



HAN
Handbuch • Manual



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Foreword

Congratulations on your purchase of HAN. The HAN software suite revolutionizes access to Internet resources from enterprise networks. This manual gives you step-by-step instructions on the installation and operation of your HAN program.

Terms that come up often in this manual, and that have a special meaning in the context of HAN, are listed together with definitions in the **HAN glossary**. An **on-line** version of the NetMan manual is available as a PDF file on CD-ROM. With the PDF version, you can use the “Search” function in the Adobe Acrobat Reader to find specific terms.

Notes on Using the Demo Version

Once you register the demo version, it runs in demo mode with full HAN functionality. You can use the demo program for up to 30 days before the purchase of a license is required.

Support

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

You can send 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 on-line Help in the HAN program. If you are not sure where to look, check the Help index.

If you do not find a solution in the manual or the Help program and wish to request support, please include the following information when you send us your question, or have it on hand when you call your software vendor:

- Text of any error messages, as well as any relevant entries in the H+H Trace Monitor
- The steps required to reproduce the problem

Ideas and Suggestions

We are always happy to hear your ideas, comments, or suggestions for improvement.

Please send them to:

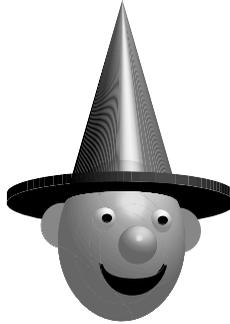
H+H Software GmbH
Attn: HAN Product Manager
Maschmuehlenweg 8-10
37073 Goettingen
Germany

Or send e-mail to:

supportHAN@hh-software.com; subject: HAN

Ask Bob!

Bob is a Wizard, here to assist you in completing standard HAN tasks. He also pops up now and again in this manual and in the on-line Help, to offer handy hints and tips and answer those “frequently asked questions” you are bound to have. You should make the acquaintance of this friendly little guy right at the outset.



We would also like to introduce the various manifestations that Bob takes on in this manual:

Note:



‘Notes’ tell you things you should know about HAN, or about using the manual.

Tip:



‘Tips’ show you how to simplify tasks or how to avoid problems before they occur.

The Discussion:



‘Discussions’ go into detail about general topics or specific problems.

Format Conventions in this Manual

The following format conventions are followed throughout this manual:

- ***HAN-specific terms are printed in*** bold and italic type, and
- TEXTS QUOTED FROM DIALOGS AND DIALOG PAGES are printed in SMALL CAPITALS

Here is an example:

Select .../HAN/SETTINGS/GLOBAL to open the GLOBAL page of the HAN SETTINGS dialog. You can configure the following on this page:

- Which HTML page is output when:
 - user permissions are not sufficient for the requested HAN account
 - the requested HAN account is not found
 - no license is available for the requested HAN account
 - no license is available for using HAN
- The duration of the ***browser session timeout***
- How often data is logged (data record interval)

Introduction

Contents of This Manual

- The **Introduction** gives you a general overview of the following:
 - The HAN software and how it works
 - The HAN architecture and its individual components
 - System requirements for installation of HAN
 - How to integrate your existing data and organization structure in HAN
 - The use of HAN in conjunction with other products
 - Our “Test” environment for HAN users
 - This chapter also provides explanations of HAN terminology.
- **Chapter 3, “Installation,”** describes the procedures for installing and configuring HAN.
- **Chapter 4, “How HAN Works,”** shows you how to create a HAN account quickly and easily. It also explains the effects this action has within your system.
- **Chapter 5, “HAN Administration,”** details the functions in HAN for processing your Internet information resources.
- **Chapter 6, “Program Settings,”** provides details on configuring your HAN Administration settings.
- **Chapter 7, “Import/Export Functions,”** tells you how to use the functions for importing and exporting data to and from HAN.
- **Chapter 8, “Printing in HAN,”** details printing functions and printer settings.
- **Chapter 9, “Statistical Analysis of HAN Account Usage,”** shows the options available for statistical evaluations of HAN data.
- Chapter 10, “Trace Monitor,” provides an introduction to the Trace Monitor.
- **Chapter 11, “License Monitor,”** describes the HAN License Monitor.
- **Chapter 12, “Appendix”:** The **Bibliography** lists details on the publications referred to in this manual and the **Glossary** provides definitions of HAN terminology

What is HAN?

Providing direct access to Internet resources has become an important part of the services offered in libraries, learning institutions and businesses. The H+H Hidden Automatic Navigator, or HAN, has been specifically designed to simplify the tasks involved in providing on-line resources, while at the same time giving you powerful tools for controlling Internet usage and maintaining usage data.

One of the most important steps in developing HAN was to speak with network administrators and try to solve the difficulties encountered in providing access to Internet resources for users.

The problems described to us, together with the solutions we have developed in HAN, are outlined below in the form of an imaginary question-and-answer session between H+H and a network administrator:



Administrator: *Some of my Internet resources (such as e-journals, for example) require a user login. Do I have to supply all of my users with the required user name and password?*



H+H: *No. This login data is exchanged exclusively between your HAN server and the Internet resource provider's Web server. Your users do not see the login happening. Even the "login" Web page remains invisible (see "HAN Administration" for details).*



Administrator: *A lot of my Internet resources (such as e-journals) require the IP address(es) of the computer(s) used to access them (i.e., the range of IP addresses used at a given enterprise, campus or other university facility). Do I have to notify the Internet resource provider every time something is changed in these addresses?*



H+H: *No. All the provider needs is the IP address of your HAN server. With HAN, any changes in your own IP-address structure remain a company-internal matter.*



Administrator: *The e-journals that are accessible based on client IP address can be called up at any time from any of our campus computers. Can our users access these same resources from home, or while attending an out-of-town conference?*



H+H: *Yes. For just such cases, HAN offers the option of authenticating users in the HAN system (e.g., using an NT domain account, over an LDAP interface, etc.).*



Administrator: *Can I block selected computers in my system from accessing specified resources (e.g., particular e-journals), even if these computers are within the permitted IP address range?*



H+H: Yes. With HAN, you have the option of making selected e-journals available to a limited group of users, independent of the user data registered with the resource provider. You can define access permissions based on such criteria as NT group membership, IP address, NT domain, etc.



Administrator: *Is the HAN server a proxy server that I have to configure in all my client browsers?*



H+H: No. The HAN server is not a proxy; no client-side configuration is necessary.



Administrator: *Some of the e-journals we subscribe to permit only limited parallel user access. Is there any way to have HAN apply the same limits and automatically block access as needed in order to keep within the agreed access limits?*



H+H: Yes. HAN is equipped with special license control functions so you can specify the maximum number of users that will be able to access a given e-journal at any one time. If this maximum is set to 5, for example, and a 6th user in your network attempts to access the e-journal in question, an information page generated by HAN is opened in the user's browser in place of the requested e-journal page. You can design this information page yourself.



Administrator: *Can I generate statistical evaluations concerning the e-journals accessed from within my network?*



H+H: Yes. HAN comes with powerful statistics tools that let you process Web traffic statistics, such as frequency of calls, duration of access, and data volume downloaded, in a variety of tables and graphs (see "Statistical Analysis of HAN Account Usage").



Administrator: I have several different e-journal subscriptions for which the resource provider has assigned identical login data. Do I have to enter this data for each e-journal separately?



H+H: No. In HAN you have the option of grouping e-journals that have similar properties. This means you can edit the account data for all group members simultaneously.



Administrator: When my users are unable to access an e-journal due to a problem on the side of the resource provider, they are often presented with a confusing error message opened in their browser. As a result, I get a lot of phone calls from users who are not sure whether there is anything they can or should do about the problem themselves. Can HAN help me to avoid these time-consuming misunderstandings?



H+H: Yes. With HAN, you can deactivate access to the e-journal yourself as soon as a problem is detected, and compose the error message opened by HAN when the e-journal is requested.

In summary, HAN lets you:

- Provide one-click access to Internet resources, with invisible login
- Compose your own message texts in HTML pages, for understandable user guidance
- Monitor and control licenses (for observing resource access licensing agreements)
- Log and evaluate your usage data; for example, to check against invoices from resource providers
- Implement user login on resource provider's server without disclosing login data to your end users (prevents misuse of login data; reduces the administrative tasks entailed when login data changes or when a user leaves your company).
- Have users log in on the HAN server through their browser interface:
- Simple login on existing NT domain or ADS
- Use ODBC sources and LDAP for authentication
- Create login combinations for authentication at the resource provider's site)
- Administer your on-line access data centrally, with interfaces and functions designed to keep administration simple

Moreover, your users enjoy the advantage of **“one-click access”** – HAN takes them directly to the page they want. Users no longer have to click their way through Web sites looking for links, or remember passwords.

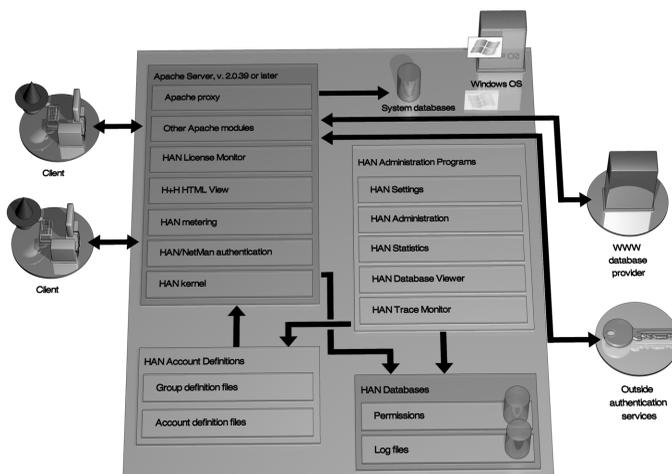
HAN Architecture

The architecture of the HAN program is illustrated below, under “Components of the HAN System.” As you can see, one of the most important features of HAN is its three-level permission check:

1. Does the user have permission to access the HAN system?
2. If access to the HAN system is permitted: Does the user have permission to use the HAN account called?
3. Does the HAN server have permission to access the Internet resource requested by the HAN account?

Figure 1 on the next page shows an example of Internet resource access controlled by HAN.

Components of the HAN System



The HAN system is made up of the following components:

- Apache server version 2.0.39 or later (including system databases)
- HAN administration programs
- HAN databases
- HAN account definitions

HAN and Other Products

You can embed a HAN installation in practically any intranet or Internet infrastructure. Existing Web servers with the following extensions are easy to integrate:

- Database engines
- PHP
- Macromedia ColdFusion
- Dynamic HTML
- ...and others.

The HAN architecture

1 User Authentication for Accessing HAN:

In the HAN configuration program you specify whether and how your users are authenticated before they can use HAN accounts. At the time of writing, the following authentication methods are available:

- IP address/host name check
- NT login
- Login over an LDAP interface
- ADS
- NetMan login
- PICA
- SISIS

For example, you can enable automatic login for all users within your campus IP address range, and have a login dialog box opened for authentication of clients outside that range. In the latter instance, the login dialog can be used to prompt an NT login, for example.

2 Permitting Access to Specified HAN Accounts:

This feature is configured in HAN Administration, one of the central programs in HAN. As Administrator, you specify the Internet resources to be provided to your users. This is referred to as "configuring a HAN account". For each HAN account, in turn, you can configure separate permissions. Access permissions to HAN accounts can be based on any of the following:

- Global NT network group membership
- Local NT network group membership
- IP Range
- Host name
- LDAP

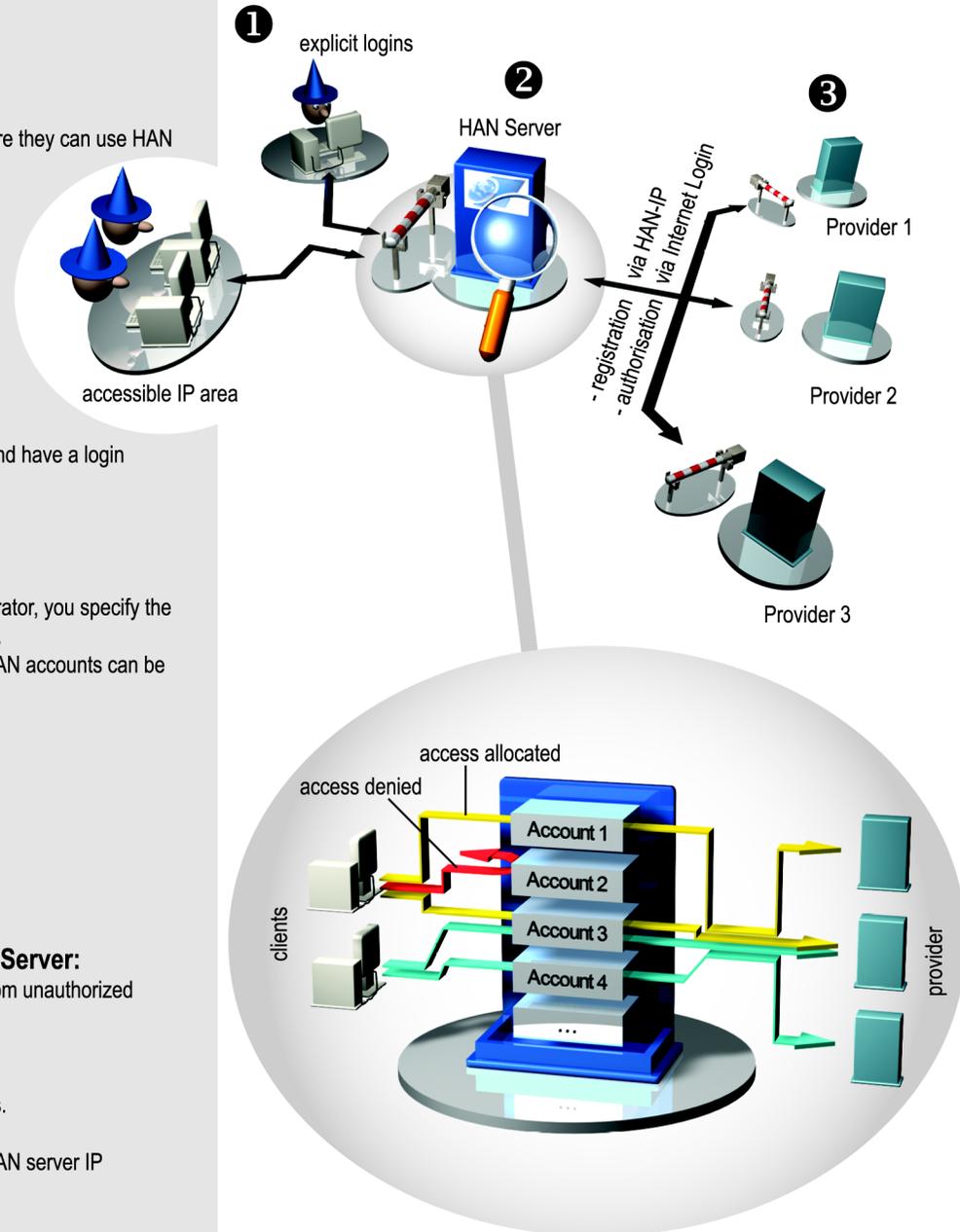
3 Authorizing the HAN Server to Access the Internet Resource Provider's Server:

The providers of e-journals, e-databases, and other Internet resources can protect their content from unauthorized access by

- permitting access only to clients within a specified IP address range, or
- requiring user authentication over Internet login mechanisms such as HTTP login or HTML forms.

Since all Web traffic between user and provider is channeled through your HAN server, only the HAN server IP address is required by the provider's server in the first instance.

Thanks to HAN, the procedure is independent of the user in the second case as well, even though user login is required. The entire login process is handled between your HAN server and the provider's Web server.



Using Existing Data and Organizational Structures

You might already have a lot of data on the e-journals and other Internet resources you provide for your users. To save you having to enter this data all over again, HAN gives you the option of importing structured data in XML format, as well as exporting data from HAN (see "Import/Export Functions").

System Prerequisites and Required Skills

Server-side requirements for running HAN:

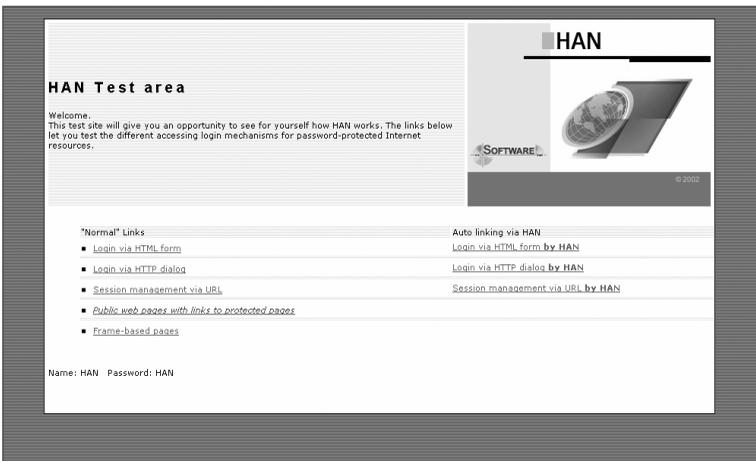
- Apache Web server, version 2.0.39 or later, running under Windows NT, 2000 or XP
- Knowledge of network administration and the World Wide Web
- Basic knowledge of XML

End-user requirements:

- Any Web browser
- Basic Internet navigation skills

Our Test Environment

At our test site, located under www.hh-netman.com/testinghan, you can practice the steps described in these instructions.



Definition of Terms

The terms **account** and **account group**, which you will encounter through the program and on every page of this manual, have special meanings in the context of HAN:

Account



A HAN **account** is the group of settings that provides access to a specific Internet resource through the medium of the HAN system, including a number of related configurations. You can define content and properties for each of your HAN accounts.

Account Group



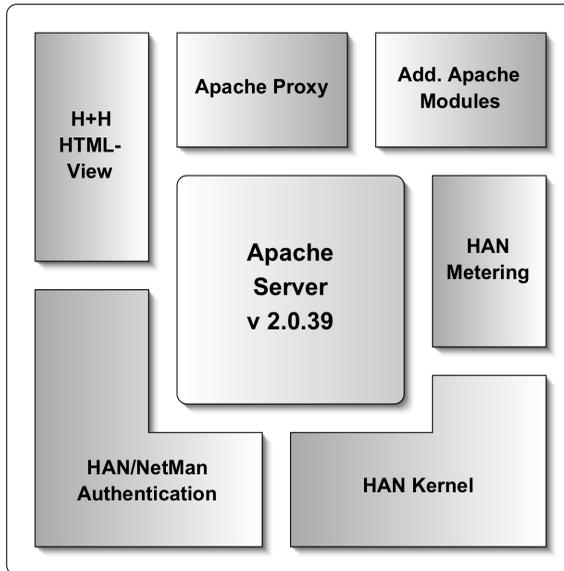
An **account group** is a logical grouping of HAN accounts that have identical or similar properties. Sorting accounts into groups can make your work with HAN simpler and more efficient.

Installation

Apache Web Server

If you do not have an Apache Web server, or if your version is earlier than 2.0.39, you can install the required Apache server from the HAN installation CD.

The diagram below shows how the Apache server and HAN work together.



HAN Setup

To install HAN, simply follow the instructions presented in the Installation Wizard dialogs. One of the options presented during this procedure is the installation of Apache server version 2.0.39.

Furthermore, you can call the **HAN Settings** program directly from the Setup program to integrate the desired **HAN Authentication services**.

Licensing HAN

You need to register your HAN program before you can run it. If you do not purchase a license right away, you can use HAN in demo mode, with full HAN functionality, for up to 30 days before the purchase of a license is required.



The licensing version and number of installation licenses are defined when you order the software, and have to be registered once the software is installed.

The Registration Wizard guides you step by step through the registration process. Open this Wizard by selecting PROGRAMS/HAN/HAN REGISTRATION WIZARD.



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

- Your registration data (name / company)
- HAN serial number (see the enclosed adhesive labels)
- Identification number

This is the data you entered in the setup program. It is automatically loaded in the registration dialog:

Enter the registration code. The next window shows the edition, modules and number of licenses purchased. Check the data again before finalizing the registration.



*If you are registering HAN in conjunction with one or more other products from H+H Software, you can select the **IMPORT** option in the **ENTER REGISTRATION KEY** dialog to load this registration data.*

This concludes registration of your HAN installation.

Configuring HAN

The HAN system is configured in the **HAN Settings** program. You can call the **HAN Settings** program at the end of the Setup procedure, or by selecting PROGRAMS/HAN/HAN SETTINGS.

This is where you assign permissions to use HAN, among other things (see also Figure 1, “HAN Architecture”). The HAN settings are divided into the following categories:

- Global
 - Output of HTML pages
 - Browser session timeout
 - Data logging interval

- Proxy
 - Proxy server configuration (only if HAN is to access the Internet over a proxy server)
- Authentication
 - Configuration of authentication mechanisms
- IP address ranges
 - Configuration of the address ranges permitted to use HAN accounts

The AUTHENTICATION and IP RANGE dialog pages are closely related in practice, but have been allocated separate dialog pages in the interest of a clear overview.



Make sure to restart the Apache server after making any changes in these settings, as this is the only way to ensure that the changes are applied. This does not apply to the "IP range / Host name" page, as these settings are loaded dynamically.

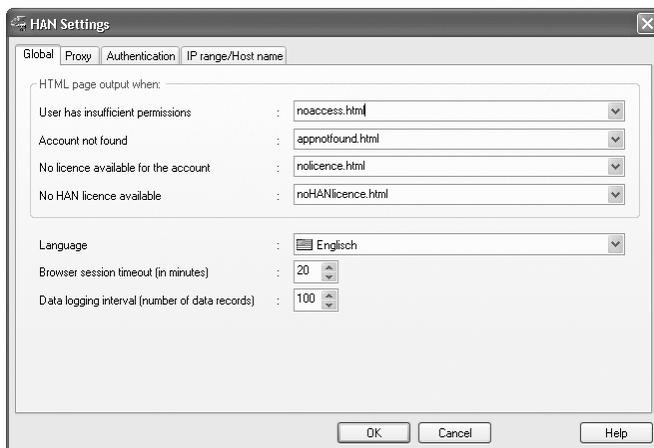
Global Settings

The settings configured on the GLOBAL dialog page of the HAN Settings include the definition of which HTML pages are output in response to the following situations:

- A user attempts to access the HAN system but:
 - no license is available for the HAN program
- A user is already logged on in HAN and attempts to access a particular HAN account, but:
 - no license is available for the account, or
 - the user does not have permission to access the account, or
 - the requested HAN account is not found.

You can edit the HTML pages as desired. Other settings configured on this page include the following:

- The language version you wish to use
- The duration of the **browser session timeout**
- How often data is logged (data record interval)



Details on the **BROWSER SESSION TIMEOUT**:

The **browser session timeout** plays in role in every HTTP operation. The following excerpt provides background information on the mechanisms involved:

“...the browser and server must make, and later break, a network connection for each HTTP **operation**. For example, when you connect to a Web site, your browser and the server create a connection that allows the server to download the site’s HTML file to the browser. After the browser receives the file, the server breaks the connection.
(JAMSA et. al. 1996).

Thus the HAN program or the browser can only “tell” that the site was accessed through a HAN account when an HTML file is loaded. There is no constant connection to the provider’s server.

The **browser session timeout** plays an important role; especially when you assign licenses for individual HAN accounts. The following example should help to illustrate this function:

The **browser session timeout** is set to 10 minutes. When a given HAN account is called and then at some stage remains inactive for 10 minutes

(i.e., no user action takes place), the user's connection to HAN is closed down. The browser remains open. If the user clicks on a link within the HAN account after 10 minutes or more have elapsed, the starting page is opened and the user must call the account again.

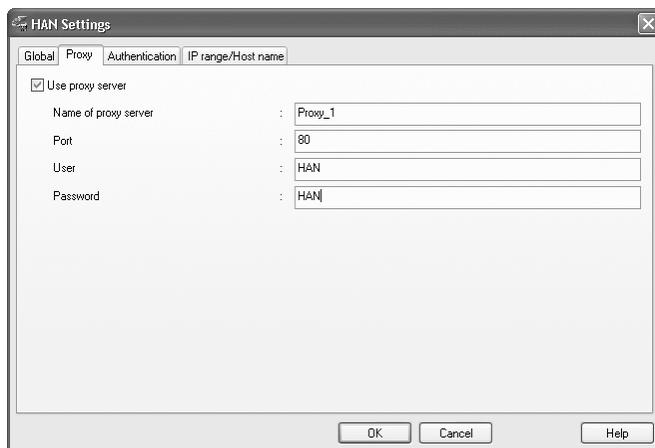
If you have assigned licenses to your HAN accounts, the browser license timeout function prevents licenses from being "blocked" when not in use. If licenses are assigned to a given account and a user quits that account before the **browser session timeout** has elapsed, the account will not be accessible again until the end of the browser session timeout.

Details on the DATA LOGGING INTERVAL

The main purpose of logging HAN usage data is the later statistical evaluation of this data (see "Statistical Analysis of Account Usage Data"). Every time data is logged, a database is opened and data written in it. If every event was to be written to the database at the same time it was logged, however, this would place an undue load on the computer processor. This is why the "Data logging interval" option lets you specify the interval at which log data is written to the database. The interval is defined as the number of records logged before the database is opened for writing. In the example shown above, the interval is 21 data records.

Configuring a Proxy Server

If a proxy server is used for Internet access, you can configure the required settings on the PROXY page of the HAN Settings.



Activate the USE PROXY SERVER option on this page and then enter the following:

- Name of the Proxy server
- The port to be used
- The user name (name of the HAN server)
- The password for the HAN server

Configuring Permission to Use HAN

You can restrict access to your HAN system by configuring settings on the AUTHENTICATION and IP RANGE / HOST NAME pages of the HAN Settings.

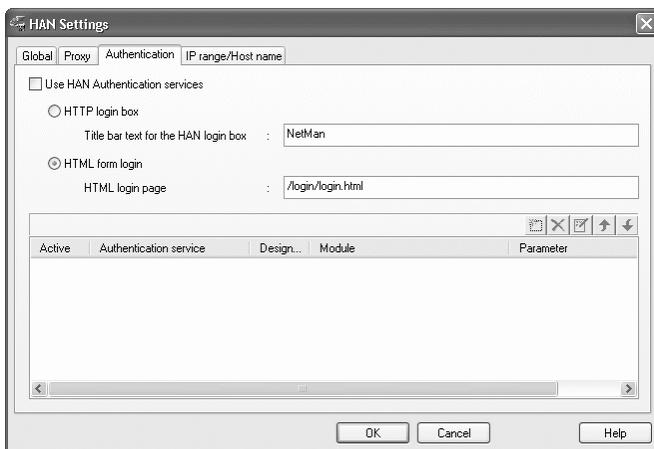
The following is an example of a typical constellation:

When a user activates a HAN account, HAN checks whether permission to access HAN is granted. In this first step, permission based on client IP address is checked. If permission is not granted to IP address in question, HAN checks whether the NT domain has been granted permission.

To configure permission based on IP address or host name, you need to configure the Authentication service (IP check) first. The second step is to define which IP addresses or host names are granted permission.

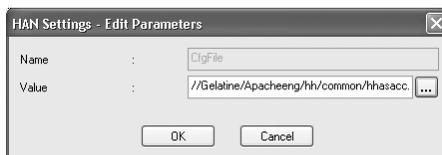
Configuring the IP Check:

1. Open the AUTHENTICATION page of the HAN Settings:

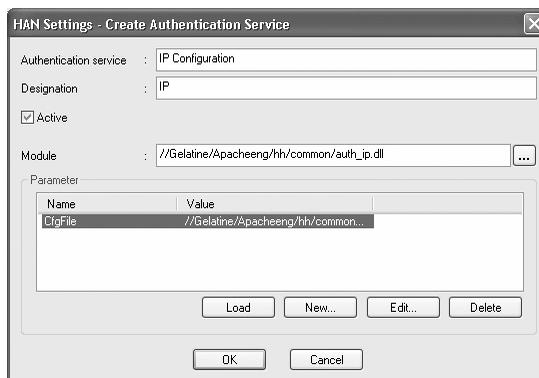


2. Activate the USE HAN AUTHENTICATION SERVICES option and enter a title for the HAN login box.

3. Open the CREATE AUTHENTICATION SERVICE dialog by clicking on the  button and configure the following settings:
 - Enter the authentication service: **IP Check**
 - Enter the designation: **IP**
 - Activate the service: **Active**
 - Click on the “Browse” button to select the module for the IP check: ...\\auth_ip.dll
 - Click on LOAD to load the corresponding parameter: **CfgFile**
4. Select the parameter (CfgFile) and click on EDIT to open the EDIT PARAMETER dialog.
5. Enter a file name, **including the complete path**, in which the permitted IP addresses will be stored.



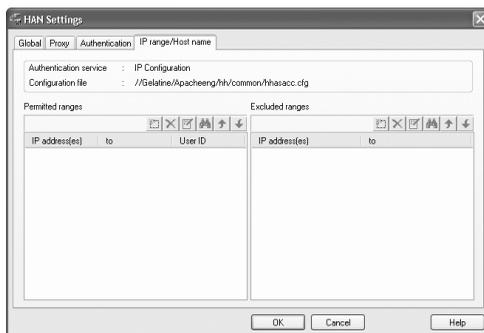
6. Confirm your input



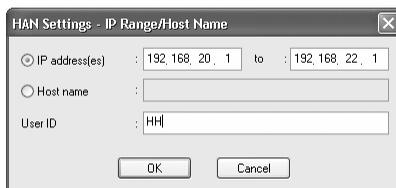
7. Confirm input again in the EDIT AUTHENTICATION SERVICES dialog.

Now define which IP addresses are permitted to use HAN:

1. Open the IP RANGE/HOST NAME dialog page of the HAN Settings. The authentication service configured and name of the file that specifies the authorized IP addresses are shown at the top of this page.



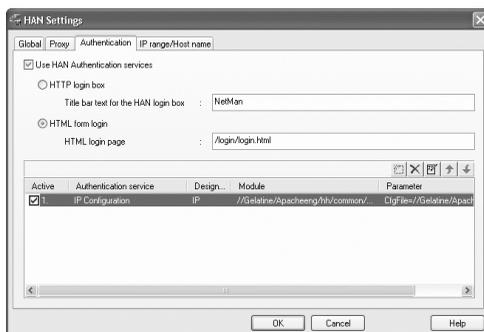
2. Click on the  button to open the IP RANGE / HOST NAME dialog.



3. Enter the authorized IP address(es) and the corresponding user ID.
4. Confirm your input.

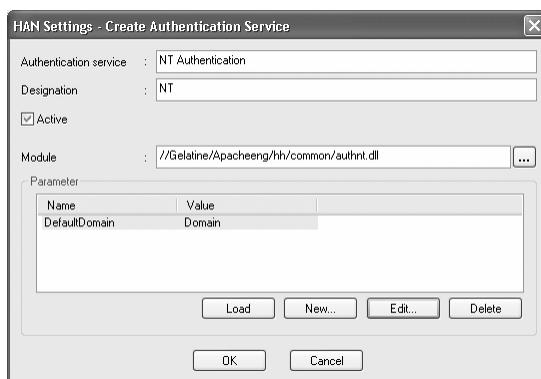
The authorized IP addresses are stored in the designated file “Cfg” file.

The IP check is now an authentication service. This means you have granted HAN access permission to any computer within the specified range of IP addresses.

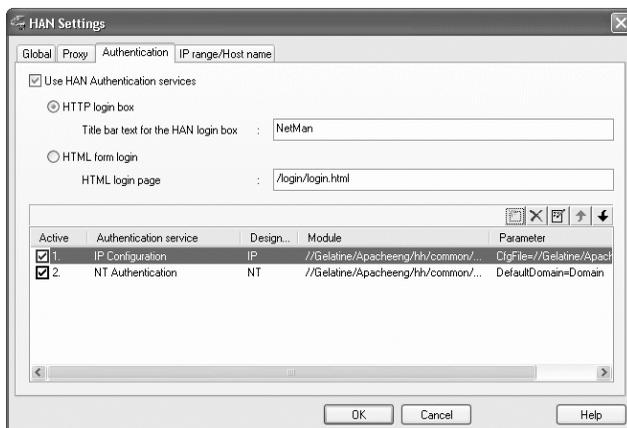


Now we shall configure a second control function to check the client's NT domain.

1. Open the CREATE AUTHENTICATION SERVICE dialog by clicking on the button.
2. Configure the following settings:
 - Enter the authentication service: **NT domain**
 - Enter the designation: **NT**
 - Activate the service: **Active**
 - Click on the "Browse" button to select the module for the IP check: ...\\authnt.dll
3. Click on LOAD to load the corresponding parameter: DefaultDomain
4. Click on EDIT to open the EDIT PARAMETER dialog. Enter the NT domain to be used as your default domain.



Confirm your input. This concludes the configuration of authentication services.



The next time a user attempts to access HAN, the client IP address is checked against the list of authorized addresses. If the result is negative (permission not granted on this basis), the NT domain is checked. Unlike the IP check, the NT domain check requires an explicit login. In other words, the user is prompted to enter authentication data in a login box.

If the user name and password entered match the data required, the user in question can access your HAN system.

“Authentication” Dialog Page

The AUTHENTICATION SERVICES provided by the H+H company include the following:

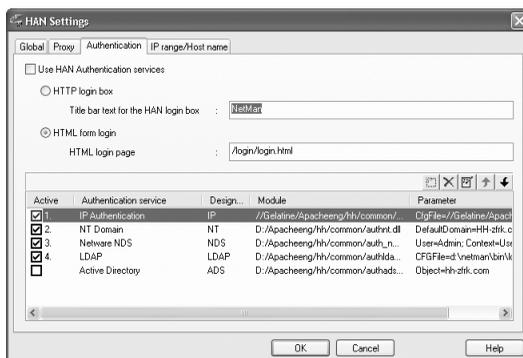
- IP address / host name check
- NT domain
- LDAP over Netscape//Microsoft
- NetMan login
- Active Directory Services (ADS)
- PICA
- SISIS



With the exception of the IP check, all of the above services require explicit user login (implemented in a dialog box).

The window in the lower half of the AUTHENTICATION page in the HAN Settings dialog is divided into the following columns:

- Active
- Authentication service
- Designation
- Module
- Parameter



“What is actually indicated in each of these columns?”**ACTIVE**

You can temporarily deactivate a service by simply clicking in its “active” checkbox, to remove the checkmark. The “Parameter” column remains unchanged.

DESIGNATION:

This is a unique code for unambiguous identification of the authentication service. If desired, you can specify this designation for the login dialog as well, but this is not necessary, as this is the default setting.

MODULE:

The module is the DLL file which, in conjunction with the parameters defined in the configuration (“Cfg”) file, implements the authentication.

Authentication service	Module
NT login	authnt.dll
IP address/host name check	auth_ip.dll
LDAP login	authldap.dll
ADS login	authads.dll
NetMan login	auth_netman.dll
PICA login	auth_pica.dll
SISIS	auth_odbc.dll

PARAMETER

For each login module, certain parameters must be defined before authentication can be performed.



You can load the parameters defined for the modules supplied by H+H. If you configure additional authentication services, you will need to enter parameters for these as well.

The following parameters are required for the login modules supplied:

Module	Parameter
authnt.dll	Default domain, used when no domain name is specified in the user login
auth_ip.dll	Configuration file in which permitted and excluded IP addresses are defined
authldap.dll	The 'hhenv.cfg' file, configured in the LDAP Settings program
authads.dll	ADS object on which the login is performed
auth_netman.dll	NetMan program path

“How and where do the respective module access the required parameters?”

After you install HAN, you need to configure the authentication services. Each service is implemented by a certain module (DLL file), and each module requires certain parameters, which are entered by you, the administrator. The parameters required for login based on **NT domain and IP address** are described in the Section “Configuring Permission to Use HAN.” With the exception of the LDAP module, the configuration steps for all modules supplied by H+H are identical:

1. Open the **CREATE AUTHENTICATION SERVICE** dialog by clicking on the  button.
2. Configure the following settings:
 - Enter the authentication service
 - Enter the designation
 - Activate the service (“Active” column)
 - Click on the “Browse” button to select the module
3. Click on **LOAD** to load the corresponding parameter
4. Click on **EDIT** to open the **EDIT PARAMETER** dialog. Enter the value(s) for the parameter(s).



When creating an LDAP authentication service, you need to enter the hhenv.cfg file, including the entire path name, as the parameter.

LDAP: To configure the LDAP interface, call PROGRAMS/HAN/HAN-LDAP.

Proceed as follows to define the parameters for the LDAP interface, contained in the hhenv.cfg file:

1. Enter the data relating to the LDAP server you wish to use:
 - Server = Name of the LDAP server
 - DN = Distinguished Name of the directory in which your users are stored
 - User = User name for login on the LDAP server
 - Password = Password for login on the LDAP server
2. Click on the “LDAP definition” button to choose from the following two group schemes: 1. Microsoft LDAP server, and 2. Netscape LDAP server
3. When you double-click on the selected server, the corresponding attributes are inserted:
 - User attribute: This value is used to represent the user name in the corresponding DN for the user
 - Group attribute: Name of the attribute
 - Group value: Indicates whether this is a group.
 - Member = Attributes in which the members are defined

You can add other authentication services if desired, and change the order in which the checks are automatically performed.

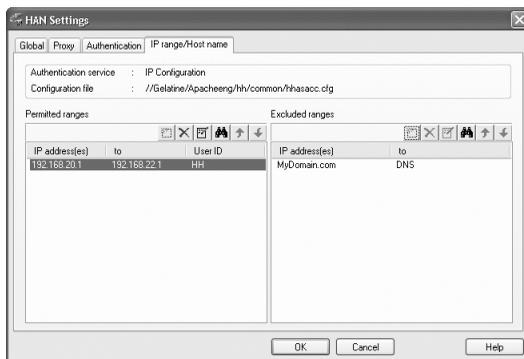
You can use the toolbar buttons as follows:

-  Create an authentication service
-  Delete an authentication service
-  Edit an authentication service
-  Change the order in which authentication services are executed

“IP range / Host name” Dialog Page

As mentioned in the example above (Section “Configuring Permission to Use HAN”), you can specify IP addresses or host names of machines to be permitted access to your HAN system on the IP RANGE / HOST NAME of the HAN Settings. You can also define IP addresses or host name to be excluded from access to HAN on this page.

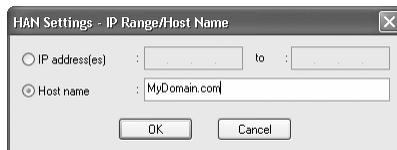
The menu bar for this page contains the same entries as the AUTHENTICATION page menu bar, with the addition of a “Search” function in the menu bar.



The names of the authentication service and its configuration file are shown in the header of this dialog page. You can configure more than one IP address/host name check. Each authentication service has its own configuration file.

To add a new IP address (range) or host name to be permitted access, proceed as described in the example above.

The same procedure is used to deny permission based on IP address or host name (see below). Click on the **+** BUTTON IN THE EXCLUDED RANGES SECTION OF THIS DIALOG.



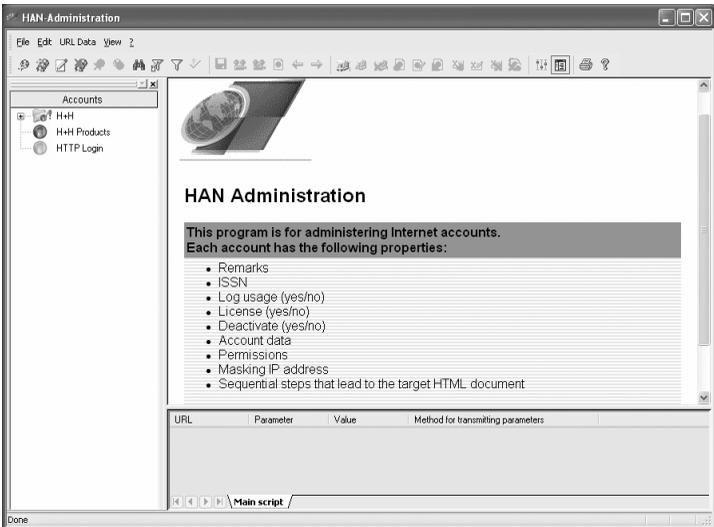
In the example shown here, the host name **MyDomain.com** is denied access to the HAN system.

How HAN Works

Select PROGRAMS/HAN/HAN-ADMINISTRATION to start the **HAN Administration** program. This is the HAN module used for creating and managing HAN accounts.

The main window of the **HAN Administration** program has a menu bar, a toolbar, and the following window panes:

- the **Accounts view** (on the left), and
- the **Script generator** (on the right), which is divided into two sections:
- the **Web View** (upper section), and
- the **Navigation view** (lower section)



The **Accounts view** shows all existing accounts and account groups. For a quick overview of all the accounts in groups, right-click in the **Accounts view** and select OPEN ALL NODES to open all groups at once. To close all groups at once, click on CLOSE ALL NODES.

You can also choose whether to show or hide the **Accounts view**; for example, by selecting ACCOUNT REGISTER from the VIEW menu.

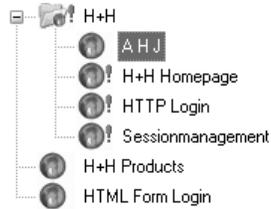
The **Script Generator** is made up of the **Web View** and the **Navigation view**.

The **Web View** shows the HTML page that the HAN account points to, and the **Navigation view** shows the URLs for that page.



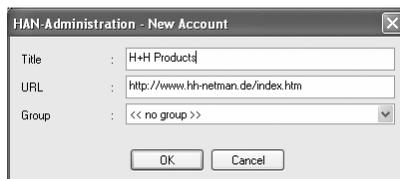
An exclamation point indicates an account that does not inherit group properties, or an account group containing an account that does not inherit group properties. For more information, please see Section “Group Properties.”

For a quick and easy introduction to HAN and its functions, we now provide step-by-step instructions for creating a HAN account.

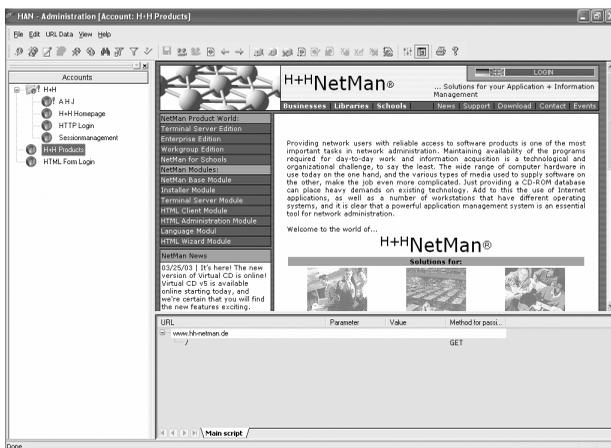


First Steps

1. In the **HAN Administration** program, select **FILE/NEW ACCOUNT**.
2. Enter a name for the account in the **TITLE** field, and enter the desired URL for this account in the **URL** field.



3. Confirm your input
4. If you used the URL given in this example, your **HAN Administration** now shows the NetMan page of H+H Software.



The **Accounts view** shows the title of the account, the **Web View** shows the HTML page, and the **Navigation view** shows the URL

And that's it! You have just created your first HAN account.

“What does this mean?”

The account you have just created can be accessed on your HAN server from computers located anywhere in the world. The URL to this account uses the following **link syntax**: `http://<servername>/han/<link-ID>`.

- The **server name** is the name of your HAN server.
- **HAN** is the system you are using to distribute this link.

The **Link ID** is the identifier, generated automatically from the title of the account.



For details on configuring accounts that require user login, please see Section “Login Using an HTML Form” and Section “Login Using a Dialog Box (HTTP Login).”

Making the Link Available to Users

The following example assumes that your HAN server is reached through the URL `http://HANServer/`, and you have configured a HAN account with the title “HHHomepage” that points to the H+H Software home page.

In this case, a request for the original URL

(`http://www.hh-software.com/`)

is rerouted through your HAN server to the URL

`http://HANServer<port>/han/HH-Products.`

Now say you already have a Web page containing a “direct” link to the H+H home page.

The HTML text might look something like this:

```
<html>
..
<a href="http://www.hh-software.com">
  H+H, Computer Communication Center</a>
..
</html>
```

To use the HAN account in place of the direct link, simply change the link as follows:

```
<html>
..
<a href="http://HANServer<port>/han/HH-Products/" >
  H+H, Computer Communication Center</a>
..
</html>
```

The end user can now activate this link to open the H+H NetMan page.



Keep in mind that “Port 80” is the default setting when configuring the server. If port 80 is already in use by another server in your system, you need to select a different port in your Apache server settings.

HAN Administration

Some aspects of the HAN Administration program have already been presented above. In this chapter, we will outline the entire spectrum of HAN functionalities.

The information and examples presented in this chapter demonstrate a number of different login scenarios, provide details on the assignment of access permissions and licenses, and familiarize you with the properties of HAN accounts and the creation of account groups.

Working with the HAN account created in the previous chapter, we will begin by presenting the various forms of login (user authentication).

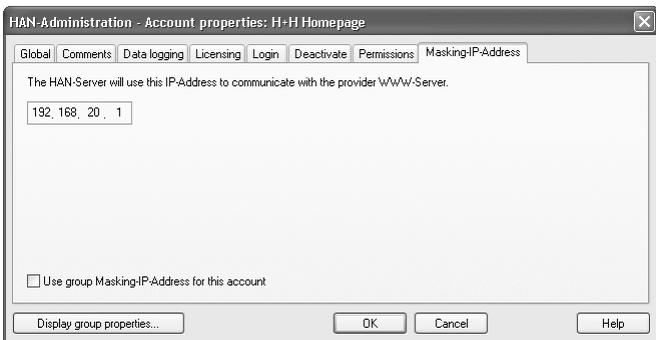
These include:

- logins based on IP address, and
- explicit logins.

Logins Based on IP Address

If the provider of a given Internet resource permits access on the basis of client IP address, the IP address of your HAN server is used for authentication. You do not need to define a user name or password within your HAN accounts for this authentication; all you have to do is inform the resource provider of your HAN server's IP address.

In the unusual event that a given HAN account has to use a specified IP address for authentication, all you need to do is assign a **masking IP address**. This is not a fictitious IP address, but rather one of the IP addresses used by your HAN server. To assign a **masking IP address**, open the PROPERTIES dialog of the account in question in the HAN Administration program and click on the MASKING IP ADDRESS tab. Enter the desired IP address on this dialog page.



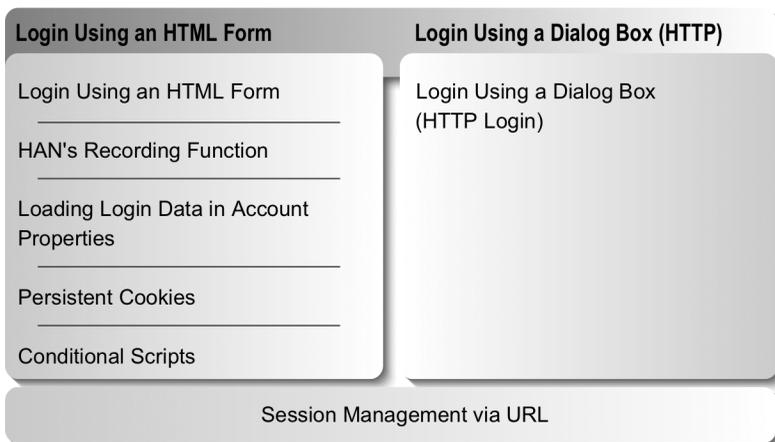
Once you confirm your input, this **masking IP address** is used for communication with the provider of the on-line resource.

Explicit Logins

“Explicit logins” are defined here as login operations that require explicit user names and passwords. There are two types of login relevant in configuring HAN accounts:

1. Login using an HTML form
2. Login using a dialog box (HTTP login)

Login using an HTML form is actually a very broad topic. We will begin with a look at the more basic methods, before moving on to more complex areas of use. Below is an outline of the next two sections, which describe the two login types listed above:



This might appear rather complicated now, but as you read on you will see that the mechanisms described are quite simple.

Login Using an HTML Form

Our first example illustrates a very basic scenario:

In this case, an HTML login form can be passed in the URL as follows:

```
http://hh-software.com/han/html_form?name=user&password=password.
```



In practice, it is unusual to encounter such an uncomplicated constellation. Furthermore, a login using this URL in this form can function only if the server expects login using the HTTP “GET” method. (For more information

see, for example, “HTTP Pocket Reference. Hypertext Transfer Protocol” by Clinton Wong; May 2000; published by O’Reilly.)

In this particular case, you would simply enter the entire URL in the URL field of the HAN account you are creating.

As mentioned above, login using an HTML form is not usually this simple. There are no fixed standards for this mechanism, and the HTML form can pop up seemingly at any time; for example, when a user requests a full text version of a publication, or simply clicks on a certain link. Fortunately, HAN’s “recording” feature makes it easy to configure a HAN account for use with this type of login.

HAN’s Recording Function

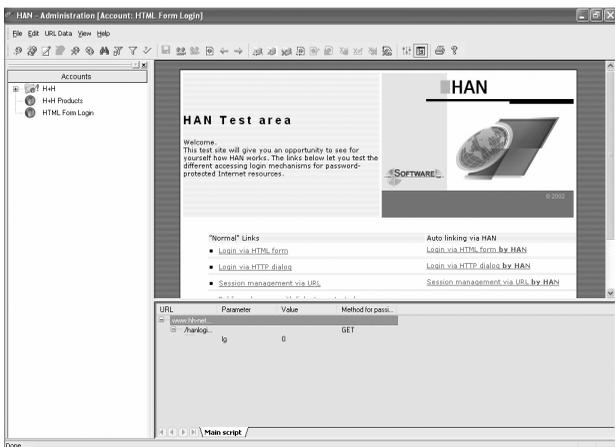
To illustrate the procedures described in this manual, we have set up a test site on our Web server at H+H. You can visit this site and follow the steps listed below for a “live” demonstration of HAN functions.

Begin by creating a new account that accesses the HAN test site (www.hh-netman.com/testinghan):

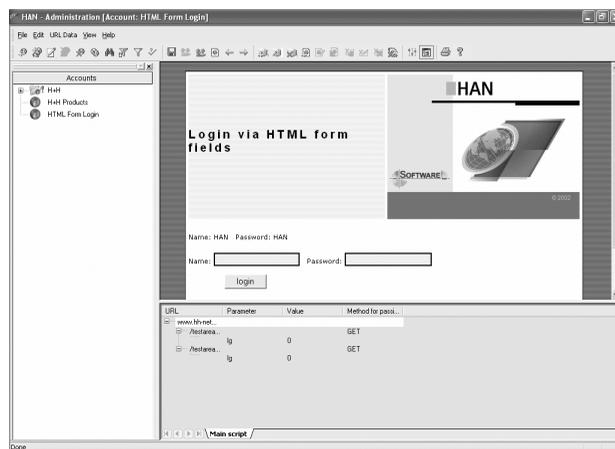


The HAN test area is shown in your **Web View**. Proceed from here as follows:

1. Select the URL DATA/START RECORDING menu command to initiate recording



- In the **Web View**, click on the LOGIN VIA HTML FORM link



- Enter the user name (HAN) and password (HAN) (also in the **Web View**)
- Complete the login in the **Web View** by clicking on LOGIN.
- If the next page was the one you wanted to define as the start page for your users, you would now select the URL DATA/STOP RECORDING menu command to stop the recording function. Otherwise, you would continue navigating until you reached the page you want your users to start on, and then stop recording.



If you configure an account to access an e-journal that offers a number of separate issues or articles (whether full-text HTML pages or PDF files), you need to make sure your users will be able to access the desired issue or article from the page you configure as their start page. To do this, it is important that you continue recording until you have navigated back to the start page. Furthermore, when you select a login-protected link we strongly recommend choosing the link with the lowest possible data volume, as the entire path recorded here is navigated every time your user calls this HAN account. In other words, data is downloaded every time the account is used, which in turn takes up time.

“What have I achieved?”

You have recorded the navigation steps that lead to the desired page. When a user calls this account, both the process of navigation and the login on the resource provider’s server are performed in the background. All your users see is that they have “one-click access” to the target resource.

Testing an Account

You can test an account, to make sure it does what it is supposed to, before you make it available to your users.

To do this, open the `EDIT/ACCOUNTS` menu and select the `TEST ACCOUNT` command. The HTML page called by the account is displayed exactly as your users will see it. "Testing" in this case basically amounts to "checking the currently active properties." You do not have to save an account before you can test it.



When you create a new account or account group, your configurations are stored automatically when you confirm your input. There are only a few instances in which you need to save an account "manually," for example, when you modify account data using HAN's "recording" function. The `SAVE` command is located in the "URL Data" menu.

Loading Login Data in Account Properties

When you use the recording function to configure a new HAN account, the login data (user name and password) you enter is written in the account's **Navigation view** during the process. An optional step at this point, and one which we highly recommend, is to transfer this data directly to the account's properties as well. (To view the login data used by the account, select `EDIT/ACCOUNTS/PROPERTIES` and open the `LOGIN` page.)

This procedure has the following advantages:

- If you need to change the user name and/or password, all you have to do is select `EDIT/ACCOUNTS/PROPERTIES` and open the `LOGIN` dialog page to edit the data. In other words, you do **not** have to create a whole new HAN account and go through the entire recording procedure, entering the new login data.
- If the user name and password are valid for an entire group of accounts, the login data is modified for all accounts in the group when you edit it in the group properties dialog.

We will now demonstrate this procedure, continuing with the sample account configured above. The first step is to store the user name and password in variables. The values stored in these variables are automatically passed to the account's properties, after which only the variables themselves are shown in the **Navigation view**.

Perform the following steps for both the user name and the password:

1. Select the user name in the **Navigation view**:

URL	Parameter	Value	Method for trans...
www.hh-net...			
└─ /testare...	lg	0	GET
└─ /testare...	lg	0	GET
└─ /testare...	lg	0	POST
└─ name	han		
└─ pword	han		
└─ lg	0		Transmit param...

2. Open the URL DATA/PARAMETERS submenu and select EDIT PARAMETER.... (The PARAMETERS menu also contains commands for adding and deleting parameters.)

HAN-Administration - Edit parameter

Parameter : name

Value : %user%

URL will be transmitted per POST - Transmitting this Parameter within the URL

Parameter may contain different values for every call

Parameter will be used for login

as: User (%user%) Password (%password%)

3. SELECT THE USE PARAMETER FOR LOGIN option
4. Select the USER NAME option
5. Confirm your input

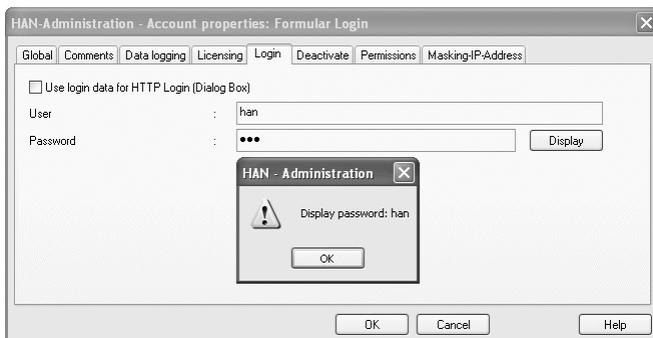
The value shown in the Navigation view for the user name is no longer HAN, but now %user%.

URL	Parameter	Value	Method for trans...
www.hh-net...			
└─ /testare...	lg	0	GET
└─ /testare...	lg	0	GET
└─ /testare...	lg	0	POST
└─ name	%user%		
└─ pword	han		
└─ lg	0		Transmit param...

Repeat this procedure to define the password as a parameter:

1. Select the password in the **Navigation view**
2. Open the URL DATA/PARAMETERS submenu and select EDIT PARAMETER...
3. SELECT THE USE PARAMETER FOR LOGIN option
4. Select the PASSWORD option
5. Confirm your input

The user name and password are now included on the LOGIN page of the account properties, opened under EDIT/ACCOUNTS/PROPERTIES.

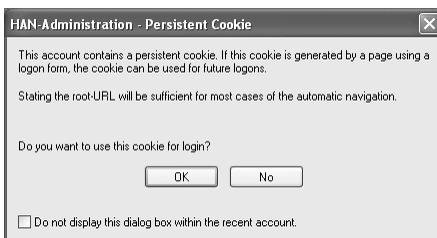


Persistent Cookies

The use of **persistent cookies** can play an important role in HTML logins. Two of their main functions are:

- storing the password entered in an HTML form, and
- passing information about the client to the Internet resource provider. This second point is not relevant to the login mechanism.

When HAN detects a **persistent cookie**, the following dialog box is opened:



The procedure for configuring the account in this case is different from that used for an HTML login without a **persistent cookie**.

The following table compares the steps involved in each case:

Creating an account without persistent cookies or conditional scripts

1. Start recording
2. Navigate shortest path to login
3. Login
5. Navigate back to root URL
(to make it the start page for your user)
7. Stop recording
8. Delete superfluous URLs

Creating an account with a persistent cookie

1. Start recording
2. Maneuver through site to login
3. Login
4. Save password
5. In the "Persistent Cookie" dialog box, answer the prompt, DO YOU WANT TO USE THIS COOKIE FOR LOGIN? by clicking on "OK"
6. "subsequent recording procedures not relevant here"
7. Stop recording
8. Delete all but the root URL entfernen



The login data contained in a persistent cookie is passed in the HTTP header, which means it remains invisible to the user.

“What are the advantages of persistent cookies for accounts that access protected Internet resources?”

- Only the root URL in the account is called, which makes the process faster; thus the persistent cookie could be said to **increase performance**. (If an HTML login form does not use persistent cookies, navigation is always routed through a login page. This in turn usually requires downloading at least one resource. See also Section “HAN’s Recording Function.”)
- The login is only prompted when a link is activated that requires a login.
- The cookie is not stored on the end user’s machine, since the communication is handled entirely between the HAN server and the provider’s server.

The dialog box opened when HAN detects a **persistent cookie** offers you the following options:

- Whether or not to use the cookie for login. If the cookie’s purpose is

merely to obtain information for the provider of the Internet resource, for example, you might want to click on “No.”

- Whether or not to suppress this dialog for this account. To suppress it, activate the **DO NOT DISPLAY THIS DIALOG BOX AGAIN FOR THIS ACCOUNT** option before clicking on **YES** or **No**.

Conditional Scripts

Another option available for configuring HTML logins is the use of **conditional scripts**. These are especially useful, for example, when the HTML login is opened for access to the full-text version of a publication that is otherwise available only as an abstract.

Many providers of on-line resources offer both abstracts and full-text versions of their publications. While abstracts can usually be viewed free of charge, opening the full version often requires user login and/or payment of a fee. In other words, a user requesting a full-text version has to provide identification.

As a rule, each full-text version has a separate identifier. This identifier is found:

- **within the URL**
(for example, www.hh-netman.com/testarea/scriptlogin/2/pub/b),
or
- **appended to the URL as a parameter**
(for example, www.hh-netman.com/testarea/scriptlogin/publication.cfm?lg=0&type=pub&id=57889)

This is more easily understood when you see it “in action,” which is why we have prepared samples of both versions for you at our test site.

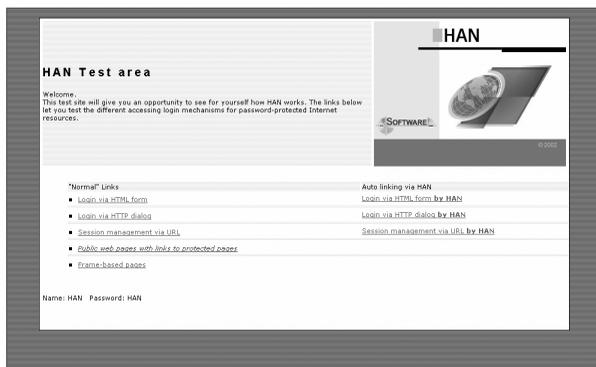
Identifier within the URL:

If the ID is within the URL, it always occupies the same position in the URL syntax.

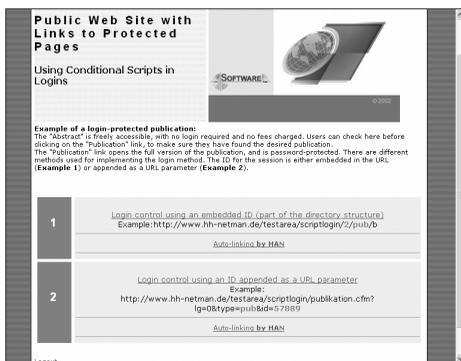
To see for yourself how this works, perform the following steps:

1. Create a new account with the URL: www.hh-netman.com/testinghan
2. Start the recording function in **HAN Administration**.

3. The HAN test area is shown in the account's **Web View**:



4. Click on the **PUBLIC WEB SITE WITH LINKS TO PROTECTED PAGES** link

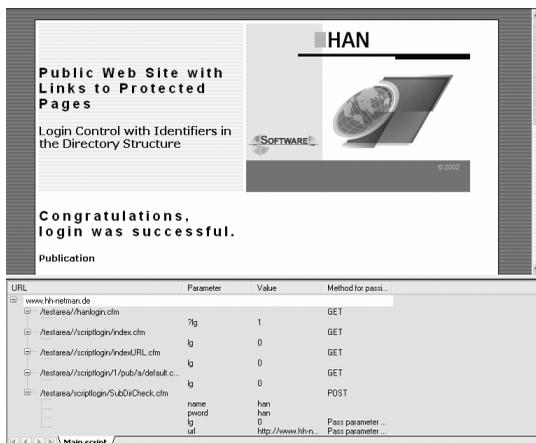


5. Select Variant 1.



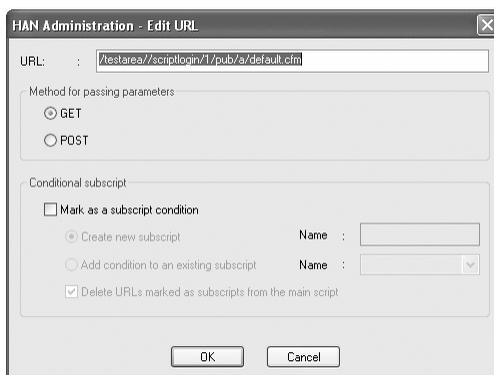
Now you can choose between an **Abstract** and a **Publication**. The abstracts are available to anyone, but authentication is required for access to the publications.

6. Select one of the publications
7. You are now prompted to log in (user name: HAN; password: HAN)
8. After you confirm the login data, the full-text version of the publication is opened:

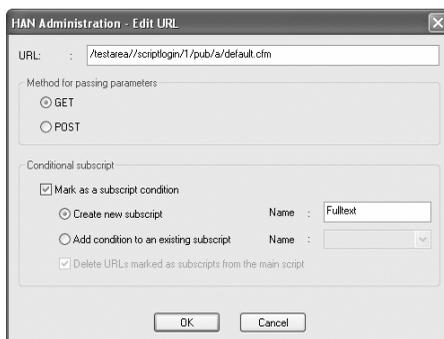


To provide access to the full-text page for your users, you need to implement a conditional script. This procedure for this is as follows:

1. In the Script Generator view, select the URL in which the login is executed.
2. Double-click on it to open the **EDIT URL** dialog

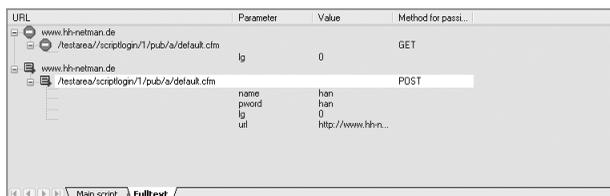


3. Activate the MARK AS A SUBSCRIPT CONDITION option and enter a name for the subscript.



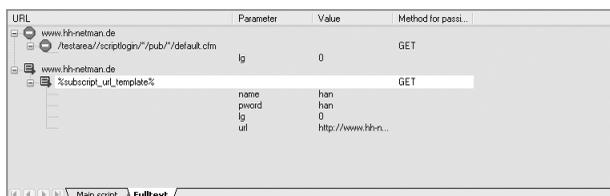
4. This URL is now a condition that must be met in order for the subsequent URLs to be executed as subtitles.
5. Confirm your input
6. Stop the recording function.

The  symbol indicates a condition, and the  symbol marks a subscript. The **Navigation view** is now divided into two windows, one for the main script and one for subtitles. The subscript window now shows the subscript you have just completed.



Since the value for the parameter recorded here will differ from one URL to the next, the URL that contains the condition requires some editing. This is the only way to ensure that your users can access all the publications available from this provider. Edit the URL as follows:

1. Select the URL that contains the identifier
2. Double-click on it to open the EDIT URL dialog
3. Since the value will be different for each publication, replace the identifier with an asterisk (“*”)



4. Confirm your input and stop the recording function in **HAN Administration**

Your users now have access to all of the publications available at this site.



You can implement multiple subscripsts if desired. This can be useful, for example, if there is a password-protected PDF version of a resource, in addition to the full text version, which you want to make available to your users. You can also modify existing subscripsts, and use additional conditions if you wish.

Identifier Appended as a URL Parameter

An identifier inserted as a URL parameter is usually a number found at the end of the URL.

To see for yourself how this works, perform the following steps:

1. Create a new account with the URL: www.hh-netman.com/testinghan
2. Start the recording function in **HAN Administration**
3. In the **Web View**, click on the PUBLIC WEB SITE WITH LINKS TO PROTECTED PAGES link
4. Select Variant 2, LOGIN CONTROL USING AN ID APPENDED AS A URL PARAMETER:

URL	Parameter	Value	Method for pass...
www.hh-netman.de			
/testarea/HANlogin.cfm		1	GET
/testarea/scrptlogin/index.cfm		0	GET
/testarea/scrptlogin/indexPara.cfm	lg	0	GET

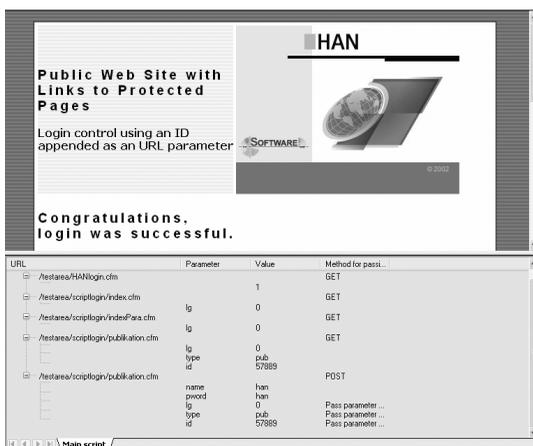
The Login control using an ID

- **appended as a URL parameter**
- page is opened

The next steps are as follows:

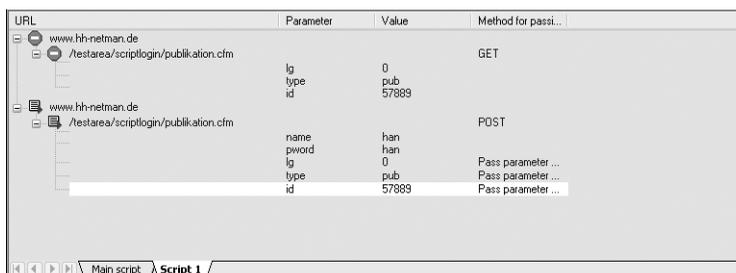
5. Click on a "Publication" link.
6. Log in using the required data (user name: HAN; password: HAN)

This is the page shown when login is successful. This means you have been granted access to the selected publication. Now you need to define the relevant portion of the URL as a **condition** which must be met in order for the login to be executed automatically. The "relevant portion" is that segment of the URL that contains the login function. When you make this URL segment a condition, you basically "tell" HAN that the authentication script is prompted when the user has reached this point. This authentication takes place within HAN and enables your end user to access any publication at this site.



Proceed as follows to define this **condition**:

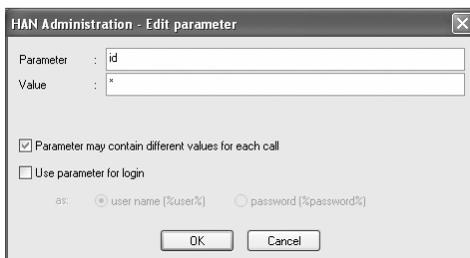
1. Select the URL that triggers the authentication prompt (in our example: /testarea/scriptlogin/publikation.cfm)
2. Double-click on it to open the EDIT URL dialog. Activate the MARK AS A SUBSCRIPT CONDITION option and enter a name for the subscript.
3. Confirm your input
4. Delete the non-relevant URLs



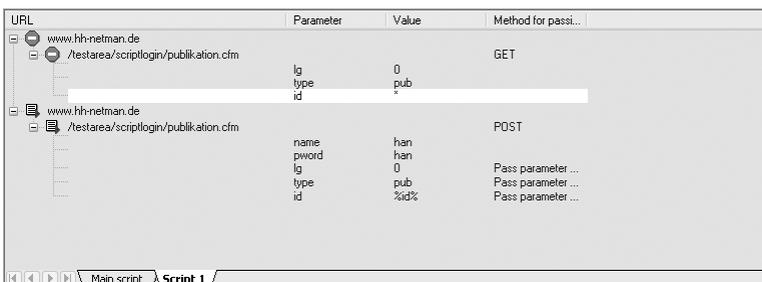
The  symbol indicates a condition, and the  symbol marks a subscript.

Since the parameter recorded here will differ from one publication to the next, you need to edit the parameter definition to enable access to all publications for your users:

5. Select that part of the URL that contains the parameter
6. Double-click on it to open the **EDIT PARAMETER** dialog



7. Since the value will be different for each publication, check **PARAMETER MAY CONTAIN DIFFERENT VALUES FOR EACH CALL**, the identifier is now an asterisk (“*”)
8. Confirm your input and stop the recording function in the **HAN Administration**

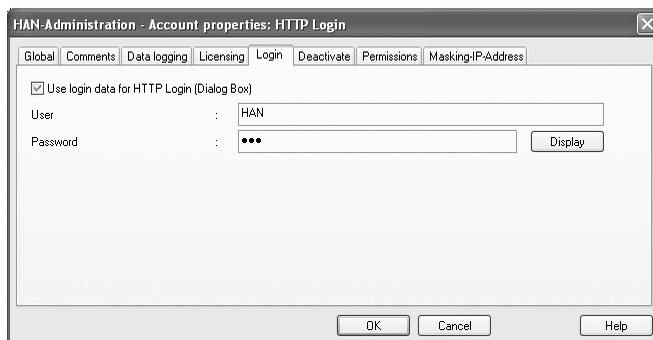


This concludes the process for creating a conditional script. This account now provides access to all of the provider’s publications, because the variable is passed at run time.

Login Using a Dialog Box (HTTP Login)

The required login data must be known before you can configure the account. We will use the HAN test site to demonstrate this configuration.

1. Create a new account pointing to the HAN test site (www.hh-netman.com/testinghan)
2. Select the **EDIT/ACCOUNTS/PROPERTIES** menu command in **HAN Administration** and open the **LOGIN** page.



3. Activate the option at the top of the page, **USE LOGIN DATA FOR HTTP LOGIN (DIALOG BOX)** AS WELL
4. **ENTER THE USER NAME (HAN) AND PASSWORD (HAN)**. Password input is hidden (asterisks are displayed)
5. Confirm your input
6. The HAN test area is shown in your **Web View**.



7. Start the recording function, select LOGIN VIA HTTP DIALOG from the test site and click on the link to password-protected content.
8. A login dialog box opens



9. Enter the login data again and confirm your input
10. Stop the recording function. This concludes configuration of the account.

Once you make this account available to your users, they will be able to access the protected content without performing any login themselves. The login is “hidden;” i.e., it runs in the background.



Discussion:

When you configure an account with an HTTP login, the login procedure runs in the Web View. The Web View, however, does not have the HAN login information, which is why the login must be performed again on the Web page. In such cases, only the root URL is shown in the Navigation view, since communication relating to the login takes place in the Web View. The HTTP login data does not form a part of the URL, and consequently is not shown in the script. (For details on the differences between HTTP login and login using an HTML form, please see “Login Using an HTML Form”). If other links are activated once access is gained through this HAN account, this login runs automatically each time a link is activated, in a browser process invisible to the user.

Session Management via URL

A large number of Internet resource providers use cookies to obtain information about the users (or usage) of their content. **This practice is independent of whether or not the content is password-protected or subject to usage fees. This is an aspect of session management often implemented using cookies, generated by the Web server on the resource-provider side and stored on the end user's hard drive.** In many cases, however, the user's Web browser is configured **not** to accept cookies. Resource providers often use one of the following techniques to get around this "obstacle:"

- By assigning session IDs as parameters **added to the URL** (for example: `http://URL2/test.htm?cookie=<cookie>`). In this case, the provider's Web server generates a new parameter for each browser session.
- By passing a session ID as part of the URL (for example, `http://URL1<cookie>/test.htm`.) This session ID is part of the URL generated by the provider's server and performs a function similar to that of a cookie.

Knowing the difference between these two methods is important when you define parameters for these cookies (see Sections "Defining Variables for Parameters" and "Defining Variables for Dynamic URLs").

Problem:

When an account is activated, the Web server generates a new session ID within the URL, or a new parameter, and compares these values to those in the HAN account (the values configured when the account was created). Since these do not match, the server on the provider side cannot deliver the requested page and the user is presented with an error message.

Solution:

This problem can be eliminated by defining parameters in ***HAN Administration*** for the session ID. Read on for details.

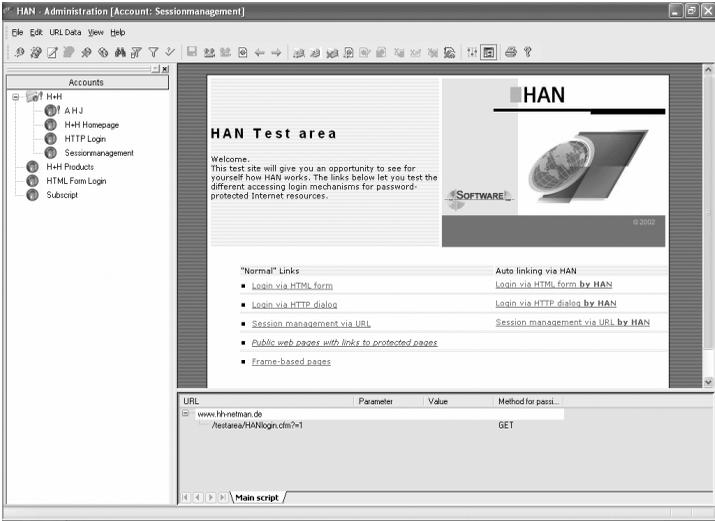
At run time, this segment of the URL, or these parameters, are replaced with the corresponding parameter value. The HAN kernel now "knows" that the server on the provider side will generate different values here for each session, so it fills in values for the session ID accordingly. This ensures that the user can access the account target at any time.

The procedure for defining parameters for use with both forms of session ID is described in the following.

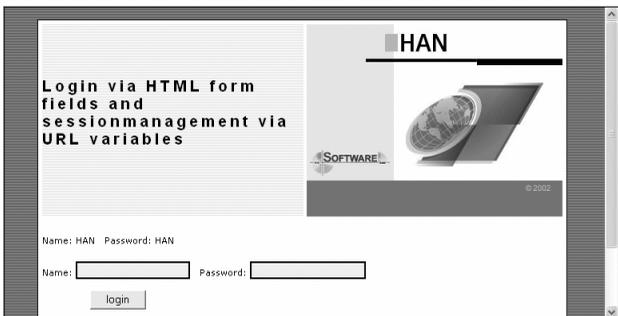
Defining Variables for Parameters

You can follow the procedure described below at our test site, located at <http://www.hh-netman.com/testinghan>.

1. Create an account in **HAN Administration** that accesses the HAN test site (<http://www.hh-netman.com/testinghan>)



2. Start the recording function in **HAN Administration** by selecting URL DATA/START RECORDING
3. In the **Web View**, click on the SESSION MANAGEMENT VIA URL link



4. Enter the user name (HAN) and password (HAN) in the **Web View**
5. Click on LOGIN **to confirm your input**
6. Following successful login, a message is shown in the **Web View**

informing you that the session has two identifiers (in our example, CFID (619935) and CFTOKEN (88470753)).

7. These parameters are shown in the **Navigation view**

URL	Parameter	Value	Method for passi...
www.hh-netman.de			
/testarea/HANlogin.cfm		1	GET
/testarea/cookie/index.cfm			GET
/testarea/cookie/result.cfm			POST
	lg	0	
	name	han	
	pword	han	
	lg	0	Pass parameter ...
	CFID	619935	Pass parameter ...
	CFTOKEN	88470753	Pass parameter ...

8. Stop the recording function (URL DATA/STOP RECORDING) IN **HAN Administration**

The next step is to define variables for the CFID and CFTOKEN parameters.

1. Select the CFID parameter in the **Navigation view**
2. Double-click on it to open the **PARAMETERS/EDIT PARAMETER...** dialog

HAN Administration - Edit parameter

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

Use parameter for login

as: user name [%user%] password [%password%]

3. The setting **URL WILL BE TRANSMITTED PER POST - PASS THIS PARAMETER WITHIN THE URL ANYWAY** is activated automatically (see "Note" below).
Activate the **PARAMETER MAY CONTAIN DIFFERENT VALUES FOR EACH CALL** OPTION
4. Confirm your input.

Repeat these steps for the CFTOKEN parameter as well.

URL	Parameter	Value	Method for passi...
www.hh-netman.de			
/testarea/HANlogin.cfm		1	GET
/testarea/cookie/index.cfm			GET
/testarea/cookie/result.cfm			POST
	lg	0	
	name	han	
	pword	han	
	lg	0	Pass parameter ...
	CFID	%url_parameter_...	Pass parameter ...
	CFTOKEN	%url_parameter_...	Pass parameter ...



It is important to set the URL WILL BE TRANSMITTED PER POST - PASS THIS PARAMETER WITHIN THE URL ANYWAY option, because parameters are usually excluded when a URL is transmitted per POST. This appears as follows in the source code: <form action="result.cfm?lg=0&CFID=84339&CFTOKEN=79528649"method="POST">

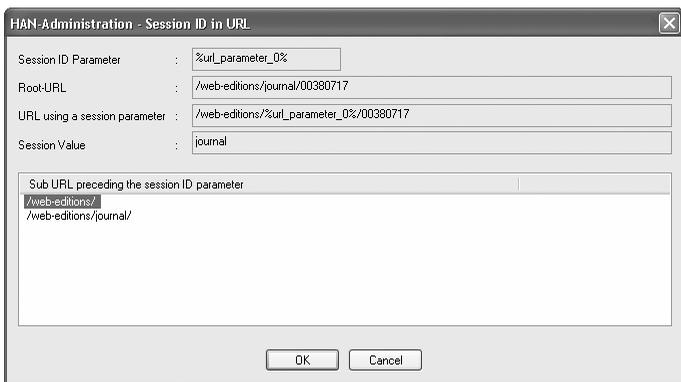
This concludes the configuration of these parameters; you can now make this account available to your users.

Defining Variables for Dynamic URLs

In some cases, Web pages are generated dynamically on the provider's Web server whenever a browser request is received. Thus the URL is generated dynamically as well, which means certain segments of the URL can change. These segments must be replaced by parameters that you define, to ensure that your users can open the desired page.

If you have an account that includes dynamic elements within the URL, these elements are shown in the **Navigation view** and can be defined as parameters as follows:

1. In the **Navigation view**, select that portion of the URL that contains the session ID
2. Right click on the selected portion, and select the SESSION-ID IN URL... menu item



3. In the URL SEGMENT PRECEDING THE SESSION ID window, select that part of the URL which comes before the session ID
 - The SESSION VALUE field shows the session ID

- The SESSION ID PARAMETER field shows: %URL_parameter0%.
 - The ROOT URL field shows the top directory under which the provider's content is stored and
 - The URL WITH SESSION ID PARAMETER field shows the URL with the session ID variable in place of the session ID
4. Confirm your input
 5. The session ID is replaced by %url_parameter2% in the Navigation view

You can now make this account available to your users.



Under URL SEGMENT PRECEDING THE SESSION ID PARAMETER, the URL is divided into separate segments. The following characters are allowed as separators: question mark (?), ampersand (&), forward slash (/), space, tab, and underline (_).

Frame-based Internet Pages

Some resource providers present their material in what are called «frame-based» pages. These pages are made up of a number of separate components, known as «frames,» which are all displayed at one time.

The 'framework' in which the individual frames are put together is called a "frame set," and is **always** implemented as an HTML file (i.e., an "index" file) which specifies the frames that make up the Web page, as well as page structure.

The following example explains how to configure a HAN account that accesses a frame-based page.

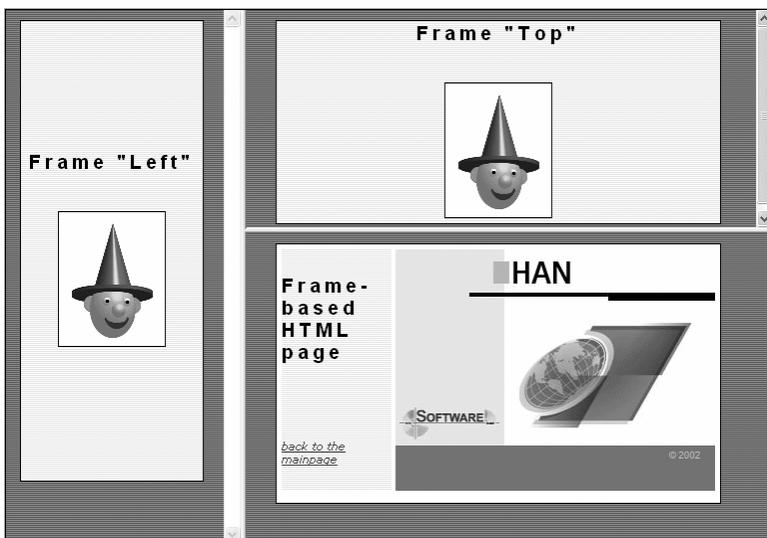
A basic question that arises in this context is:

"How can I tell whether a given Internet page is frame based?"

One way is to view the source data and check whether it uses frame syntax. HAN, on the other hand, recognizes frame-based pages automatically.

This example demonstrates how easy it is to work with frame-based pages:

1. Create a new account pointing to the HAN test site (www.hh-netman.com/testinghan)
2. Open the frame-based page
3. The HTML page opened by your new account is shown in the **Web View**:



- The Navigation view lists the files that make up the page, with symbols indicating the file type as follows:

The “index” file, or main file, is indicated by this symbol : 

The frames, or individual components of the frame-based page, are indicated by this symbol : 

URL	Parameter	Value	Method for passi...
www.hh-netman.com			
/testinghan			GET
 /testarea/frame/index.cfm			GET
 /testarea/frame/left.cfm	lg	0	GET
 /testarea/frame/top.cfm	lg	0	GET
 /testarea/frame/main.cfm	lg	0	GET

Navigation view footer:    Main script /

- Select all frame files **except the index file** in the Navigation view and delete them
- Save the account by selecting URL DATA/SAVE

“Why does this account work, when most of the corresponding files have been deleted?”

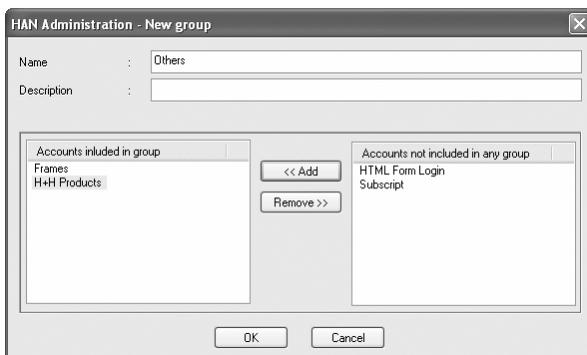
When a frame-based page is opened, the index file is loaded first. It contains the basic framework for the page, the frame set, which has references to the component frames. Since the frame files are all on the resource provider’s server, these references are all that is required to put the page together for presentation in the client’s browser.

Creating an Account Group

As the number of HAN accounts in your system grows, it can become difficult to keep track of them all. This is why the **HAN Administration** offers you the option of putting accounts together in groups.

For example, it can be helpful to group those accounts which share properties (e.g., accounts that use identical login data, or access the same site).

Select FILE/NEW GROUP to open the following dialog box:



Enter a name for the new group. You can also enter a description, if desired. The accounts which have not been added to any group are listed under ACCOUNTS NOT INCLUDED IN GROUP. Use the ADD button to add accounts to the group. The accounts you add are listed under ACCOUNTS INCLUDED IN GROUP. Use the REMOVE button to remove an account from the group.



*In the **Accounts view**, you can **drag & drop** accounts to add them to groups or remove them. When you use this method, however, the accounts in question keep their own properties (see Section “Properties”).*

Properties

In the HAN Administration program, you can configure access permissions and licenses for particular accounts or account groups. Furthermore, you can define settings for metering account usage, and configure account data, such as resource provider information, directly.

All of these “specifications” are configured in the PROPERTIES of the account or account group.

These properties are divided into the following categories (listed on separate dialog pages):

- General information (GLOBAL)
- Data relating to the account, such as information about the resource provider (COMMENTS)
- Activation and configuration of metering functions (DATA LOGGING)
- Assignment of licenses (LICENSING)
- Configuration of login procedures (LOGIN)
- Deactivation of an account; settings applied to deactivated accounts; duration of inactive period (DEACTIVATE)
- Assignment of user permissions (PERMISSIONS)
- Assignment of a masking IP address (MASKING IP ADDRESS)

To edit the properties of an account or account group, mark the desired account (group) and select EDIT/ACCOUNTS(ACCOUNT GROUPS)/PROPERTIES.



There is very little difference between account properties and account group properties. These differences are described briefly at the end of this section.

Global Properties

The GLOBAL page contains the name of the account, the group it belongs to (if any), and its link ID, link syntax and root URL (see Chapter 4, "How HAN Works"). You can enter a description of the account here if desired. If the account accesses an e-journal, you can enter the journal's ISSN on this page as well.

Field	Value
Title	H+H Products
Description	
ISSN	
Group	<< no group >>
Link ID	H+HProducts
Link Syntax	http://NULLDIETUS.ads.hh-zfrk.com/han/H+HProducts
Root URL	http://www.hh-netman.de/index.htm

If the account belongs to a group, you can click on **DISPLAY GROUP PROPERTIES...** to view the properties of the account group.



The **DISPLAY GROUP PROPERTIES...** button is shown only if the account belongs to a group.

The link ID is generated automatically from the account title (name). To change a link ID, click on **EDIT...**



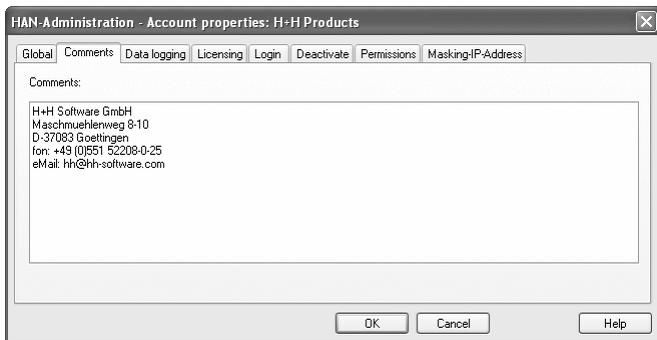
This opens a dialog in which you can modify the link ID. After you confirm the new link ID, a syntax check is performed automatically. If the new link ID contains non-allowed characters, a warning is displayed and you are prompted to enter the link ID again. Alternatively, you can simply enter the desired ID and then click on the **CORRECT SYNTAX** button. In this case, the link ID is modified as needed, and non-allowed characters are eliminated automatically.

Comments

Experience has shown that it is often important to have comprehensive and specific information about an account or account group readily available.

This is why we developed the **COMMENTS** property.

This page is useful for storing such data as the resource provider's contact information, for example.



Data Logging

If you wish to generate statistical evaluations of your HAN usage data, you need to have this data collected first. Simply select the corresponding option on the **DATA LOGGING** page of the account (group) properties to have usage data recorded in a log file. A **Record ID** is generated automatically, and can be modified as desired.



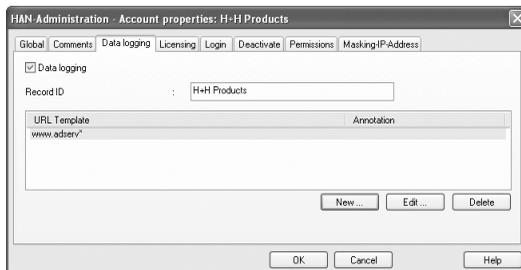
You can set HAN to activate the data logging function and generate a **Record ID** generated automatically for every new account you create. To do this, open the **HAN Administration** settings from the **VIEW** menu, and activate **DATA LOGGING ENABLED**.

Another important function for data logging is the definition of **URL templates**:

“What is a URL-Template?”

Many providers of Internet resources use more than one server for their Internet content. For example, a full-text version of a requested file might be called from the provider’s home page, but not stored on the same server as the home page. In this case, the user’s browser is automatically re-directed to the other server. Since the URL specified in the HAN account is no longer addressed once the client browser is re-directed, data logging of this account usage event is terminated. **URL templates** let you include selected server changes in data logging operations. In other words, **URL templates** help to ensure uninterrupted data logging even when your users are re-directed while browsing.

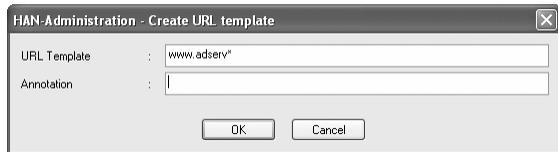
Which server is logged under the **Record ID** of the account in question is defined in a **URL template**.



The servers defined in the template are listed, with their URLs, in the **HAN Details** table of the event log database (see Chapter “Statistical Analysis of HAN Account Usage”).

Proceed as follows to configure a template:

1. Click on **NEW** to open the **CREATE URL TEMPLATE** dialog



2. Enter the server to be included in the event log. If desired, you can enter a description as well.
3. Confirm your input

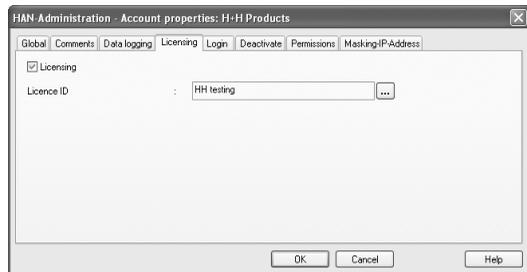
You can edit or delete URL templates on the **DATA LOGGING** page of the account properties.

Licensing

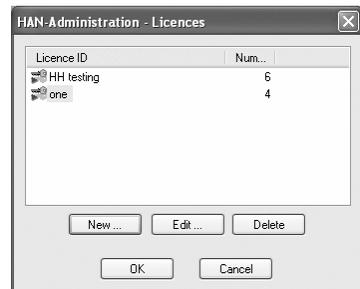
Some providers of Internet resources place a limit on the numbers of users from a given system that are permitted parallel access. When this is the case, HAN can make sure you automatically stay within this limit. Simply assign a number of user licenses to the HAN account in question, corresponding to the number of licenses you have for the resource. These licensing functions are configured on the **LICENSING** page of the account properties.

To define licenses, proceed as follows:

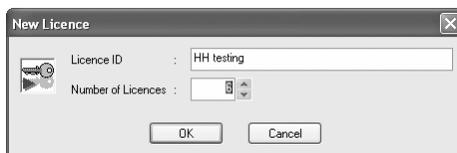
1. Open the **LICENSING** page of the account properties



2. Activate the **LICENSING** option.
3. Click on the “Browse” button



- This opens the “Licenses” dialog; click on NEW... here



- In the NEW LICENSE dialog, enter a name for the license and the number of instances to be available
- Confirm your input

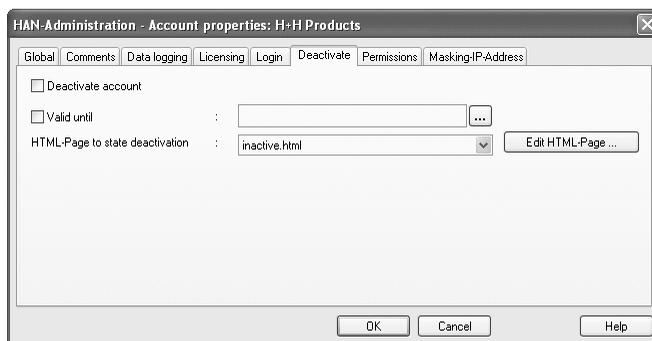
The account in question can now be used simultaneously by no more than the number of users entered under “Number of licenses.” In this example, 3 users can navigate under this account simultaneously.

Login

For details on configuring accounts that require user login, please see Section “Login Using an HTML Form” and Section “Login Using a Dialog Box (HTTP Login).”

Deactivate

An account should be deactivated before testing or editing. You can also deactivate an account when a problem occurs on the side of the resource provider’s server, in which case your users are presented with a message from HAN rather than a potentially confusing error message from the provider’s server. Any time a deactivated account is requested by a user, HAN opens an HTML page providing your choice of information to the user. To deactivate an account, select the DEACTIVATE ACCOUNT option on the DEACTIVATE PAGE of the ACCOUNT PROPERTIES.



To re-activate the account, for example after testing or editing is completed, deselect the DEACTIVATE ACCOUNT option. Once you do this, the account is available to your users.

In the HTML PAGE FOR NOTIFICATION field, you can define which HTML page is opened when an inactive account is requested. Click on EDIT HTML PAGE... to edit this page.

Furthermore, you can configure a date for automatic deactivation of an account. This is very practical for use with e-journal subscriptions, for example, that are set to expire on a certain date.

Proceed as follows to set an account for automatic deactivation:

1. Activate the VALID UNTIL checkbox
2. A calendar is opened in which you can select the desired date
3. CONFIRM YOUR INPUT



In our example, the account will be deactivated automatically on April 23rd 2003.

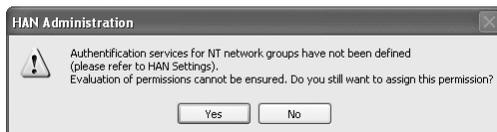
Permissions

If you want to make a given account exclusively available to a certain set of users, simply define access permissions accordingly. You can grant access to an account based on:

- Global NT network group membership
- Local NT network group membership
- IP address ranges
- Host name
- LDAP
- Environment variables



If you wish to make NT domain membership a condition for access to an account, keep in mind that this works only for users who access your HAN system through an "NT domain" authentication service (see "Configuring Permission to Use HAN"). If the user was authenticated in HAN through an IP check, then HAN does not "know" which NT domain the user belongs to. In this case, the following dialog box opens when you configure the permission in question:



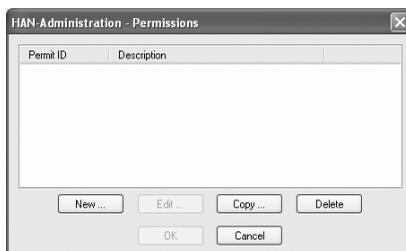
You can define conditions in combination, link them with logical “**and**” and “**or**” operands, and formulate them in the positive or negative.

To define permissions, proceed as follows:

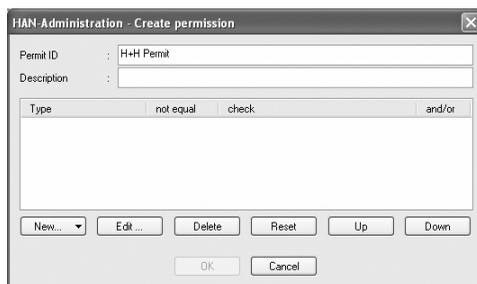
1. Open the PERMISSIONS page



2. Click on the “Browse” button to open the PERMISSIONS dialog for creating new permissions



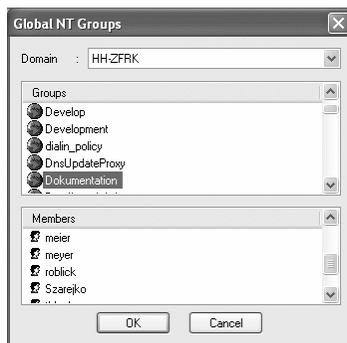
3. To define a new access permission, click on NEW...
4. In the CREATE PERMISSION dialog, enter an ID and, if desired, a description of the permission



5. Click on NEW... to define which users are granted this permission. The options available are described in the following sections.

Permissions for Global NT Network Group Members

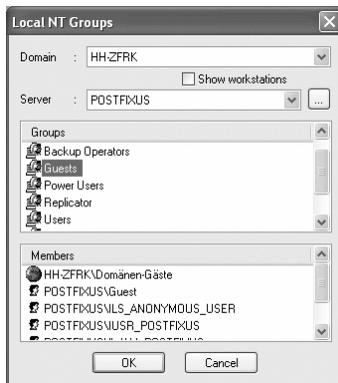
To grant permission based on global NT network group membership, you need to specify the domain(s) and select the user(s) or group to be granted access by this permission.



In our example, the group called “Documentation” in the HH-SOFTWARE domain is granted permission.

Permissions for Local NT Network Group Members

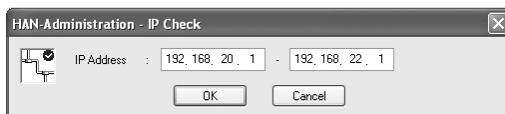
To grant permission based on local NT network group membership, you need to specify the desired domain(s). If the SHOW WORKSTATIONS option is enabled, the domain’s workstation is displayed as well.



After you select a group, you can define whether the permission applies to the entire group or to one or more specified member(s) of the selected group.

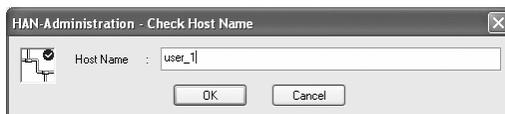
Permission Based on IP Address

You can grant permission to use HAN on the basis of client IP address. You have the option of specifying individual IP addresses for permission, or a range of addresses. In the IP ADDRESS fields, enter the first and last IP addresses of the desired range. To specify a single address, enter it in both fields.



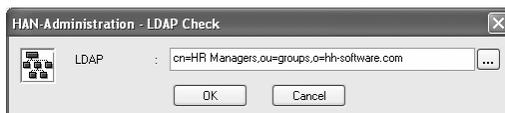
Permission Based on Host Name

To grant access permission to a workstation with a certain host name, select DNS CHECK and enter the desired name in the HOST NAME field.



Permission Based on LDAP

To grant permissions using LDAP, select “LDAP Definition.”



Click on the “Browse” button to open the GROUP SELECTION dialog and enter the desired path. Prerequisite for using LDAP to assign permissions is the prior configuration of an LDAP server.

Permission Based on Environment Variables

To assign permission based on environment variables, select “Environment Check.”



Enter the name of the environment variable (“Environment”) and its value in this dialog.

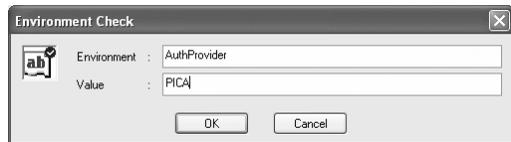


You have the option of linking multiple environment variables; for example, to grant access permission to individual user groups for a defined authentication provider.

Example of Permissions Based on Environment Variables

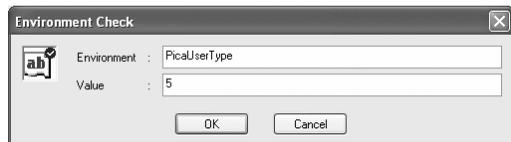
In this example, PICA has been configured in the **HAN Settings** as an authentication service. Now let us say you wish to restrict access to an account called “HTTPLogin” to a certain user group within your PICA system.

1. Open the “HTTP Login” account.
2. In the account properties dialog, open the PERMISSIONS page and select ENVIRONMENT CHECK
3. Set “PICA” as the value for the AuthProvider (authentication provider) variable

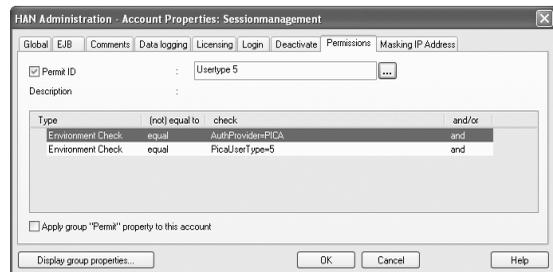


The next step is to grant permission only to a certain group of users.

1. Select ENVIRONMENT CHECK again, enter PICAUSERTYPE IN THE “ENVIRONMENT” FIELD, and the designation of the user group in the “Value” field.



2. The permission configured is effective as soon as you confirm your input

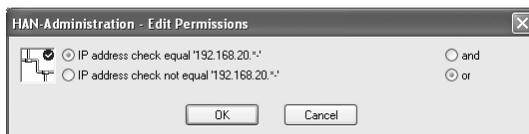


Among your PICA users, only User Group 5 has access to this HAN account.

Editing Existing Permissions

In the example below, an existing “IP Check” permission is modified.

- Select the **EDIT/PERMISSIONS** menu item to open the **PERMISSIONS** dialog.
- Select **EDIT** to open the dialog that lets you define the IP address(es) to be granted or denied access permission. Select **EQUAL TO ...** to grant permission, or **NOT EQUAL TO ...** to deny permission. The **NOT EQUAL TO** setting lets you exclude one IP address, or a subset range, from a range of addresses defined in the same dialog, for example.



- You can activate the **AND** setting, for example to link membership in a specified NT domain as an additional condition.
- If you have granted permission to a certain range of IP addresses, and you also wish to grant permission based on host names as well, use the **OR** operand. This ensures that a single user does not access the same account in two simultaneous instances.



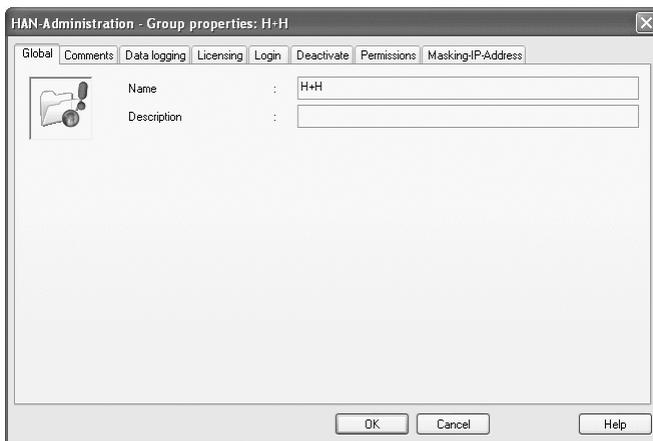
This editing procedure is the same for all permission conditions. You can also grant “mixed” permissions. For example, you can combine an IP Check with permissions based on global NT group membership.

Assigning a Masking IP Address

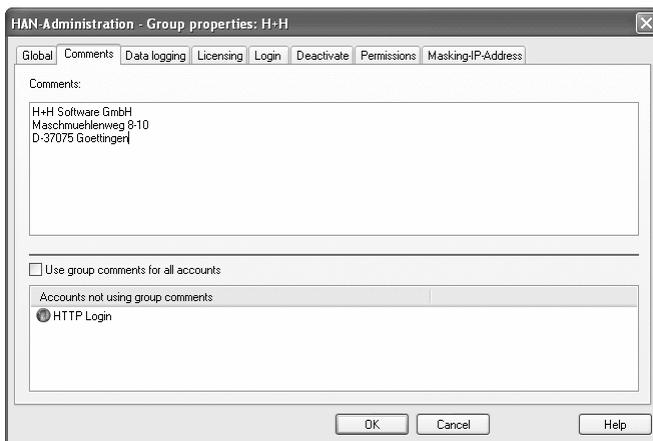
Please see the beginning of this chapter “HAN Administration”.

Group Properties

The GLOBAL dialog page for account groups has fewer input fields than the same page for accounts. The name of the account group is shown at the top of this page. You can enter a description of the group if desired.



The main difference between group properties and account properties is explained in the following, using the COMMENTS page as an example.



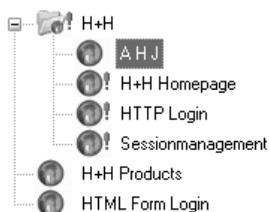
The upper portion of the page contains the feature(s) that both the group

properties and the account properties dialog have in common; in the current example, this is an input field for additional information relating to the account or group.

At the bottom of the page is a list of the accounts that belong to the group but which do not share the property in question. In this example, the list is entitled **ACCOUNTS NOT USING GROUP COMMENTS**. This indicates that the accounts listed have different input on the **COMMENTS** page of their properties.



*Accounts that do not share group properties are marked by an exclamation point (!) in the **Accounts view**. Account groups that contain accounts which do not share group properties are also marked with an exclamation point.*



Conversely, if you activate the **USE GROUP COMMENTS FOR ALL ACCOUNTS** option, all accounts in the group will use the comment configured here for the group. In this case, the list at the bottom will no longer contain any accounts the next time you open this page. **IN THE EXAMPLE SHOWN ON THE RIGHT, THE *HTTP Login* AND *HTML Form Login* ACCOUNTS WOULD NO LONGER BE MARKED BY EXCLAMATION POINTS.**



*The option **USE GROUP <...> FOR ALL ACCOUNTS** is available for the following properties:*

- COMMENTS
- DATA LOGGING
- LICENSING
- LOGIN
- DEACTIVATE
- PERMISSIONS
- MASKING IP ADDRESS

Overview of Properties

Select **EDIT/OVERVIEW** to view a table of all accounts and their properties. In this window, you can sort the accounts by properties; for example, to check which accounts have licenses (i.e., can be accessed by only a limited number of users at any one time). To sort the accounts by a given property, click on the desired property name at the top of the corresponding column. You also have the option of sorting accounts by their “Valid until” date. You can open accounts in this window.

Name	ISSN	Recorded	Licensed	Login	Deactivated	Valid until	Permission	Masking IP Address
lgfg		lgfg			✓			
Formular Login								
frame		frame			✓			
H-H Homepa...								
H-H Products		H-H Products						
HTTP Login		HTTP Login		✓ (about HTTP)				
Sessionmana...		Sessionmanage...						

Click on the name of an account to open that account’s **PROPERTIES** dialog; if you click on a given property, the **PROPERTIES** dialog is opened to the corresponding page. You can also open an account’s **PROPERTIES** page by marking the account name and clicking on the **SHOW PROPERTIES** button. Click on the **LOAD WEB PAGE** button to open the account’s Web page in your **HAN Administration**.

Filter Function

In addition to the option of sorting your accounts by property in the “Overview” (described above), you can filter the display of accounts in your **HAN Administration** window by the following properties:

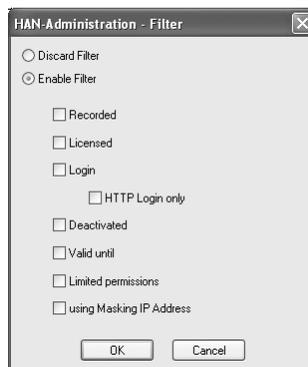
- Data logging
- Licensing
- With Web site login
- With HTTP login only
- Deactivated
- Valid until
- Limited access (permissions assigned)
- With masking IP address

Here is an example:

Say certain conditions have changed, affecting only those accounts for which you have defined an expiration date (“Valid until:”). Up to now, these accounts were set to expire on different dates; starting immediately, how-

ever, you want all of your limited accounts to expire on 31 December.

1. In the **HAN Administration** program, select the menu command VIEW/DEFINE FILTER to open the “Filter” dialog
2. Turn the filter on



3. Activate the VALID UNTIL option
4. Confirm your input
5. The **Accounts view** in the **HAN Administration** program now shows only those accounts for which an expiration date has been set.



Now you can open the PROPERTIES page for each account in turn and change the expiration date as desired (see also Section “Deactivate”).

Additional Features for Processing Accounts

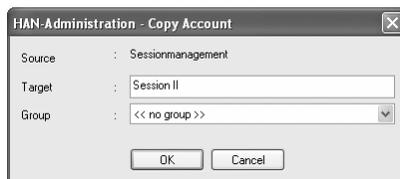
The commands for copying, finding, and deleting accounts can be found under the EDIT/ACCOUNTS menu item.



You can open a shortcut menu containing a number of commands by right-clicking on an account.

The steps listed below are all preceded by selecting the account (by clicking on it with the mouse).

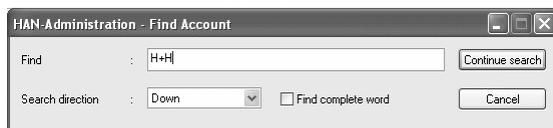
- To copy an existing account, select the **EDIT/ACCOUNTS** MENU ITEM AND SELECT THE **COPY ACCOUNT** command. At this point you also have the option of adding the account copy to a group.



- Select **EDIT/ACCOUNTS/REMOVE ACCOUNT FROM GROUP** to remove the account from the group it has belonged to up to now.
- Select **EDIT/ACCOUNTS/DELETE ACCOUNT** to delete an account.

If you have a very long list of accounts and account groups, it can be difficult to find one particular account.

- Select **EDIT/ACCOUNTS/FIND ACCOUNT** to have HAN locate the desired account for you.



Additional Features for Processing Account Groups

Under the EDIT/GROUP menu item, you will find a number of functions for working with accounts groups.

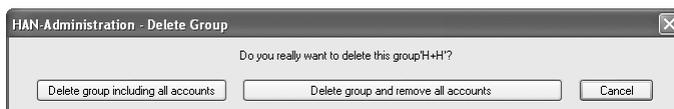


You can open a shortcut menu by right-clicking on an account group. These shortcut menus also contain a number of commands for processing groups.

- Select EDIT/GROUPS/EDIT... to add or remove accounts in an existing account group, or to edit the name and/or description of the group.
- Select EDIT/GROUPS/COPY...to copy an existing group. The copy does **not** contain any accounts.



- Select EDIT/GROUPS/DELETE to delete an existing group.



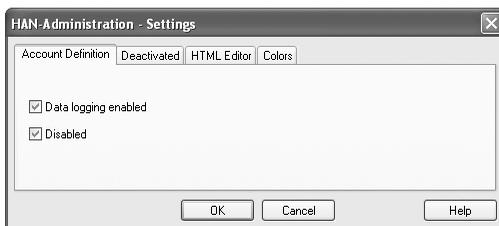
At this point, you are given the option of deleting both the group and all of the accounts it contains, or deleting the group and keeping the accounts.

Program Settings

You can customize your **HAN Administration** by configuring the program settings. To do this, open the **VIEW** menu and select **SETTINGS**.

Account Defaults

When you activate **DATA LOGGING ENABLED** on this dialog page, the **DATA LOGGING** option is automatically enabled for every account you create. This is practical if you want to record the usage of your HAN accounts; for example, for statistical evaluation purposes.



If you select **ACCOUNT INITIALLY DEACTIVATED** on this page, your HAN accounts are inactive (inaccessible to users) when first created. This is useful if you know you want to test accounts before providing them to users. To activate an account once you are ready to let your users access it, select **EDIT/ACCOUNTS/PROPERTIES** and open the **DEACTIVATE** page to change the setting.



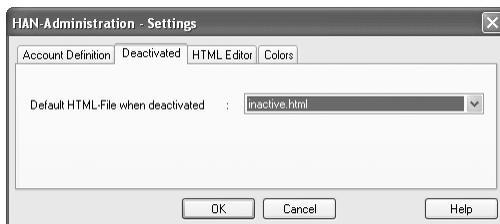
*When the **ACCOUNT INITIALLY DEACTIVATED** option is set in the **ACCOUNT DEFAULTS**, the following message is shown after you create a HAN account:*



Deactivated

If one of your users tries to call an account that has been deactivated, an HTML page is opened to inform the user that the account is not available. The DEACTIVATED page of the Han Administration SETTINGS dialog lets you specify which HTML file is opened in this case.

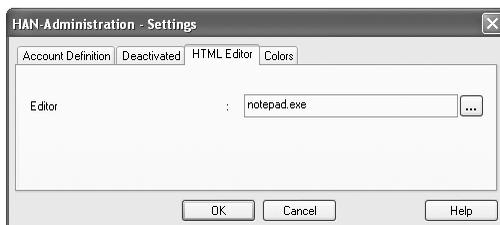
Under DEFAULT HTML PAGE FOR NOTIFICATION you can select an HTML file prepared for this purpose.



You can edit the HTML page by opening the PROPERTIES page of the account (or account group) and selecting EDIT on the DEACTIVATE page.

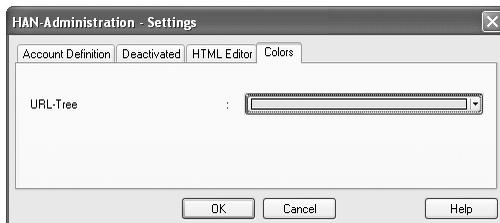
HTML Editor

On this page, you can specify the editor program called by HAN (for example, to edit the DEACTIVATED HTML page). Click on the "Browse" button to select a program. In this example, notepad.exe has been selected.



Color Settings

On the COLORS page you can specify the background color used in the **Navigation view** of your **HAN Administration**.



Import/Export Functions

Chances are, you already have a sizable store of data on the on-line resources you provide for your users. When you use HAN to provide access to Internet resources, you can simply load your existing data into the HAN system. The only prerequisite is that the data is in XML format with a structure corresponding to the XML scheme file supplied with HAN.

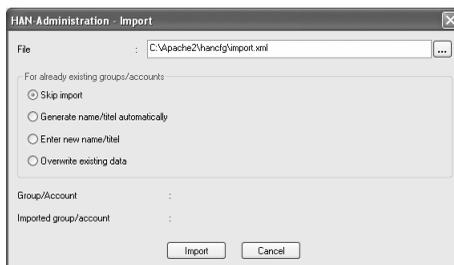


In order to use imported data for creating HAN accounts, the imported records must contain at least a title and the root URL for the account.

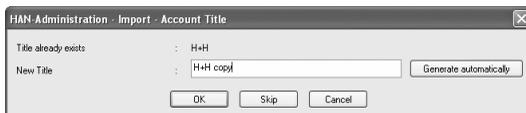
Importing Data

Select **EDIT/IMPORT** to open the dialog shown below. Click on the “Browse” button find the data you wish to import. In the example shown here, `lmport.xml` will be imported.

- If you already have accounts in your HAN system, you can select **SKIP IMPORT** to prevent your existing accounts from being overwritten.



- Select **GENERATE NAME/TITLE AUTOMATICALLY** to have HAN create the names for the new accounts automatically.
- If you would rather write your own account names, select **ENTER NEW NAME/TITLE**. YOU CAN ENTER A NEW NAME IN THE DIALOG SHOWN HERE. IF YOU DO NOT WISH TO CHANGE THE NAME, SELECT “SKIP.”

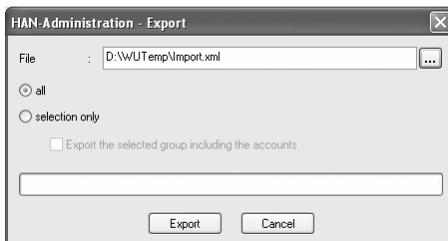


- To have your existing data completely replaced by the data you import, select **OVERWRITE EXISTING DATA**.

Click on **IMPORT** to execute the data import operation.

Exporting Data

You can export your HAN data; for example, for central processing and evaluation in an external database. Select **EDIT/EXPORT** to open the following dialog:



Click on the "Browse" button to select the data you wish to export.

- Activate the **ALL** option to export all of your HAN account data.
- If you wish to export only some of your account data, select the desired accounts and activate the **SELECTION ONLY** option. If you have selected account groups for export, you can specify whether or not the accounts belonging to the group are exported as well.

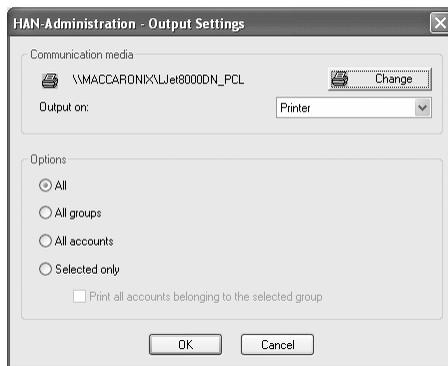
Click on **EXPORT** to execute the export operation.

Printing in HAN

The printing function in HAN lets you generate clearly structured documentation on your accounts and account groups.

Output Settings

Click on **FILE** and select the **PRINT** option. The **OUTPUT SETTINGS** dialog opens.



The **CHANGE** button lets you change the printer settings, and the **OUTPUT TO/AS** list box lets you define the form of output generated. You can have your HAN data output as:

- a printout,
- a print preview, or
- a file, in
 - Rich Text Format (RTF),
 - HTML format, or
 - Portable Document Format (PDF)

Furthermore, you can specify the data to be included in the output:

- All groups and all accounts (**ALL**)
- All of your groups (**ALL GROUPS**)
- All of your accounts (**ALL ACCOUNTS**)
- Only selected groups or accounts (**SELECTED ONLY**)

If you choose **SELECTED ONLY** to output selected groups, you can activate the **PRINT ALL ACCOUNTS BELONGING TO THE SELECTED GROUPS** to include member accounts in the output.

The output generated for a group presents the group's properties in an easy-to-read table.

Hidden Automatic Navigator		23.05.2003
DESCRIPTION		
SUB GÖßlingen		
Group properties		
Title	H-N	
Description		
Date Mapping	No	
Access ID		
Learning	No	
Learning ID	Number of resources	
Learning ID		
Login		
Server	Password	
Use HTTP Login	No	
Use SSL	No	
HTML Page for authentication	Index.html	
Valid until		
Privacy notice	No	
Parent ID		
Marketing URL Address		
Comments		

Page 1

Output for an account includes the address of the resource provider's Web server and the root URL of the page opened, in addition to the account properties.

You can send, print or save the preview.

Statistical Analysis of HAN Account Usage

You can analyze the usage of your HAN accounts by performing statistical evaluations on HAN log files. There are a number of practical uses for these statistical evaluations, from arranging an overview of system use to comparing your data with invoices from resource providers.

You can also create parallel-use spreadsheets to determine the number of licenses you require for an account.

This helps you detect or prevent bottle-necks and surpluses. In other words, you can adapt the number of account licenses exactly to suit your needs.

In the second part of this chapter, we present a practical example that demonstrates the many options available for statistical evaluations.



*In the **HAN Settings** you can define how usage data is recorded for accounts with the `DATA LOGGING` function enabled (see “Account Defaults”).*

Usage data is recorded in the HAN database (for those accounts that have the “Data logging” function active), and can be viewed in the **Database Viewer**.

To open the Database Viewer, select `PROGRAMS/HAN/HAN DATABASE VIEWER`.

There are two types of table in the Database Viewer:

- HAN-Details
- HAN-Sequential

The **HAN-Details** table shows each account with the date(s) and time(s) it was called, client IP address, user ID, bytes transferred, status, URL and session ID.

This data is summarized in the **HAN-Sequential** table, which forms the basis of HAN statistics.



You can have the **HAN Sequential** table generated automatically when the **Statistics** program is started (see **STATISTICS - SETTINGS**) or generate the table manually, by selecting **EDIT/DATABASES/UPDATE DATABASE** in the **Statistics** program. You also have the option of updating data (i.e., adding new data) before each calculation.

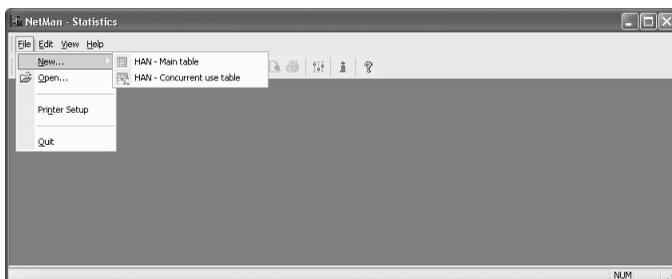
Record ID	Start date	Start time	Station ID	User ID	Transmitted bytes	URL	Browser se...
675149	27.03.2003	10:59:51	122.53.95.68	UNIVER	0	www.nature.co...	1048759198
675149	27.03.2003	10:59:50	122.53.95.68	UNIVER	162	www.nature.co...	1048759198
675147	27.03.2003	10:59:46	122.53.95.68	UNIVER	0		1048759198
675146	27.03.2003	10:02:43	122.53.71.63	UNIVER	168976	www.sciencedi...	1048755543
675145	27.03.2003	10:02:16	122.53.71.63	UNIVER	188972	www.sciencedi...	1048755543
675144	27.03.2003	10:01:41	122.53.71.63	UNIVER	262544	www.sciencedi...	1048755543
675143	27.03.2003	10:00:42	122.53.71.63	UNIVER	127888	www.sciencedi...	1048755543
675142	27.03.2003	10:00:07	122.53.71.63	UNIVER	150127	www.sciencedi...	1048755543
675141	27.03.2003	09:59:23	122.53.71.63	UNIVER	281376	www.sciencedi...	1048755543
675140	27.03.2003	09:59:16	122.53.71.63	UNIVER	999	www.sciencedi...	1048755543
675139	27.03.2003	09:59:16	122.53.71.63	UNIVER	81	www.sciencedi...	1048755543
675138	27.03.2003	09:59:16	122.53.71.63	UNIVER	62	www.sciencedi...	1048755543
675137	27.03.2003	09:59:16	122.53.71.63	UNIVER	3750	www.sciencedi...	1048755543
675136	27.03.2003	09:59:16	122.53.71.63	UNIVER	173	www.sciencedi...	1048755543
675135	27.03.2003	09:59:11	122.53.71.63	UNIVER	48618	www.sciencedi...	1048755543

When viewing data records, keep in mind that the URL data recorded may be affected by **URL templates**, if such have been configured (see Section "Data Logging"). When **URL templates** are modified, this is also reflected in the data logged. Server changes are logged in accordance with the currently valid **URL templates**.

Statistical Analysis with the HAN Statistics Program

To start the HAN Statistics program, select **PROGRAMS/HAN/HAN STATISTICS**. This opens the main window of the Statistics program. You can choose from two types of table in this window:

- **Main table**
- **Table of concurrent use**



The first time you start HAN Statistics, no spreadsheet is loaded on start-up. Under **SETTINGS/SELECTION** you can configure the following:

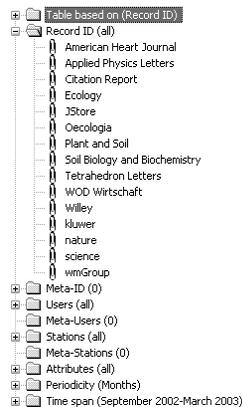
- Whether a table is opened on start-up, and if so, which type of table
- Whether data is updated on start-up
- Whether data recorded after start-up is updated (added to the database) before a requested calculation is performed.

The Main Table

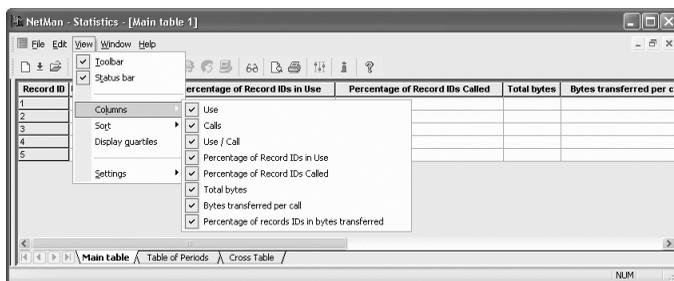
To open the main table, select **FILE/NEW/MAIN TABLE**. The main table offers the following **selection options**:

Under **Table based on...** you can define calculation of the account calls and usage data is sorted by record ID (account), user or station. Depending on your selection, each data line in the main table shows the data on a single account, user or station.

You can group accounts, users, or stations for purposes of statistical analysis under the selections **Meta-IDs**, **Meta-users** and **Meta-stations**. The results in the main table show the aggregate data under the defined group name as a data line.



You can adapt the table to your requirements by selecting which **columns** will be shown in the main table. To do this, select **VIEW/COLUMNS**:



You can choose **Record ID**, **user** or **station** as the basis for calculation. Whichever you choose, you can view a calculation based on **either of the other two elements** by selecting **EDIT / DETAILED INFORMATION/...** and the desired element.

Record ID	Use	Calls	Use / Call	Percentage of Record IDs in Use	Percentage of Record IDs Called
535	1279	00:02:31		60.37	46.41
2923	483	00:03:33		21.90	17.63
adron Letters	00:0	255	00:00:00	0.08	9.25
Physica Letters	04:2	215	00:01:14	5.00	7.90
Physik und Biochemie	00:1	172	00:02:27	1.40	6.24
Plant and Soil	00:0	138	00:00:01	0.04	4.64
Oecologia	00:1	95	00:00:09	0.27	3.45
American Heart Journal	00:0	91	00:00:07	0.22	3.30
Lettre	00:0	9	00:00:58	0.15	0.20
Citation Report	00:0	7	00:00:20	0.05	0.25
Science	00:1	6	00:02:31	0.24	0.18
kluwer	00:0	3	00:00:58	0.05	0.11
Wormsop	00:0	2	00:00:22	0.01	0.07
WVD Hirschfeld	00:0	2	00:00:00	0.00	0.07
Sum	892	2766	00:01:56	100.00	100.00

The **Periodicity** function lets you define the **Time span** for the calculations to be performed (in our example, “Months” is selected). The **time span** shown is the currently selected **time span**.

Furthermore, you can choose from the following **Attributes** here:

- /NL (no license)
- /NR (no right)
- /NA (not active)

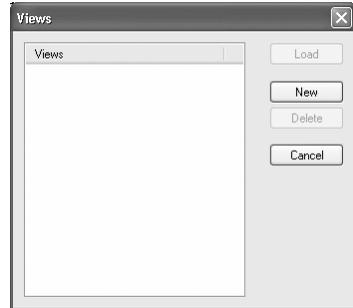
Any time an account is called for which no license is available, this is indicated in the statistics by the abbreviation /NL. Similarly, if an account is called by a user who does not have the required permission, or if an account is inactive, the corresponding abbreviations are shown in the statistics.

You can also save any of these calculations as a special **View** of your data,

by selecting **EDIT/VIEWS**. A **View** can be activated at any time or loaded at program start.



When you select a **View** of a complete statistics period, the View is saved automatically.



When you create a main table, a table of periods and a cross table are created at the same time using the same configuration.

Table of Periods

Period	Use	Calls	Use / Call	Percentage of Record Ibs in Use	Percentage of Record Ibs Called	Total bytes	Bytes transferred per call	Percentage of records Ibs in byt
September 2002	02:5	38	00:04:41	10.40	7.37	23468112	610351	
October 2002	02:3	44	00:03:36	9.27	9.11	26329757	598403	
November 2002	08:1	153	00:03:12	26.68	31.68	97651402	638244	
December 2002	04:5	26	00:02:17	3.48	5.38	15408620	592677	
January 2003	04:5	71	00:04:10	17.28	14.70	54418647	758473	
February 2003	02:4	70	00:02:23	9.74	14.48	26568899	408127	
March 2003	06:0	81	00:04:28	21.14	16.77	64301687	783847	
Sum	28:3	483	00:03:33	100.00	100.00	319167124	642167	

The table of periods shows the usage, calls, use per call, and other statistics, calculated according to the chosen period. In our example, the period selected is “Months.”

Cross Table

You can view the cross table by selecting the item from the shortcut menu (right-click in the main table). In our example, since calculations are based on **Record IDs**, we can choose from the following pairings:

- Record ID/Periods
- Record ID/Users
- Record ID/Stations

The screenshot shows the NetMan - Statistics application window. The main table displays data for various record IDs, including 'nature', 'science', 'Tetrahedron Letters', 'Applied Physics Letters', 'Soil Biology and Biochemistry', 'Ecology', 'Plant and Soil', 'Oecologia', 'American Heart Journal', 'Willey', 'Citation Report', 'Zbornik', 'Inventor', 'Wentzoup', and 'Wolff Mettschall'. A context menu is open over the 'Main table' header, showing options: 'Cross Table', 'Record ID/Periods', 'Record ID/Users', 'Record ID/Stations', 'Total usage', 'Use as percentage of total usage', 'Use as percentage of total usage for record ID', 'Total calls', 'Calls as percentage of total calls', 'Total bytes', and 'Bytes as percentage of bytes for record ID'.

Record ID	Use	Calls	Use / Call	Percentage of Record Use in Use	Percentage of Record Use in Calls	Total bytes	Bytes transferred per call	Pr
nature	535	1279	0.0231	60.37	46.41	13483919	105497	
science	263	483	0.0333	31.99	17.53	31016724	842107	
Tetrahedron Letters	000			0.00	9.25	0	0	
Applied Physics Letters	042			6.00	7.80	2915200	13559	
Soil Biology and Biochemistry	011			1.49	6.24	0	0	
Ecology	003			0.04	4.84	85269	6960	
Plant and Soil	001			0.27	3.45	25394	2697	
Oecologia	003			0.22	3.30	543984	5976	
American Heart Journal	000			0.04	0.40	824444	74676	
Willey	000			0.15	0.20	1204663	106650	
Citation Report	000			0.06	0.25	76283	11163	
Zbornik	001			0.00	0.00	239738	239738	
Inventor	000			0.00	0.00	72795	72795	
Wentzoup	000			0.00	0.00	178813	178813	
Wolff Mettschall	000			0.00	0.00	0	0	
Sum	002			100.00			166595	

Once the desired pair is selected, the next menu level offers a choice of the following cross table contents:

- Total usage
- Use as percentage of total usage
- Use as percentage of total usage for record ID
- Total calls
- Calls as percentage of total calls
- Calls as percentage of total calls for the ID
- Total bytes
- Bytes as percentage of total bytes
- Bytes as percentage of total bytes for the ID

You can also create cross tables based on **stations** or **users** rather than record IDs.

Table of Concurrent Use

This table evaluates data on accounts used in parallel by multiple users. The following data is included in the calculation:

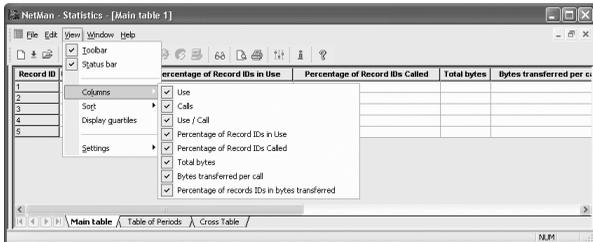
- Highest number of concurrent users at any one time
- Number of days on which the highest number of users was reached
- Longest period during which the highest number of users was active

Similar calculations are also made for the five next lower values. This helps you determine whether the highest value was an exceptional case or can be seen as a logical extension of other values. With this information, you can determine whether you have too many (or too few) licenses for a given application.

Analyzing Data with the HAN Statistics Program

The database used for our example is a log of selected accounts called between September 2002 and March 2003. There are a lot of test calls in this data stock.

First we run a calculation for this time span, and then we define the columns we wish to view in the main table. For this example, we select all columns.



Data processing is considerably slower if data is output to the screen during calculation. This option is defined under SETTINGS/CALCULATION. For the fastest processing, select NO SCREEN OUTPUT DURING CALCULATION.

NetMan - Statistics - [Main table 1: September 2002-March 2003]

Record ID	Use	Call	Use / Call	Percentage of Recor	Percentage	Total bytes	Bytes transferred per	Percentage of records IDs in bytes transferred
nature	53.55:59	1279	00:02:31	60.37	46.41	134831818	106487	29.75
science	28:36:04	483	00:03:33	31.99	17.53	310167124	642167	66.38
Tetrahedron Letters	00:04:10	255	00:00:00	0.06	9.25	0	0	0.00
Applied Physics Letters	04:26:18	215	00:01:14	5.00	7.80	2915200	13559	0.64
Soil Biology and Biochemistry	01:19:38	172	00:00:27	1.49	6.24	0	0	0.00
Ecology	00:02:23	128	00:00:01	0.04	4.64	852569	6660	0.19
Plant and Soil	00:14:29	95	00:00:09	0.27	3.45	253394	2697	0.08
Oecologia	00:11:36	91	00:00:07	0.22	3.30	543894	5976	0.12
American Heart Journal	00:02:02	11	00:00:11	0.04	0.40	821444	74676	0.18
Willey	00:07:57	6	00:00:59	0.15	0.29	1248403	156050	0.28
Citation Report	00:02:47	7	00:00:23	0.05	0.25	78283	11183	0.02
JStow	00:12:36	5	00:02:31	0.24	0.18	1193890	238738	0.26
klwuer	00:02:58	3	00:00:58	0.05	0.11	233357	77785	0.05
lwnGroup	00:00:44	2	00:00:22	0.01	0.07	357626	178813	0.08
WOD Wirtschaft	00:00:00	2	00:00:00	0.00	0.07	0	0	0.00
Sum	09:20:40	2756	00:01:56	100.00	100.00	453596602	164585	100.00

The data shown is sorted by record IDs. First of all, we want to know which accounts were used the longest and called most often, so we right-click with the mouse cursor on the table to open a shortcut menu, and select DESCEND / (order of) USE.

NetMan - Statistics - [Main table 1: September 2002-March 2003]

Columns: Use, Call, Use / Call, Percentage of Recor, Percentage, Total bytes, Bytes transferred per, Percentage of records IDs in bytes transferred

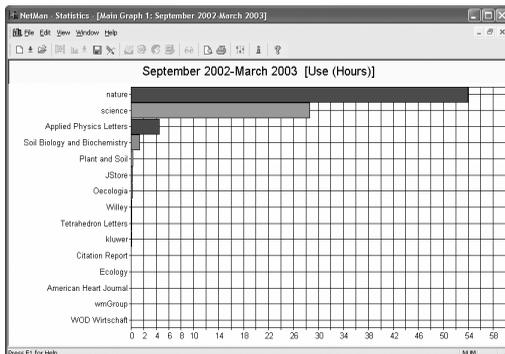
Sort: Ascending

Display quartiles: Descending

Settings: to Record ID, to Use, to Call, to Use / Call, to Percentage of Recor IDs in Use, to Percentage of Record IDs Called, to Total bytes, to Bytes transferred per call, to Percentage of records IDs in bytes transferred

Record ID	Use	Call	Use / Call	Percentage of Recor	Percentage	Total bytes	Bytes transferred per	Percentage of records IDs in bytes transferred
nature	53.55:59	1279	00:02:31	60.37	46.41	134831818	106487	29.75
science	28:36:04	483	00:03:33	31.99	17.53	310167124	642167	66.38
Applied Physics Letters	00:04:10	255	00:00:00	0.06	9.25	0	0	0.00
Soil Biology and Biochemistry	01:19:38	172	00:00:27	1.49	6.24	0	0	0.00
Ecology	00:02:23	128	00:00:01	0.04	4.64	852569	6660	0.19
Plant and Soil	00:14:29	95	00:00:09	0.27	3.45	253394	2697	0.08
Oecologia	00:11:36	91	00:00:07	0.22	3.30	543894	5976	0.12
American Heart Journal	00:02:02	11	00:00:11	0.04	0.40	821444	74676	0.18
Willey	00:07:57	6	00:00:59	0.15	0.29	1248403	156050	0.28
Citation Report	00:02:47	7	00:00:23	0.05	0.25	78283	11183	0.02
JStow	00:12:36	5	00:02:31	0.24	0.18	1193890	238738	0.26
klwuer	00:02:58	3	00:00:58	0.05	0.11	233357	77785	0.05
lwnGroup	00:00:44	2	00:00:22	0.01	0.07	357626	178813	0.08
WOD Wirtschaft	00:00:00	2	00:00:00	0.00	0.07	0	0	0.00
Sum	09:20:40	2756	00:01:56	100.00	100.00	453596602	164585	100.00

Now we choose a suitable graph type for our data and generate graphic output:



The "nature" account shows the most usage, in minutes. As can be seen in the USE / CALL column shown on the previous page, however, the account was used only briefly, on average, each time it was called. Next, we sort the table by account call. We also activate the DISPLAY QUARTILES option, so we can recognize the highest and lowest values in the

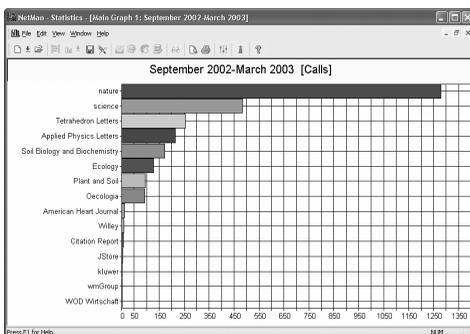
column at a glance. This option marks values with one of four colors, to differentiate the following categories:

- high values (=75 to 100%),
- fairly high values (=50 to 74%),
- fairly low values (=25 to 49%), and
- low values (=0 to 24%).

In the table below, you can tell at a glance which are the highest values in each of the columns (sorted by use):

Record ID	Use	Calls	Use / Call	Percentage of Record IDs in Use	Percentage of Record IDs Called	Total bytes	Bytes transferred per call	Pe
nature	535	1279	00:02:31	60.37	46.41	134631618	105407	
science	283	483	00:03:33	31.99	17.53	310167124	842167	
Applied Physics Letters	042	215	00:01:14	5.00	7.80	2915200	13559	
Soil Biology and Biochem	011	172	00:00:27	1.49	6.24	0	0	
Plant and Soil	001	95	00:00:09	0.27	3.45	253394	2667	
JStow	001	5	00:00:31	0.24	0.18	1193690	236738	
Ecologia	001	91	00:00:07	0.22	3.30	543994	5976	
Willey	000	8	00:00:59	0.15	0.29	1246603	156950	
Tetrahedron Letters	000	255	00:00:00	0.08	9.25	0	0	
klower	000	3	00:00:58	0.05	0.11	233557	77785	
Citation Report	000	7	00:00:23	0.05	0.25	76283	11103	
Ecology	000	128	00:00:01	0.04	4.64	852569	6660	
American Heart Journ	000	11	00:00:11	0.04	0.40	821444	74676	
wmGroup	000	2	00:00:22	0.01	0.07	357628	178813	
WOD Wirtschaft	000	2	00:00:00	0.00	0.07	0	0	
Sum	892	2756	00:01:56	100.00	100.00	453596602	164585	

Sorted by number of account calls, the graph looks like this:



Here we have sorted the table by number of bytes transferred:

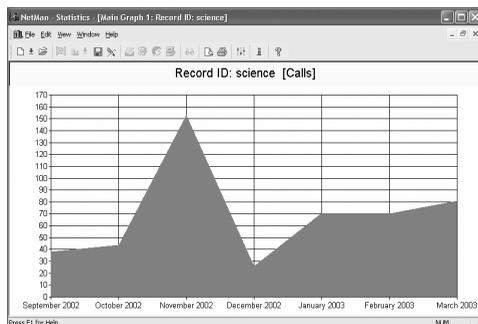
Record ID	Use	Calls	Use / Call	Percentage of Record IDs in Use	Percentage of Record IDs Called	Total bytes	Bytes transferred
science	283	483	00:03:33	29.88	17.53	310167124	842167
JStow	001	5	00:00:31	0.24	0.18	1193690	236738
wmGroup	000	2	00:00:22	0.01	0.07	357628	178813
Willey	000	8	00:00:59	0.15	0.29	1246603	156950
nature	535	1279	00:02:31	60.37	46.41	134631618	105407
klower	000	3	00:00:58	0.05	0.11	233557	77785
American Heart Journal	000	11	00:00:11	0.04	0.40	821444	74676
Applied Physics Letters	042	215	00:01:14	5.00	7.80	2915200	13559
Citation Report	000	7	00:00:23	0.05	0.25	76283	11103
Ecology	000	128	00:00:01	0.04	4.64	852569	6660
Plant and Soil	001	95	00:00:09	0.27	3.45	253394	2667
Tetrahedron Letters	000	255	00:00:00	0.08	9.25	0	0
Soil Biology and Biochemistry	011	172	00:00:27	1.49	6.24	0	0
WOD Wirtschaft	000	2	00:00:00	0.00	0.07	0	0
Sum	892	2756	00:01:56	100.00	100.00	453596602	164585

The "science" is in the lead.

In the table of periods for a given line, the Sum line shows the total use of all accounts in each period, which is useful for detecting trends:

Period	Use	Calls	Usage	Call	Percentage of Record IDs in Use	Percentage of Record IDs Called	Total Bytes	Bytes transferred per call	Percentage of records IDs in Use
September 2002	02:35	39	00:04:41		10.40	7.37	2369112	61055	
October 2002	02:31	44	00:03:36		9.27	5.11	26129757	58403	
November 2002	08:11	152	00:03:12		29.68	31.68	87921402	63924	
December 2002	00:45	26	00:02:17		3.48	5.38	15606201	62927	
January 2003	04:51	71	00:04:10		17.28	14.70	54413647	76473	
February 2003	02:47	70	00:02:23		8.14	14.48	28568989	409127	
March 2003	06:01	81	00:04:28		21.14	16.77	6491687	79347	
Sum	28:31	483	00:03:33		100.00	100.00	310167124	642167	

The graphic representation of usage distribution over time periods (a different type of graph was chosen for this example) shows that the highest usage occurred in November 2002, while hardly any accounts were used in December 2002.



The cross table below shows the periodic distribution of the Use column for all accounts:

Record ID	Sept	October 2002	November 2002	January 2003	February 2003	March 2003	Sum	
nature	04:45:1	08:27:21	09:17:14	02:52:52	10:01:48	10:14:44	07:16:42	63:55:59
science	02:58:2	02:38:02	08:11:57	00:58:44	04:56:22	02:46:58	06:02:36	28:35:04
Applied Physics Letters	00:24:2	00:50:10	00:35:47	00:06:09	00:52:02	01:29:21	00:10:25	04:28:18
Soil Biology and Biochemistry	01:08:4	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	01:08:39
Plant and Soil	00:14:2	00:00:00	00:00:01	00:00:00	00:00:00	00:00:00	00:00:00	00:14:29
JStore	00:12:3	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:12:36
Oecologia	00:00:0	00:01:58	00:09:38	00:00:00	00:00:00	00:00:00	00:00:00	00:11:36
Willey	00:06:4	00:00:00	00:01:17	00:00:00	00:00:00	00:00:00	00:00:00	00:07:57
Tetrahedron Letters	00:00:0	00:00:00	00:00:00	00:00:00	00:00:00	00:04:10	00:00:00	00:04:10
kluever	00:02:5	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:02:56
Citation Report	00:02:4	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:02:47
Ecology	00:00:0	00:00:00	00:00:00	00:00:02	00:00:00	00:01:54	00:00:27	00:02:23
American Heart Journal	00:00:0	00:00:15	00:00:00	00:00:00	00:00:17	00:00:00	00:01:30	00:02:02
uwwGroup	00:00:3	00:00:15	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:44
VWD Wirtschaft	00:00:0	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00
Sum	08:57:4	12:58:58	18:15:54	03:58:47	16:00:27	14:37:07	13:31:40	83:20:40

All of the calculations demonstrated above for record IDs can also be made based on users or stations.

Sorted by account calls, the 'Users' table shows the following...

User	Use / Calls	Percentage of Record Its In Use	Percentage of Record Its Called	Total bytes	Bytes transferred per
USER	08:4 2088	00:01:58	99.31	97.48	45073927
1001	00:0 17	00:00:05	0.04	0.02	6071984
0807482195X	00:0 15	00:00:00	0.00	0.04	2479
YAL USER	00:0 5	00:00:07	0.01	0.10	11709
0807480458	00:0 3	00:00:22	0.02	0.11	13068
12:5:5.181.28	00:0 3	00:00:05	0.00	0.11	130165
12:5:5.17.78	00:0 2	00:00:00	0.00	0.04	10701
12:5:5.17.89	00:0 2	00:00:35	0.13	0.07	88874
0807480291	00:0 2	00:00:24	0.13	0.07	26886
0807480307	00:0 2	00:00:12	0.01	0.07	16522
0807111128	00:0 2	00:00:27	0.02	0.07	32470
0807110108	00:0 2	00:00:00	0.00	0.07	0
0807186529	00:0 2	00:00:00	0.00	0.07	0
12:5:5.18.51	00:0 2	00:00:00	0.00	0.07	0
0807480788	00:0 1	00:00:32	0.20	0.04	24186
12:5:5.118.164	00:0 1	00:01:59	0.04	0.04	8330
12:5:5.38.81	00:0 1	00:01:19	0.02	0.04	91471
12:5:5.88.56	00:0 1	00:01:29	0.03	0.04	60761
12:5:5.85.52	00:0 1	00:01:57	0.04	0.04	8021
18:181.528.83	00:0 1	00:00:16	0.00	0.04	7282
12:5:5.88.183	00:0 1	00:00:06	0.00	0.04	16872
0807480178	00:0 1	00:00:00	0.00	0.04	0
0807221788	00:0 1	00:00:00	0.00	0.04	0
12:5:5.66.96	00:0 1	00:00:00	0.00	0.04	0
Sum	08:4 2162	00:01:51	100.00	100.00	40359662

...and the 'Stations' table looks like this:

Stations	Use / Calls	Percentage of Record Its In Use	Percentage of Record Its Called	Total bytes	Bytes transferred per
12:5:5.128.123	00:1 108	00:00:19	0.31	3.92	3601001
12:5:5.15.157	00:2 308	00:00:13	0.45	3.92	5430001
12:5:5.18.182	00:0 105	00:00:00	0.00	3.81	84210
12:5:5.182.87	00:0 55	00:00:00	0.17	2.00	39411
12:5:5.38.224	03:4 51	00:04:28	4.26	1.85	1248992
12:5:5.88.162	01:1 48	00:01:31	1.40	1.78	1027815
12:5:5.38.195	00:0 45	00:00:05	0.08	1.63	423160
12:5:5.18.263	04:2 43	00:06:12	4.99	1.58	22854261
12:5:5.38.265	00:0 34	00:00:06	1.45	1.23	10856513
12:5:5.85.53	02:5 33	00:05:20	3.28	1.20	8163385
12:5:5.66.36	00:0 32	00:00:07	0.00	1.16	0
12:5:5.152.91	00:0 30	00:00:16	0.16	1.09	2195178
12:5:5.241.222	01:3 30	00:03:19	1.86	1.09	12274770
12:5:5.38.266	00:0 30	00:00:00	0.00	1.09	0
12:5:5.165.43	00:0 28	00:00:00	0.00	1.02	4538
12:5:5.182.188	00:5 28	00:01:50	0.96	1.02	1398198
12:5:5.128.185	00:1 28	00:00:40	0.33	0.94	2378000
12:5:5.88.56	01:0 26	00:02:20	1.20	0.94	3735841
12:5:5.17.78	01:1 25	00:00:48	1.38	0.91	110560
12:5:5.66.33	00:0 24	00:00:01	0.07	0.87	78226
12:5:5.167.33	00:4 22	00:00:20	0.82	0.80	3841004
12:5:5.38.128	00:2 22	00:00:59	0.44	0.80	2681837
12:5:5.83.128	00:2 22	00:00:56	0.38	0.80	102627
12:5:5.38.188	00:5 21	00:02:29	1.88	0.70	368086
12:5:5.66.52	00:4 21	00:02:01	0.78	0.76	4518324
18:181.528.83	00:0 20	00:00:06	0.04	0.73	744886
12:5:5.188.28	00:0 18	00:00:29	0.18	0.68	1783263
12:5:5.188.131	00:1 18	00:00:44	0.26	0.68	486784
12:5:5.38.208	00:3 18	00:01:06	0.65	0.65	3832288
12:5:5.66.28	00:0 18	00:00:00	0.00	0.68	0
12:5:5.181.34	00:4 17	00:02:37	0.83	0.62	6681753
12:5:5.17.88	00:4 17	00:02:35	0.82	0.62	6888752
12:5:5.85.78	00:0 17	00:00:17	0.09	0.62	209978
12:5:5.183.152	00:0 16	00:00:11	0.08	0.58	547627
12:5:5.17.173	00:4 16	00:02:58	0.98	0.58	2652078
12:5:5.88.181	00:0 16	01:17:13	0.67	0.66	1016044

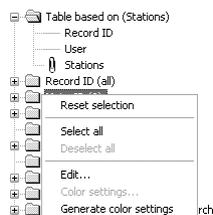
The calculations can be made not only according to **all** users, stations or accounts, but also for **selected**

- accounts,
- users,
- stations, and
- attributes.

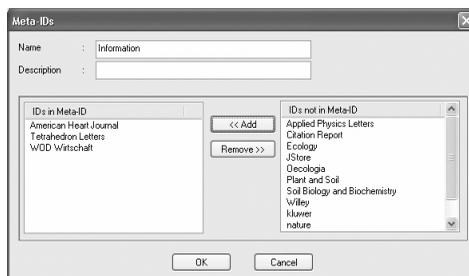
Furthermore, you can change the periodicity (quarterly, half-yearly, yearly or none), select different time spans, or set the minimum time to another value.

For the last demonstration, we shall generate calculations for Meta-users, Meta-stations and Meta-IDs (accounts). These give less detail, and provide a clear overview of the selected period.

We begin by defining categories of accounts. To do this, right-click on **Meta-IDs** for a shortcut menu, and select **EDIT**:



In this window we group our accounts...



and then repeat the calculation, this time based on our new Meta-IDs:

NetMan - Statistics - [Main table 1: September 2002-March 2003]

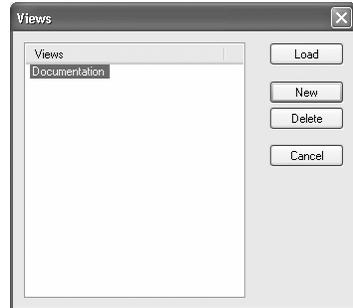
Record ID	Use	Call	Use / Call	Percentage of Record IDs in Use	Percentage of Record IDs Called	Total bytes	Bytes transferred per call	Percentage
EJournals	84.0	2204	00:02:17	94.14		79.97	446938126	202764
Science	04.3	354	00:00:46	5.09		12.84	4589013	12963
News	00.2	193	00:00:08	0.54		7.00	875971	4538
Information	00.1	5	00:00:28	0.24		0.18	116360	23878
Sum	89.2	2756	00:01:56	100.00		100.00	453596602	1164695

Next we group our stations:

NetMan - Statistics - [Main table 1: September 2002-March 2003]

Stations	Use	Call	Use / Call	Percentage of Record IDs in Use	Percentage of Record IDs Called	Total bytes	Bytes transferred per call	Percentage of re
User 2	77.1	2348	00:01:58	86.50		85.23	377913381	160982
User	07.5	299	00:01:34	8.79		10.85	56678153	186248
Anonymous	04.1	108	00:00:28	4.71		3.92	17005988	157454
Sum	88.7	2756	00:01:56	100.00		100.00	453596602	1164695

Now we save our selection of stations as a **View**, so we can perform calculations in future using this selection of criteria:



As a final evaluation, we create a concurrent use table to obtain additional information about the use of accounts:

Record ID	Licenses	Max	Days	Duration	Max - 1	Days	Duration	Max - 2	Days	Duration	Max - 3	Days	Duration
Maths	4	4	1	00:00:01	3	1	00:02:56	2	22	00:10:19	1	129	0
Science	2	2	8	00:05:57	1	122	00:38:24	0	0	00:00:00	0	0	0
Applied Physics Letters	3	2	1	00:03:05	1	73	00:24:34	0	0	00:00:00	0	0	0
Stone	2	2	1	00:00:01	1	3	00:01:20	0	0	00:00:00	0	0	0
Soil Biology and Biochemistry	1	4	0	00:58:11	0	0	00:00:00	0	0	00:00:00	0	0	0
American Heart Journal	1	4	0	00:01:16	0	0	00:00:00	0	0	00:00:00	0	0	0
Ecology	1	4	0	00:01:01	0	0	00:00:00	0	0	00:00:00	0	0	0
Citation Report	1	3	0	00:01:23	0	0	00:00:00	0	0	00:00:00	0	0	0
Plant and Soil	1	2	0	00:14:28	0	0	00:00:00	0	0	00:00:00	0	0	0
Oecologia	1	2	0	00:09:38	0	0	00:00:00	0	0	00:00:00	0	0	0
Willey	1	2	0	00:05:52	0	0	00:00:00	0	0	00:00:00	0	0	0
Shower	1	2	0	00:02:12	0	0	00:00:00	0	0	00:00:00	0	0	0
wmGroup	1	2	0	00:00:31	0	0	00:00:00	0	0	00:00:00	0	0	0
Tetrahedron Letters	1	1	0	00:04:10	0	0	00:00:00	0	0	00:00:00	0	0	0

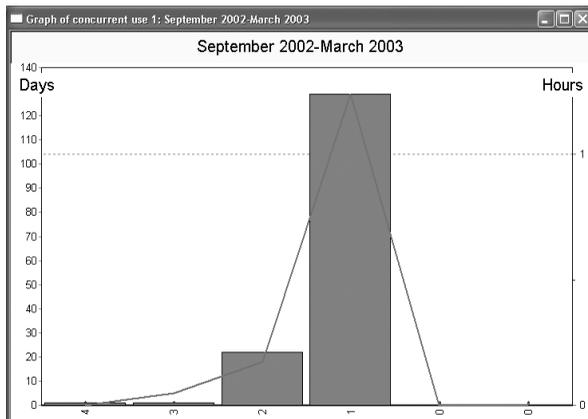
The LICENSES column shows the number of licenses currently configured for the account. This generally defines the limit for parallel use.

The MAX, DAYS and DURATION columns belong together as a block: MAX shows the highest number of parallel users, DAYS the number of days on which this level was reached, and DURATION the longest period during which this number of licenses was used simultaneously.

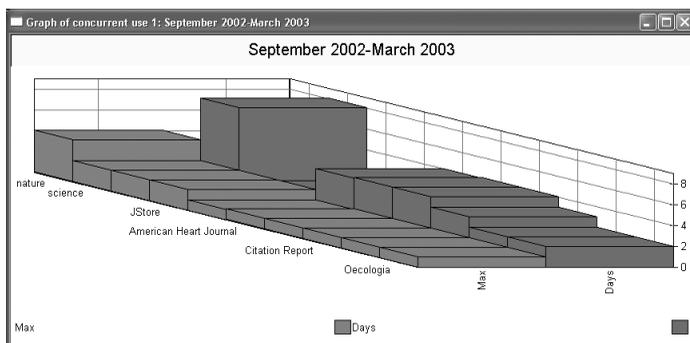
The subsequent columns show the same data for each of the five next lower simultaneous-use values.

As the table above shows, the number of licenses available for “Applied Physics Letter” was always sufficient. The “science” account data, however, shows a bottle-neck; if a third user had attempted to launch this application at that time, they might have had to wait over 6 minutes for a license to become available. Since all licenses were in use on 8 different days, it would probably be a good idea to make additional user licenses available for this account.

When we select one line of the spreadsheet and generate a bar graph based on these values, the height of the bars shows the number of days on which the value occurred. The superimposed curve gives the duration in minutes.



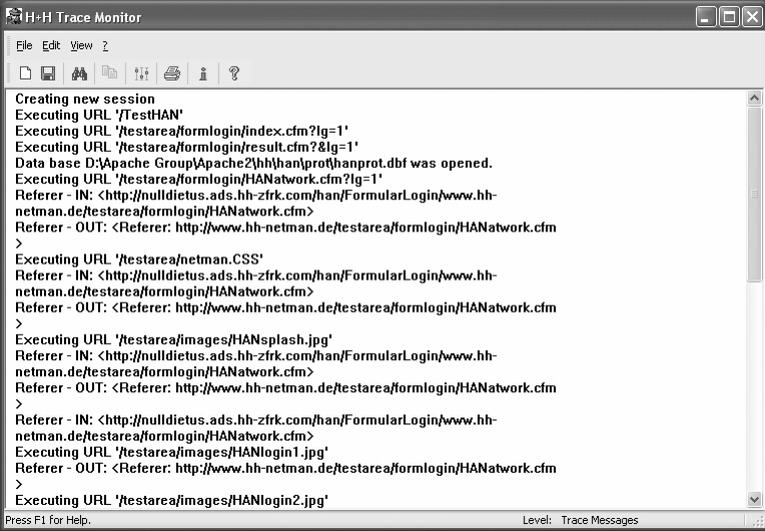
The following graph gives an overview of all accounts that were accessed by more than one user simultaneously at least once:



This graph was created by selecting the accounts and then activating **EDIT / GRAPH / MAXIMUM PARALLEL USE (FOR ALL IDS)**.

Trace Monitor

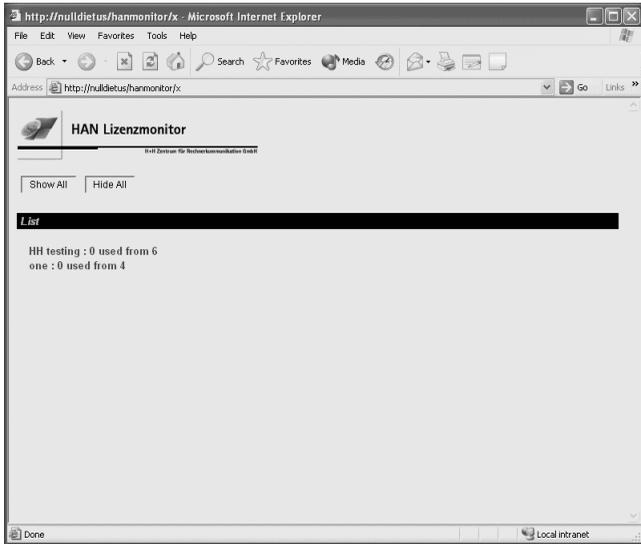
To run the Trace Monitor, select PROGRAMS/HAN/H+H TRACE MONITOR. This program shows all actions that involve addressing HAN accounts. If a problem occurs while using HAN, this program can help you detect when and why it happened.



License Monitor

This program lets you monitor your HAN licenses using your Web browser. To do this, point the browser to `http://<computername>/hanmonitor/monitor`. The following data is shown for the accounts and account groups that use licenses:

- How many licenses are in use for a given **account** or **account group**?
- Which workstation/user is using the license?



In our example, 0 of the 6 licenses assigned to the **HHtesting** account are in use. None of the **one** account are in use.

Appendix

- Bibliography
- Glossary



Bibliography

Jamsa K., Lalani S., Weakley S. 1996: WEB Programming; Jamsa Press

Wong C. 2000: HTTP Pocket Reference. HyperText Transfer Protocol; O'Reilly

Glossary

Account

A HAN account provides access to a specific Internet resource, making it available to your users through the medium of the HAN system. You can define content and properties for each of your HAN accounts.

Account Group

An account group is a logical grouping of HAN accounts that have identical or similar properties. Sorting accounts into groups can make your work with HAN simpler and more efficient.

Accounts view

Component of the HAN Administration; shows all accounts and account groups.

Link ID

An identifier automatically generated by HAN from the account name and used to identify the account.

Masking IP Address

One of the IP addresses used by your HAN server.

Navigation view

Part of the Script Generator. The Navigation view shows the URLs belonging to an account.

Script Generator

Consists of the Web View and the Navigation view

Settings

A program for configuring basic settings relating to the HAN program.

Web View

Part of the Script Generator. The Web View shows the HTML page opened by an account.

