.187.123.028	248.204	11,50	90,47
▶ PNG	2324	29.592.108	12.733	0,16	0,07
▶ Sum	1442766	45.524.042.389	31.553	100,00	100,00

A. Menu bar. In the menu bar you can access optional functions such as Views or selection of calculation criteria, or open the Settings program. For a description of the menu bar, see "[Statistics](#)".

B. Task bar. The task bar has commands for all of the functions available in the main table.

C. Navigation bar. In the navigation bar you can change the criteria by which data is broken down in the single-record view, and navigate through existing tables.

D. Column header. The column headers let you sort the data records by the contents of the desired column. Click on the header to toggle between ascending and descending order.

E. Table selection sidebar. The controls in the table selection sidebar let you switch the type of table calculated. The data contained in the active main table are re-calculated as a cross table or a table of concurrent use when you click on the corresponding icon.

F. Table. The table window shows all of the calculated data records. You can open a single-record view to see details on any of the data records in the table. For details on using the single-record view, see "[Main Table](#)".

Commands in the task bar:

Graph. Opens a menu for selecting the basis for a graph. For details on a creating graphs, see "[Creating Graphs](#)".

Graph Types. Opens a menu of graphs types to choose from.

Quartiles. Activates the display of quartiles, which highlights the cells in different colors so that you can distinguish quartiles and their highs and lows at a glance.

Cross table. Opens a menu for selecting the basis for a cross table.

Print. Prints the active table or graph.

Export. Exports your data in a spreadsheet-compatible format, which you can open e.g. in Excel.

Report. Saves the results of the current calculation as a report.

Current selection. Opens a window showing the current calculation criteria.

Elements in the navigation bar:

Break down by. Specifies how data are broken down in the single-record view. For details on using the single-record view, see "[Single-record view](#)".

The navigation buttons on the right let you navigate existing tables and graphs.

Elements in the table selection sidebar:

Main table. Calculates a main table. For details on calculating a main table, see "[Main table](#)".

Cross table. Calculates a cross table. For details on calculating a cross table, see "[Cross Table](#)".

Concurrent use table. Calculates a table of concurrent use. For details on calculating a concurrent use table, see "[Table of Concurrent Use](#)".

Document-type table. Calculates a document-type table.

Varying elements:

Graph. Shows an existing graph. For details on a creating graphs, see "[Creating Graphs](#)".

Columns in the table:

Record ID. The ID of a data record, indicating that the e-script was called.

Calls. Absolute number of calls for the document type.

Bytes. Total number of bytes transferred for this document type.

Bytes per call. Number of bytes transferred per call for the document type.

Percentage of IDs in total calls. Document-type calls as a percentage of all e-script calls.

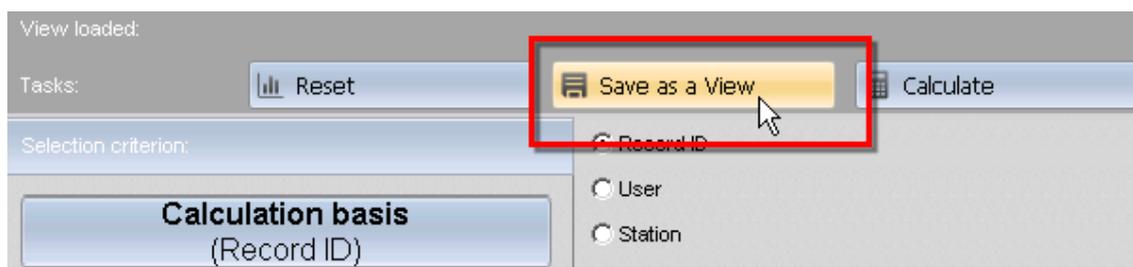
Percentage of ID in total bytes. Bytes transferred in document-type calls as a percentage of all bytes transferred.

Creating Views

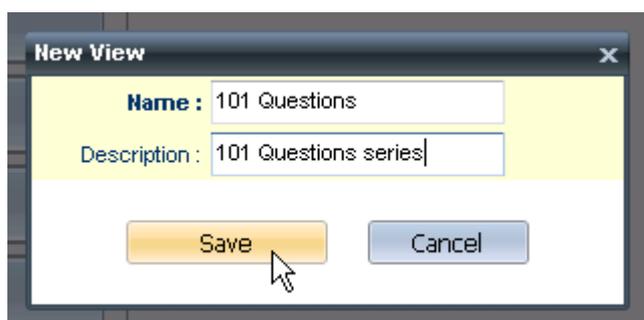
When you know you want to calculate your data using a particular user-defined set of criteria repeatedly, you can save a template of the criteria and load it for calculations as needed. The stored template is called a View. For details on selecting calculation criteria, see "[Calculating Data](#)". This chapter shows you how to save your selections as a [View](#) and how to [run calculations](#) using a stored View:

Saving a View:

1. In the Selection window, select your choice of criteria.
2. Then click on **Save as a View** in the task bar:



3. In the **New View** dialog, enter a name and description for the new View and click **Save**:



The View is created. You can now run a calculation by clicking on the **Calculate** button. To use it in future calculations, select this View in the View window as follows:

Calculations using a View:

1. Click on **Views** in the Statistics menu bar:



2. In the View window, select the desired View:



3. Click on the **Calculate** button in the task bar.
4. Select the desired form of table. The table is calculated and displayed.

Creating Graphs

HAN Statistics comes with utilities for making charts and graphs of your data.



Please install Adobe Flash Player to view graphs in the Statistics program.

Graphs are always generated from the currently active table. Graphs are available for the following types of table:

- Main table
- Concurrent use table

The following types of graph are available:

- Bars
- 3D bars
- Round bars
- Lines
- Surface area
- Pie chart

You can chart the following data from a main table in graphical form:

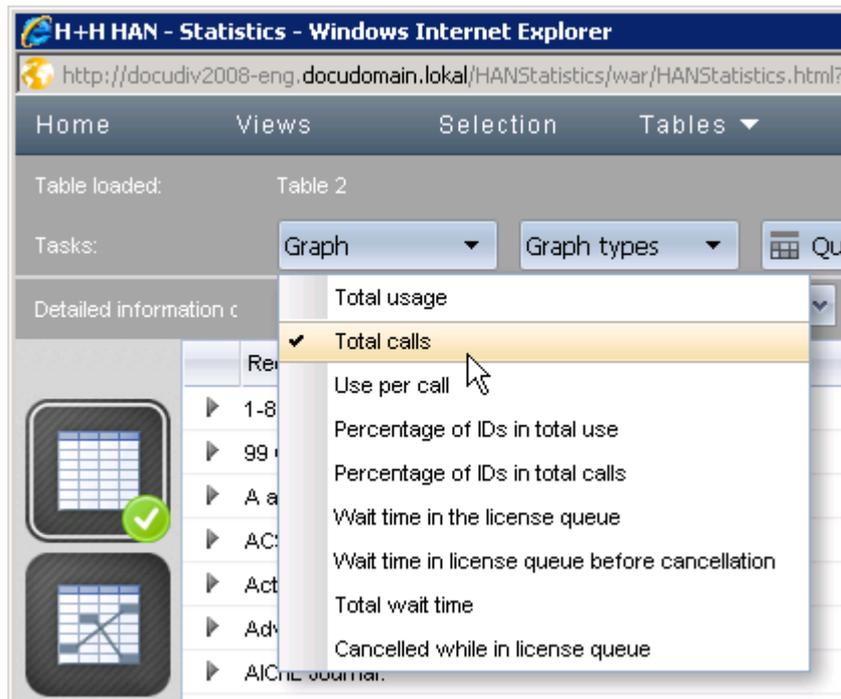
- Usage
- Calls
- Use per call
- Percentage of IDs in total use
- Percentage of IDs in total calls
- Time waited in queue
- Total time waited
- Cancellations in queue

You can chart the following data from a table of concurrent use in graphical form:

- Maximum concurrent use (all record IDs)
- Maximum concurrent use (only one ID)

This chapter describes how to create a graph for a particular calculation:

1. In the task bar above the active table, click on the **Graph** button and select the data to be included:

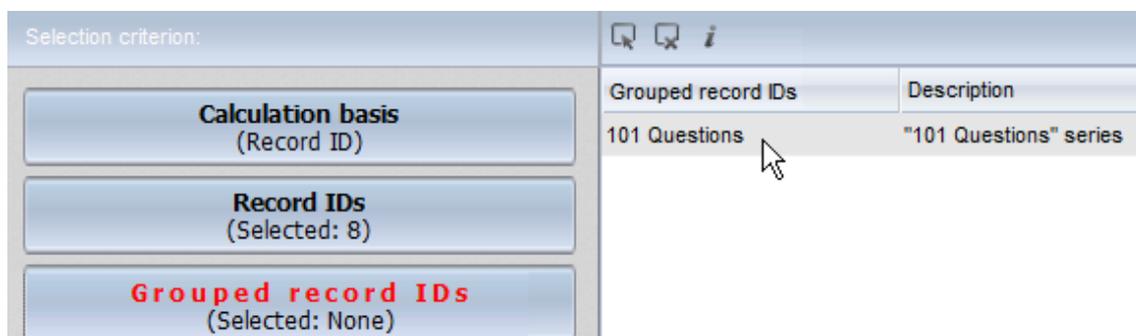


2. To use a different graph, click on **Graph Types** and select the desired type.

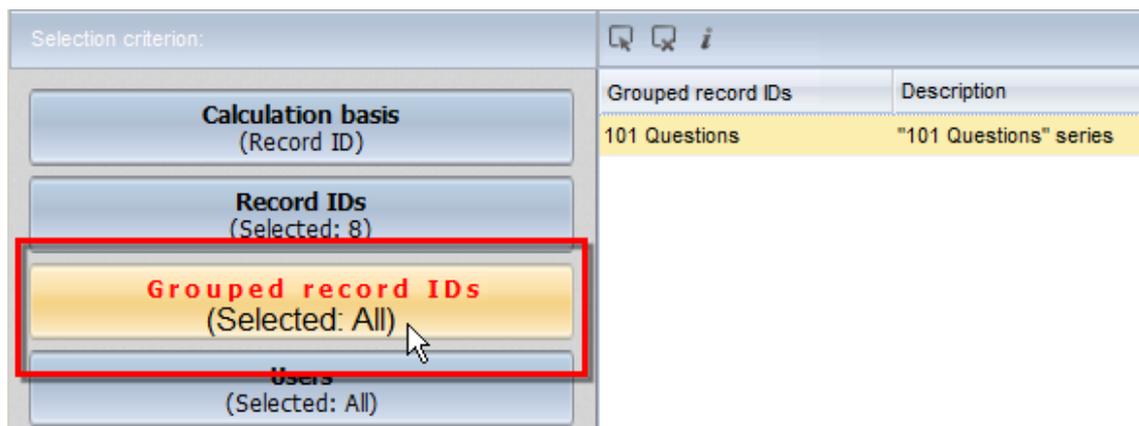
Calculating Data Groups

Data groups are aggregate data records. You can create data groups from a subset of record IDs, of users, or of stations to process the subset as a single data record. This lets you streamline the data content in your tables considerably; for example, to view usage data broken down by application. Data groups are created in the HAN Data Editor. For details on creating data groups, see "[Managing HAN Resources/Data Editor/Data Groups](#)". This chapter explains how to run calculations on data groups:

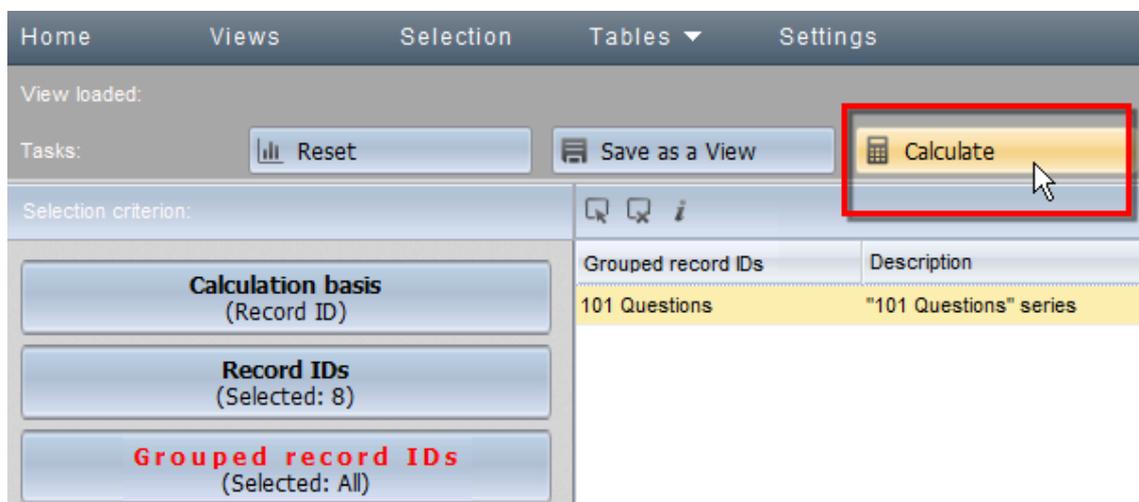
1. Select the desired grouped record(s) – grouped record IDs, grouped users or grouped stations – in the Selection window. Our grouped record ID in this example, "101 Questions", is shown in the list of **grouped record IDs** (detail view):



2. To use a grouped data record, select it. The text on the button in the selection sidebar now shows that a data group has been selected (in this example, "all"):



3. Click on **Calculate** in the task bar to run the calculation:



You can use grouped data records in Views, just like other data records, by clicking on the **Save as a View** button to store the View when the desired selection of settings is active.

Grouped data records in the detail window:

When working with data groups, the detail window lets you view the regular set that defines the group. The regular set can contain both specific record IDs and regular expressions.



Data group member definitions using regular expressions are dynamic; any new element that corresponds to the definition in the regular expression will automatically be added to the data group.

To view the regular set defining a data group, click on the **Info** button in the toolbar above the list:



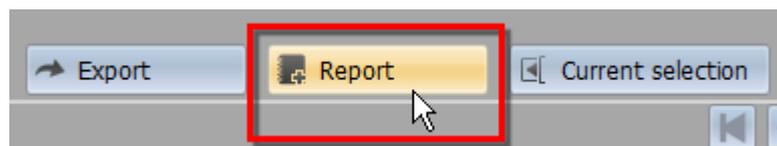
In the example, the regular set consists of one regular expression: the string "101". Thus the group includes all existing (and future) data records that have IDs beginning with "101."

Creating Reports

You can use HAN Statistics to save the results of calculations, for example if you want to store them or make them accessible to others. For details on calculating data, see "[Calculating Data](#)". This chapter explains how to [save](#) and [manage](#) reports.

Saving reports:

To save results, complete the calculation and then click on **Report** in the task bar:



The report is saved, and is automatically added to the list in the Report window for management.

Managing reports:

Click on **Reports** in the menu bar to open the report management window:



This window lists the existing reports:

Name	Description	Table type	Generated on	Generated by
June 2013	Monthly calculation: June 2013	Main table	16.07.2013 13:37:59	HH

The commands in the task bar affect the selected reports:

Load. Loads a saved report.

Delete. Deletes the selected report.

Columns in the table:

Name. Name of the report.

Description. Description of the report.

Table type. Lists all of the tables contained in the report.

Generated on. Date and time when the report was created.

Generated by. Shows who created the report.

Settings for the Statistics Program

The HAN Statistics program is configured in the Settings. To open the settings, click on **Settings** in the menu bar:

The settings affect the calculation of data and the Selection window:

Show results only if ID is found. Calculates the data records only of those record IDs which were used within the selected period. If this option is not active, data records are calculated for all IDs and a 0 result shown for those IDs which do not appear in the selected period.

Select only current period at start. With this setting, only the data for the current period (where "period" is defined by the periodicity setting) are calculated when you click on "Calculate" in the Selection window.

Load only some data records (not all). Activates the restriction on the number of data records loaded in response to a query. This can improve the speed of the query response considerably, depending on your database size.

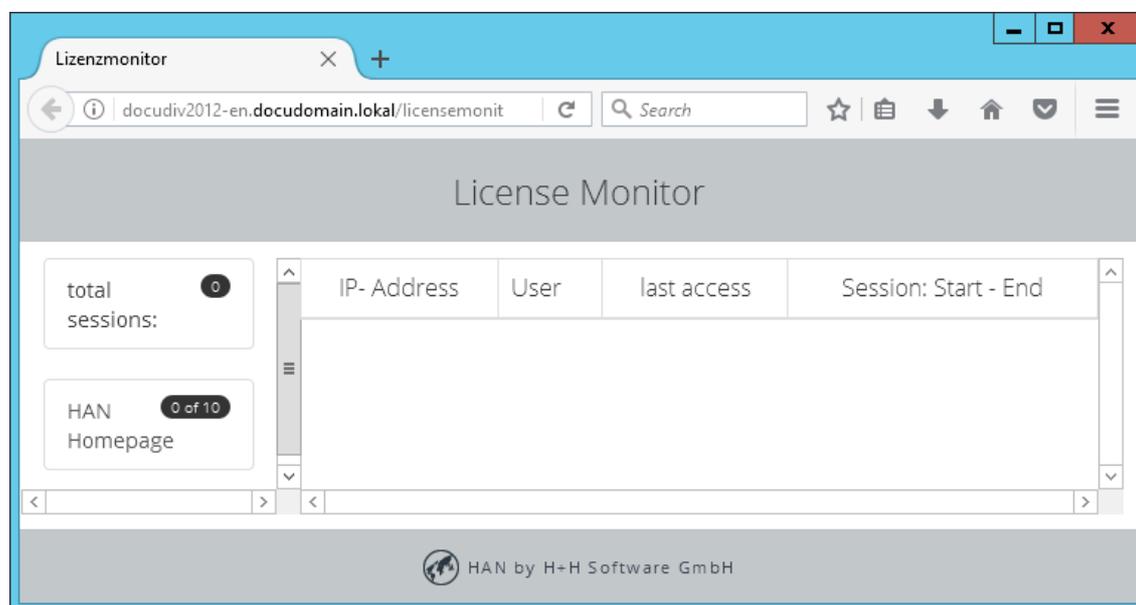
Number of data records. Specifies the number of (most recent) data records to be loaded. The default setting is 1000.

Selection options for record attributes. If you want to break down data by record attributes, configure this setting to specify how the record attributes you specify for the calculation are applied in filtering the data:

- **Include any data records that contain the specified attribute(s).** Only data records which have one or more of the selected record attributes will be included in the calculation.
- **Include only data records that contain one of the selected attributes.** Only data records which have only one of the specified record attributes will be included in the calculation.
- **Include data records that contain all of the selected attributes, and no other attributes.** Only data records which have all of the specified record attributes and none of the other attributes will be included in the calculation.

License Monitor

The License Monitor shows the license usage in your HAN system. All e-scripts to which you have assigned licenses are listed in the License Monitor. The License Monitor is a web-based application. To run the License Monitor, select it from the Windows Start menu: open the Start menu and select **All Programs/H+H HAN/License Monitor**:



The name of the license and its current usage are shown on the left. Select a license to obtain more detailed information on its usage. The following information is available for each license in use:

IP. IP address of the station on which the license is being used.

User. Username of the person using the license.

Start. Starting time for the e-script.

Most recent access. Shows when the e-script was last accessed.

Session: Start - End. Shows the estimated time at which the license will be released if no further user activity is detected. A license that is not actively used is automatically closed after 20 minutes of activity.

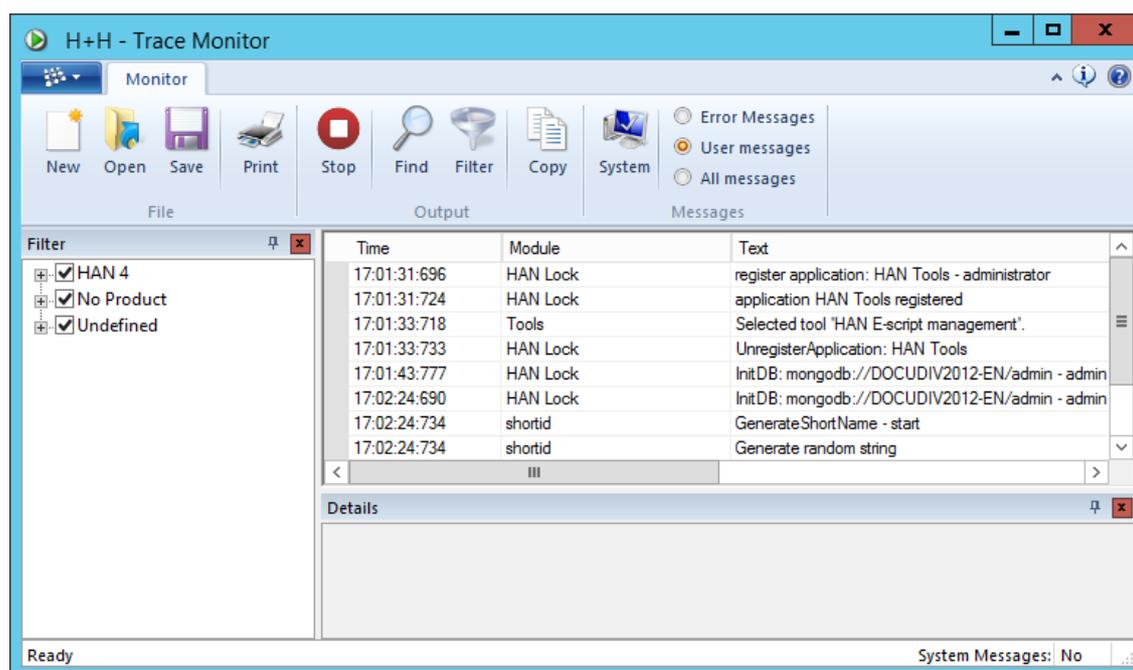
H+H Trace Monitor

This chapter describes the functions of the H+H Trace Monitor. The Trace Monitor is a Monitoring-tool that displays the trace messages from programs and HAN functions. The H+H Trace Monitor lets you monitor HAN program processes and can help you locate the source of any problems that may occur. Start the Trace Monitor as a help program via the Windows Start menu or the program menu of any HAN application, e.g., the e-script Administration. From the program menu, select **Utilities/Trace Messages**.



Trace Monitor is available only in English.

The main window shows messages indicating the status of internal processes:



With the initial (default) settings, the **Filter** sidebar is on the left. Trace messages are shown in the window on the right. What messages are shown, and in what form, depends on your selection of programs, modules, columns and output level. The **Details** section shows details on the selected item.

The table has the following columns:

No. Number of the entry in the current Trace Monitor document.

Date. The date on which the message was recorded.

Time. The time at which the message was recorded.

PID. Product identification number.

Product. Name of the program from which the message originated.

Module. Program module that sent the message.

Text. Contains the actual message.

To configure which columns are displayed, open the Field Chooser. You can also select colors, in the **Color selection** dialog, to see at a glance which modules sent which messages.

Show console messages:

By default, the Trace Monitor shows the trace messages from the session which you are currently using. If your session is running on the remote desktop session host, you can view server console messages as well. To do this, click on **System** in the Ribbon. Trace Monitor shows now trace messages from the console session as well.

Commands in the Ribbon:

New. Clears the display and creates a new document.

Open. Opens an existing document.

Save. Saves the active document.

Print. Prints the displayed trace messages.

Stop. Stops the output of trace messages.

Find. Starts a search for the specified text.

Filter. Filters the output.

Copy. Copies the selection to the Clipboard.

System. Shows trace messages from the server console.

Output level:

Error messages. Shows only error messages.

User messages. Shows only the messages concerning the logged-in user.

All messages: Shows all messages.

Filter

With the initial (default) settings, the **Filter** sidebar is on the left. This sidebar shows the HAN programs and their individual modules. You can define which trace messages are shown by activating or deactivating the checkmarks in the boxes next to module names. With the default settings, all modules show trace message.



The list shows only those modules that were active when the Trace Monitor was launched.

Right-click in the sidebar to open a shortcut menu with options for editing program and module entries:

Delete. Deletes the selected element.

Choose color. Opens the dialog [Color](#) for assigning colors to the messages according to program or module. This can help make it easier to find specific information in the main window.

Reset color. Setzt die Farbe für das markierte Element zurück.

Reset color for all sub elements. Setzt die Farbe für das markierte Element und alle seine Unterelemente zurück.

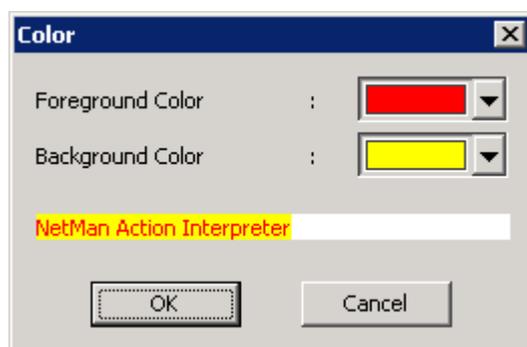
Select all. Markiert alle Elemente.

Deselect all. Löscht alle Markierungen.

Selecting a color:



If one user changes the color settings and saves the settings, the new color configuration is valid only for that user on that workstation. When the Trace Monitor is run by a different user or on a different station, the default settings are active (provided they have not been changed by that user on that machine).

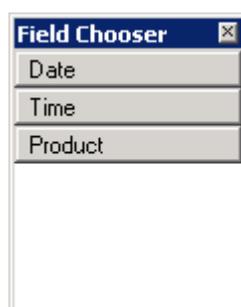


Selecting colors for the display of trace messages can facilitate rapid interpretation of messages. Colors are defined in the **Color** dialog. To open the Color dialog, right-click in the Filter sidebar and select Choose Color from the shortcut menu, or double-click on the desired entry in the **Filter** sidebar.

Foreground Color defines the color of the text, and **Background Color** defines the color of the background. A preview of your selected color combination is shown below these two fields.

Field Chooser

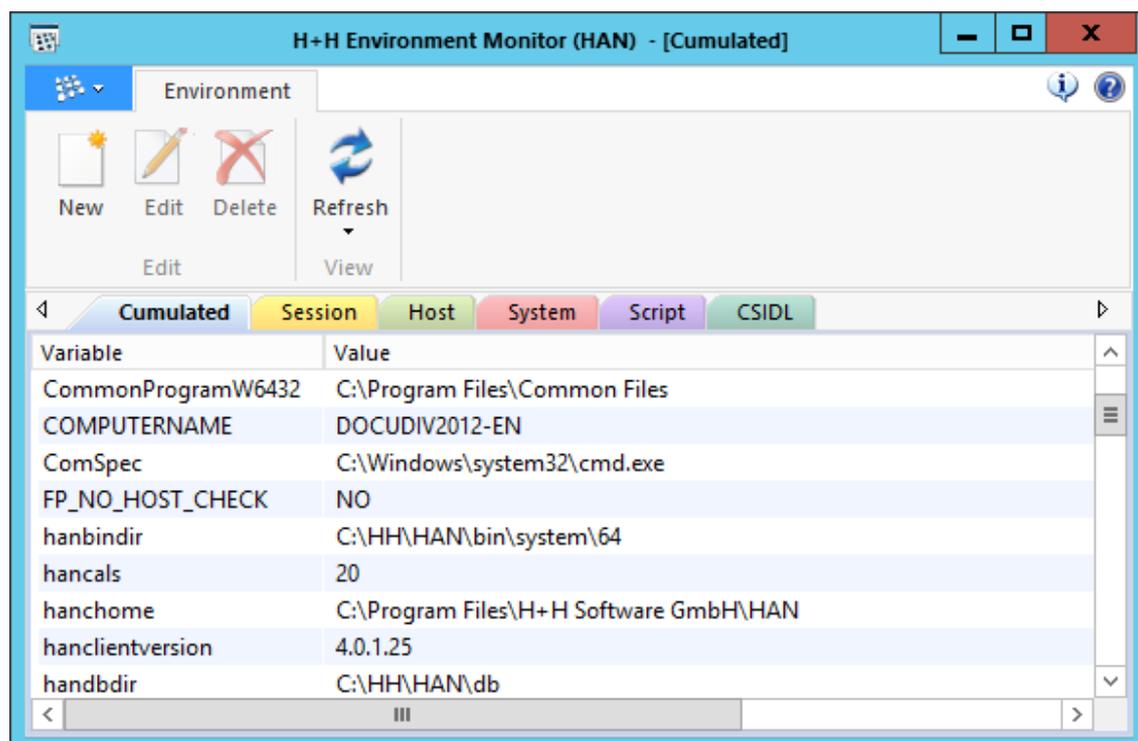
The Field Chooser lets you determine which columns are shown in the Trace Monitor window. Right-click in the output window and select the only item, **Field Chooser**, to call the Field Chooser. Use drag-and-drop to move column headers from the main window of the Trace Monitor to the Field Chooser window:



You can close the Field Chooser at any time. To return a column to the main display after it has been removed, open the Field Chooser as described above and use drag-and-drop.

Environment Monitor

The HAN Environment Monitor shows you all environment variables in the system. The main window of the Environment Monitor shows all variables in your system environment, divided into several dialog pages:



The Environment Monitor categorizes the variables as follows:

- **Session:** Variables in the current session.
- **Host:** Variables on the server.
- **System:** Variables for the operating system.
- **Skript:** Variables for the e-scripts.
- **CSIDL:** List of all constant special item IDs in the HAN system.

Each category has a separate page in the Environment Monitor. The **Cumulated** page shows the cumulative environment.

The Ribbon gives you access to the following program functions:

New. Generates a new variable.



System environment variables and CSIDLs cannot be created, modified or deleted. That is why the **New**, **Edit** and **Delete** buttons are not accessible in the **System** and the **CSIDL** section.

Edit. Lets you edit the selected variable.

Delete. Deletes the selected variable.

Refresh. Updates the display. Open the dropdown list on this button to define the interval for automatic display updates.

Creating/editing variables:

Click on **New** to create a new variable. In the **New Environment Variable** dialog, enter a name for the variable in the **Variable** field and the value to be stored in it in the **Value** field. Select either **Host** or **Session** to define whether the variable is written into the environment of the session host or the desktop session:



Changes made in variables using the Environment Monitor are not persistent.

Click on **OK** to confirm that the variable is to be written in the environment.

To edit a variable, select it and click on **Edit**. In the **Edit Environment Variable** dialog, you can modify value to be stored. Click on **OK** to confirm that the modified variable is to be written in the environment.

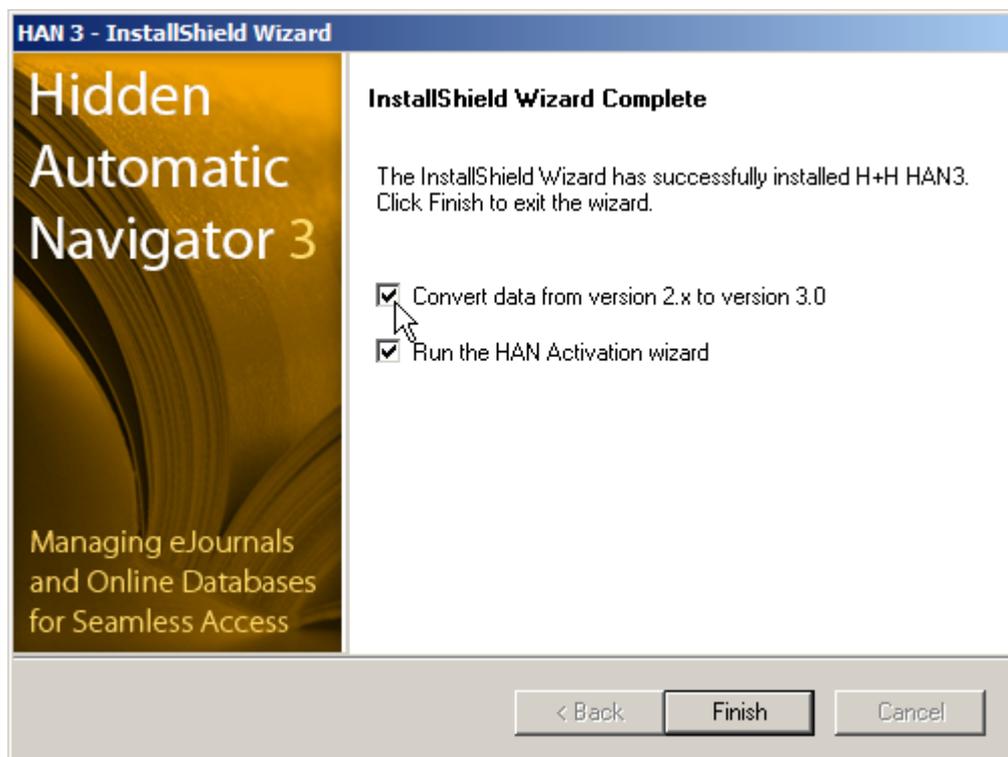
Migration Wizard

The Migration Wizard converts the data in your HAN 2 installation to the new HAN 3 database format and migrates your data to HAN 3. This lets you use your existing HAN accounts (now called "e-scripts") in HAN 3, so you do not have to create them all over again. Run Migration Wizard immediately following the installation of HAN by selecting the **Convert data from version 2.x to version 3.0** option:

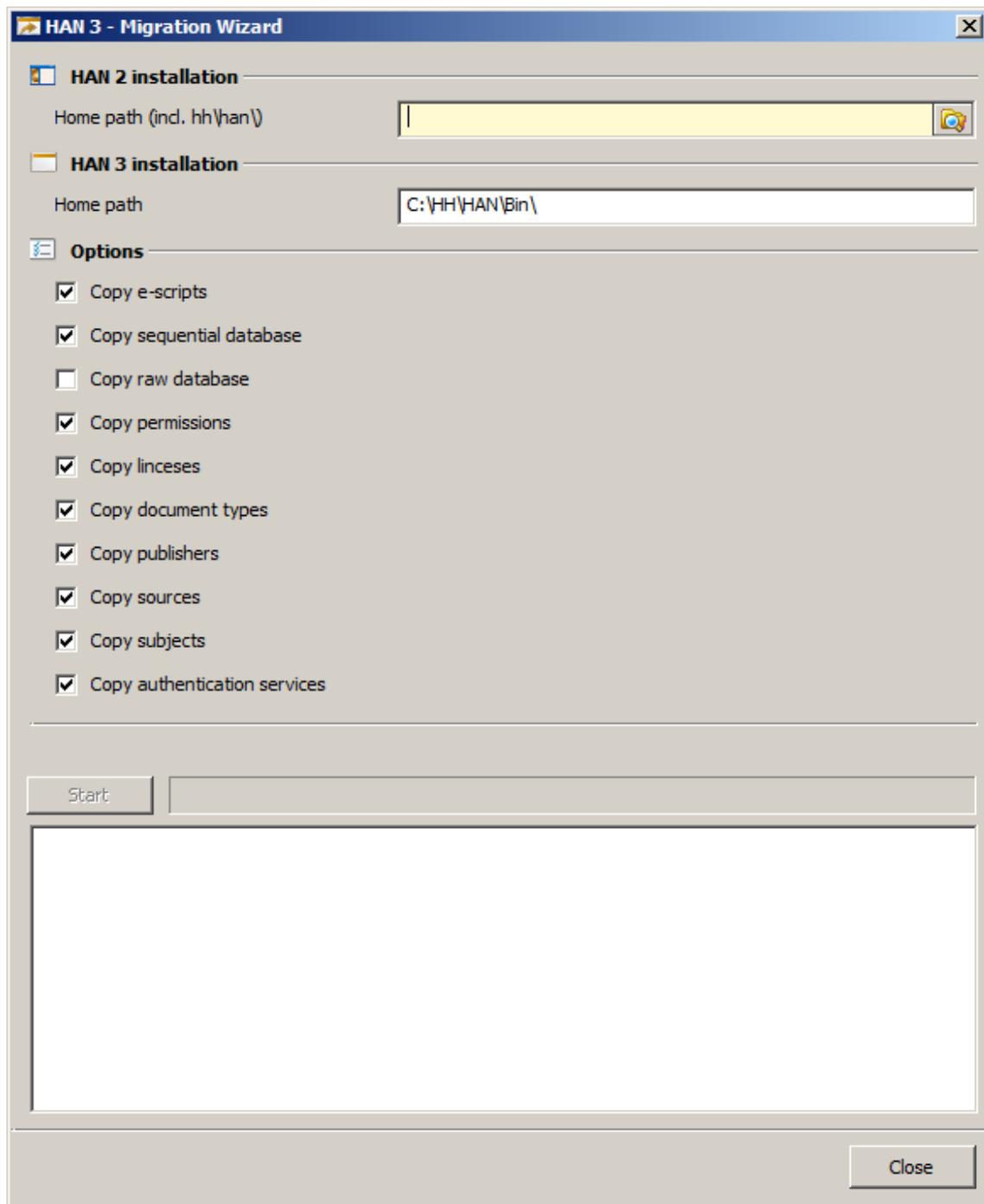


If you have an earlier version of HAN, convert that installation to v2 before performing this migration.

 Um von HAN 3 auf HAN 4 zu aktualisieren, führen Sie eine Update-Installation aus. Dabei werden Ihre Daten automatisch übernommen.



Select the options for data migration in the Migration Wizard:



Home path (incl. hh\han\). The path to your HAN 2 installation, without the drive letter; usually hh\han2\.

Home path. Installation directory of your HAN 3 installation. This value is loaded automatically and cannot be edited.

Copy e-scripts. Copies all HAN accounts from HAN 2 and creates HAN 3 e-scripts from them.

Copy sequential database. Copies the sequential log to the HAN 3 databases.

Copy raw database. Copies all statistical log data from your HAN 2 installation to the HAN 3 databases. This process can take several minutes or more.

Copy permissions. Copies all HAN 2 permissions.

Copy licenses. Copies all licenses associated with HAN accounts/e-scripts.

Copy document types. Copies all document types.

Copy publishers. Copies all publishers.

Copy sources. Copies all sources.

Copy subjects. Copies all subjects.

Copy authentication services. Copies all configured authentication services from HAN 2 into HAN 3.

Start. Starts the data migration.

End. Closes the Migration Wizard.

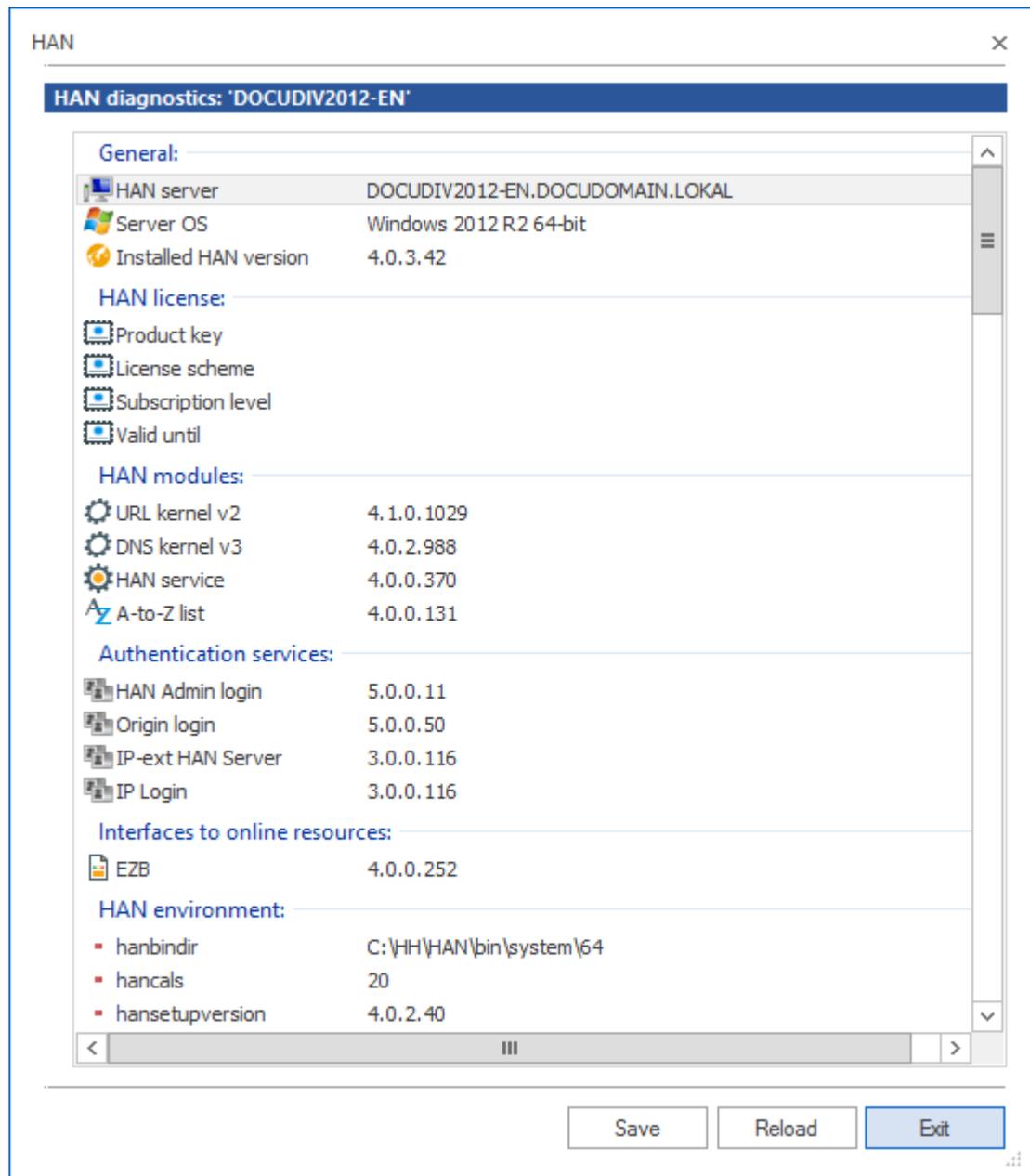
For details on migrating your HAN 2 data, see "[Installation/Updating from HAN 2](#)".

HAN Diagnostics

The HAN Diagnostics utility reads and displays a comprehensive list of all system specifications in your HAN system. To run HAN Diagnostics, select the **Diagnostics** option from the program menu of any HAN program.

In the event of a failure, run the Diagnostics utility and send the resulting file to H+H Support as part of your support request. If you have any problems with the software while using HAN, this may be the only way to find a solution.

Before you contact the support team, however, please check the HAN knowledge base: <http://www.hh-han.com/kb/default.cfm>. If you do not find the help you need in the knowledge base, send your support request by e-mail to the H+H Support Team. Be sure to include a detailed description of the problem, including what you were doing when it happened and any other information that may be helpful concerning the circumstances under which it occurred. Do not forget to include the file created with the HAN Diagnostics utility. The file is created by saving the data in the main window of HAN Diagnostics:



Simply click on the **Save** button and specify a target path for the diagnostics file.

Reload refreshes the window contents; **Exit** closes the program.

Send your request for support to support@hh-software.com with "HAN" in the subject line. There will be a charge for this e-mail support service under the terms of the HAN service contract.

Appendix

The Appendix contains additional information about HAN, much of it in the form of tables. Specifically, the following information can be found here:

- "[Authentication Services and their Modules](#)". A table listing all of the authentication services compatible with HAN, with descriptions and parameters.
- "[Keyboard Shortcuts](#)". A list of all keyboard shortcuts used in HAN.
- "[Internal Functions for Conversion of Strings](#)". Lists internal HAN function for a conversion of strings.

Authentication Services and their Modules

HAN supports the following authentication services:

<i>Authentication service</i>	<i>Module</i>
ADS login	auth_ads.dll
ALEPH login	auth_aleph.dll
Elektra login	auth_elektra.dll
IP address/host name check	auth_ip.dll
LDAP login	auth_ldap.dll
NT login	auth_nt.dll
ODBC interface to existing databases	auth_odbc.dll
ODBC SHA1 interface	auth_sha1.dll
SIP2 login	auth_sip2.dll
SISIS login	auth_sisis.dll
XServer login	auth_xserver.dll
AuthDS login	auth_discovery.dll



The list of supported authentication services shown on the HAN Settings program includes additional services which are not described here. These are services that have been specifically adapted for special areas of use and for internal functions.

Authentication services and their parameters:

ADS Login	
Description	Authentication is performed over an Active Directory System (ADS).
Module	auth_ads.dll
Parameters	Object ADS object on which the login is performed.
Configuration	for ADS: LDAP://HostName[:PortNumber][/DistinguishedName] for NT4: WinNT://DomainName[/ObjectName[,className]] or WinNT://ComputerName,computer]

ALEPH Login		
Description	Authentication is performed over ALEPH.	
Module	auth_aleph.dll	
Parameters	DSN	System data source name for the database
	DBUser	User name
	DBPassword	Password
Configuration	<p>Prerequisite for the ALEPH authentication module is functioning ODBC interface to the database containing the user information. The ODBC connection must be set up as a system data source.</p> <p>Further, a user account with "read" access to the required tables must be set up in the database.</p> <p>The password for the designated user must be stored in the database in plain text.</p> <p>As ALEPH uses an Oracle database, you might have to install an Oracle client on the computer.</p>	

AuthDS Login		
Description	For e-scripts that implement a discovery service, HAN authentication is suppressed because authentication takes place in full-text retrieval.	
Module	auth_discovery.dll	
Parameter	ID	HAN ID of the e-script that implements the Discovery Service.
Configuration	Value: (<HAN ID> <HAN ID> <HAN ID> ...)	

Elektra Login		
Description	Authentication is performed over Elektra.	
Module	auth_elektra.dll	
Parameters	DSN	Data source name (name of the ODBC data source)
	DBUser	User name
	DBPassword	Password
Configuration	<p>Prerequisite for the Elektra authentication module is functioning ODBC interface to the database containing the user information. The ODBC connection must be set up as a system data source.</p> <p>Further, a user account with "read" access to the required tables must be set up in the database.</p> <p>The password for the designated user must be stored in the database in plain text.</p>	

IP Address/Host Name Check			
Description	Authentication is assessed on the basis of the client's IP address and/or host name.		
Module	auth_ip.dll		
Parameters	<table border="1"> <tr> <td>CFGFile</td> <td>Path to configuration file which stores permitted/excluded IP addresses and/or host names</td> </tr> </table>	CFGFile	Path to configuration file which stores permitted/excluded IP addresses and/or host names
CFGFile	Path to configuration file which stores permitted/excluded IP addresses and/or host names		
Configuration	<p>Values are edited in the HAN Settings, in the Edit Authentication service dialog opened from the Authentication page, and stored in a.CFG file. For details on editing authentication services, see "HAN Settings/Login/Authentication".</p> <p>Configuration file structure:</p> <p>This is an INI file with the following structure:</p> <p>Section [Include]</p> <p>The permitted IP addresses and host names are specified in this section. Each entry can be associated with a user name. The entries have the following form:</p> <p>Adr_x=<IP address or host name>,<username></p> <p>The keys in this section are numbered sequentially beginning with 1. You can use wildcards when entering IP address and host name.</p> <p>You can enter a range of IP addresses if desired, rather than a single IP address. If you enter an address range, use a hyphen to separate the beginning and ending addresses.</p> <p>Example:</p> <pre>[Include] Adr_1=62.225.136.* ,HH Adr_2=*.hh-software.com ,HH Adr_3=62.225.136.1-62.225.136.100 ,HH</pre> <p>Section [Exclude]</p> <p>The IP addresses and host names that are not granted access are specified in this section. The structure corresponds to that of the [Include] section, except that the entries cannot be associated with user names.</p> <p>Section [ReplaceIP]</p> <p>When troubleshooting, you might wish to use the IP address of the computer that is having the problem rather than that of your test computer. For this purpose you can define an IP address translation in this section.</p> <p>Each entry in this section has the following structure: <actual IP address>=<new IP address>.</p>		

LDAP Login		
Description	Authentication is performed over an LDAP interface.	
Module	auth_ldap.dll	
Parameters	Data in the database (see "Configuration", below)	
Configuration	Values are configured in the HAN Settings, on the LDAP page. For details on editing LDAP settings, see " HAN Settings/Login/LDAP Configuration ". In the Login section on the LDAP page, enter the following values:	
	Server	Name of the LDAP server
	Port	Port on the LDAP server over which login is performed
	DN	Distinguished name of the directory in which users are stored
	User	User name for login on the LDAP server
	Password	Password for login on the LDAP server
	Use SSL encryption	Defines whether SSL encryption is used for transfer of login data
	LDAP interface	Specifies the LDAP interface in use (either version 2 or version 3)
	User attribute	Attribute with which the user is displayed in the DN
	Group attribute	Name of the attribute
	Group value	Value that defines whether the user is a group
Members	Attribute in which the members are defined	

NT Login (SSPI)	
Description	Authentication is to the default domain.
Module	auth_nt.dll, authntads.dll
Parameters	DefaultDomain This is applied when the user does not indicate a domain for login name.
Configuration	Values are edited in the HAN Settings, in the Edit Authentication service dialog opened from the Authentication page.

ODBC Interface to Existing Databases		
Description	Authentication can be performed using any ODBC-compatible database.	
Module	auth_odbc.dll	
Parameters	DSN	System data source name for the database
	DBUser	Database user who has "read" rights in the database
	DBPasswd	Password for reading the database
	TableName	Table in which the authentication information is stored
	UserField	Field containing the login name
	PasswdField	Field containing the user's login password
	Import	List of fields to be stored in environment variables. Structure: <fieldname>=<environmentvariable>[,<fieldname>=<environmentvariable>]
	Where	Additional condition appended to the SQL statement
	hash-algorithm	Hash algorithm; possible values: sha1, sha256, sha384, sha512, md2, md5, haval, ripemd128, ripemd160, ripemd256, ripemd320 Without a hash algorithm set the authentication module will process passwords as plain text.
	saltfield	Field containing the salt
encoding-passwordfield	Hash encryption method; possible values: Base64, Hex	
charset-hash	Character set used in the hashing procedure; possible values: ANSI, unicode, iso-8859-1, iso-8859-2, iso-8859-3, iso-8859-4, iso-8859-5, iso-8859-6, iso-8859-7, iso-8859-8, iso-8859-9, iso-8859-13, iso-8859-15, windows-874, windows-1250, windows-1251, windows-1252, windows-1253, windows-1254, windows-1255, windows-1256, windows-1257, windows-1258, utf-7, utf-8, utf-32, utf-32be, shift_jis, gb2312, ks_c_5601-1987, big5, iso-2022-jp, iso-2022-kr, euc-jp, euc-kr, macintosh, x-mac-japanese, x-mac-chinesetrad, x-mac-korean, x-mac-arabic, x-mac-hebrew, x-mac-greek, x-mac-cyrillic, x-mac-chinesesimp, x-mac-romanian, x-mac-ukrainian, x-mac-thai, x-mac-ce, x-mac-icelandic, x-mac-turkish, x-mac-croatian, asmo-708, dos-720, dos-862, ibm037, ibm437, ibm500, ibm737, ibm775, ibm850, ibm852, ibm855, ibm857, ibm00858, ibm860, ibm861, ibm863, ibm864, ibm865, cp866, ibm869, ibm870, cp875, koi8-r, koi8-u	
Configuration	<p>Prerequisite for the ODBC authentication module is a functioning ODBC interface to the database containing the user information. The ODBC connection must be set up as a system data source.</p> <p>Further, a user account with "read" access to the required table must be set up in the database.</p> <p>The password for the designated user must be stored in the database in plain text.</p> <p>Values are edited in the HAN Settings, in the Edit Authentication service dialog opened from the Authentication page.</p>	

ODBC SHA1 Interface		
Description	Authentication is performed over an ODBC-compatible database using SHA1.	
Module	auth_sha1.dll	
Parameters	DBUser	Database user who has "read" rights in the database
	DSN	System data source name for the database
	UserField	Column containing the login name
	TableName	Table in which the authentication information is stored
	where	Version 3.0.0.11 and later: Additional condition appended to the SQL statement
	DBPasswd	Password for reading the database
	PasswdField	Column containing the user's login password
	Import	Version 3.0.0.11 and later: List of fields to be stored in environment variables. Structure: <fieldname>=<environmentvariable>[,<fieldname>=<environmentvariable>]
Configuration	<p>Prerequisite for the ODBC authentication module is a functioning ODBC interface to the database containing the user information. The ODBC connection must be set up as a system data source.</p> <p>Further, a user account with "read" access to the required table must be set up in the database.</p> <p>The password for the designated user must be stored in the database in plain text.</p> <p>Values are edited in the HAN Settings, in the Edit Authentication service dialog opened from the Authentication page.</p>	

SIP2 Login		
Description	Authentication is performed over an SIP2 server. In addition, the module stores the values from the database in HAN environment variables, thus enabling it to check user rights.	
Module	auth_sip2.dll	
Parameters	Server	IP address/name of the SIP2 server
	Port	Port
	User	User name for login on the database
	Password	Password for login on the database
Configuration	<p>Prerequisite for login over the SIP2 server is the ability to build up a socket connection to the that server.</p> <p>Values are edited in the HAN Settings, in the Edit Authentication service dialog opened from the Authentication page and stored in the HAN database.</p> <p>The login module stores data from the database (user data) in HAN environment variables. These can be used to check for user rights.</p>	
Environment variables	SIP2_ST ATUS	Status of the user. This is a 14-character string. Each position can have either a Y or an N.

SISIS Login		
Description	Authentication is performed over a SISIS database (using ODBC). In addition, the module stores the values from the database in HAN environment variables, thus enabling it to check user rights.	
Module	auth_sisis.dll	
Parameters	DSN	System data source name for the database
	DBUser	Database user who has "read" rights in the database
	DBPassword	Password for reading the database
Configuration	<p>Prerequisite for login over the SIP2 server is the ability to build up a socket connection to the that server. List of tables: d02ben, d02zus, d61bgr.</p> <p>Values are edited in the HAN Settings, in the Edit Authentication service dialog opened from the Authentication page and stored in the HAN database.</p> <p>The login module stores data from the database (user data) in HAN environment variables. These can be used to check for user rights.</p>	
Environment variables	SisisGroup	User group (database field: d02bg)
	SisisPLZ1	Zip code (database field: d02p1)
	SisisPLZ2	Zip code (database field: d02z_plz)

XServer Login					
Description	The ALEPH server offers a web-based interface (XServer) that can be used to request user information. There is an option available for user authentication. Login data (user name and password) are passed in the form of a URL to the XServer as a request. The response takes the form of an XML file and shows the user's status if login is successful, or shows that the login failed. When checking the user credentials, a URL is called.				
Module	auth_xserver.dll				
Parameters	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Server</td> <td>Name or IP address of the XServer</td> </tr> <tr> <td>Library</td> <td>Name or IP address of the XServer</td> </tr> </table>	Server	Name or IP address of the XServer	Library	Name or IP address of the XServer
Server	Name or IP address of the XServer				
Library	Name or IP address of the XServer				
Configuration	<p>The response to the authentication request takes the form of an XML file. When checking the user credentials, the following URL is called:</p> <pre>https://<server>/X?op=bor-auth&library=<library>&bor_id=<user-id>&verification=<user-password></pre> <p>XML response to failed login:</p> <pre><?xml version = "1.0" encoding = "UTF-8"?> <bor-auth> <error>Error in Verification</error> <session-id>Y7LJFB4NEBI5Y97SQ397GVQMGHRGG2S9MXI5UG14C9YDEBAG2Q</session-id> </bor-auth></pre> <p>XML response to valid login:</p> <pre><?xml version = "1.0" encoding = "UTF-8"?> <bor-auth> <z304> <id>PWD000000010</id> <date-from>20/10/2005</date-from> <date-to>07/08/2015</date-to> </z304> <session-id>SEDE618IAT4NKDLXFHEHL1KNAEB12YC2K3DPMURHMLQII4M4KX</session-id> </bor-auth></pre> <p>XML response to invalid login:</p> <pre><?xml version = "1.0" encoding = "UTF-8"?> <bor-auth> <z304> <id>PWD000000016</id> <date-from>04/10/2001</date-from> <date-to></date-to> </z304> <session-id>LIRNG3G6XA9GL1S2X8G4VQFIIIVYQ6YNUYA5YGD7HJVK2BFTI6</session-id> </bor-auth></pre>				

Keyboard Shortcuts

General keyboard shortcuts:

Classic keyboard shortcuts; most of these are CTRL-key combinations.

<i>Function</i>	<i>Shortcut</i>
Exit program (automatic)	Alt+F4
Help (automatic)	F1
Contextual help	Shift+F1
New	Ctrl+N, INS
Save	Ctrl+S
Delete	Ctrl+D
HAN Tools	Ctrl+T
Reload	F5
Select a view.	Ctrl+1 through Ctrl+0
Show/hide the Ribbon	Ctrl+F1
Selection dialog in input field	Alt+PageDown
Next page	Ctrl+Tab
Previous page	Shift+Ctrl+Tab

Program specific shortcuts:

These shortcuts may differ slightly from one program to another. These are all ALT-key combinations.

Top level (program window):

<i>Function</i>	<i>Shortcut</i>
Menu	Alt+M
Information	Alt+I
Help	Alt+H

Second level (menu/Ribbon):

<i>Function</i>	<i>Shortcut</i>
Information	Alt+I
Help	Alt+H
Exit	Alt+X
HAN Tools	Alt+T
New	Alt+N
Edit	Alt+E
Duplicate	Alt+C
Rename	Alt+R
Delete	Alt+D
Refresh	Alt+H

Properties	Alt+P
Save	Alt+S
Save and close	Alt+C+S
Test	Alt+T
Filter	Alt+F
Options	Alt+O
Utilities	Alt+U
Language	Alt+L

Internal Functions for Converting Strings

You can use the following functions in HAN for conversion of strings, for example for the anonymization or pseudonymization of logged data:

Function	Description	Example
HHSubStr	Internal function for reading a specified part of the original string	<code>HHSubstr(192.168.1.1,1,8) = 192.168.</code>
HHReverseFind	Finds a character in the string, searching from right to left	<code>HHReverseFind(EDP-Smith,-) = 4</code>
HHDec	Decreases a numerical value in the string by 1	<code>HHDec(10) = 9</code>
HHInc	Increases a numerical value in the string by 1	<code>HHInc(10) = 11</code>
HHLeft	Returns the left-hand value of a string	<code>HHLeft(EDP-Smith,3) = EDP</code>
HHRight	Returns the right-hand value of a string	<code>HHRight(192.168.115.113,3) = 113</code>
HHLower	Converts upper-case to lower-case characters	<code>HHLower(Smith) = smith</code>
HHRemoveFrame	Removes the specified characters from before and after the string	<code>HHRemoveFrame(%ReturnValue%,%) = ReturnValue</code>
HHReplace	Replaces characters in the original string with other characters (syntax: ,originalChar,replacementChar)	<code>HHReplace(192.168.115.113,192.168.113,EDP) = EDP.113</code>
HHTrim	Removes spaces to the left and right of the original string	<code>HHTrim(EDP) = 'EDP'</code>
HHTrimLeft	Removes spaces to the left of the string	<code>HHTrimLeft(EDP) = 'EDP '</code>
HHTrimRight	Removes spaces to the right of the string	<code>HHTrimRight(EDP) = ' EDP'</code>
HHUpper	Converts lower-case to upper-case characters	<code>HHUpper(edp) = EDP</code>

Glossary

A

A to Z List

The A to Z List, or alphabetical list, is HAN's native online catalog of all e-journals provided through HAN. The list is published by the HAN web server. You can easily create links to this list from wherever you access the Internet. Furthermore, the A to Z List has an advanced search function for locating specific e-journals.

Query

In HAN, the term "query" refers specifically to a database query that retrieves certain e-scripts from the HAN database. At the same time, a query is an object you can save, and in which you can specify the exact criteria to be used for retrieval of e-scripts from the database. You can use regular expressions to define and combine even complex query sets. Because the queries are saved, they are permanently available in the -> E-Script Administration program for viewing defined selections of e-scripts. This helps keep your e-scripts well organized. In combination with the assignment of -> cumulative properties, queries are an important tool for assigning common properties to multiple e-scripts.

D

Data Editor

The Data Editor is for managing, creating and editing -> data objects.

Data objects

There are a number of data objects in HAN which you can manage and edit in the -> Data Editor. Data objects are allocated to e-scripts in the form of properties. Specifically, data objects in HAN are licenses, permissions, publishers, subjects, sources and document types.

E

EBSCO

EBSCO is the provider of an extensive database with online resources and associated administrative tools. HAN can import the online resources provided by EBSCO and save them as -> e-scripts, making them available from within your HAN system. HAN's EBSCO module is an auxiliary component that requires separate installation during the setup of your HAN software.

E-Script

A HAN e-script is a script that calls an online resource via the HAN server. Each e-script can have various properties. The central element of the e-script is a script. This is what initiates the call of the online resource and defines what happens when the resource is called. For example, the script might execute a user login on the origin server, or point the user's browser to a particular HTML page. E-scripts also have a number of additional properties, such as licenses and permissions, which you can edit.

E-Script Administration

The E-Script Administration program is the central administration tool for e-scripts. All of your HAN e-scripts are shown here. In addition, -> queries are created, edited and managed in E-Script Administration. Many of the functions for handling e-scripts can be reached only from the E-Script

Administration program, such as the e-script properties, the -> EZB import functions and the -> Script Editor program.

EZB

EZB is the abbreviation for "Electronic Zeitschriftenbibliothek," the electronic journal library of the University of Regensburg which provides online access to e-journals. HAN can import access scripts for these e-journals and save them as fully functional -> e-scripts.

EZB import

The EZB import function imports e-journal access scripts from the -> EZB and saves them as -> e-scripts.

EZB module

The EZB module is an auxiliary component in HAN, for importing e-journals from the -> EZB. Installation of the EZB module must be explicitly activated during the installation of HAN. You need to have authorized access to the EZB if you wish to use the HAN EZB-module.

F

Flexible parameters

The terms "flexible parameter" and "making a parameter flexible" refer to the replacement of the value in a specified HTTP parameter with a variable. Such parameters include, for example, session IDs that change each time a page is called, or login data managed by HAN. When a script is recorded for use in an e-script, the values for such parameters have to be replaced by variables so that the resulting e-script does not pass expired or invalid values in the parameters when it executes. This is done in the HAN -> Script Editor.

H

HAN

-> Hidden Automatic Navigator

Hidden Automatic Navigator

Hidden Automatic Navigator (HAN) is a software product developed by H+H software. With HAN, you can provide your users with access to Internet resources (e-journals) over the separate HAN web server. Basically, HAN is a reverse proxy. In the HAN system, users communicate only with the HAN web server rather than with the actual providers of the e-journals. HAN offers a variety of features for management of your online resources, including access control through permissions, license management, metering and statistical analysis, and help desk functions for troubleshooting.

M

Migration Wizard

The Migration Wizard is for migrating data from HAN 2 to HAN 3. The following data are migrated: Sequential database, detailed database, permissions, licenses, document types, publishers, sources, subjects and authentication services.

R

Report Center

The HAN Report Center is a web-based application for the statistics and metering functions. Because this application is web-based, you can call it from any machine that has access to the HAN web server. HAN administrator rights are required for use of this application.

S

Script Editor

You can use the Script Editor to edit e-scripts. Not all e-scripts require manual editing. Imported e-journals, for example, do not need editing. If an e-script sends session-specific values, or if it requires a login using credentials managed by HAN, then it will require editing. The Script Editor can be opened from the E-Script Administration program. It also has a recording module so you can record e-scripts in your browser.

Summon

Summon is a product from the Serials Solutions company. It is a program that provides libraries with an extensive index of online resources and makes the resources accessible in the libraries. HAN can import the online resources provided by Summon and save them as -> e-scripts, making them available from within your HAN system. HAN's Summon module is an auxiliary component that requires separate installation during the setup of your HAN software.

W

Wildcard DNS record

A wildcard DNS record is an entry in your DNS that enables HAN to provide access to unknown domains. This entry in the DNS is essential to ensure that HAN can provide access to e-journals from a broad variety of providers.

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