

Hidden Automatic Navigator 2.3

H+H Software GmbH



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1 Introduction

Thank you for choosing HAN, the software suite that revolutionizes distribution of access to Internet resources. 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.

Terms frequently used in this manual that have a special meaning in the context of HAN are listed together with their definitions in the *HAN 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.

1.1 Support

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

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

supportHAN@hh-software.com

Before you contact your software vendor, please read the relevant sections of the manual and refer to the online 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

1.2 Ideas and Suggestions

We are always happy to hear your ideas, comments and suggestions for improvements.

Please send them to:

H+H Software GmbH

Attn.: HAN Product Manager

Maschmühlenweg 8-10

37073 Göttingen

Germany

Or send e-mail to:

supportHAN@hh-software.com; subject: „HAN“

1.3 Document Conventions

The following conventions are observed in this manual:



Important notes about the HAN software or regarding the use of this manual are marked by an exclamation point.



A light bulb indicates tips on how to simplify tasks or prevent problems before they can occur.



This symbol marks passages that explain a particular term or give detailed information or background concerning a certain topic.

The following variables are used as placeholders for certain paths:

`%HANHome%` –

Path to your HAN directory; for example, `C:\Program Files\HAN2\WebSrv\hh\han`

`%ApacheHome%` –

Path to your Apache installation; for example, `C:\Program Files\HAN2\WebSrv`

Text used in examples that is meant to be replaced with data provided by your HAN environment is displayed in angle brackets (“<” and “>”).

Example:

<code><HAN server></code> :	Name of your HAN server
<code><path to temp directory></code> :	Path to your Temp directory; e.g., <code>C:\Temp</code>
<code><HAN ID></code> :	ID of a particular HAN account

Introduction

Support

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1.4 New Features in HAN 2.3

Version 2.3 of HAN has a number of significant improvements in several areas. This chapter begins with a list of the new features, and then describes them in detail.

- **Microsoft Windows Server 2008:** The HAN 2.3 setup program supports Microsoft's user account control feature, and sets up the corresponding user privileges in the HAN installation directory for the "HAN Administrators" group.
- **Protection from botnets:** HAN 2.3 has a new mechanism specifically to provide protection from botnet attacks.
- **Login:** When a login operation fails, the login page now shows a message informing the user of this fact.
- **Disk space monitoring:** The new HAN version monitors the amount of space available on the hard drive of the HAN server. In the HAN Settings program, you can define two values indicating critically low disk space. When the first value is reached, an e-mail informs the administrator that available disk space is low. When the second value is reached, any further initial request for a HAN account is answered with an error message indicating that the system is not available.
- **EZB data logging:** In HAN 2.3 you can determine whether the data logging function is enabled for EZB updates. One log file is created per day.
- **Statistics data logging:** A new mechanism prevents logging of group data without group IDs. If the data logging function has been activated but no ID explicitly assigned for a group, the group name is automatically used as the ID for that group. Settings for group data logging are configured on the "Account/Group Defaults" page of the HAN Administration settings program.
- **HAN Web Service Settings:** The new HAN version adds a Web Service Settings program to the Windows Control Panel. This configuration program makes it easier to configure and control the HAN web server, provides access to error and usage logs, and facilitates certificate management.

Activating/deactivating EZB data logging:



With the default settings, EZB data logging is active. If you do not want to log EZB data, this function must be deactivated. One log file is created per day. These log files are stored in `\HAN2\WebSrv\hh\han\EZBLogs`.

1

To deactivate EZB data logging, begin by opening the HAN Administration settings.

2

Select the **Import from EZB** page.

3

Under **Keep a log of imports**, click in the box next to **Yes** to remove the checkmark:

The screenshot shows the 'HAN Administration' window with the 'Settings' tab selected. The 'Import from EZB' sub-tab is active. The 'Keep a log of imports' section at the bottom has a red box around the 'Yes' button, indicating that the user should click it to deactivate logging.

Section	Field/Option	Value/State
HAN default import group	Group Name	EZB
	Inheriting account properties	<input checked="" type="radio"/> No properties inherited
Import into	None (no HAN group/no anchor)	<input checked="" type="radio"/>
	HAN default import group	<input type="radio"/>
	HAN group indicated by anchor	<input type="radio"/>
	If this HAN group is not found:	<input type="radio"/> Create HAN group indicated by anchor
		<input type="radio"/> Import into default HAN group
Library login data	Library ID	BIB
	User	Admin
	Password	••••••
	Display	Display
Keep a log of imports	Yes	<input checked="" type="checkbox"/>
	No	<input type="checkbox"/>

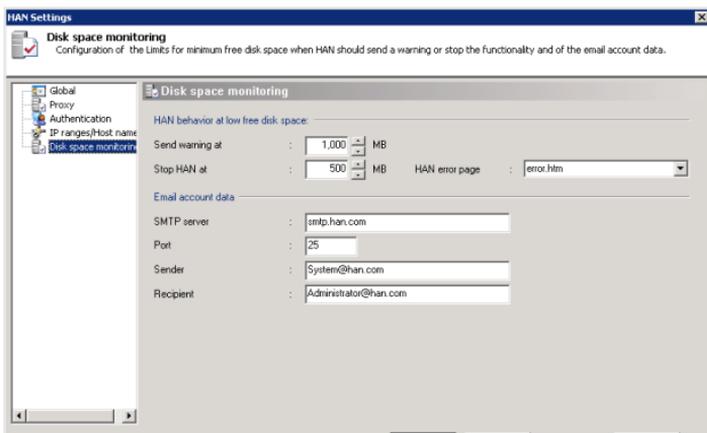
Configuring the disk space monitoring functions:

1

Open the HAN Settings program.

2

Open the **Disk Space Monitoring** page:



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 1000 access attempts.

Stop HAN at. When this level is reached, new access requests are blocked. Any further attempt to access HAN results in an error message.

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 `\HAN2\WebSrv\hh\han\hanerror`. You can adapt the error pages stored here, or add your own.

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

Port. Port for the SMTP server.

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

Recipient. Enter the e-mail address of the recipient of the warning e-mail.



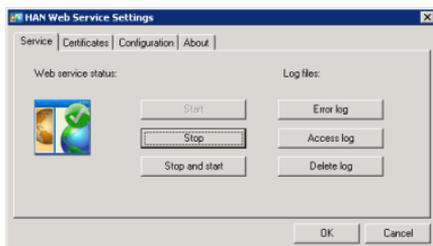
Do not enter any values lower than the default values given, as these are the absolute minimum disk space amounts required for a stable HAN system.

HAN Web Service Settings:

Select **HAN Web Service configuration** in the Windows Control Panel to open the HAN Web Service Settings program:



The settings configured here are distributed over several dialog pages:



Service

This page shows information on the web server's status. The **Start**, **Stop** and **Stop and start** buttons let you start and stop the web service. Click on the **Error log** or **Access log** button to open the corresponding log files. Click on the **Delete log** button to delete the log files.

Certificates

This dialog page shows the certificate currently in use. Click on **Manage certificates...** to launch a wizard for creating a self-signed (temporary) certificate or to import an official certificate.

Configuration

On this page, you can configure the HTTP and HTTPS ports in HAN and specify the IP address HAN listens on.

About

This page shows information about the Settings program.

Creating a self-signed certificate:



Launch the HAN Web Service Settings program from the Windows Control Panel and open the "Certificates" page. Click on **Manage certificates...** to run the wizard for managing certificates.

2

Select the **Create or request a new server certificate** task and click on **Next**. Enter data in the **Create new server certificate** dialog as required:

Server FQDN. The fully qualified domain name of the server on which you have installed HAN. The 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.

3

Click on **Next** to continue. In the next dialog, you can specify whether you wish to create a self-signed certificate or a certificate request for an official certificate authority. Select **Issue a self-signed certificate** under **Type of**

Certificate, enter the date for the period of validity, and enter a password for the private key.

4

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 server.

The HAN Web Service 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 `\HAN2\WebSrv\hh\han\bin` and open the `han.cfg` file. In the `[SSL]` section, remove the comment tag from the `SSLCertificateChainFile` entry and add the desired file name:

```

001 [SSL]
002 #Server Certificate Chain:
003 #Point SSLCertificateChainFile at a file
    containing the
004 #concatenation of PEM encoded CA certificates
    which form the
005 #certificate chain for the server certificate.
    Alternatively
006 #the referenced file can be the same as
    SSLCertificateFile
007 #when the CA certificates are directly appended
    to the server
008 #certificate for convenience.
009 SSLCertificateChainFile conf/ssl.crt/ca.crt

```

Requesting and importing official certificates:

Using an official server certificate involves two steps:

1. Request a certificate: A certificate request must be created and sent to a certificate authority. The certificate authority checks the specifications of the request for correctness and issues the certificate.
2. Import the certificate: Once the certificate has been issued by the certificate authority, it must be imported to your server.

Requesting a certificate:

1

In the **HAN Web Server Settings** dialog, click on **Manage certificates...** to open the certificate management wizard.

2

Select the **Create or request a new server certificate** task and click on **Next**. Enter data in the **Create a New Server Certificate** dialog as required.

3

Click on **Next** to continue. In the next dialog, select **Create a certificate request for an official certificate authority** under **Type of Certificate** and enter a password for the private key:

HAN Web Service - Certificate

Create a New Server Certificate
 You can create a self-signed certificate; for example, for a test installation, or a request for an official certificate authority (recommended).

Type of Certificate

Create a certificate request for an official certificate authority

Issue a self-signed certificate

Valid until : 02.09.2011 (367 days)

Password for the Private Key of the Certificate

Please select a complex password to protect the private key for this certificate.

Password : *****

Repeat password : *****

< Back Finish Cancel Help

4

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.

Import the certificate:

1

In the **HAN Web Service Settings** dialog, click on **Manage certificates...** to open the certificate management wizard. Select the **Import a server certificate** task and click on **Next** to continue:



2

In the next dialog, enter the file name of the certificate and the password for the private key:



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.



The HAN system uses the DER format for certificate files, requests and private keys.



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 server.

2 Basic Principles

2.1 HAN as Reverse Proxy

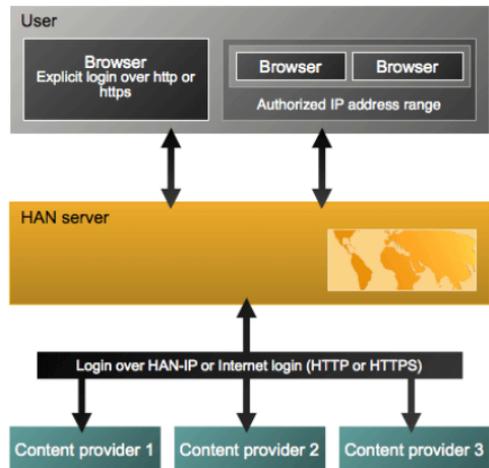
Among the variety of functions that can be carried out by a proxy server (such as caching web pages), the functionality of a reverse proxy is most relevant in conjunction with HAN.



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 as though it had originated with the reverse proxy.

Your HAN server provides URLs (<http://<HAN server>/han/<HAN ID>>) 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).



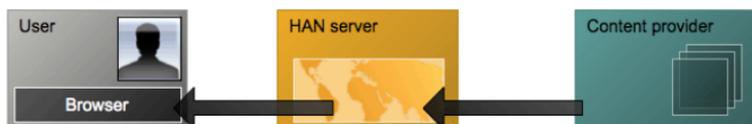
3

HAN opens the home page indicated in the HAN account and, if the associated access script so defines, logs in on the content provider.



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 web site's URL, the URL used to call the e-journal from its site 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 (see also section 2.2, Authentication and Authorization in HAN).
- **Metering:** Every time a user calls a HAN-URL, HAN can store statistical data regarding the usage of that account (see also section 2.3, Statistics).
- **License control:** HAN can monitor and control parallel usage of online resources.
- **Help desk features:** 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 served only to local computers (identified by IP address; for example, in a campus licensing scheme), you can use a masking IP address so that HAN can serve the desired content to your users regardless of their location.
- **No modifications on the client:** Use of HAN resources 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.

2.2 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 this process, an important distinction is made between authentication and authorization.



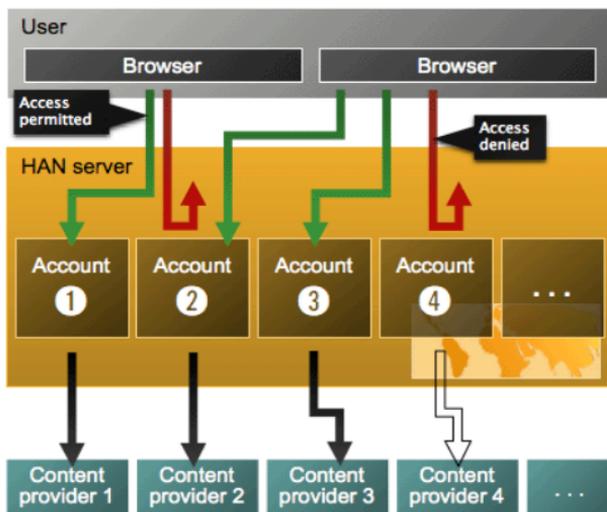
Authentication is part of the login process; the system addressed determines the user's identity and checks it for authenticity.



Authorization, on the other hand, describes the allocation of permissions and privileges to a 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:



- Define which users can access HAN (authentication)
- 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. Because uncomplicated administration was one of the main objectives in developing the software, HAN is made to leverage existing configurations for user authentication, such as ADS and OPAC settings. This saves time and effort that would otherwise be spent configuring settings that already exist (see also section 3.2, **Configuring Authentication Services**).

2.3 Statistics

HAN can collect statistical data on every user 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 more details on the topic of statistics in HAN, see chapter 7, **Event Logging and Statistical Analysis**.

3 Installation and Configuration

3.1 Setting up HAN Version 2

System requirements:

- Windows® Server 2003, Windows® Server 2008
- Microsoft Internet Explorer® (version 6 or later)
- At least 10 GB disk space

The HAN setup program installs the following components:

- Apache 2.0.59
- HAN components
- SQLite
- PHP version 5.2.6 (if the “A-Z List” component is selected)



The HAN update feature updates the integrated Apache and PHP installations.

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

- HTML
- HTTP and HTTPS
- Networks

Follow the instructions given by the installation wizard to install HAN.



A valid serial number must be entered during installation. To obtain a serial number, please contact your software vendor.



You can modify or add to the installed components at any time.



When installing HAN on Windows Server 2008, keep in mind that with the default settings, Microsoft restricts user privileges in the %ProgramFiles% directory.

Following installation, you need to register your HAN program as described below.



The number of concurrent-use licenses to be registered is defined when you order the software.

To open the registration wizard, open the Windows Start menu and select **Programs/HAN/HAN Registration Wizard**:



Call your software vendor to obtain the registration code. The following information is required for registration:

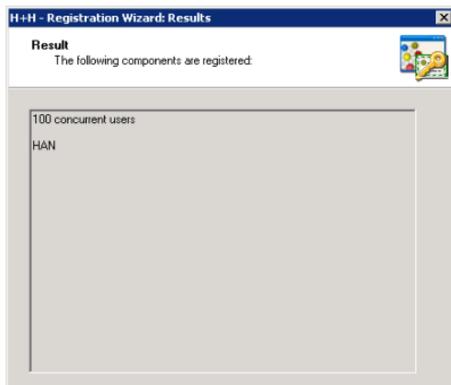
- Your registration data (your name and company name)
- HAN serial number (on the invoice)
- Identification number (generated automatically by the registration wizard)



Enter the registration code in the **License code** field and click on **Next**. The next window shows the number of licenses registered.

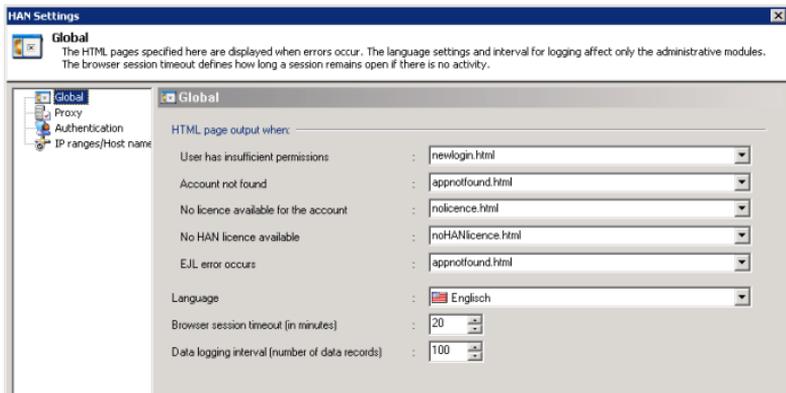


You need to enter the new registration code obtained with your HAN 2.x software. The registration wizard does not accept registration codes from HAN 1 versions.



Your registration is not effective until after you restart the Apache service.

Once the installation has been completed, you can configure the global settings in HAN. To open the **HAN Settings** program, select **Programs/HAN/HAN Settings** from the Windows Start menu.



The Settings program has four dialog pages:

- Global
- Proxy

- Authentication
- IP Ranges/Host Names



For details on the Authentication and IP Ranges/Host Names pages, see section 3.2, **Configuring Authentication Services**.

Global

The settings on the Global page define the HAN help desk feature. Here you can specify which HTML pages are opened in response to certain events; for example, to provide the user with background information or instructions.

You can specify pages for the following events:

- Insufficient access permissions:
- This is the case when a user is not authorized to access the requested HAN resource. Depending on which of the following two HTML pages you select, the user is either informed that access is not permitted or is presented with a login page:
 - noaccess.html
 - newLogin.html. In this case, the user has the option of entering different authentication data.



Settings you configure for specific access privileges override the global settings configured here (see section 3.3, **Permissions**).

- Account not found: This page is opened if the account that a HAN-URL points to does not exist.
- No license available for the requested HAN account: The HAN program lets you restrict parallel usage of HAN accounts by allocating licenses. If the number of instances allowed for a requested HAN account is already in use, this page is opened.
- No HAN license available: 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 Help menu and select “About” in HAN Administration to see how many HAN licenses are currently in use in your system (see section 3.2, **Licensing**).

- EJM error: This error message is shown when an error occurs while creating a HAN account from the EJM pages (see also chapter 6, **EJM and HAN**).



This option is available only if the EJM module is installed.



These HTML files are stored in `\hh\apache2\hh\han\hanerror`. You can add new files and edit existing files as desired. The selection lists for HTML files show all HTML files stored in this directory.

The **Language** setting lets you specify the language used in HAN's administrative components. You can choose between **German** and **English**.

The **Browser session timeout** defines the minimum duration of a HAN session.



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); it cannot detect other user activity, nor whether the browser has been closed. Setting a limit on the period of user inactivity helps conserve resources. If the specified time elapses with no detectable user activity, the server closes the session and logs the user off, which frees up resources for further use. If user activity is detected before the timeout period runs out, the session continues and the timeout period countdown begins again.

Once a HAN license is in use, it remains in use for at least as long as the **browser session timeout** you set. Thus this setting can affect the availability of HAN licenses. 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.

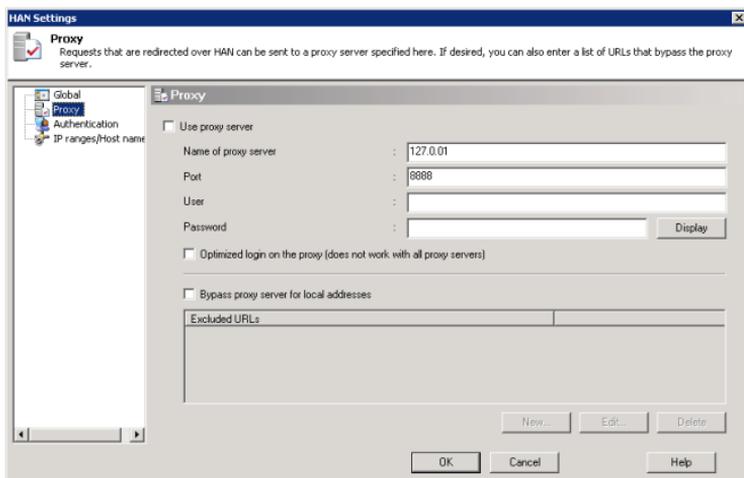
If the timeout period is too short, the user might have to log in on HAN repeatedly to access online resources.

The default value for the browser session timeout is 20 minutes.

The **Data logging interval** is defined by the number of datasets collected before the data is written in the database. If the value is too low, the database will constantly be accessed for writing, which can impede system performance. The default value is 100 datasets.

Proxy

On the Proxy dialog page, you can configure the HAN server to access the Internet over a proxy server.



In the **Name of proxy server** field, you can enter either the host name or the IP address of the proxy server.

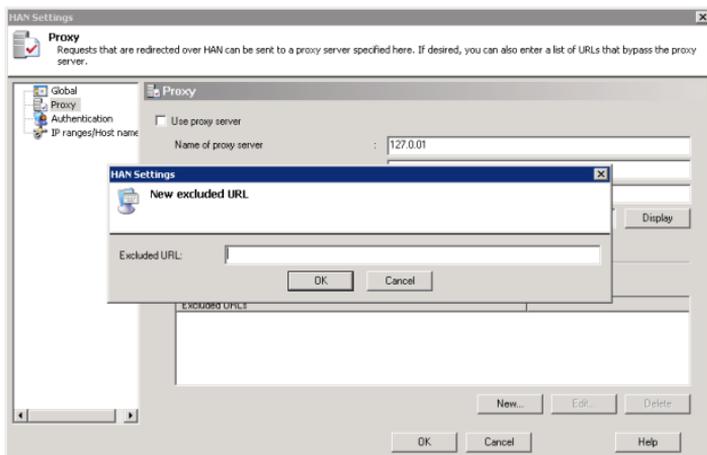
HAN can authenticate itself on the proxy server over a user account created for this purpose. Enter this login data in the **User** and **Password** fields on this page.

If you activate the **Optimized login on the proxy** 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.

To access local pages (for example, in the intranet) without going through the proxy, activate the **Bypass proxy server for local addresses** option and define the URLs that can be reached directly.



Make sure you activate the **Use proxy server** option at the top of the dialog page. When you deactivate use of the proxy server, your settings are not affected, and are applied again the next time you activate the “Use proxy server” option.



Any time you change settings on the **Global** or **Proxy** dialog page, your changes are not effective until after you restart the Apache service.

UNC-based Access

Ideally, HAN's administrative programs (Administration, Statistics, etc.) run in a terminal server session on the HAN server. This ensures that these programs can access all required components.

You also have the option of running these programs in a shared folder on the network.



Depending on the number of HAN access scripts, or on the size of your databases, it may take a while for HAN Administration, or the Statistics program, respectively, to open when started over the network.

Configure the following to **enable UNC-based access**:

1

Share the `WebSrv` folder (`%ApacheHome%`).

2

Configure the following values in the “Path” section of the `han.cfg` configuration file in `%HANHome%\bin`:

```
[Path]
ApacheHomeUNC=<UNC path to WebSrv share>
HANHomeUNC=<UNC path to WebSrv share>\hh\han
```

3

Edit the following values in the “Environment” section of the `hhenv.cfg` configuration file in `%HANHome%\bin`:

```
[Environment]
nmDrive=\\<server name>
nmPath=<share name of the WebSrv folder>\hh\han
```

4

Edit the following values in the “Environment” section of the `hhenv.cfg` configuration file in `%HANHome%\System\Statis`:

```
[Environment]
nmDrive=\\<server name>
nmPath=<share name of the WebSrv folder>\hh\han
```

Example:

In the following example, the server on which HAN 2.x is installed is called DC01 and the 'WebSrv' folder is shared under the name "HAN2." The configuration files now contain the following entries:

han.cfg:

```
[Path]
ApacheHomeUNC=\\DC01\HAN2
HANHomeUNC=\\DC01\HAN2\hh\han
nmHome=%nmDrive%\%nmPath%
```

hhenv.cfg:

```
[Environment]
nmDrive=\\DC01
nmPath=HAN2\hh\han
nmHome=%nmDrive%\%nmPath%
```

3.2 Configuring Authentication Services

Access to the HAN system can be controlled through HAN's authentication services.



These are predefined HAN modules that detect user identity based on an authentication source.

The following can be used as authentication sources:

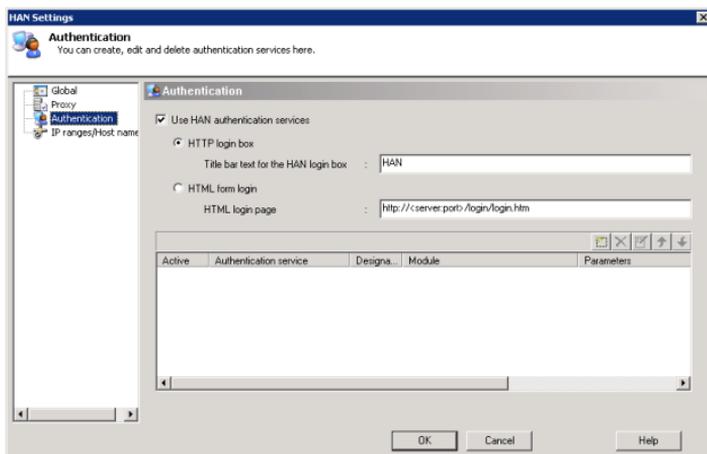
- NT login
- IP address/host name check
- LDAP login
- ADS login
- NT4 login
- NetMan login
- PICA login
- ODBC interface to an ODBC-compatible database
- SISIS



For detailed information on these authentication services, please refer to the appendix.

Authentication Settings

Open the **Authentication** dialog page in the **HAN Settings (Programs/HAN/HAN Settings)**.



HAN distinguishes between **implicit** and **explicit login**. With implicit login, the user does not have to enter any data; 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.

There are two types of explicit login:

- HTTP login dialog
- HTML form

The HTTP login method uses the following dialog:



You can edit the title of this dialog in the **Title bar text for the login box** field on the **Authentication** dialog page.



The actual appearance of the login dialog depends on the browser in which it opens.

The other option is to have an HTML form open:



This login page can be edited and, if desired, adapted (for example, to match your intranet pages). Make sure that the following HTML text is integrated in the form page unaltered:

```
<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>
```



If you call the login page over HTTPS, data is encrypted before it is sent to the HAN server. To do this, enter the URL as follows: **https://<HAN server>/login/login.htm**. Replace <HAN server> with the name or IP address of your HAN server.

Contact your network administrator for information on integrating a server certificate in Windows 2003 Server. Alternatively, you can use OpenSSL to create a certificate.

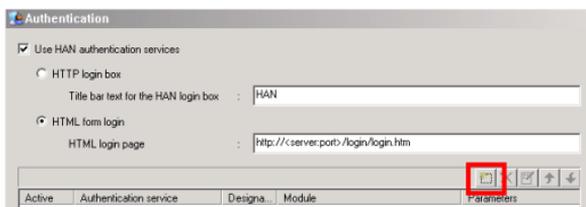
Furthermore, SSL modules must be linked in the Apache web server. The \apache2\hh\han\SSL directory contains brief instructions on integrating SSL modules.

Setting Up an Authentication Service

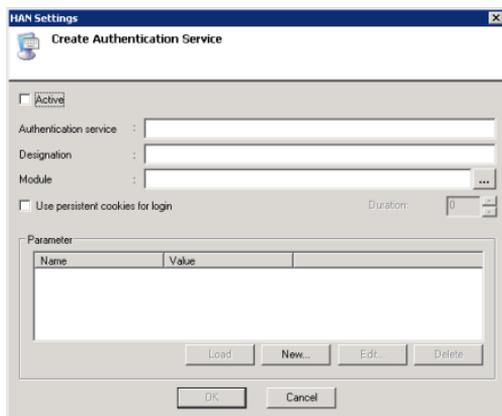
The following example shows how to set up an authentication service; in this case, IP authentication.



On the **Authentication** dialog page, click on the **New** icon.



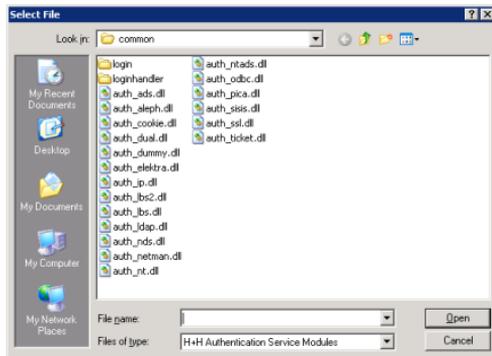
This opens the **Create Authentication Service** dialog for defining the properties of the new authentication service.



In the **Authentication service** field, enter a name for the new authentication service (such as “IP Authentication”). The **Designation** (in this example, “IP”) is required for internal processing.

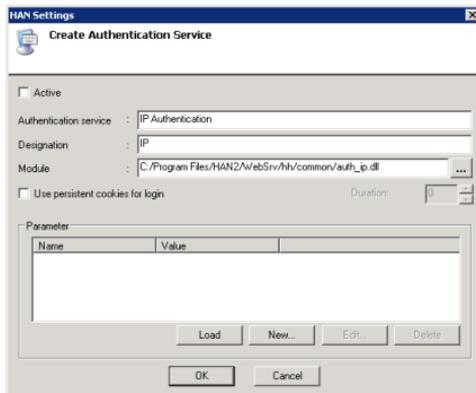
3

Click on the “browse” button  next to the **Module** field to open the “Select File” dialog, which lists the available authentication services.



4

Select the desired module (in this example, `auth_ip.dll`) and click on **Open**.



5

Each authentication service has its own set of parameters. When you click on **Load**, the parameters for the selected service are shown in the “Parameters” section.

For the IP authentication service the parameter is “CfgFile.”

Name	Value
CfgFile	

Buttons: Load, New..., Edit..., Delete

6

Select **Edit** to assign a value to the selected parameter. In this case, the value is the complete path to a configuration file that defines the permitted IP address(es).



To enable this option, the user's browser must be set to accept cookies from the HAN server.

7

HAN can check the validity of a login. To activate this feature, select the **Use persistent cookies for login** option. When this option is active, you can set the period (in hours) of validity for a login.



If the “persistent cookies” option is not active, the login is no longer valid once the user has closed the browser.

8

Click to put a checkmark in the box next to **Active** to activate the authentication service and click on **OK** to save your settings.



To use an IP authentication service, you need to define access privileges on the “IP Ranges/Host Names” page.



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. As a result, the statistics database collects usage data acquired from all users authenticated by this service and attributes it to a user called “Library.”



To check computer host names, the Apache web server has to reverse resolve IP addresses. This functionality must be explicitly activated in the Apache configuration file (`httpd.conf`):

HostNameLookups=On

The change is not active until you restart the Apache service.

Important: If your Apache server cannot reverse resolve IP addresses, it could take a very long time to open a HAN account.



To test your system’s name resolution performance, run `nslookup` and enter the client IP address. The `nslookup` program should return the client’s host name.

If this works, you can activate name resolution in the Apache server. If the host name is not returned, do not activate name resolution in the Apache server.



Remember to restart the Apache service any time you change HAN settings; otherwise, your changes will not be saved.

If your changes affect only the definition of IP address ranges, however, it is **not** necessary to restart the Apache service.



If more than one authentication service has been defined, they are processed in order 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 authentication does not require user input.

3.3 Permissions

With HAN you can configure access privileges that permit or deny access to individual resources.



Access privilege configurations define the conditions that users must meet before they can access a HAN resource. If the defined conditions are not met, an error message (or a login page) is opened.

Access privileges can be allocated based on any of the following:

Global NT group membership

Local NT group membership

Host name

IP address

LDAP group membership

Environment variables



Each condition must be checked by a corresponding authentication service.



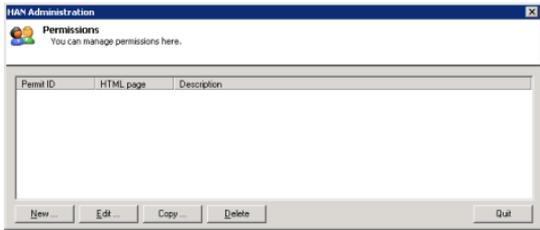
When login is successful, the authentication service can store user-specific data in environment variables. When a HAN account is called, user privileges are checked to determine whether the corresponding values meet the requirements of the access privilege definition. If they do, then access is permitted; if not, the specified error page (or login page) is shown.

Defining Permissions

Select **Permissions** from the **Edit** menu in HAN Administration to configure access privileges.

You can define new permissions and edit, copy and delete existing permissions here.

The following example illustrates the procedure for defining permissions. The privileges defined in this example permit access only for library users (IP addresses located in the library). The one exception is a local group called "Staff." Members of this group have access regardless of location.



1

First of all, you need to select the authentication services that can determine the required information.

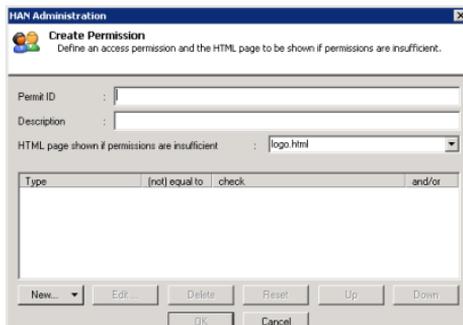
In this example, these are the auth_ip.dll and auth_nt.dll modules.

2

The next step is to check whether the authentication services have been configured. If they have not, then this must be done now (see section 3.2, **Configuring Authentication Services** for details).

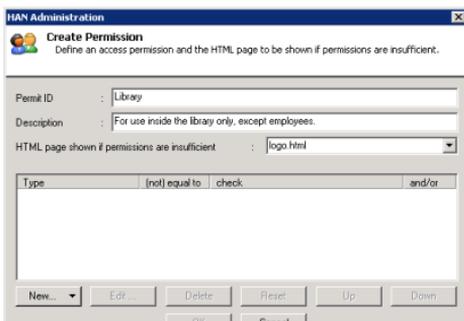
3

To define new permissions, open the Permissions dialog (menu command: Edit/Permissions) and click on **New**.



4

Enter a name for the permission in the “Permit ID” field (in this example, “Library”). If desired, you can enter a description as well (in this example, “For use inside the library only, except employees,” “For use inside the library only, plus staff”).

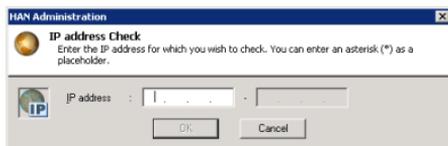


5

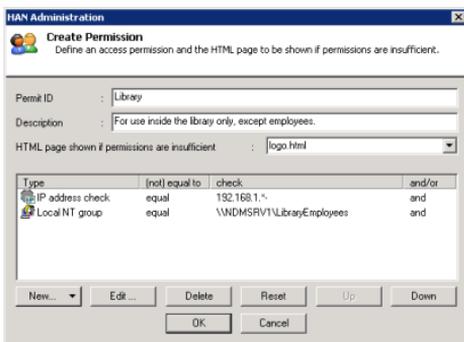
Click on **New** and select a condition as the basis of the permission. In this example, we select both IP range and local NT group.

- Global NT Network Group
- Local NT Network Group
- IP Address Check
- DNS Check
- LDAP Definition
- Environment Check

This opens a window for configuring the definition. For an IP range:

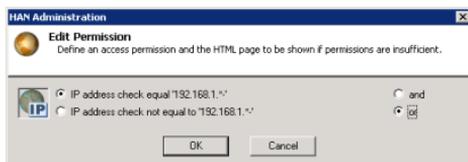


Define the range of IP addresses to be granted permission. When **Local NT group** is selected, a dialog opens for defining the desired local group. Select the domain first, then the server and then the local group.



6

You can link conditions with logical **ANDs** and **ORs**, if desired. You can also negate a condition statement. To configure condition statements, double-click on the desired condition or select it and click on **Edit**. In this example, we link the two conditions with a logical OR.



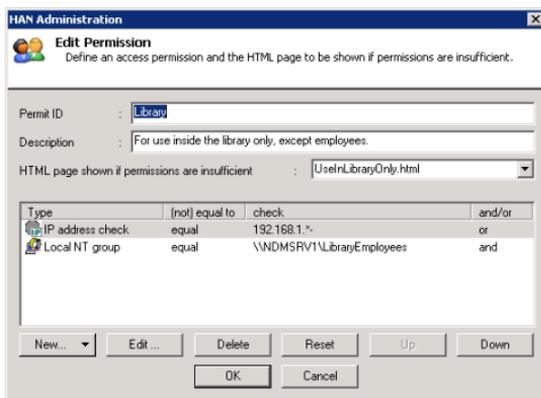
7

The last step is to specify the HTML page to be shown in the event of error. Depending on the level of permission required, you might want to have a login page opened with a note on the type of login required.



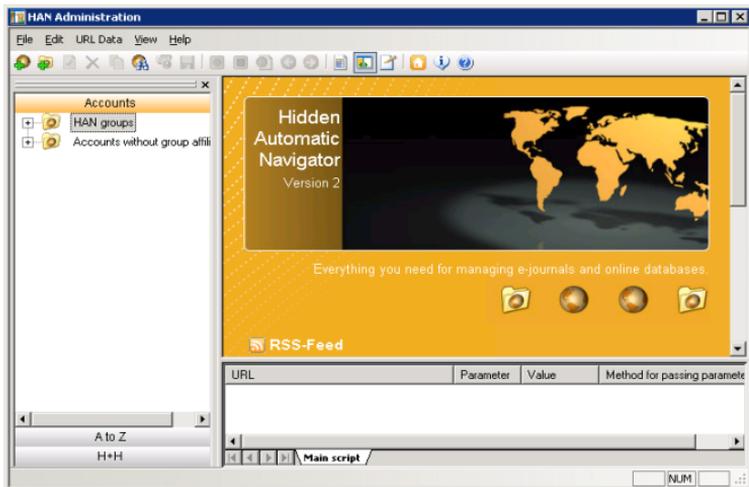
The HTML pages to choose from are stored in `\apache2\hh\han\hanerror`.

In this example we do not want to open a login page, since we do not wish to permit access to anyone from outside the library. Instead, we prefer to show an HTML page explaining that only computers located inside the library can access the requested resources. To this end, we have created an informational page called “UseInLibraryOnly.htm”.



3.4 HAN Administration

The **HAN Administration** program is the central element in HAN. This is where you can manage the online resources that HAN serves to your users. Select **Programs/HAN/HAN Administration** to open **HAN Administration**.



The HAN Administration program window has the following components:

- A menu bar
- A toolbar
- The Accounts sidebar (on the left), showing Accounts (accounts groups and accounts not in groups), A to Z (alphabetical list of all accounts), and any Views you have created
- The script generator, divided into:
 - the HTML view (upper right-hand pane), and
 - the Navigation view (lower right-hand pane)



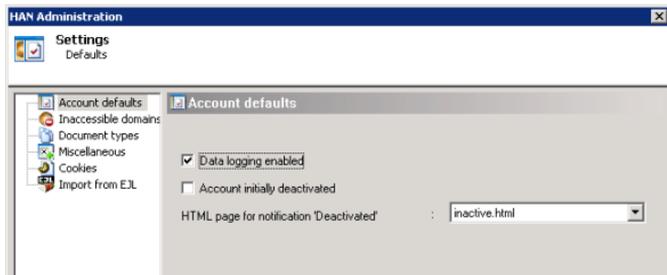
The Accounts sidebar and the script generator are described in detail in Chapters 4, **Online Resources over HAN** and 5, **Managing HAN Resources**.

When you open the HAN Administration program, the HTML view shows an information page that is updated by RSS feeds to provide links to the latest technical information about HAN, such as knowledge base articles and software patches.

Click on the  button to open this page at any time.

In HAN Administration, you can define global defaults. To configure settings, select **View/Settings** in HAN Administration:

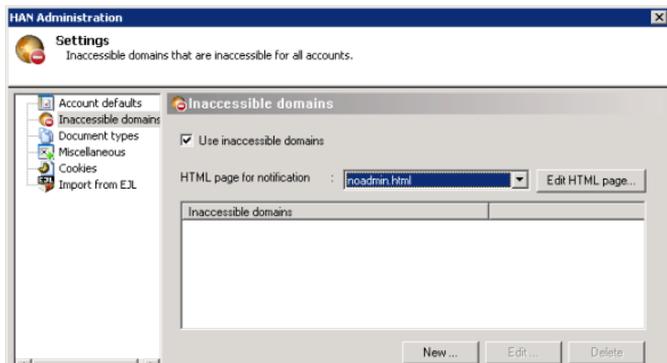
Account Defaults



Under **Account defaults** you can define whether data logging is active for all HAN accounts and groups. If it is, the HAN account title is automatically used as the record ID in the log file each time a new record is written.

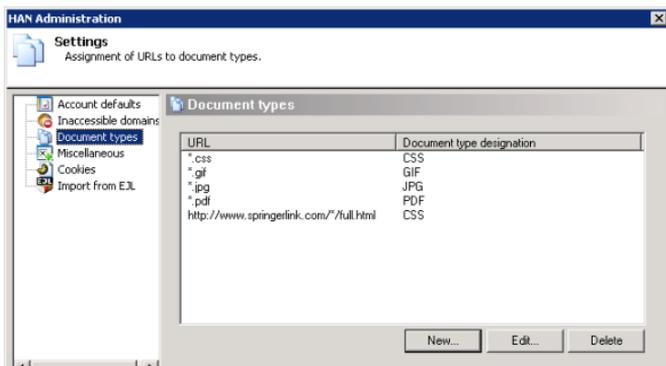
You can choose to have all HAN accounts initially deactivated. For this purpose, you can specify an HTML page to be opened when any account is requested under **HTML page for notification “Deactivated”**—for example, you might have a login page opened.

Inaccessible Domains



Under **Inaccessible Domains** you can define a blacklist that is applied globally. URLs that are specified here cannot be reached using a HAN account. If a blacklisted URL is requested, the page specified here under **HTML page for notification** is shown.

Data Logging and Statistics

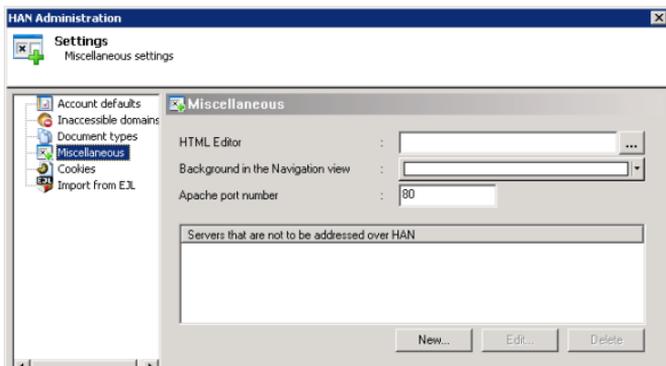


Under **Document Types** you can allocate document types to certain URLs or URL patterns (wildcards permitted).



Document types are described in detail in section 7.3, **Document Types**.

Miscellaneous



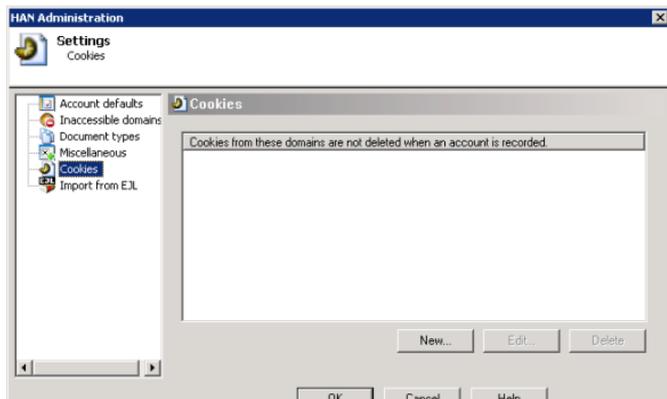
Under **Miscellaneous** you can specify an HTML editor and define the background color in the Navigation view.

You can also enter the addresses of servers that cannot be reached over HAN. This is useful, for example, for preventing the use of one HAN account to execute another HAN account. Such server addresses might include the name of a link-out service, an OPAC system, or EJL Regensburg, for exam-

ple. When HAN detects such an address, the active HAN account is closed and the rest of the URL is called by the browser.

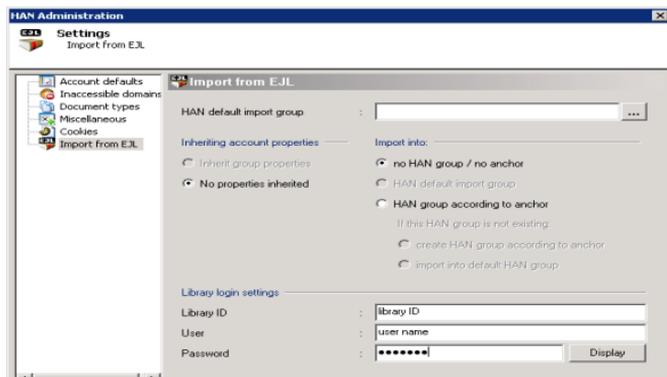
If more than one port is bound to the Apache server, or if Apache is not reached over the default port (80), you need to specify the port over which HAN is called in the **Apache port number** field.

Cookies



Before a script is recorded (see chapter 4, **Online Resources over HAN**), all existing cookies are deleted. If you wish to save certain cookies (for example, ones that come from your intranet), use this dialog page to specify the names of the domains from which those cookies originate.

Import from E.JL



If you have installed the E.JL module, this dialog includes a page with options for configuring E.JL imports.

There are three ways to import data from EJL (for details, see chapter 6, **EJL and HAN**):

- Manually (complete or partial import)
- Automatically (complete or partial import)
- Import or update when EJL content is accessed

When you import EJL data to make a new account, you can have the account automatically added to a group. Under **Inheriting account properties** you can specify whether the new account inherits all inheritable group properties or not.

HAN 2 supports the eventuality that an e-journal may have more than one starting URL. This means that access to an e-journal may consist of multiple HAN accounts. When importing accounts, you can configure certain options that affect how accounts are handled. You can choose from the following options:

- None (no HAN group/no anchor): The account is not assigned to any group
- HAN default import group: All newly imported accounts are assigned to the same group.
- HAN group indicated by anchor: Depending on the settings for the 'Anchor' criterion in the EJL Administration in Regensburg, Germany, an account may be assigned to a HAN group of the same name. If such a group does not already exist, you can have HAN create it or assign accounts with this anchor to the default import group in HAN.

Furthermore, you can define the access data (library login data) for downloading the import file.



Please note that the library ID is case sensitive.



These settings are applied globally to all accounts created through EJL import.

For details on which module versions are installed, as well as on parallel usage of HAN licenses, select **About** from the **Help** menu in HAN Administration.

Information

HAN Licenses	100
in use	0
HAN setup version	2.11.1
Modules	
HAN Kernel	2.1.0.305
HAN Administration	2.1.0.1471
HAN Statistics	2.1.0.1471
HAN Record Data Base Viewer	2.0.0.107
HAN Settings	2.0.0.143
H4H Trace Monitor	3.3.0.148
H4H Trace Monitor TS	3.3.0.147
H4H LDAP Settings	3.3.0.184
H4H Registration Wizard	3.2.0.33
HAN EIL Interface	2.1.1.610
HAN Ebsco Interface	2.0.0.22
Apache	2.0.59.200
PHP	5.2.6

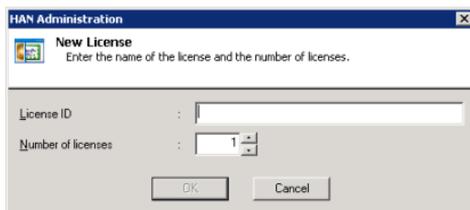
OK

3.5 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. To do this, begin by selecting **Licenses** from the **Edit** menu in HAN Administration.



In the Licenses window, you can create new licenses and edit or delete existing licenses. Select **New** to open the dialog for creating new licenses.



Enter a name for the license in the **License ID** field and define the number of parallel instances you wish to permit in the **Number of licenses** field.

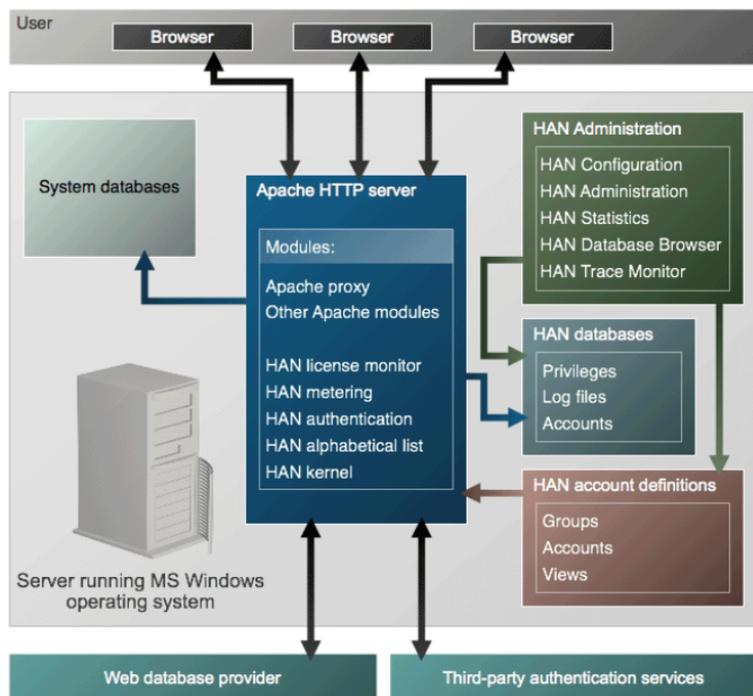


If you define a single license to cover multiple HAN accounts, all of the accounts taken together share only the specified number of parallel usage instances.

To check on the current usage of licensed HAN accounts, open the license monitor at <http://<HAN server>/hanmonitor/>.

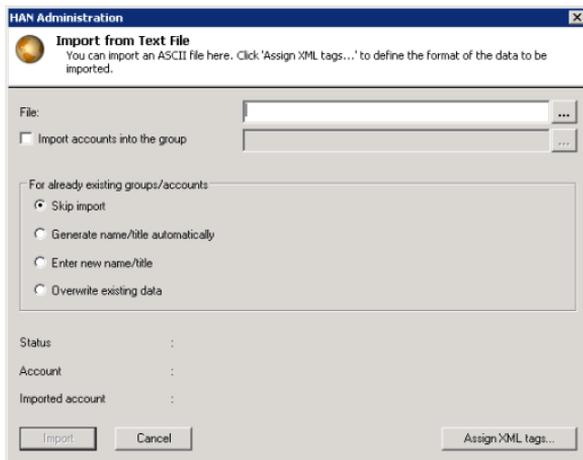
3.6 HAN and Apache

HAN leverages Apache web server technology and builds on its reverse-proxy functionality. The HAN Administration, Settings and Statistics programs are Windows modules. Because HAN and Apache work closely together, some configuration changes in HAN are not effective until the Apache service has been restarted.

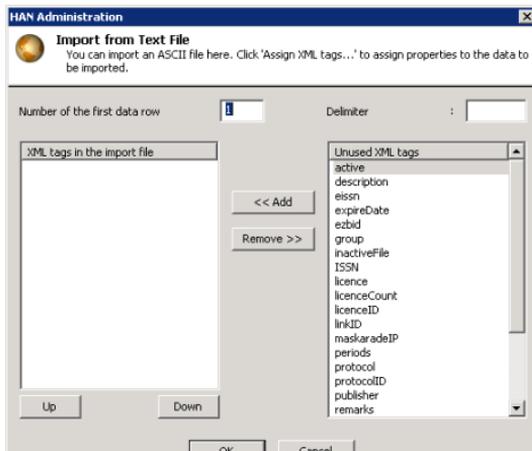


3.7 Importing HAN Accounts

You can import HAN accounts from a text file containing comma-separated values. To do this, open the **Edit** menu and select **Import/export /Import from text file**.



Enter the path to the text file and define how existing HAN accounts are to be handled. Click on **Assign XML tags** to assign HAN account properties to columns in the text file.



You can skip a number of rows in the file by defining a value under **Number of the first data row**. Click on **Add** to add the selected HAN properties (XML

tags) from your list. You can use the **Up** and **Down** buttons to change the order of the properties. In the **Delimiter** field, you can specify the character that separates the columns in the text file.



If no separating character is specified, the columns have to be separated using tabulator spaces.



The appendix contains a list of all available XML tags and their descriptions.

Click on **OK** to confirm your settings. Once this dialog closes, you can click on **Import** to begin importing data.

3.8 Exporting HAN Accounts

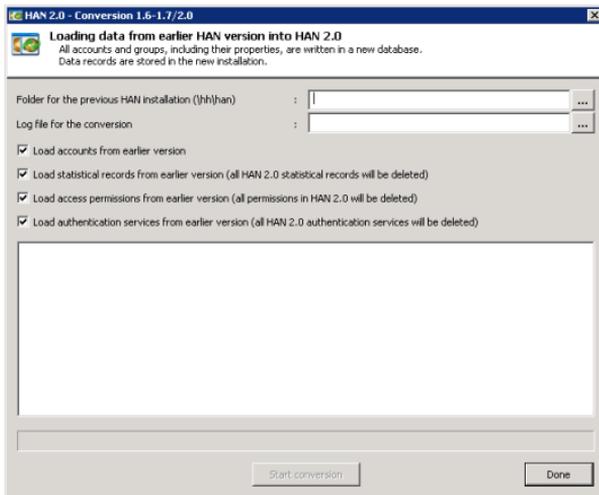
You can export existing HAN accounts in XML format; for example, for archiving purposes. To do this, open the **Edit** menu and select **/Import/Export/Export**.



This opens a dialog in which you can specify a path for the export. You can export all HAN accounts or only the accounts that you have selected in the Accounts sidebar.

3.9 Updating HAN 1.6/1.7 to HAN 2.x

If you wish to update existing data from version 1.6 or 1.7, run the **HAN Conversion 2.0** program after you have installed HAN 2.x. To do this, select **Programs/HAN/HAN Conversion 2.0**.



Enter the path to your HAN 1.6/1.7 installation (`\apache2\hh\han`) and a path for the conversion log file. You can import log files from the HAN Statistics program too, if desired.



When log files are converted from earlier versions, HAN 2.x log files are automatically deleted.

Click on **Start conversion** to begin converting HAN accounts and log files to the HAN 2.x format.



Important: Do NOT copy your HAN 1.6/1.7 databases to your HAN directory. Version 2.x uses a totally new database format that is not compatible with files from the earlier version. Use the conversion program to convert existing data records to the version 2.x format.



The conversion program can convert only files from versions 1.6 and 1.7. If you have an earlier version, please update it to version 1.6/1.7 before converting files.

3.10 A-to-Z List

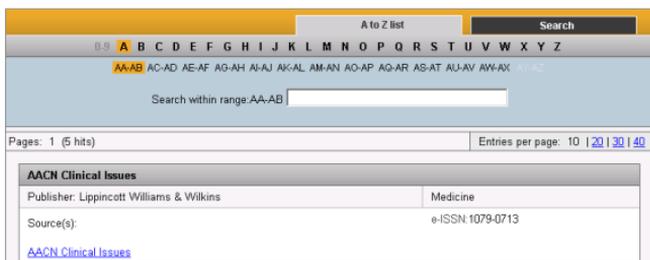
HAN 2 has an alphabetical list option to help you find specific HAN accounts. You can view account names listed alphabetically or use the search function to find a particular account.



You can integrate the A-to-Z list in existing HTML pages. To do this, add a link that points to the URL given below. To adapt the graphical presentation of the list, edit the `base-style.css` file in the `\apache2\hh\han\HAN-AtoZ` directory.

For details on how to change functionalities in the alphabetical list (such as language defaults, for example), please contact H+H Software.

The URL that calls the A-to-Z list is `http://<HAN server>/HAN-AtoZ/atoz.php`.



3.11 Statistics Program

The Statistics program in HAN can help you carry out statistical analyses of HAN usage. The procedures involved are explained in detail in chapter 7.

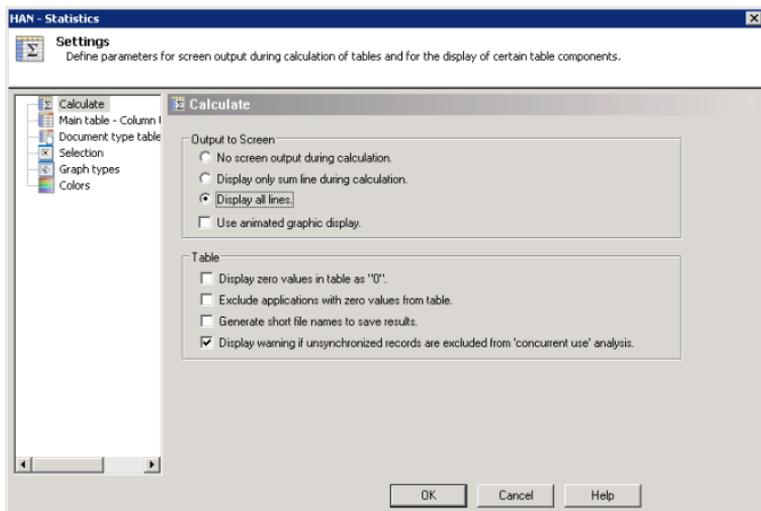
To launch the HAN Statistics program, select **Programs/HAN/HAN Statistics**. Select **Settings** from the **View** menu to configure global settings for the Statistics program.



The settings are divided into the following categories:

- Calculation
- Column titles in main table
- Column titles in document-type table
- Selection
- Graph types
- Graph colors

Calculation



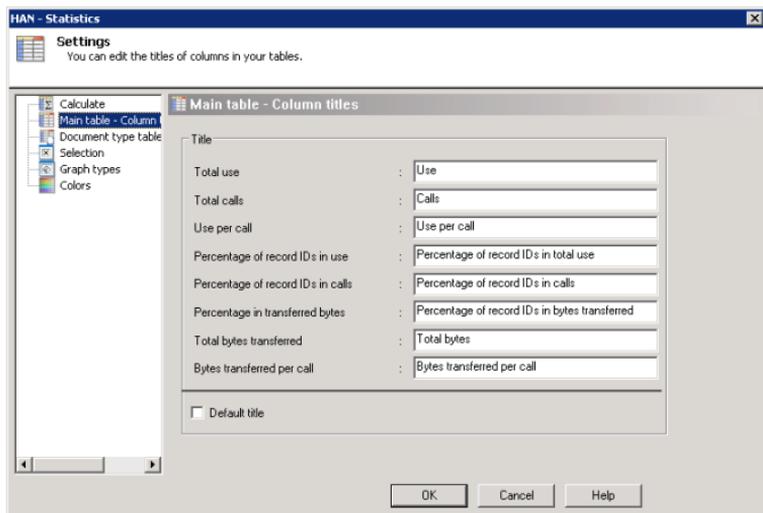
On the **Calculation** dialog page, you can define which data is output to the screen during calculation and configure the graphical representation of the charts.



If you select the “Use animated graphic display” option, calculation of the spreadsheet will be slowed down. For the fastest possible calculation, select “No screen output during calculation.”

The settings under “Table” let you define whether or not HAN accounts for which no record ID is found are included in the spreadsheet.

Main Table: Column Titles

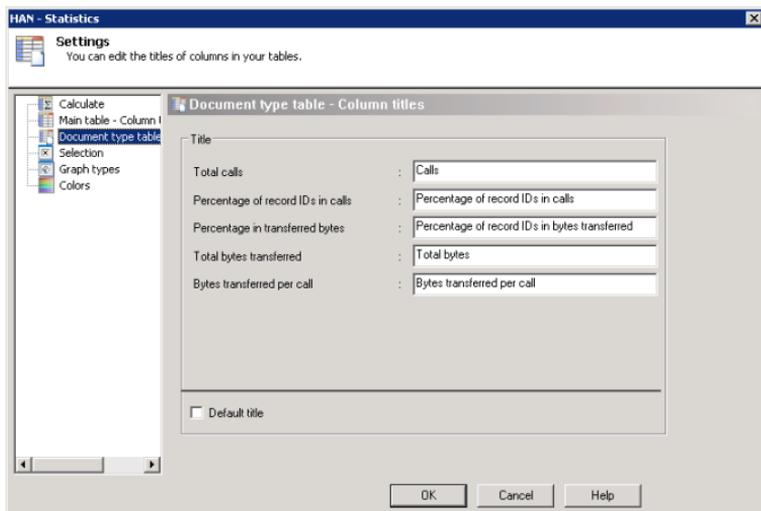


On the **Main Table: Column titles** dialog page you can adapt column titles to your requirements and preferences. Select the “Default titles” option to use the default settings for column titles defined in HAN.



For details on the purpose of the main table, see section 7.1, **Total Usage**.

Document-type Table: Column Titles

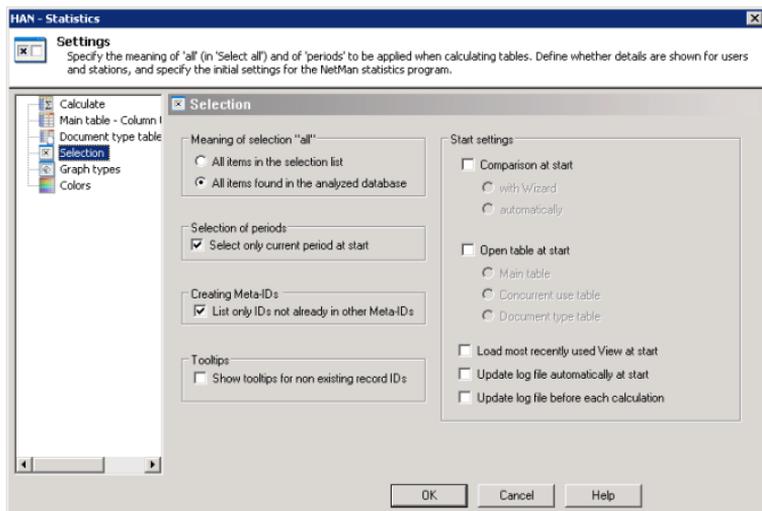


On the **Document-type table: Column titles** dialog page you can adapt column titles to your requirements and preferences. Select the “Default titles” option to use the default settings for column titles defined in HAN.



For details on the uses of the document-type table, see section 7.3, **Document Types**.

Selection



With the HAN Statistics program you can have spreadsheets calculated on the basis of users, record IDs, or other criteria. When choosing criteria, you have the option of selecting all criteria. The exact meaning of “all” in the “Select all” option is defined on the “Selection” dialog page as follows:

- **All items in the selection list:** Only the elements in the currently active selection are included in the calculation.
- **All items in the analyzed database:** Elements that have not been selected (e.g., because their data has not yet been collated) are included in the calculation. In some cases, the resulting spreadsheet may show entries that were not present in the selection (e.g., deleted HAN accounts).

The option under “Selection of periods” lets you define whether the current period (month, quarter, half-year or year) is the default selection when the calculation function is called.



You can group record IDs under one separate record ID, called a “Meta-ID,” that summarizes the statistical values in the individual IDs.

Each ID, whether for a user, station or HAN account, can be assigned more than once to Meta-IDs, but the data can only be calculated if the ID is not used in multiple instances. If you select the “Show only IDs not used” option, only record IDs not yet included in any Meta-ID are shown for selection when you create a new Meta-ID.

When you select a record ID, HAN Statistics shows which accounts are assigned to this ID (in a Windows “tooltip”, displayed when you hover the mouse on the selected ID). The **Show tooltips for non-existing record IDs** option defines whether an empty tooltip opens if no record ID is found.



A Record IDs is not found, for example, if the account has been deleted in HAN Administration.

The options under “Initial settings” define the operations carried out when you open the HAN Statistics program. Select **Collate data when program is opened** to have the Statistics program update data on record IDs, users and stations at startup, either automatically or by opening an interactive wizard. If **Open table automatically** is selected, you can define which table is opened at startup.



Please note that the table specified here is not re-calculated when it is opened on startup.

Alternatively, you can have the most recently active View opened (**Load most recently used View on startup**.) For details on the use of Views, see chapter 7, *Event Logging and Statistical Analysis*.

HAN has two databases for data logging. One database contains records of all requests and the other, the sequential database, is used for statistical analyses. The two options **Update database automatically on startup** and **Update database before each calculation** define when the sequential database is updated.



You can update databases manually at any time by selecting **Databases/Update database** from the **Edit** menu. For more information on the HAN databases see section 8.4, *Databases*.

Graph Types

The HAN Statistics program enables graphical display of statistical values. On the “Graph Types” dialog page you can specify the type of chart to be shown.

Graph Colors

On the “Graph Colors” page you can define the colors used in the Statistics program to highlight values.

4 Online Resources over HAN

4.1 HAN Accounts over HTTP and HTTPS



A HAN account is an online resource that is called over the HAN server. Each HAN account has its own properties (see also chapter 5, *Managing HAN Resources*). One special property of a HAN account is the access script, which defines the response to a HAN account call. For example, the access scripts might execute a user login on the origin server, for example, or point the user's browser to a particular HTML page.

This chapter describes how to create and edit HAN accounts.

Generally speaking, HAN accounts can be divided into two different types:

- Accounts without manually recorded scripts; for example, accounts that use HAN's IP authentication or HTTP login dialog mechanisms.
- Accounts with manually recorded scripts; for example, for explicit login on the origin server.

Creating a HAN account without recording a script

The most basic form of HAN account has a destination URL that is simultaneously the root URL of the desired online resource. When this is the case, the access script does not require editing; all required information is automatically stored in HAN when the account is created.

The following example describes how to create an account that opens the online magazine "Heise" using the URL "www.heise.de".



Open HAN Administration.



Open the "New Account" dialog in one of two ways: Select New Account from the File menu, or click on the "New Account" toolbar icon .



3

Enter a name for the account, the starting URL and, if desired, a group name.



For details on account groups, see section 5.2, **Account Groups**.

4

Click on **OK** to confirm your input. The new account is shown in the Accounts sidebar. The HTML view shows the page that the account opens, and the Navigation view shows the access script automatically created by HAN.

URL	Parameter	Value	Method for passing
http://www.ft.com/home/us			GET

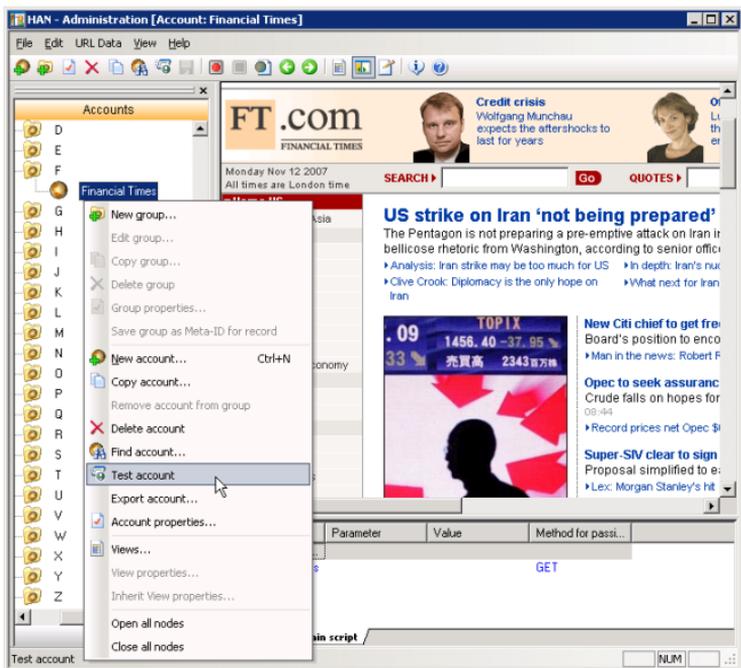


The new account is saved automatically.

The new account is fully functional as soon as it has been saved, and can be called by entering the URL: `http://<HAN server>/han/Heise`.



You can call the account from the HAN Administration program by clicking on the toolbar icon  or by selecting "Test account" from the shortcut menu.



To create a HAN account with an access script for login on the origin server with an HTTP login dialog, only one additional step is required: After creating the new account, add the required login data to the account properties (see section 5.1, **Accounts** for details).



When logging in using an HTTP login dialog, data is encrypted before it is sent by the browser. For this reason, data for an access script is not required. HAN sends the data when it is requested by the origin server.

When you make a HAN account that performs login in the background or guides the user to a specific HTML page, you need to record a script for the account.

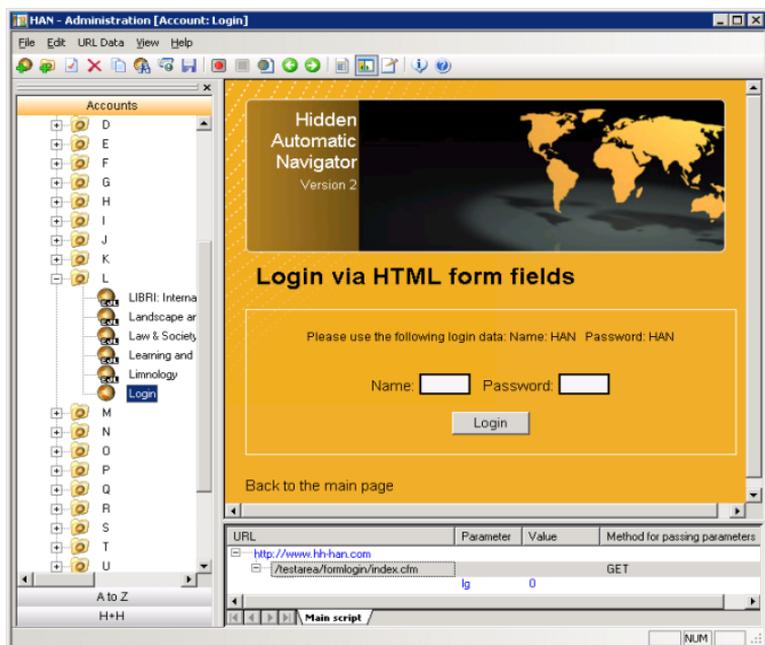
Creating a HAN account with manual script recording

The first steps are the same as those described above. In this example, we will create an account that opens a page at the H+H HAN testing site (<http://www.hh-han.com/testarea/HANlogin.cfm?lg=0>).

The page in question contains a link labeled “HTML form login.” When you follow this link, a login form opens. Enter “HAN” (without quotation marks) for both user name and password and click on “Login”. This opens a page with congratulations on your successful login and a link to another page, with a description of HAN’s automation features, which will be the target page of this sample HAN account.

1

Create a new account (called “Login”) with the root URL “<http://www.hh-han.com/testarea/formlogin/index.cfm?lg=0>”.



2

The next step is to begin recording the script. To do this, click on the **Start recording** icon: 

All subsequent actions, the results of which you see in the HTML view, are recorded in an access script as seen in the Navigation view.

To record a script, go through all the steps in the HTML view that you would otherwise go through on the web page itself (login, navigation, etc.). Enter the user name and password and click on **Login** to confirm your input. Then click on the link to the target page.



For this time being, you can ignore the message about a persistent cookie (see section 4.4, **Cookies** for information). Click on the **No** button to confirm that you do not wish to save the cookie.

All required steps are now listed in the Navigation view.

URL	Parameter	Value	Method for passing parameters
http://www.hn-han.com			
/testarea/fomlogin/index.cfm			GET
/testarea/fomlogin/result.cfm	lg	0	POST
	name	HAN	HAN
	pwd	HAN	HAN
	lg	0	Pass parameter within URL
/testarea/fomlogin/HANatwork.cfm			GET
	lg	0	

Navigation view: Main script

3

Click on the **Stop recording** icon () to end the script recording function, and then save the script. You now have a fully functional access script that you can call using the Testing function.

In some cases, a HAN access script may contain calls that are not relevant for the desired process. The structure of an access script is described in detail in the following, followed by an example of how you can optimize the script just created.

Structure of an Access Script

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

- Server nodes
- URLs
- Parameters

A **server node** indicates a change of servers. All URLs that are listed under a particular server node are automatically allocated to that server. Any number of URLs can be listed under each server node.

Each **URL** is assigned to the server node directly above it in the hierarchy. URLs can have any number of parameters.

Each **parameter** is assigned to the URL directly above it in the hierarchy. Each parameter has one value assigned to it.

When creating the account in the example above, one server node (www.hh-han.com) and three 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.

URL	Parameter	Value	Method for passing parameters
http://www.hh-han.com			
-/testarea/tomlogin/index.cfm	lg	0	GET
-/testarea/tomlogin/result.cfm			POST
	name	HAN	
	pwdord	HAN	
	lg	0	Pass parameter within URL
-/testarea/tomlogin/HANatwork.cfm	lg	0	GET



A detailed explanation of HTTP and the GET and POST methods it defines is beyond the scope of this manual. If you need more information on these topics, please see the recommendations for further reading listed in the appendix.

HAN stores the login data you enter while recording the script.

-/testarea/tomlogin/result.cfm			POST
	name	HAN	
	pwdord	HAN	
	lg	0	Pass parameter within URL

This data is sent automatically when the script executes; thus no user input is required for login.

You can edit access scripts at any time. Double-click on the desired server node, URL or parameter to edit the properties of that element. Alternatively, you can open a shortcut menu to edit, add or delete script elements.

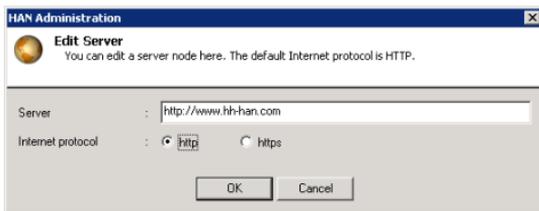


If the login data is encrypted and sent over HTTPS, the server node is labeled accordingly in HAN with **https**:

- Call over HTTP: http://<server>
- Call over HTTPS: https://<server>

You also have the option of configuring the use of HTTPS manually.

To do this, open the server node properties (double-click on the node or right-click and select **Server/Edit**).



Optimizing an Access Script

Unlike a script used for programming, such as a Java or Visual Basic script, for example, a HAN access script may contain steps that are not relevant for the intended process. When a user navigates the the Internet, the path to a particular web page may be circuitous if the target is not known at the outset. If the exact target is known, however, the URL can simply be entered in the address line.

The same principles are seen in a HAN access script. Initially, it contains all the steps that were carried out to arrive at the target. Afterwards, you can optimize the script so that the HAN account opens only the relevant page(s). These may include, for example, login pages, target pages, and any intermediate pages that are required for subsequent processing (see section 4.2, **Defining URL Parameters** for details).

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.

In this example, the login page and target page are the relevant pages. The optimized access script looks like this:

URL	Parameter	Value	Method for passing parameters
http://www.hh-han.com			
/testarea/formlogin/essul.cfm			POST
.....	name	HAN	
.....	pwd	HAN	
.....	lg	0	Pass parameter within URL
/testarea/formlogin/HANatwork.cfm			GET
.....	lg	0	



We strongly recommend creating a copy of the access script as soon as recording is completed. This way, you can edit the copy and still have the original in case anything goes wrong during optimization (e.g., if you delete one URL too many).



When you restart the script recording process, all existing entries are deleted from the main script.

4.2 Defining 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, such parameters are automatically included in the URLs recorded. If you test it right away, the script will work. When used later to call a page, however, such values may have expired, in which case the script fails.

This is why HAN offers the option of **defining these parameters** in variables. This means that HAN does not send the value of a parameter as saved in the script, but rather the value that is used in the session by the origin server at the time the URL is called.

The following demonstration illustrates this technique: Create a new account as described in section 4.1 with the URL “http://www.hh-han.com/testarea/cookie/index.cfm?lg=0”.

After the script has been recorded, the Navigation view should show the following:

URL	Parameter	Value	Method for passing para.
http://www.hh-han.com			
testarea/cookie/index.cfm			GET
testarea/cookie/result.cfm	lg	0	POST
	name	HAN	
	pwd	HAN	
	lg	0	Pass parameter within URL
	CFID	35216082	Pass parameter within URL
	CFTOKEN	67692534	Pass parameter within URL
testarea/cookie/HANnetwork.c...			GET
	lg	0	
	CFID	35216082	
	CFTOKEN	67692534	

Main script

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



To determine which values might change every time a page is called, create the access script again in a new account with a different name at a later point in time, and check for differences in parameter values.

The following steps demonstrate the procedure for using variables to define URL parameters.

1

Double-click on the parameter to open its properties (or right-click on the parameter and select **Parameter/Edit** from the shortcut menu).

HAN Administration [X]

Edit parameter
You can edit a URL parameter here.

Parameter : CFID

Value : 35216082

URL is transmitted per POST - Pass this parameter within the URL anyway

Parameter may contain different values for each call

Replace only if parameter names and values are identical

Replace only if values are identical

in URLs in parameters

Parameter separator : []

Use parameter for login as:

user name [%user%]

password [%password%]

OK Cancel

2

Activate the **Parameter may contain different values for each call** option.

HAN Administration [X]

Edit parameter
You can edit a URL parameter here.

Parameter : CFID

Value : %url_parameter_0%

URL is transmitted per POST - Pass this parameter within the URL anyway

Parameter may contain different values for each call

Replace only if parameter names and values are identical

Replace only if values are identical

in URLs in parameters

Parameter separator : []

Use parameter for login as:

user name [%user%]

password [%password%]

OK Cancel

The value of the CFID parameter is replaced by the `%url_parameter_0%` variable. Click on **OK** to confirm. The `%url_parameter_0%` variable is now shown in the access script in place of the value recorded for the CFID parameter.

URL	Parameter	Value	Method for passing para...
http://www.hh-han.com			
- /testarea/cookie/index.cfm			GET
- /testarea/cookie/result.cfm	lg	0	POST
	name	HAN	
	pwd	HAN	
	lg	0	Pass parameter within URL
	CFID	%url_parameter_0%	Pass parameter within URL
	CFTOKEN	67692534	Pass parameter within URL
- /testarea/cookie/HANatwork.c...			GET
	lg	0	
	CFID	%url_parameter_0%	
	CFTOKEN	67692534	

Navigation icons: back, forward, search, refresh, stop. Main script /

As shown in the illustration above, HAN has inserted the variable not only once, but for every occurrence of the CFID parameter.

3

Now configure HAN to use a variable for the CFTOKEN parameter as well, and then optimize the script. The resulting script should now appear as follows:

URL	Parameter	Value	Method for passing parameters
http://www.hh-han.com			
- /testarea/cookie/result.cfm			POST
	name	HAN	
	pwd	HAN	
	lg	0	Pass parameter within URL
	CFID	%url_parameter_0%	Pass parameter within URL
	CFTOKEN	%url_parameter_1%	Pass parameter within URL
- /testarea/cookie/HANatwork.cfm			GET
	lg	0	
	CFID	%url_parameter_0%	
	CFTOKEN	%url_parameter_1%	

Navigation icons: back, forward, search, refresh, stop. Main script /

4

Test your access script. If you delete the last URL, you will see the currently valid values for CFID and CFTOKEN when you call the account. In addition to the relatively simple techniques described above for defining URL parameters, HAN offers more sophisticated methods, as described in the following.

Options for Defining Parameters in URLs

The following options are available in the “Add Parameter” dialog:

- **Replace if parameter names and values are identical:** HAN replaces values only for the selected parameters for which both name **and** value match the recorded value.

HAN Administration

Add parameter
Adds a new parameter to the selected URL.

Parameter : Parameter2
Value : %url_parameter_2%

URL is transmitted per POST - Pass this parameter within the URL anyway

Parameter may contain different values for each call

Replace only if parameter names and values are identical

Replace only if values are identical

in URLs in parameters

Parameter separator :

Use parameter for login as:

user name (%user%)

password (%password%)

OK Cancel

- **Replace only if values are identical:** In some cases, the value for a parameter may be stored in more than one location; for example, within a URL or as part of a value for a different parameter. Select this option to have HAN modify the value even if only the values match, and not the parameter names. In such cases it is important to include the parameter separator.

HAN Administration

Add parameter
Adds a new parameter to the selected URL.

Parameter : Parameter2
Value : %url_parameter_2%

URL is transmitted per POST - Pass this parameter within the URL anyway

Parameter may contain different values for each call

Replace only if parameter names and values are identical

Replace only if values are identical

in URLs in parameters

Parameter separator :

Use parameter for login as:

user name (%user%)

password (%password%)

OK Cancel

Example: The home page of Financial and Manager Accounting (FMA), an online magazine, always shows the latest issue, which changes at regular intervals. The access script for this resource appears as follows:

URL	Parameter	Value	Method for passing parameters
http://www.mhhe.com			
/williams_basist3e			GET
https://highered.mcgraw-hill.com			
/webintegration/Webintegration/...			POST
	call	StudentLoginWeblet	
	email	%user%	
	password	%password%	
	goto_url	/sites/007285659...	
	external	1	
	chrome	/sites/007285659...	
	isbn	007285659	

This script is fully functional, but it always shows the issue that was current when the HAN account was created, rather than the latest issue. In this example, the value for the “isbn” parameter must be replaced by a variable in such a way that not only the “isbn” value is changed at login, but also the values for “goto_URL” and “chrome.” The parameter separator in this example is “/”.

In the **Edit Parameter** dialog, select both the **Parameter may contain different values for each call** and **Replace only if values are identical** options.

HAN Administration

Edit parameter
You can edit a URL parameter here.

Parameter : isbn

Value : %call_parameter_0%

URL is transmitted per POST - Pass this parameter within the URL anyway

Parameter may contain different values for each call

Replace only if parameter names and values are identical

Replace only if values are identical

in URLs in parameters

Parameter separator : /

Use parameter for login as:

user name (%user%)

password (%password%)

OK Cancel

You can deselect the **in URLs** option in this case, because no value for the parameter is bound to the URL itself. On the other hand, the **in parameters** option must be selected.

Once all variables have been added, the script appears as follows:

URL	Parameter	Value	Method...
http://www.mhhe.com			GET
https://highered.mcgraw-hill.com			POST
call		StudentLoginWeblet	
email		%user%	
password		%password%	
goto_url		/sites/%url_parameter_0%/student_viewQ/	
external		1	
chrome		/sites/%url_parameter_0%/chrome.vm	
isbn		%url_parameter_0%	

Main script /

- **Use parameter for login:** The script may show variables for login data. In this case, the specific data is stored in the account properties (see section 5.1, **Accounts** for details).



HAN can only replace a value with a variable if it is clear which parameter is thus defined. Some HTML pages contain the parameters read by HAN 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.

Example:

URL	Parameter	Value	Method...
http://www.mining-journal.com			GET
/home.aspx			
.....	__VIEWSTATE	%url_parameter_0%	
.....	ctlHeader:TxtSearch		
.....	ctlNavigation:Loginbt...	%user%	
.....	ctlNavigation:Loginbt...	%password%	
.....	hdnJournalID	474	
.....	Result:QID		
.....	ctlNavigation:Login...	21	
.....	ctlNavigation:Login...	9	

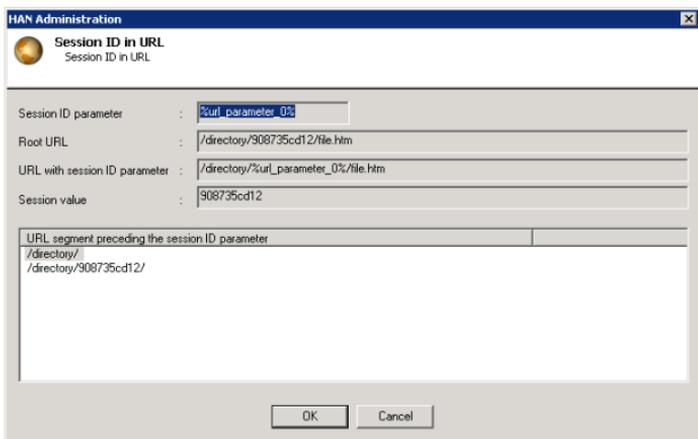
This script fails because the current value of the “_Viewstate” parameter is not available to HAN. On the other hand, if the “/home.aspx” page is loaded beforehand using the GET method, HAN reads HTML code and detects the required values.

URL	Parameter	Value	Method...
http://www.mining-journal.com			GET
/home.aspx			POST
.....	__VIEWSTATE	%url_parameter_0%	
.....	ctlHeader:TxtSearch		
.....	ctlNavigation:Loginbt...	%user%	
.....	ctlNavigation:Loginbt...	%password%	
.....	hdnJournalID	474	
.....	Result:QID		
.....	ctlNavigation:Login...	21	
.....	ctlNavigation:Login...	9	

Replacing a Session ID in a URL with a Variable

In some cases, the session ID is not appended to the URL, but rather is a fixed part of the URL itself. Nevertheless, with HAN you can replace this part of the URL with a variable.

In the next example the session ID, 908735cd12, is part of the URL: “http://server/directory/908735cd12/file.htm”. Select this URL in the Navigation view, right-click to open the shortcut menu and select **URL/Session ID in URL** to open the window for editing the URL.



Under **URL segment that precedes the session ID** select that portion of the URL that immediately precedes the session ID. This enables HAN to identify the session ID, which it then replaces with the %URL_parameter_x% variable. The **URL with session ID parameter** field now shows the URL with the session ID variable. Click on **OK** to save your changes.

URL	Parameter	Value	Method...
http://server			
/directory/%url_parameter_0%/file.htm			GET

4.3 Conditional Scripts

The HAN accounts created in the previous examples were designed for immediate login. In other words, as soon as the HAN account is called, the user is logged in on the content provider's web server. This solution is ideal for accessing online resources that require user login. Such resources can include online databases, archives, and others.

Some websites, however, offer both freely accessible and password-protected resources. For these websites, you need HAN accounts that only log the user in when login is required. Such sites might include online magazines that provide free access to abstracts, but require user login before complete articles can be read.

HAN lets you write **conditional access scripts**; for example, to perform login only if a certain URL is detected.

The first step of this procedure is the same as that outlined above for creating an account and beginning to record a script. In the second step, login is performed, recording is stopped and then conditions and variables for the conditional script are defined.

This procedure is demonstrated in the following using the H+H HAN testing site.

1

Create a new HAN account for accessing the website called **Public Web Site with Links to Protected Pages** (<http://www.hh-han.com/testarea/scriptlogin/index.cfm?lg=0>).

2

Begin recording the script and navigate to the page with links labeled "Abstract" and "Publication." Login is required only for publications, not for abstracts. Select a publication and log in. Stop the recording and save the results.

URL	Parameter	Value	Method for passing parameters
http://www.han.com			
-/testarea/scriptlogin/index.cfm			
	lg	0	GET
-/testarea/scriptlogin/indexPara.cfm			
	lg	0	GET
-/testarea/scriptlogin/publikation.cfm			
	lg	0	GET
	type	pub	
	id	57889	
-/testarea/scriptlogin/publikation.cfm			
	name	HAN	
	pwd	HAN	
	lg	0	Pass parameter within URL
	type	pub	Pass parameter within URL
	id	57889	Pass parameter within URL

The result at this point is a fully functional script that has two disadvantages: First, it will always perform the login, and second, it always opens the same publication.

3

The third step is to determine which URL triggered the login prompt, and then edit it in a subscript. In the current example, the login prompt opened when you clicked on the link to the publication. The URL in this link differs from the others encountered so far at this site in that it sends a parameter called “type,” with the value “pub,” to the web server. Furthermore, this URL contains an identifier for the requested publication (“ID=57889”).

URL	Parameter	Value	Method for passing parameters
http://www.han.com			
/testarea/scriptlogin/index.cfm	lg	0	GET
/testarea/scriptlogin/indexPara.cfm	lg	0	GET
/testarea/scriptlogin/publikation.cfm	lg	0	GET
	type	pub	
	id	57889	
/testarea/scriptlogin/publikation.cfm	name	HAN	POST
	pword	HAN	
	lg	0	Pass parameter within URL
	type	pub	Pass parameter within URL
	id	57889	Pass parameter within URL



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.

4

Open the URL properties page (double-click on the URL or select “URL/Edit URL” from the shortcut menu) and select the **Mark as a subscript condition** option. Enter a name for the subscript in the **Name** field.



It is a good idea to use a descriptive name, such as “Complete text” (or, in this example, “Plain text”).

Click on **OK** to confirm your settings.

HAN Administration

Edit URL
You can edit a URL here.

URL: /testarea/scriptlogin/publikation.cfm

Method for passing parameters

GET

POST

Conditional subscript

Mark as a subscript condition

Create new subscript Name: Plain text

Add condition to an existing subscript Name: [dropdown]

Delete URLs marked as subtitles from the main script

OK Cancel

HAN modifies the existing script and moves all URLs to the subscript.

URL	Parameter	Value	Method for passing parameters
http://www.hh-han.com			
/testarea/scriptlogin/publikation.cfm	lg	0	GET
	type	pub	
	id	57889	
http://www.hh-han.com			
/testarea/scriptlogin/publikation.cfm	lg	0	GET
	type	pub	
	id	57889	
/testarea/scriptlogin/publikation.cfm	name	HAN	POST
	pwdord	HAN	
	lg	0	Pass parameter within URL
	type	pub	Pass parameter within URL
	id	57889	Pass parameter within URL

The Navigation view now shows a second page with the name of the subscript. This page is divided into two parts:

- The condition is shown in the upper portion of the page (icon: )
- The lower portion shows the URLs that are called if the condition is met; in other words, when the URL at the top of this page is called (icon: )



The URL that forms the condition is the first URL called when the condition is met.



The last step is to define a variable for that value in the condition which can change every time the page is opened. (For details, see section 4.2, **Defining URL Parameters.**) To do this, open the properties page for the “ID” parameter in the condition-URL and select the options **Parameter may contain different values for each call** and **Replace only if parameter names and values are identical**.



Unlike variables in the main script, HAN uses asterisks (“*”) to indicate variables in subscripts.

Click on **OK** to confirm your settings.

HAN Administration ✕

Edit parameter
You can edit a URL parameter here.

Parameter : id

Value : *

Parameter may contain different values for each call

Replace only if parameter names and values are identical

Replace only if values are identical

in URLs in parameters

Parameter separator :

Use parameter for login as:

user name [%user%]

password [%password%]

All instances of the parameter which have been replaced are replaced by variables throughout the subscript; in this case, by %ID%.

URL	Parameter	Value	Method for passing parameters
http://www.hh-han.com			
/testarea/scriptlogin/publik-ation.cfm	lg	0	GET
	type	pub	
	id		
http://www.hh-han.com			
/testarea/scriptlogin/publik-ation.cfm	lg	0	GET
	type	pub	
	id	%id%	
/testarea/scriptlogin/publik-ation.cfm			POST
	name	HAN	
	pword	HAN	
	lg	0	Pass parameter within URL
	type	pub	Pass parameter within URL
	id	%id%	Pass parameter within URL

6

The last step is to check whether the calls in the main script are still correct. All URLs that came after the point in the main script at which you inserted a condition have been moved to the subscript.

URL	Parameter	Value	Method for passing parameters
http://www.hh-han.com			
/testarea/scriptlogin/index.cfm			GET
/testarea/scriptlogin/indexPara.cfm	lg	0	GET
	lg	0	

Main script Plain text



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

In this example, the main script is functional. The first URL can optionally be deleted to optimize the script, since it is not needed.

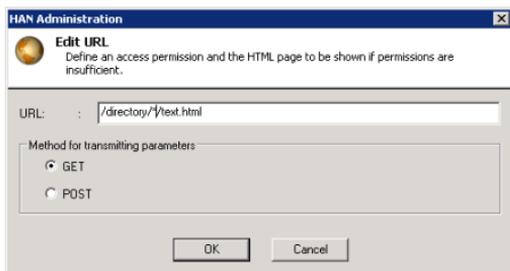
Test your script. The login is not performed until the subscript is called. Alternatively, you can replace a parameter the condition-URL with a variable. To do this, open the URL properties and enter an asterisk in place of the parameter you wish to replace.

For example, take the URL "http://server/directory/id5798621/text.html" as the condition.

The subscript is as follows:

URL	Parameter	Value	Method for passing...
http://server			
/directory/id5798621/text.html			GET
http://server			
/directory/id5798621/text.html			GET

In the URL properties, the “id5798621” value is manually replaced by deleting that text and entering an asterisk (“*”).



Afterwards, HAN replaces all instances of that parameter in the conditional script.

URL	Parameter	Value	Method...
http://server			
http://server	/directory/*text.html		GET
http://server			
%subscript_ul_template%			GET

4.4 Frames

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

A frame-based page consists of a number of web pages displayed at one time. A definition file called a frameset controls how the frames are displayed on a given web page.

HAN detects the use of frames in a web page and marks them in the Navigation view. The  icon indicates a frameset, and a frame is marked by . When using HAN, it is important to make sure the last URL in the access script contains the definition file for the frame set. If the last URL points to a page that forms a single frame in the set, then the user will see only that frame when the HAN account is called.

You can explore the H+H HAN testing site at <http://www.hh-han.com/testarea/HANlogin.cfm?lg=0> to familiarize yourself with frames.

1

For the following demonstration, create a HAN account to the “Frame-based HTML page” at <http://www.hh-han.com/testarea/frame/index.cfm?lg=0>.

The structure of this page is clearly labeled:



2

When you navigate to this page, HAN writes the following access script:

URL	Parameter	Value	Method...
http://www.hh-han.com			
./testarea/frame/index.cfm	lg	0	GET
./testarea/frame/left.cfm	lg	0	GET
./testarea/frame/top.cfm	lg	0	GET
./testarea/frame/main.cfm	lg	0	GET

When this script executes, however, only the last frame (main.cfm) is shown. To have the HAN account open all frames that make up the page, delete all frame URLs so that only the frameset URL (in this example, index.cfm) is called.

4.5 Cookies



Cookies are packets of information from a web server that are stored on the client by the browser. Web servers can use cookies to store information in the form of values assigned to parameter names. Generally, a distinction is made between persistent cookies and session cookies. Persistent cookies are saved beyond the end of the browser session. Session cookies, on the other hand, are deleted when the last browser instance is closed.

What information a cookie contains depends on the web server it came from. Providers of online resources often set persistent cookies when users log on. Usually a message box opens (such as a “remember me” dialog) offering this as an option. HAN supports the use of persistent cookies. When HAN detects a persistent cookie from a content provider while recording an access script, it opens a window prompting you to accept or refuse the persistent cookie.



If you click **OK**, HAN saves the cookie in the account properties and sends the stored information as requested when the script executes. In this case, the access script is almost complete and you do not need to create a login script. On the contrary; you can delete almost all of the recorded URLs from the script.

HAN shows the  icon in the Navigation window to indicate that the account uses a persistent cookie.

The advantage of using cookies is that the access script consists of only one URL. The shorter the script, the better the performance.

The use of cookies, however, can also have disadvantages. For example, if the content provider changes the web server’s mechanism for reading cookies, your HAN account will no longer work. Furthermore, cookies can expire.



Not all persistent cookies contain login data. Cookies are often used to track the websites visited by a browser and compile user profiles.

4.6 Advanced Settings



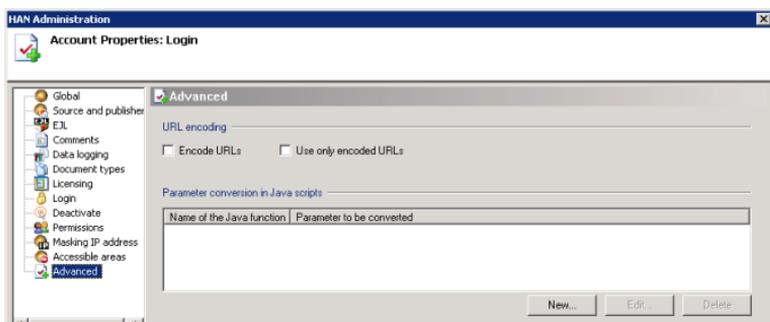
Note: *Advanced settings should be configured by experienced HAN administrators only. Faulty configurations may prevent HAN from functioning correctly.*

HAN has a number of advanced configuration options for administrative purposes.



Advanced settings are inactive when HAN is initially installed. To activate these configuration options, open the `han.cfg` file stored in the `\apache2\hh\han\bin` directory and enter `UserMode=Admin` in the “Settings” section.

This activates the “Advanced” property in account properties (see section 5.1, **Accounts** for details).



With this property, you can configure whether the account’s URL is displayed in the user’s browser in encrypted form. The following shows an example of the two forms:

- Unencrypted: `http://han2-beta/han/Login/www.hh-han.com/testarea/formlogin/HANNetwork.cfm`
- Encrypted: `http://han2-beta/han/Login/001259331e25143a143a4d7c4d390e321f2b1324.de/000d59331e251439052f023a112d15/000e59331e25142b1d360237013f0f38/000e59331e2514051d0a321f31072c1e.cfm`

If the URL is encrypted, the user cannot tell what page is loaded. You can also select the option to permit only encrypted URLs.



Encrypted URLs may cause HAN to function incorrectly. This is frequently the case when complex Java scripts are used to open new windows.

Under “Parameter conversion in Java scripts” you can configure how HAN handles problematic Java scripts.

Discussion:

If a page that HAN loads contains links to another page, these are automatically rewritten so that they are redirected to the HAN server. With Java scripts, however, it is not always easy to tell what the script does and whether URLs should be handled as HAN-URLs or “normal” URLs.

Here is an example: An “openWindow” function has been defined with two parameters: parameter 1 identifies a magazine and parameter 2 is a URL. When the script executes, the magazine specified is opened in a new window. The source code contains the following:

```
onClick="openWindow(12345,http://server/directory/index.html)"
```

In this case the URL that is passed to the Java script must be converted to a HAN-URL; otherwise, the new URL is not opened by HAN.

The “transferSelection” function in the next example also contains two functions; again, a magazine ID and a URL. The difference in this example is that the second parameter is not called directly; instead, the web server is informed of the destination URL. The Java script then generates the following call:

```
http://server/directory2/identify.html?Magazin=<Parameter1>&DestinationPage=<Parameter2>
```

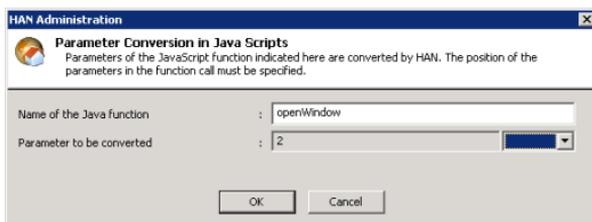
The source code contains the following:

```
onClick="transferSelection(12345,http://server/directory/index.html)"
```

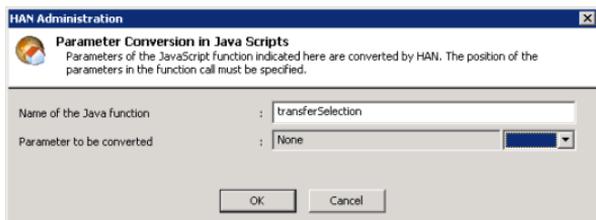
In this case, HAN must not change the second parameter, because the content provider’s web server cannot process the HAN-URL.

As the examples above show, HAN cannot interpret the Java syntax to discover whether a URL should be converted to a HAN-URL or not.

For this reason, you have the option of storing account-specific defaults for complex Java scripts. Click on “New” and enter the name of the Java script. Under “Parameter to be converted,” specify the parameter to be converted to a HAN-URL (for the first example given above, “2” is entered, indicating the second parameter):



For the second example above, use the following settings:



We do not recommend using this function unless an error occurs when a HAN account is called. Most Java scripts are automatically interpreted correctly by HAN.

5 Managing HAN Resources

5.1 HAN Accounts



A HAN account is an online resource that is called over the HAN server. Each HAN account has its own properties. One special property of a HAN account is the access script, which defines the response to a HAN account call. You can use access scripts to have a HAN account automatically login on the origin server, for example, or to guide the user to a particular HTML page.

Each HAN account has a number of properties, presented on various dialog pages:

- General information (Global page)
- Source and publisher
- Comments
- Metering functions (Data Logging page)
- Definitions of document types
- Licensing
- Login data
- Status (active/inactive, period of validity) (Deactivate page)
- Access privileges
- Masking IP address
- Whitelist (Accessible Areas page)
- E.JL (optional)

To open account properties, select the account, open the Edit menu and select **Accounts/Properties** or right-click on the account and select **Account properties**.

Global

The **Global** page contains general information about the account.



Some fields cannot be edited; for example, “Link syntax” (contains the account’s HAN-URL).

The link ID is the name of the account. If the account name contains any characters that are not allowed in URLs (such as umlauts or other special characters), these are automatically deleted. Click **Edit** to customize the link ID.

In the “Subject” field, you can assign a subject as a criterion for sorting your HAN accounts. You can also enter the ISSN and e-ISSN if desired. This information is included in the table of all accounts (see section 5.4, **Overview**) and in the alphabetical list of accounts.



To edit the choices available under “Subject,” open the **Edit** menu in HAN Administration and select **Subjects**.

The “Periods” field defines the licensing period during which this account is valid (see also chapter 6, **EJL and HAN**.)

The “Root URL” field shows the URL with which the account was created.

Source and Publisher

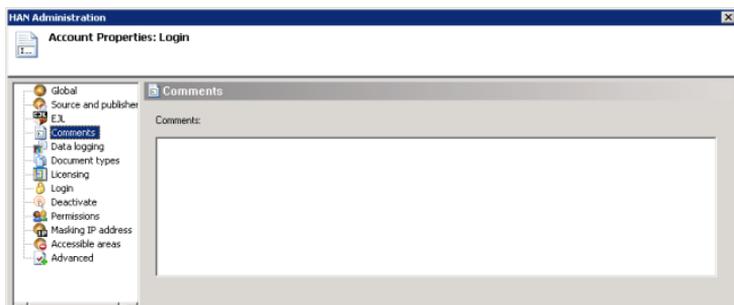
On the **Source and Publisher** dialog page you can specify these details pertaining to the target page of the HAN account. This information is shown

in the synoptical table (see section 5.4, **Overview**) and in the alphabetical list of accounts.



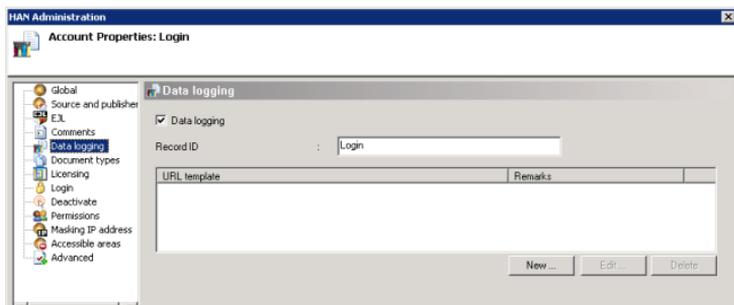
To edit the lists of sources and publishers, open the **Edit** menu in HAN Administration and select **Publishers** or **Sources**.

Comments



The **Comments** field lets you store additional information about the online resource.

Data Logging



On the **Data Logging** page you can configure the logging function to collect statistical data on the use of the online resource that this HAN account opens. The record ID identifies this account in the HAN Statistics program. Activate the “Data logging” option to switch on this function.



The Record ID must not be longer than 30 characters. If a longer ID is entered, HAN will truncate it and discard the excess characters.

You can define URL patterns for statistical analysis of HAN account usage. If the URL called does not match any URL pattern defined for the account (under “URL template”), usage of that account is not included in the statistical evaluation.

There are basically two modes of statistical analysis:

- All calls within the scope of a given account are analyzed together.
- Only calls directed to a URL that matched a specified URL pattern are analyzed.

The problem with the first mode is that HAN cannot tell how long the online resource specified in the account is used, nor when the user moved on to a different page.



The default setting in the Statistics program corresponds to the first mode described above: all usage of all URLs in the account is calculated as usage of the account. When this mode is active, any URL patterns you have defined are ignored.

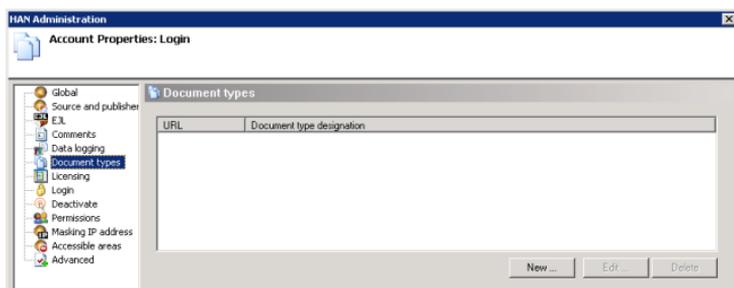
To change this setting, you need to edit the “nmstatis.cfg” file stored in the \apache2\hh\han\system\statis directory. In the “Record ID” section, change **DontUseHANTemplates=1** to **DontUseHANTemplates=0**.

With this setting active, only usage of URLs that match a specified pattern is counted as usage of the account. With the default settings, each HAN account has its root URL defined as a URL pattern.



The setting described above in the “nmstatis.cfg” file is global. If the account contains a server change and the URL pattern does not cover the subsequent server, usage data logging may be incomplete.

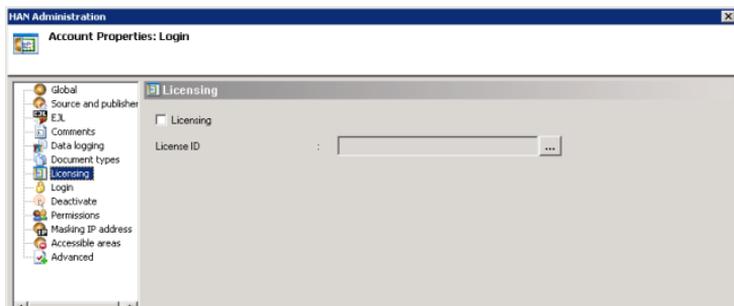
Document Types



Defining document types in HAN lets you run statistical analyses in accordance with criteria used by web-counter programs. On the “Document

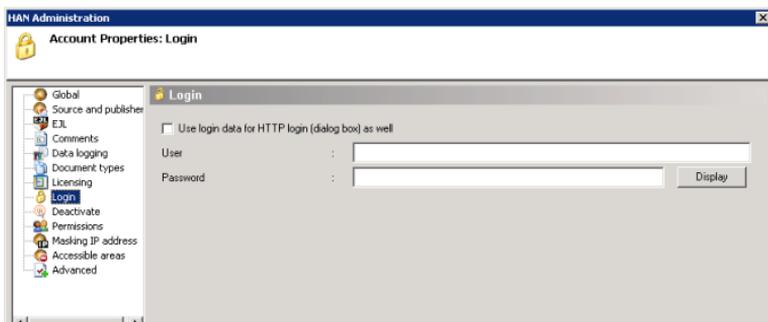
Types” page of account properties, you can assign URL patterns to document types. Click on **New** to open the dialog for allocating types. Enter your URL pattern(s) and allocate document types as desired. For details on document type designations, see section 7.3, **Document Types**.

Licensing



On the **Licensing** page of the account properties, you can activate account-specific licensing and define a license ID for the HAN account. (See section 3.5, **Licenses**, for details on defining a license ID.)

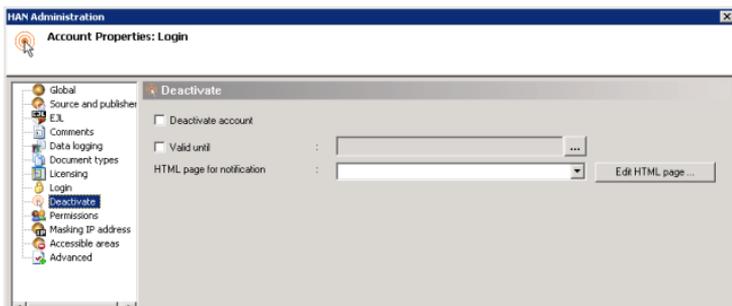
Login



HAN helps you manage the login data required for access to online content. In the Navigation view, right-click and select **Edit** from the shortcut menu to open the **Edit Parameter** dialog, and select “Use parameter for login as:” to have the user data displayed and managed in the account properties with its variables. On the “Login” dialog page of the account properties, you can edit the values that have been stored.

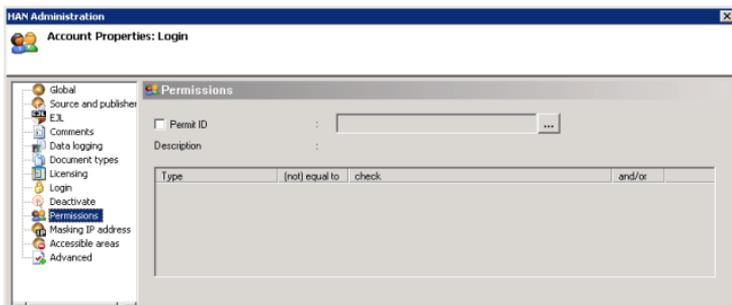
If you select **Use login data for HTTP login (dialog box) as well**, HAN will use the data entered here for HTTP login.

Deactivate



Select the **Deactivate account** option on the **Deactivate** page to make the account generally inaccessible. Alternatively, you can specify a date under **Valid until** beyond which HAN automatically deactivates the account. In either case, the HTML page you specify here is opened—for example, showing an error message—when a user attempts to call the account.

Permissions



On the **Permissions** dialog page, you can allocate existing privileges or define new privileges for access to the HAN account. The “Permit ID” field shows the designation of the privileges assigned.



For detailed information on the function and configuration of permissions, see section 3.3, **Permissions**.

Masking IP Address



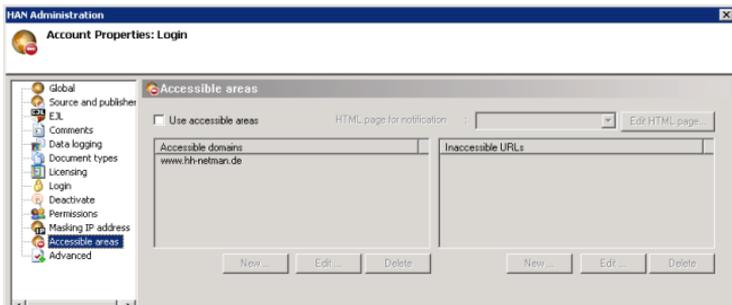
With the default settings, HAN uses the IP address of the HAN server in communication with a provider of online resources. In some cases, however, you might wish to use a different IP address for communication with certain providers. You can define an IP address for this purpose on the **Masking IP address** page. If you do, then that IP address is used for communication with the origin server whenever this account is called.

One example for the use of a masking IP address is to enable IP-based access for clients from computers outside the permitted IP range.



The masking 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 masking IP addresses in HAN.

Accessible Areas



HAN lets you restrict access to websites that may be linked in the page(s) opened by a HAN account. Activate the **Apply 'Accessible areas' definitions** option to define a whitelist for user access. The “Accessible domains”

section shows the URLs that can be called from within this account. The “Inaccessible URLs” section defines subareas within accessible domains that are excluded from user access (for example, pages with forms for editing a subscription to an online resource).



The root URL of an account is automatically entered in the **Accessible domains** section.

Advanced

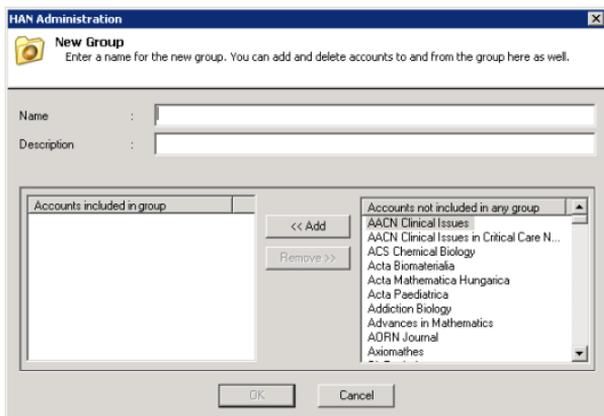
The options on the **Advanced** dialog page are described in detail in section 4.6.

5.2 Account Groups



You can group accounts in HAN according to your choice of criteria. An account group can be assigned properties that are independent of account properties. The members of a group can inherit some or all group properties, or retain all of their individual properties.

To create a new group, open the Edit menu and select **Groups/New** or right-click in the Accounts sidebar and select **New Group** from the shortcut menu.



Enter a name for the group and add HAN accounts from the list under “Accounts not included in any group.”

Adding Accounts to a Group

There are several options for adding existing accounts to a group:

- Open the **Edit** menu and select **Groups/Edit** or right-click on a group and select **Edit group** from the shortcut menu to open the window for editing groups, in which you can add and remove accounts.
- Use drag-and-drop to add an account to a group. In this case, the account retains its individual properties.

Removing Accounts from a Group

The options available are similar to those for adding groups:

- Open the **Edit** menu and select **Groups/Edit** or right-click on a group and select **Edit group** from the shortcut menu to open the window for editing groups, in which you can add and remove accounts.
- Right-click on an account and select **Remove account from group** from the shortcut menu.
- Select the account, open the **Edit** menu and select **Accounts/Remove from group**.

Save group as Meta-ID for record

You have the option of saving a group as a record Meta-ID (for the definition Meta-IDs, see Chapter 7, *Event Logging and Statistical Analysis*). To do this, select the group you wish to save as a Meta-ID, right-click on it and select **Save group as Meta-ID for record** from the shortcut menu. The record Meta-ID is generated in the HAN Statistics program for the selected group and is an aggregate of all accounts in the group.

The resulting Meta-ID will not be dynamically updated. In other words, changes made later are not shown. To update the record ID, you need to save the group as a Meta-ID again.

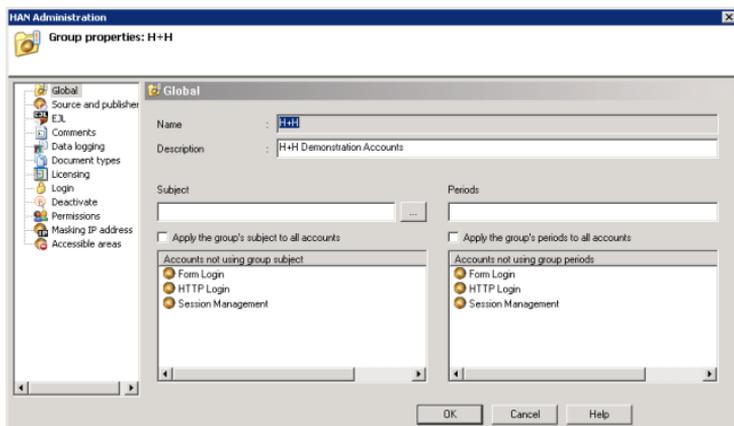
Group Properties

Like HAN accounts, account groups also have properties.

- General information (Global page)
- Source and publisher
- Comments
- Metering functions (Data Logging page)
- Definitions of document types
- Licensing
- Login data
- Status (active/inactive, period of validity) (Deactivate page)

- Access privileges
- Masking IP address
- Whitelist (Accessible Areas page)
- EJL (optional)

To view or edit group properties, open the Edit menu and select **Groups/Properties** or right-click on the group and select **Group Properties** from the shortcut menu.



The difference between group properties and account properties is that each group property can optionally be inherited by all the accounts that belong to the group. Each group property page also shows which account members do not use that property.



If an account belongs to a group, the option of applying the group value is available for each property.

Example: Data logging property page for an account that does not belong to any group:

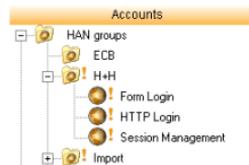


Example: Data logging property page for an account that belongs to a group:



In the Accounts sidebar, an exclamation point next to a property indicates whether all members of the group use the value defined for the group property.

At the account property level within the group, an exclamation point indicates an account property that differs from the group property.



5.3 Views



Views let you use your choice of criteria from among the account properties to search for accounts. Views also let you transfer properties to all accounts that match the criteria defined for the view.

Views complement the account-grouping functions in the administration of HAN resources. While an account can only be a member of one group and thus can inherit properties from only one source, it may be desirable under certain circumstances to transfer account properties to multiple accounts according to special criteria. This is possible with Views.

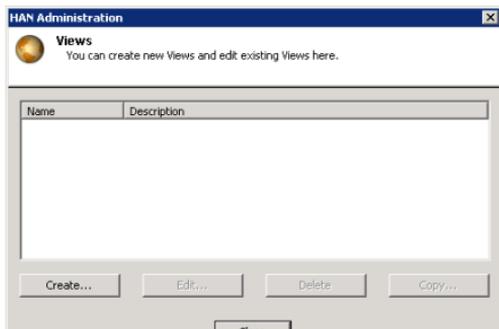
Example: A group called Springerlink includes all accounts that access the Springerlink content provider. While it may well make sense to use the record ID as group ID, it might not make sense to make access privileges content provider-dependent.



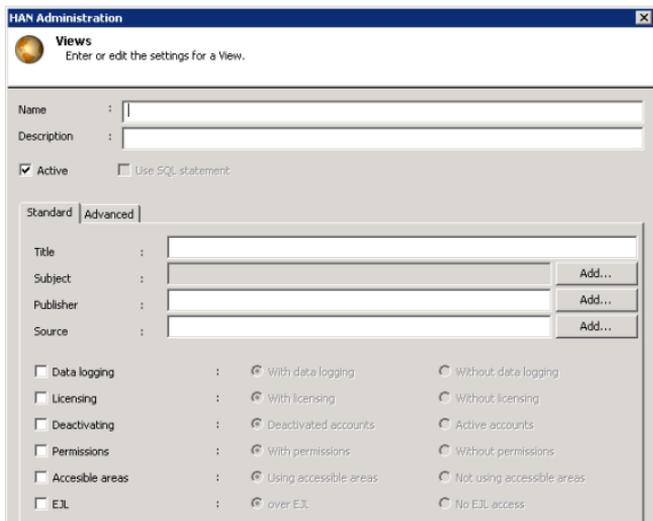
Note: Views do not have individual properties. Unlike group membership, the occurrence of an account in a View does not mean that that account cannot be found using any other View.

Defining a View

Select **Views** from the **Edit** menu in HAN Administration, or right-click in the Views window pane of the Accounts sidebar and select **Views** from the short-cut menu.



Click on **New** to define a new View.



Enter a name for the new View in the “Name” field. The description is optional. The “Active” option determines whether the View is shown in the Accounts sidebar. On the “Global” dialog page, you can define the criteria according to which the View is generated.



You can use wildcards in the “Title,” “Subject,” “Publisher” and “Source” fields.

Example: If you enter “H+H” in the “Title” field, this View will show all accounts called “H+H”. (Since accounts must have unique titles, this search would not yield more than one account.) If you enter “H+H*” (without quotation marks), the View will show accounts with names that start with these three characters, followed by other characters (for example, “H+H web page”). On the “Advanced” dialog page, you can specify criteria for an SQL statement that defines the View.

HAN Administration
Views
Enter or edit the settings for a View.

Name :
Description :

Active Use SQL statement

Standard | **Advanced**

SQL statement:
select * from accounts where

Database Fields (name with type; description):

1. linkid (char)	HAN Link ID	11. protocolid (char)	Record ID
2. title (char)	Title	12. rightid (char)	Permit ID
3. issn (char)	ISSN	13. licid (char)	License ID
4. eissn (char)	e-ISSN	14. accessible_areas (int)	With/without accessible areas
5. subject (char)	Subject	15. subscript (int)	With/without subscript
6. source (char)	Source	16. doctype (int)	With/without document types
7. publisher (char)	Publisher	17. periods (char)	Periods
8. active (int)	Active/inactive accounts	18. ezbid (char)	EJL ID
9. hangroup	HAN group		

Test

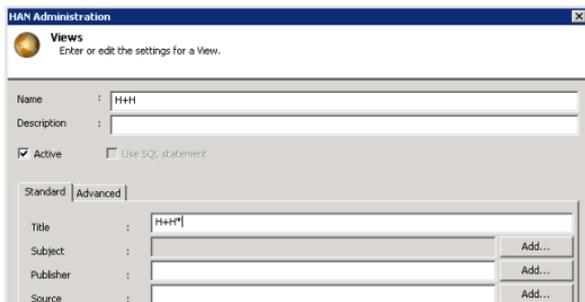
OK Cancel

Click on the **Test** button to test whether the SQL statement has been defined correctly. If you have defined options on both the “General” and “Advanced” dialog pages, the setting for the “Use SQL statement” option determines which definition is used.

Once you have completed these configurations, the new View is shown in the Accounts sidebar in HAN Administration, with the name you defined in its title bar.

Example of the “H+H” View

Defining the View:



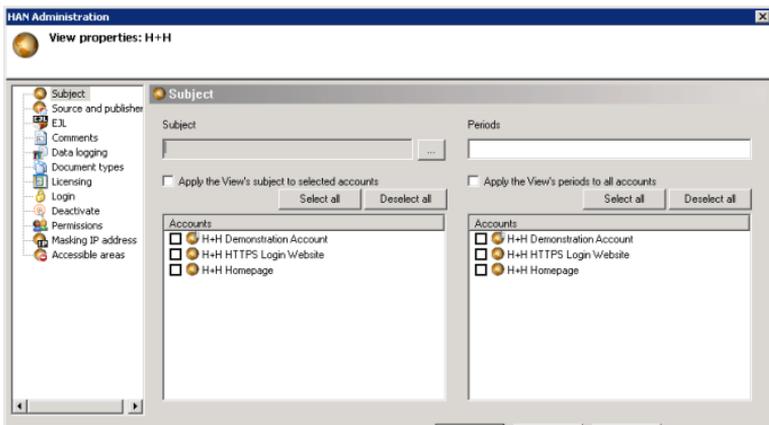
“H+H” View as shown in the Accounts sidebar:



The exclamation point indicates that the “H+H Demonstration Account” belongs to an account group.

Inheriting View Properties

You can define a View so that it finds certain accounts and then applies a specified property to them. Open the Edit menu and select **Views/Inherit View properties** or right-click on the View and select **Inherit View properties** from the shortcut menu to open the View properties.



Select the property in the sidebar on the left to open the corresponding dialog page, where you can configure the desired settings for each account that the View finds. Click on **Select all** to have the settings applied to all accounts in the View's list.



Your settings are not saved in the View. The next time you select **Inherit View properties**, all fields will be blank.

Settings inherited from a View overwrite the account's previous properties, regardless of whether the account belongs to a group.

5.4 Overview

Open the **Edit** menu in HAN Administration and select **Overview** to open a table that lists all accounts with their properties.

Name	Subject	Periods	Publisher	Source	ISSN	eISSN	Logged
AAACN Clinical Issues	Medicine		Lippincott Wilia...			1079-0713	
AAACN Clinical Issues in ...	Medicine		Lippincott Wilia...			1046-7467	
ACS Chemical Biology	Chemistry and P...		American Chemi...			1554-8937	
Acta Biomaterialia	Medicine.Mecha...		Elsevier			1742-7061	
Acta Mathematica Hun...	Mathematics		Akadémiai Kiadó...			1588-2632	
Acta Paediatrica							Acta Paediatrica
Addiction Biology	Medicine		Blackwell, früher...			1355-621...	
Advances in Mathemati...	Mathematics		Elsevier			1090-2082	
ADRN Journal	Medicine		Elsevier B.V.			0001-2092	
Axiomathes	Philosophy		Springer Scienc...			1572-6390	
BioTechniques	Medicine.Proces...		Eaton				
Bipolar Disorders	Medicine		Blackwell Publis...			1399-5618	
BIT - Numerical Mathe...	Mathematics		Springer Scienc...			1572-9125	
Blood Purification	Medicine		Karor			1421-9735	

Buttons: Show properties..., Load web page, Cancel

For a detailed view of account properties, double-click on the account in this list, or select the account and click on **Show properties**. When you click on **Load web page**, the root URL in the account is opened in the HTML view.



You can filter the display by entering criteria in the first line ("Enter text here").

6 HAN and the Electronic Journal Library (EJL)

6.1 EJL Interface

HAN is equipped with an interface to the Electronic Journal Library in Regensburg (EJL). This means your HAN server can provide direct access to your institution's pages at EJL. With this interface, a HAN account is created or updated every time one of your users calls a journal over the EJL page. Options are also available for manual and automatic import of EJL links. Furthermore, the HAN 2.x offers optional support for licensing time periods as well as for management of multiple HAN accounts—with different starting URLs—for a single e-journal.



The EJL options are available in HAN only if the corresponding module was selected during HAN installation.

The following must be configured to enable the EJL interface:

- Import the EJL title list into HAN
- Configure HAN settings in EJL administration
- Select the e-journals to be offered over HAN in EJL license administration
- Set up automatic collation of data

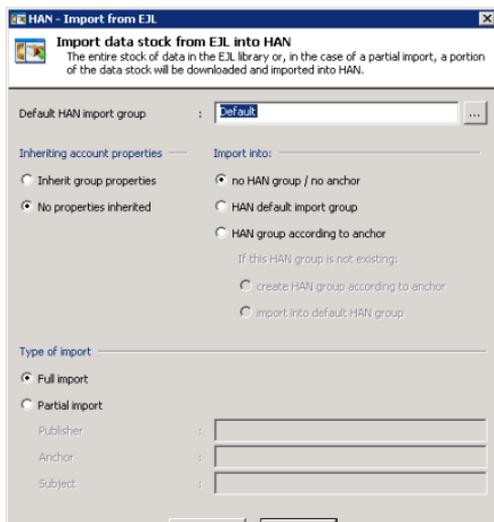
6.2 Importing the EJL Title List Manually

There are three ways to import and update EJL data:

- Manually (complete or partial import)
- Automatically (complete or partial import)
- Import or update when EJL content is accessed

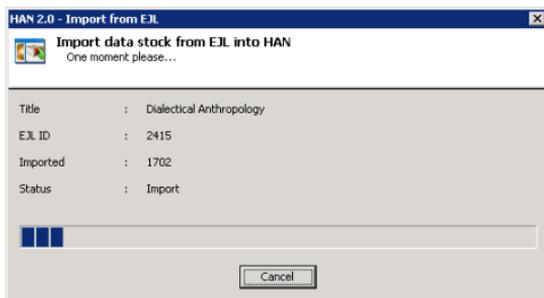
Manual import must be explicitly initiated by the HAN administrator.

In HAN Administration, open the **Edit** menu and select **Import/Export/Import from EJL**:



The settings shown that can be inherited and imported correspond to the default settings in HAN Administration. For details on these and other settings, see section 3.4, **HAN Administration**.

You can import either selected data, such as “Anchor”, “Publisher” or Subject,” or complete datasets.



For details on inheriting properties, see the description of the settings dialog in section 3.4, **HAN Administration**.



A log file of import operations is written in the %HANHome%\EZ-BLogs directory.

6.3 Collating HAN Accounts with EJL Automatically

Rather than importing EJL data manually, as described above, you can configure HAN to collate its EJL accounts with online EJL data automatically at regular intervals. During automatic collation, HAN updates existing accounts and checks whether any accounts have been added to or deleted from EJL license administration; if so, HAN adds and/or deletes accounts in your system accordingly.

Automatic collation can be scheduled using the **AT** command or your operating system's **Scheduled Tasks** tool. Automatic collation is performed when the EJL import program is called as follows (replace the %HANHome% variable with your HAN installation directory):

```
%HANHome%\bin\HANImpoEZB.exe
```

Add the `/hide` argument if you do not want the graphic interface displayed during collation. The `/clean` argument deletes all accounts that had been created by the EJL interface but are no longer found in EJL license administration.



You can also access the EJL database cleanup feature from the Start menu (**EJL Cleanup**).

In the following example, the import program was called with the `/clean` argument:



With the `/clean` argument, no new accounts are created and existing accounts are not updated.



No backup copies of accounts created in HAN when the accounts are deleted during automatic collation.



A log file of import operations is written in the %HANHome%\EZ-Logs directory.

Discussion: Using the AT Command

The first step is to write a short CMD script containing the import program call. The following example is based on a HAN installation in D:\Program Files:

```
"D:\Program Files\HAN2\WebSrv\hh\han\bin\HANImpoEZB.exe"
/hide
```

It is essential that you save the script in "D:\Program Files\HAN2\WebSrv\hh\han\bin" and name it "EZBImport.cmd". Then open the Windows command prompt and enter the following command:

```
AT 1:30 /Every:So D:\Programs\HAN2\WebSrv\hh\han\bin\EZ-
BImport.cmd
```

The resulting AT job executes every Sunday at 1.30 a.m. and performs a complete collation, including deletion of accounts that have been deleted from EJL license administration.



For more information on configuring AT jobs, please refer to the documentation on your operating system.

In addition to completely automated data collation, HAN offers the option of automatic partial importing. This entails writing a configuration file that defines criteria for the partial import. The import program is then called with the following argument: `/inputfile:<path to configuration file>`.

Configuration file structure:

[Input]

Defines the required arguments.

```
Publisher_1=<name of the publisher>
```

Defines the name of the publisher for the first partial import.

```
Subject_1=<subject>
```

Defines the subject.

```
HANGroup_1=<HAN group>
```

Defines the group (if any) into which new accounts are to be imported.

If you wish to perform multiple partial collations with an automatic program call, you can define all criteria in the configuration file:

[Input]

```
Publisher_1 =
```

```
Subject_1=
```

```
HANGroup_1=
```

```
...
```

```
Publisher_n =
```

```
Subject_n=
```

```
HANGroup_n=
```



The global settings are applied for automated import of EJL import.

6.4 Configuring HAN Settings in EJL Administration

1

In the **Settings** column in EJL Administration, click on the **Library settings** link.

2

Now follow the **Edit settings for HAN server pages** link.

3

In the “HAN server settings” field, enter the following value (insert the name of your HAN server in place of <HAN server>):

HAN-server settings

HAN-server's URL:

Selecting the e-journals to be Offered over HAN in EJL License Administration

After you have entered the HAN server in EJL administration, you need to specify which e-journals are to be opened over the HAN server.

1

In the **License administration** column in EJL administration, select the **Edit** link.

2

Specify the desired criteria on the Search page and open the Results page.

3

You should see a new column, with the header **Journal via HAN**. Select the accounts that will offer EJL links over 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			■			■

6.5 Rules for EJL Update

One of the most basic difficulties in collating data between HAN and the EJL involves the determination of when an account has been modified and when a new account should be created for a new licensing period. Because there is no unambiguous criterion, HAN requires rules that serve as a basis for interpreting the data received. Four properties are designated as fixed criteria: title, anchor, licensing period and URL.

The following rules apply:

If three of the four criteria remain unchanged: the existing account is updated.

If only the URL is changed: the existing account is updated

If only the licensing period is changed: the existing account is updated

Special case: anchor and URL are changed: the existing account is updated

In all other cases, a new account is created.



The following exception to Rule 4 above applies: ***If no licensing periods are defined*** (i.e., empty licensing period fields) and the anchor ***and*** URL are different, a new account is created.

Another special case arises when EJL accounts are blocked from EJL updates. Not only the specified account, but the e-journal itself is blocked. This is designated by the EJL ID. ***This means that for a blocked journal no changes are made.*** This includes creating new accounts for new licensing periods and deleting accounts by activating the “Cleanup” function.

Furthermore, HAN Administration detects whether an EJL account has been modified manually in the Administration program (such as a change in the root URL, or URLs added) and informs the user in such cases that the changes will be overwritten during the next update account if this account is not blocked from updates. If a main script is detected during EJL collation, the existing script is backed up to the `hh\han\hancfg\Backup` directory and the account is created once again based on the EJL data received.

7 Event Logging and Statistical Analysis

7.1 Total Usage

The Statistics program in HAN can help you carry out statistical analyses of HAN usage. The main table shows details on total usage.

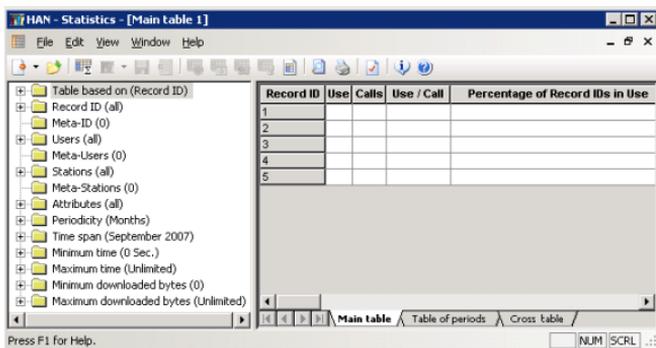
1

To launch the HAN Statistics program, select **Programs/HAN v2/HAN Statistics**. You can configure HAN to collate data and update the main table every time the Statistics program is launched.



2

Open the **File** menu and select “Main table” (or click on the **New table** icon) to run an analysis of total usage.



On the left-hand side of the main table, you can define the basis for calculation. Open **Basis for calculation** to define the basis for the statistical

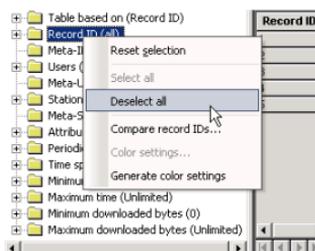
analysis. Select either record ID, users or stations. Your selection here determines which rows are shown in the table. In the **Record ID** section, select the record IDs of the datasets to be included in the calculation. You can select some or all record IDs.



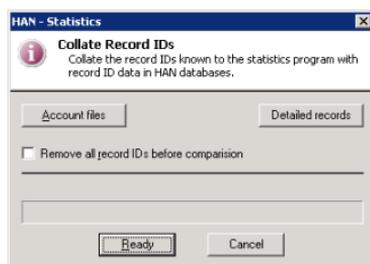
The effect of the “Select all” setting is determined by your settings; see section 3.11, **Statistics Program** for details.



If you find there are record IDs missing from the spreadsheet, this may be due to the fact that the data has not been collated. To collate the data, right-click on “Record IDs” and select “Collate record IDs” from the shortcut menu.



In the **Collate Record IDs** window, you can select the mode for collating data.



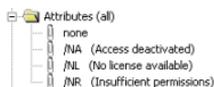
- Click on “Account files” to compile a table of record IDs from the list of accounts in HAN. Deleted accounts are not included in later statistical analyses.
- Click on “Sequential database” to compile a table of record IDs from the sequential database. Deleted and renamed record IDs are included in the statistical analysis.

The **Users** and **Stations** sections let you select the users and stations to be included in the calculation.



You can collate these records as described above. This may be necessary in order to view all records.

The **Attributes** section lets you select attributes to be included in the calculation of statistics.



You can choose from the following attributes:

- None – Accounts without attributes are included in the calculation.
- /NA – Deactivated account.
- /NL – No license available.
- /NR – The user did not have sufficient rights to call the HAN account.

The NA, NL and NR attributes are automatically allocated by HAN if the corresponding condition is met when an account is called. Another form of attribute is document type; see section 7.3, **Document Types**, for details.

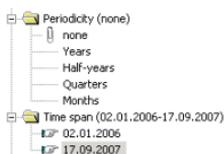
In the **Periodicity** section, you can select the period(s) to be covered in the calculation. Select a number of months, quarters, half-years, years, or no periodicity. You can define a period as the basis for periodicity in the **Periodicity** section.



If the current time period is not available for selection under “Periodicity,” you need to collate your databases. To do this, open the Edit menu and select **Databases/Update database**.



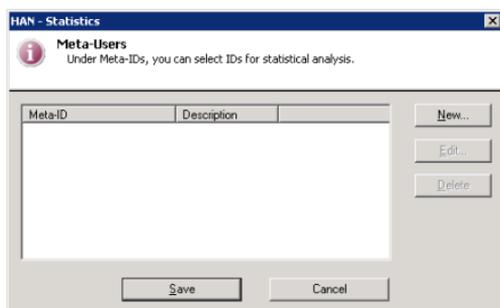
If you select “None” for the periodicity, you can specify a **period** by selecting **Set starting date** and **Set ending date** in the shortcut menu:



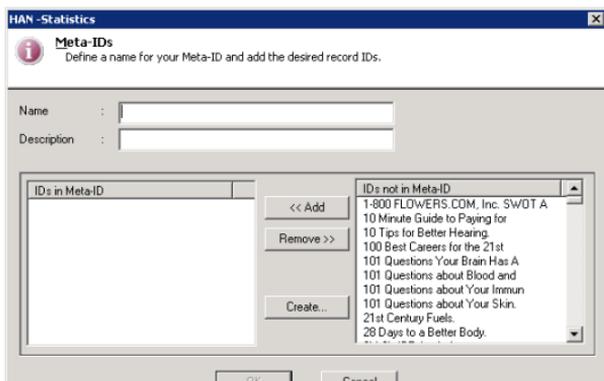
You can define filter criteria using the **Minimum time**, **Maximum time**, **Minimum downloaded bytes** and **Maximum downloaded bytes** options.

To do this, right-click on the section and select the desired items from the shortcut menu.

The Meta-IDs, Meta-Users and Meta-Stations sections let you have certain datasets automatically grouped for calculation. The resulting values are shown in the spreadsheet under the name of the Meta-ID. To create a new Meta-ID, right-click on the desired category (for example, “Users”) and navigate the shortcut menu to open the dialog for editing the Meta-ID (in this example, “Meta-Users”):



You can create, edit and delete Meta-IDs here. Click on the **New** button to create a new Meta-ID.

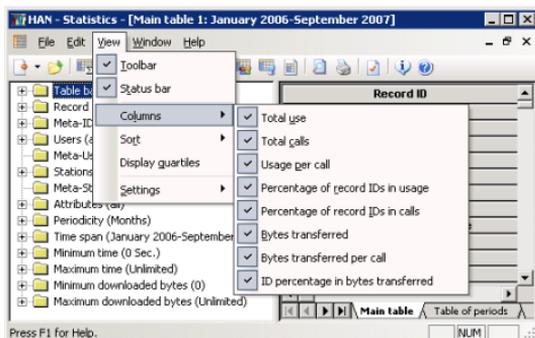


Enter a name and, if desired, a description and add the desired IDs (in this example, “Users”) to the Meta-ID. The last step is to confirm your selection by clicking on **OK**. Click on the **Create** button to define your own ID. You can use an asterisk (“*”) as a wildcard. All IDs that match the criteria you specify are automatically summarized.

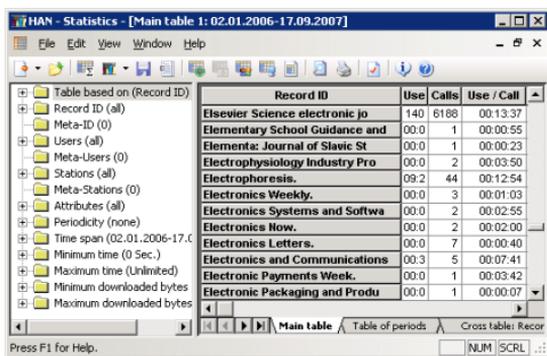


When a record ID is selected, a tooltip shows which accounts are assigned to that record ID.

Open the **View** menu and select **Columns** to specify the desired columns.



Click on the **Calculate table** icon or open the **Edit** menu and select **Calculate/Main table** to start the calculation.



You can open a detailed view of any element (ID) in the main table. You can view details on the database source and on the record ID, user or station, depending on your basis of calculation. Each time a main table is calculated, a table of periods is generated automatically. This lets you open detailed views of usage, calls, and so forth for each selected ID, based on periods. The following is an example of a table of periods, created for “Elsevier Science electronic journal” (first row), with a periodicity of months, from January 2006 to June 2006:

Period	Use	Calls	Use / Call	Percentage of Record IDs in Use
January 2006				
February 2006	392	1673	00:14:04	27.91
March 2006	361	1636	00:13:14	25.70
April 2006	274	1170	00:14:03	19.51
May 2006	249	1135	00:13:12	17.78
June 2006	44.2	221	00:12:02	3.16
Sum	140	6188	00:13:37	100.00

Select **Cross table** to have advanced calculations performed. You can pair the active basis of calculation (in this example, records IDs) with your choice of the following criteria:

- Periods
- Users
- Stations

You can choose from the following calculations for these criteria:



To calculate a cross table, open the **Edit** menu and select **Calculate/Cross table** or right-click on the main table and select **Calculate/Cross table** from the shortcut menu.

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):

Record ID	May 20	June 2006	Sum
Elsevier Science electronic jo	33.16	5.89	39.05
Emerald Management Xtra	1.64	0.01	1.65
Enzyme and Microbial Technolog	0.04	0.07	0.11
Geotechnical and Geological En	0.01	0.00	0.02
Harvard Business Review.	0.01	0.02	0.04
IEE Proceedings - Microwaves,	0.07	0.01	0.08
IEEE-IEE Electronic Library	22.81	2.31	25.12
INSPEC	3.11	0.87	3.97
ISI Emerging Markets	0.37	0.10	0.46
Inorganic Chemistry.	0.01	0.06	0.07
International Journal of Heat	0.07	0.03	0.10
IoP Electronic Journals	0.30	0.12	0.42
Journal of Magnetism and Magne	0.21	0.04	0.25

Records: 1 Periods: 2 Use as percent of total usage

This table shows that usage of the “Elsevier Science electronic journal” in those two months accounted for 23.65% of all HAN account usage in that period. Breaking this data down we see that 20.09% of the total usage occurred in May 2006, and 3.57% in June 2006.

To generate a report containing these results, open the **File** menu and select **Create report** or right-click and select **Create report** from the shortcut menu. Select the desired format and save the report. In this example, a HTML file is saved.



Reports are automatically stored under `\apache2\hh\han\statistics\reports`.

Die Haupttabelle - Microsoft Internet Explorer

Address `C:\Program Files\HAN2\WebSrv\hh\han\System\Stats\REPORTS\test.html`

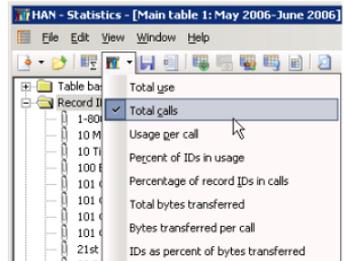
Cross table: %s (use as percent of total usage)

Record ID	May 2006	June 2006	Sum
Elsevier Science electronic jo	33.16	5.89	39.05
Emerald Management Xtra	1.64	0.01	1.65
Enzyme and Microbial Technolog	0.04	0.07	0.11
Geotechnical and Geological En	0.01	0.00	0.02
Harvard Business Review	0.01	0.02	0.04
IEE Proceedings - Microwaves,	0.07	0.01	0.08

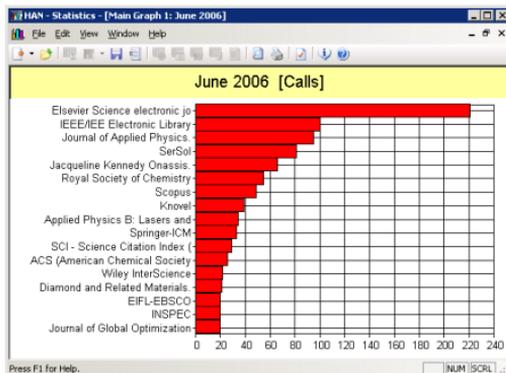
The HAN Statistics program can also display the main table data in the form of a graph.

To view a graph, click on the “Graph” icon and select the desired values:

In this example, **Total calls** is 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.

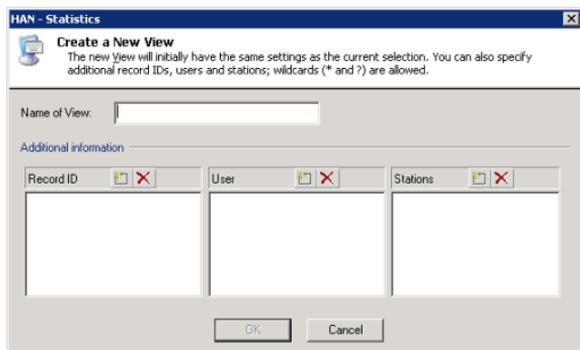


The resulting graph appears as follows:



You also have the option of saving the active settings (i.e., your selection of record IDs, users and stations or Meta-IDs) as a View.

To do this, open the **Edit** menu, select **View/New** and enter a name for the View in the dialog. You can add and edit advanced options for the View as well.



The advantage of a View is that you can use your settings to calculate the latest data at any time.



You can use wildcards in defining the desired record IDs, users and stations. The View will always show the latest values for the selected IDs.

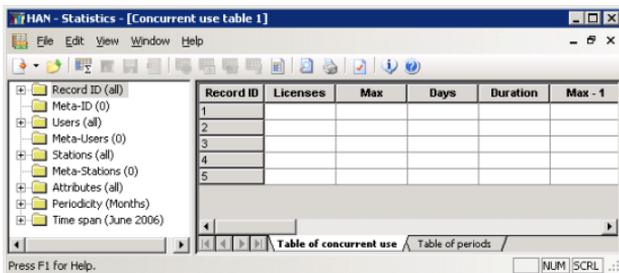
Example: You could create user IDs based on the departments in the company, and define employee IDs starting with “E,” and guest IDs starting with “G.”

Important: The additional data is added to existing settings (record ID, etc.). If you want to select only those IDs that are stored in the additional fields, you need to deselect all sections in the main table first (on the left-hand side of the window).

7.2 Concurrent Use

Unlike the main table, the concurrent use table lets you collect data on simultaneous usage of HAN resources. This can be useful in determining the number of licenses you should acquire for a given e-journal.

Run the HAN Statistics program and select “Concurrent use” as the table type.



The options in the sidebar for defining the basis for calculation are largely identical to those available in the main table, and thus are not discussed here.

The table pane shows the following columns:

- **Record ID:** For concurrent use tables, the record IDs is always used for the basis of calculation.
- **Licenses:** Optional value; the number of licenses allocated by HAN.
- **Max:** Highest number of simultaneous usage instances.
- **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 exceptional values that could skew apparent trends. The following spreadsheet is based on the data described in section 7.1, this time showing the concurrent use statistics for the month of June 2006.

Record ID	Lic	Max	Days	Duration	Max - 1	Days	Duration	Max - 2	Days	Duration
Elsevier Science electronic jo	5	1	00:03:27	4	2	00:10:13	3	1	00:15:56	
IEEE Electronic Library	4	1	00:04:13	3	2	00:02:08	2	1	00:14:29	
Springer-ICM	3	1	00:05:20	2	1	00:01:21	1	4	00:43:44	
CRC Press: ENGnetBASE (Engine	3	1	00:01:59	1	4	00:17:45	0	0	00:00:00	
SerSol	2	4	00:27:55	1	2	00:31:23	0	0	00:00:00	
Knovel	2	3	00:19:45	1	2	00:47:38	0	0	00:00:00	
Scopus	2	3	00:11:52	1	3	00:19:11	0	0	00:00:00	
Eastman Chemical Company SWOT	2	2	00:08:36	0	0	00:00:00	0	0	00:00:00	
ACS (American Chemical Society	2	1	00:09:19	1	5	00:36:06	0	0	00:00:00	
INSPEC	2	1	00:02:44	1	5	01:12:20	0	0	00:00:00	
SCI - Science Citation Index (2	1	00:02:40	1	4	01:09:15	0	0	00:00:00	
Wiley InterScience	2	1	00:01:28	1	5	02:27:25	0	0	00:00:00	

This table shows that there were five times on one day when “Elsevier Science electronic journal” was in concurrent use for a period of almost 3.5 minutes. It can likewise be seen that this concurrent use was not an exceptional occurrence, as the following peak shows concurrent use four times on two days, for a total of more than 10 minutes.

7.3 Document Types

The **Document Types 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 (see section 3.4, **HAN Administration**).
- URL patterns must be defined for the document types (see sections 3.4, **HAN Administration** and 5.1, **Accounts**).



Document types group the calls of URLs that match the specified URL pattern. You can define any number of URL patterns for each document type.

This usage can then be calculated in a document-type table in HAN Statistics.



Run the HAN Statistics program and select **Document-type Table** as the table type.

Document types	Calls	Percentage of Record IDs Called	Total bytes	Bytes tran
1				
2				
3				
4				
5				

The options in the sidebar for defining the basis for calculation are largely identical to those available in the main table, and thus are not discussed here. You can select **Minimum** or **Maximum downloaded bytes** to define filter criteria for the document types to be included in the calculation.

The following example uses the PDF document type:

All calls of PDF documents are grouped under the PDF document type (URL pattern: *.pdf). This means all instances in which PDF documents were called are included in the statistics, regardless of the resource used to locate the document.

Document types	Calls	Percentage of Record IDs	Total bytes	Bytes transferred per call
PDF	2665	6.69	765,602,987	274,206
JPG	2451	5.72	20,647,892	8,424
IGIF	34442	80.38	53,470,913	1,552
ICSS	3089	7.21	20,207,207	6,541
Sum	42847	100.00	879,928,999	[20,536]

In our example, a total of 2665 PDF documents were called in the month of June 2006. All documents together have a total data volume of approximately 780 MB. The average data transfer volume was about 274 KB per call. (To simplify calculations, 1 KB is defined as 1000 bytes in this example.)

You can also perform further calculations by selecting **Table of Users**, **Record IDs** or **Stations** as described in section 7.1., **Total Usage**.



Select "Database source" for detailed information on the effective usage of the PDF documents.

Record ID	Start date	Stop date	Start time	Stop time	User	Station	Bytes transfe	Attribute
SerSol	01.06.2006	01.06.2006	00:34:27	01:22:00	E1815U	83.31.22	238752	PDF: 28,1654538
Analytica Chimica Acta.	01.06.2006	01.06.2006	02:10:12	02:21:09	E4578U	193.25.0	159066	IGIF: 7,27927/PDF: 6,266936
Elsiever Science electronic jo	01.06.2006	01.06.2006	08:20:06	08:21:03	E3132U	194.242.	652689	PDF: 4,599000
International Journal of Heat	01.06.2006	01.06.2006	08:25:41	08:37:44	UNI LIB	194.29.1	219578	IGIF: 6,19946/PDF: 6,1321635
Elsiever Science electronic jo	01.06.2006	01.06.2006	08:52:51	08:58:24	E3132U	194.242.	897038	PDF: 6,642788
SerSol	01.06.2006	01.06.2006	08:58:45	09:02:02	E5444U	157.25.5	579222	ICSS: 1,7630/IGIF: 6,22524/PDF:
Elsiever Science electronic jo	01.06.2006	01.06.2006	09:16:12	10:10:06	UNI LIB	194.29.1	232224	IGIF: 34,123637/IGIF: 1,8677/PD
Springer-ICM	01.06.2006	01.06.2006	10:11:31	10:37:20	UNI LIB	194.29.1	939420	IGIF: 19,3169/PDF: 2,81108
International Journal of Numer	01.06.2006	01.06.2006	10:11:39	10:24:44	UNI LIB	194.29.1	198764	ICSS: 5,20700/IGIF: 108,94277/P
Eastman Chemical Company S	01.06.2006	01.06.2006	10:18:25	10:54:43	UNI LIB	194.29.1	645749	IGIF: 313,447699/ICSS: 44,1879
Elsiever Science electronic jo	01.06.2006	01.06.2006	10:18:41	10:20:55	UNI LIB	194.29.1	675568	IGIF: 15,36585/IGIF: 1,8677/PDF:
Analytica Chimica Acta.	01.06.2006	01.06.2006	10:18:59	10:32:30	UNI LIB	194.29.1	126934	IGIF: 6,27592/PDF: 8,818678
Elsiever Science electronic jo	01.06.2006	01.06.2006	10:18:59	11:53:48	UNI LIB	194.29.1	5814186	IGIF: 59,41845/IGIF: 1,8677/PDF:
SerSol	01.06.2006	01.06.2006	10:45:20	10:54:35	UNI LIB	194.29.1	224449	ICSS: 4,15042/IGIF: 1,765688/PD
Analytica Chimica Acta.	01.06.2006	01.06.2006	10:49:55	10:52:49	UNI LIB	194.29.1	519071	PDF: 2,113228
Eastman Chemical Company S	01.06.2006	01.06.2006	10:54:43	11:02:16	UNI LIB	194.29.1	158664	IGIF: 170,178101/ICSS: 25,2979
Tribology International.	01.06.2006	01.06.2006	10:57:02	11:05:23	UNI LIB	194.29.1	217360	IGIF: 7,11402/PDF: 4,1836303
Materials Science and Engineer	01.06.2006	01.06.2006	11:08:10	12:10:50	UNI LIB	194.29.1	4453325	IGIF: 31,78102/PDF: 85,4137526
SerSol	01.06.2006	01.06.2006	11:10:18	11:13:41	UNI LIB	194.29.1	358669	ICSS: 4,15042/IGIF: 9,26624/PDF
Elsiever Science electronic jo	01.06.2006	01.06.2006	11:20:56	11:22:21	E5360U	10.7.33.	741573	IGIF: 4,541/PDF: 2,653921

The "Database source" table shows details on the use of PDF documents. For example, "SerSol" was used on 1 July 2006 by the user called "E1815U"

at a station with the IP address 83.31.226.40 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 transferred” column (2,387,527 bytes). The “Data record attribute” column shows (/PDF:28,1654538) that PDF was the only type of document type transferred. This column shows the following data:
/<document type>:<number of documents>,<size in bytes>

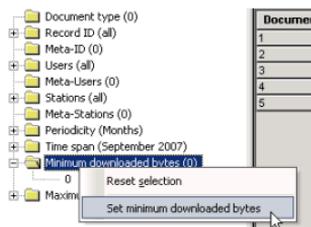


Data on calls for other types of documents can be logged at the same time. If more than one document type has been called, the “Data record attributes” column shows the different documents types as follows (example): /GIF:34,123637/JPG:1,8677/PDF:2,569073.

In this example, user “E1815U” called 28 PDF documents, with a total volume of approximately 1.6 MB, while using the “SerSol” HAN account.



The next step in this example is to determine which users loaded particularly large PDF documents. To do this, the **Minimum downloaded bytes** setting is selected in the shortcut menu and set to 30,000,000 bytes (~30 MB).



After calculation, the following spreadsheet is opened:

Document types	Calls	Percentage of Record IDs	Total bytes	Bytes transferred per call
/PDF	827	100.00	316,121,795	382,251
Sum	827	100.00	316,121,795	[382,251]

This table shows that a total of 827 PDF documents with a volume of more than 30 MB (each) were called.

Record ID	Stop date	Start time	Stop time	User	Station	Bytes transferred	Attribute
Elsevier Science electronic jo	01.06.2006	10:18:59	11:53:48	UNI LIBRAR	194.29.133.41	50141863	KJF:59,41845/PG:1,8677/PDF:166,557336
Materials Science and Engineer	01.06.2006	11:08:10	12:10:50	UNI LIBRAR	194.29.176.30	44533255	KJF:31,78102/PDF:85,41375266
Elsevier Science electronic jo	02.06.2006	11:03:09	11:25:30	UNI LIBRAR	194.29.133.41	38566390	KJF:17,19259/PG:1,8677/PDF:52,2812093
Elsevier Science electronic jo	02.06.2006	11:26:45	12:25:13	UNI LIBRAR	194.29.133.41	78148363	PDF:158,75730239/KJF:53,24126
Elsevier Science electronic jo	02.06.2006	14:09:14	15:49:10	UNI LIBRAR	194.29.176.193	69598753	KJF:169,73630/PG:3,26031/PDF:138,6045
Elsevier Science electronic jo	05.06.2006	13:11:40	15:16:26	UNI LIBRAR	194.29.152.181	49713992	PDF:226,44708927/KJF:57,139624/CSS:3,5

The **Database source** detail shows that the “Elsevier Science electronic journal” magazine was called five times by the “Uni Library” user, which is actually a grouping of all users located in the library. In each call, at least one PDF with at least 30 MB was loaded. On 1 June 2006, the user at IP address 194.29.133.41 called 168 PDFs for a total data transfer of some 55 MB, between 10:18 and 11:53 a.m. (see the first row).

Further details can be analyzed in the **Table of Users**, **Record IDs** or **Stations**.

8 HAN Components and Database Maintenance

8.1 Trace Monitor

The Trace Monitor is a diagnostic tool for tracking internal HAN processes such as checking user privileges, processing URLs, and so forth.



Trace Monitor can output only information that was generated in the active session; in other words, in the same context in which Trace Monitor is running. To view information on the Apache service and the associated HAN modules in an RDP session, Trace Monitor must be launched for console messages.

8.2 Database Browser

The Database Browser gives you a direct view of the HAN log files. The first dialog page (**HAN Details**) shows raw data (each request logged) and the **HAN Sequential** dialog page shows summarized data (all calls made in a HAN session added together). Internal HAN events and EJL system events are shown on the **Events** dialog page.

8.3 LDAP Settings

In the configuration program for LDAP settings, you can define parameters for LDAP authentication in HAN. Your settings are stored in the `%HANHome%\bin\hhenv.cfg` configuration file.

Scheme for setting up LDAP in a Windows 2003 ADS interface:

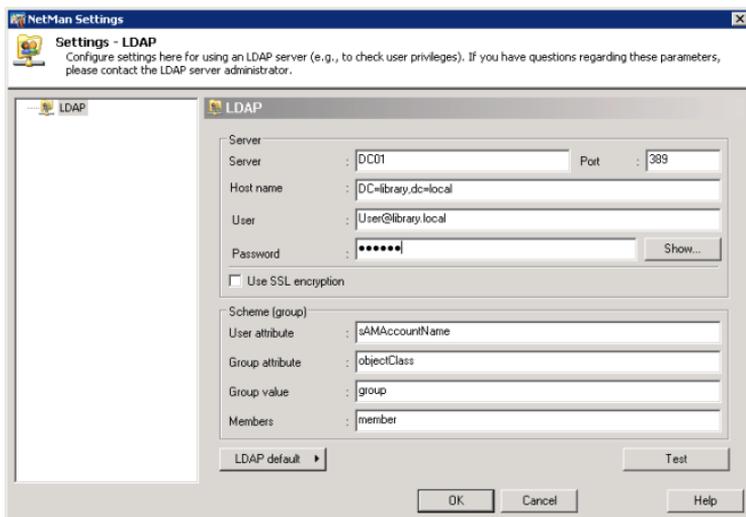
Enter the data relating to the LDAP server you wish to use:

- Server = Name of the LDAP server
- Host name = Distinguished name of the directory in which users are stored
- User = User name for login on the LDAP server
- Password = for login on the LDAP server

Click on **LDAP default** to choose one of two group schemes: 1) Microsoft LDAP server, or 2) Netscape LDAP server. Select the LDAP scheme from the defaults. If your LDAP scheme is different, you need to enter the following values:

- User attribute = This value is used to depict the user name in the corresponding user DN.
- Group attribute = Name of the attribute
- Group value = Indicates whether this is a group or not
- Members = Attribute in which the members are defined

If your LDAP server supports communication over SSL, you can configure HAN to address the LDAP interface only with encryption. Example of an LDAP configuration (domain controller name: DC01; domain: library.local, Windows 2003 domain):



8.4 Database Maintenance in the Statistics Program

HAN has two databases for data logging. The first, `hanprot.dbf`, logs all requests to providers of online content. In HTTP communication, each individual element of a web page can require a separate request, which means loading one page can add a large number of requests to this log. This is why HAN uses a different database, `hanprot.d.dbf`, for statistical analyses. The data in the the first database is added and stored based on user sessions.

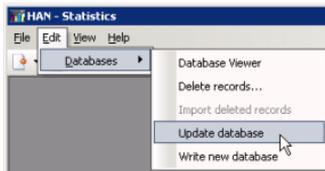


Both databases are stored in the `%HANHome%\prot` directory.

In the Statistics program, you can have data collated automatically when the program opens (see section 311, **Statistics Program**), or manually. After calculation of data in the sequential database, the raw data is no longer relevant for statistical analysis.

Collating Databases Manually

Run the Statistics program, open the **Edit** menu and select **Update database**.



Alternatively, you can have the database rewritten. The raw data in the `hanprot.dbf` database forms the basis for rewriting the sequential database.



In this case, the existing sequential database is deleted.

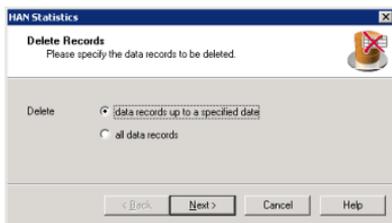
Delete Data Records

Due to the complexity of some web pages, the volume of raw data can grow rapidly, even to more than 10 GB, in a short space of time. We recommend checking your database at regular intervals and using the **Delete data records** function to delete any records you no longer need.



Data is not lost when you delete records from the data base. Records selected for deletion are stored elsewhere in a compressed file (ZIP).

To run the wizard for deleting data records, open the **Edit** menu in HAN Statistics and select **Delete data records**.



Depending on your selection, you may be prompted to enter a date, to have all data records written prior to that date deleted. Alternatively, you may choose to have all data records deleted.



Data records are copied before they are zipped and removed from the database. Make sure you have enough space on the hard disk available for this operation.

You have the option of specifying a directory for storing the temporary files. To do this, open the `nmstatis.cfg` in the `%HANHome%\Statis` directory and enter the desired directory name for `ZipTempPath` in the "HAN" section:

```
[HAN]
ZipTempPath=<path to temp directory>
```

If this entry has been commented out by a semi-colon (`;ZipTempPath=`), delete the semi-colon.

Loading Deleted Data Records

Deleted data records can be loaded from the compressed file at any time. To run the wizard for loading deleted data records, open the **Edit** menu in HAN Statistics and select **Load deleted data records**.



The database has to be opened exclusively (e.g., in only one instance) to perform any actions such as deleting or loading data records. This means the Apache service must be stopped, and HAN functionalities are not available during this period.

To avoid loss of data, we **strongly** recommend using the following procedure for deleting data records:



Shut down the Apache service.

2

Save your databases, as well as the “hanprotd.cdx” index file (ideally as compressed files).

3

Save the `hanprot.dbf` file (ideally as a compressed file).

4

Run the **Delete data records** function.

5

Start the Apache service once the files marked for deletion have been compressed and stored.

Optional: delete the backup copy of the “hanprot.dbf” from the temp directory. If you have enough disk space, it might be a good idea to keep the backup copy of the sequential database, since it can be used to restore statistical data if necessary.

9 Appendix

9.1 Authentication Services and their Modules

Authentication service	Module
NT login	auth_nt.dll
IP address/host name check	auth_ip.dll
LDAP login	auth_ldap.dll
ADS login	auth_ads.dll
NT4 login	auth_ntads.dll
NetMan login	auth_netman.dll
PICA login	auth_lbs.dll (LBS system)
ODBC interface to existing databases	auth_odbc.dll
SISIS	auth_sisis.dll

Authentication Modules and Associated Parameters

NT Login

Authentication is performed on the default domain.

Module: auth_nt.dll

Module: auth_ntads.dll

Parameter:

DefaultDomain Default domain; applied when the user does not enter a domain at logon.

IP Address/Host Name Check

Authentication is based on the client's IP address and/or host name

Module: auth_ip.dll

Parameter:

CFGFile Path to the configuration file, which contains a list of permitted/excluded IP addresses and/or host names

Values for authentication are processed on the the **IP Ranges/Host Names** page and stored in a CFG file.

LDAP Login

Authentication is performed over an LDAP interface.

Module: auth_ldap.dll

Parameter:

CFGFile Path to configuration file with LDAP values

Values are configured using the **HAN-LDAP Settings** program. The following settings must be configured

Server	Name of the LDAP server
Host name	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
UserAttribute	Attribute with which the user is displayed in the DN
GroupAttribute	Name of the attribute
GroupValue	Value that defines whether the user is a group
Members	Attribute in which the members are defined

ADS Login

Authentication is performed over an Active Directory System (ADS).

Module: auth_ads.dll

Parameter:

Object For ADS: LDAP://HostName[:PortNumber][//DistinguishedName]
 For NT4: WinNT://DomainName[/ObjectName[,class-Name]]]
 or
 WinNT://ComputerName,computer]

NetMan Login

Authentication is performed based on NetMan accounts

Module: auth_netman.dll

Parameter:

NMHome NetMan directory

PICA Login (LBS system)

Authentication is performed based on the PICA database

Module: auth_lbs.dll

Parameters:

DSN	System data source name for PICA database
DBUser	Database user (must have "read" permission in the database)
DBPasswd	Password for reading the database
Library	Internal library number (iln). Access is limited to users of this library

Database Login

Authentication can be performed for any ODBC-compatible database

Module: auth_odbc.dll

Parameter:

DSN	System data source name for database
DBUser	Database user (must have "read" permission in the database)
DBPasswd	Password for reading the database
TableName	Table in which the authentication information is stored
UserField	Column containing login names
PasswdField	Column containing the user's login password

SISIS Login

Authentication is performed based on SISIS database

Module: auth_sisis.dll

Parameters:

DSN	System data source name for SISIS database
DBUser	Database user (must have "read" permission in the database)
DBPasswd	Password for reading the database

9.2 HAN XML Tags

Designation	HAN account property
active	Account is active or has been deactivated
description	Description
eissn	eISSN
expireDate	“Valid until” date
ezbid	EJL ID
group	Group membership
inactiveFile	HTML page for notification if account has been deactivated
license	License name
licenseCount	Number of licenses
licenseID	Internal license designation
linkID	Link ID (name of account)
maskaradIP	Masking IP address
periods	Licensing periods
protocol	Data logging active for this account (yes/no)
protocolID	Record ID
publisher	Publisher
remarks	Comments
right	Access privileges ID (“Permit ID”)
rootURL	Starting URL of the account
serverName	Starting server of the account
source	Source
subject	Subject
titel	Title of the e-journals
zdbno	ZDB number

