Sysgem SysMan Utilities (Professional Edition)

Installation and Configuration Guide

By Sysgem AG

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Contact Us

Sysgem Software Distribution & Support

If you need information or assistance with SysMan, please get in touch with your supplier in the first instance.

If you need to contact 'Sysgem Distribution' for:

- Sales Support
- Information on software updates and release notes
- Frequently Asked Questions

... please visit:

www.sysgem.eu

… or send email to:

sales@sysgem.eu

If you need assistance with SysMan for:

- Technical Support

... please visit:

http://www.sysgem.eu/knowledgebase

… or send email to:

support@sysgem.eu

Introduction

What's Inside

This is the guide for installing and managing SysMan Utilities (Professional Edition). For further information see also:

- SysMan Utilities User Guide
- SysMan Remote Control User Guide
- SysMan Utilities On-line Reference

Product Positioning

SysMan Utilities (Professional Edition) is one of three SysMan software editions.

1. *SysMan Remote Control*: is a stand alone console for accessing the desktops of remote Windows systems. It is typically installed on administrator workstations and is licensed per administrator.

2. *SysMan Utilities Standard Edition*: is a stand alone console for managing remote Windows systems. It is typically installed on administrator workstations and is licensed per administrator. It includes SysMan Utilities and SysMan Remote Control to remotely manage and access PCs and Windows Servers.

3. *SysMan Utilities (Professional Edition)*: includes the same SysMan Utilities and SysMan Remote Control but also has:

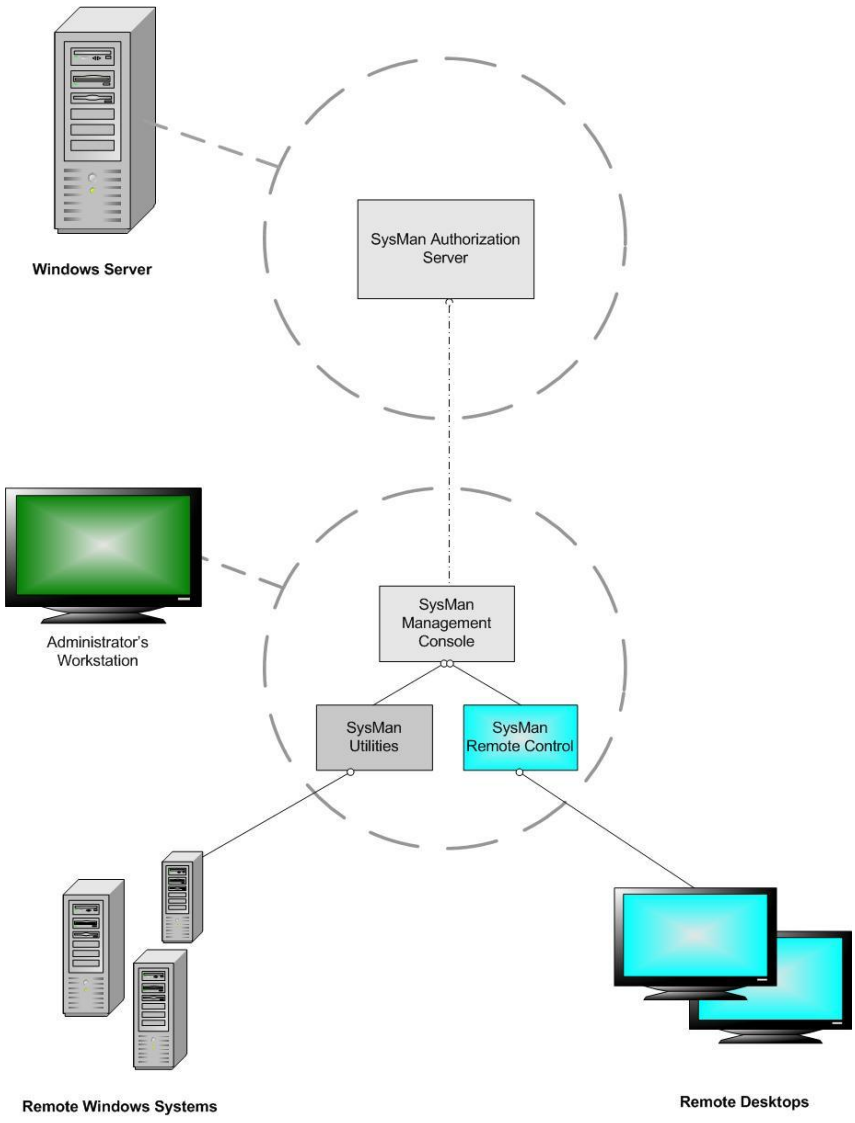
- Multiple SysMan user accounts that are managed centrally. Individual SysMan accounts are separately allocated to Windows administrators and each can be assigned different access permissions. The product, thereby, is able to be used to delegate distinct management responsibilities to different administrators.
- A central Audit Trail that keeps records of the activities of all management actions undertaken by the product.
  It records:
  - the identity of the remote machines on which the action was taken
  - the identity of the administrator
  - the date and time
  - the details of the transaction

SysMan Utilities (Professional Edition) is typically installed on a Windows Server for its central management and control and the console component (only) is typically installed on administrators' workstations.

SysMan Architectural Concept

Components

SysMan Utilities (Professional Edition) comprises the following components:



SysMan Authorization Server: - is typically installed on a central Windows Server and is used to hold the identity and permissions of SysMan users. It is also the place where the Audit Trail is recorded.

SysMan Management Console: - is typically installed on administrators' workstations and provides the user interface for the two sub-components: '*SysMan Utilities'* and '*Sysgem Remote Control'*.

SysMan Utilities: - has a number of system management tools for managing remote Windows systems. The tools run inside display windows that can be connected simultaneously to multiple remote machines.

SysMan Remote Control: - is used to access remote Windows desktops and take control over the logged in Windows sessions. SysMan Remote Control can be connected to multiple remote desktops, each connection being in a separate display window.

SysMan Remote Control Server: - is installed on a remote desktop machine when SysMan Remote Control first connects to that machine.

Installing the Software

Overview

Follow the steps below to install a SysMan Utilities (Professional Edition) with centralized SysMan user accounts / audit logging and with the SysMan GUI running on a number of administrator workstations:

1. Install the SysMan Authorization Server software on a central Windows server. (See Step 1 in the Example Installation below.) This step also automatically installs the Management Console on the central server.
2. Obtain a "SysMan Installation Key" from the Authorization Server for use by a further separate SysMan Management Console (GUI) component. (See Step 2 in the Example Installation below.)
3. Install the SysMan Management Console on an administrator's workstation using the "Installation Key" obtained from step 2 to link it to the central Authorization Server. (See Step 3 in the Example Installation below.)
4. Repeat steps 2 and 3 for each additional administrator workstation that is required.

   Notes:

   a. The Installation Key is a once-only use key, hence the reason to obtain a new one for each GUI installation.

   b. The same installation kit is used for the installation of both the Authorization Server and the Management Console components. A question during the installation directs it to one or the other type of installation.

   c. Step 1 above gives a complete working system on the central server (Authorization Server and GUI). Steps 2 and 3 are only needed

   d. An example installation follows.

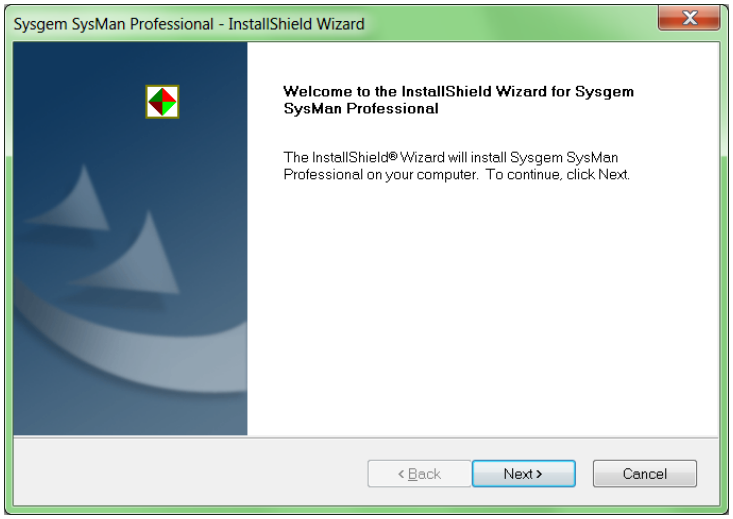
Example Installation

Step 1: Installing the SysMan Authorization Server

The SysMan Authorization Server is installed on a Windows server that is accessible from the workstations of the users who are going to use the product.

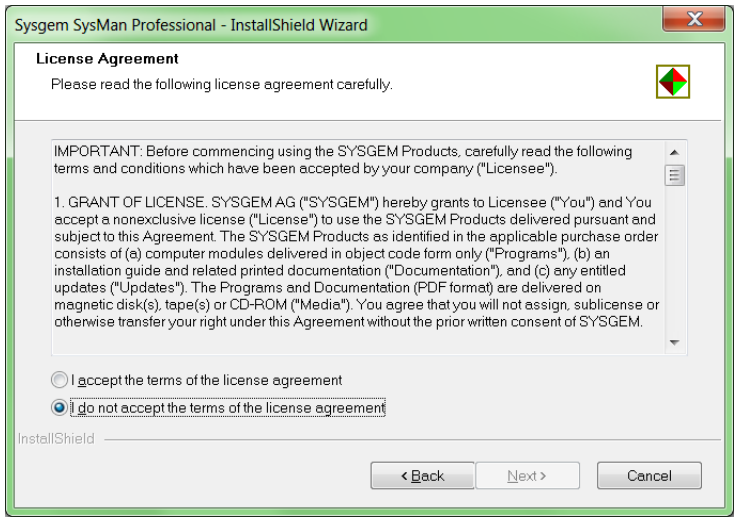
Installing the Authorization Server also installs a Management Console on the same machine. That Management Console has already been automatically linked to the Authorization Server by the time the installation is complete.

Run the SysMan installation procedure from a Windows user account that has administrator permissions. A Welcome screen similar to the following is displayed:

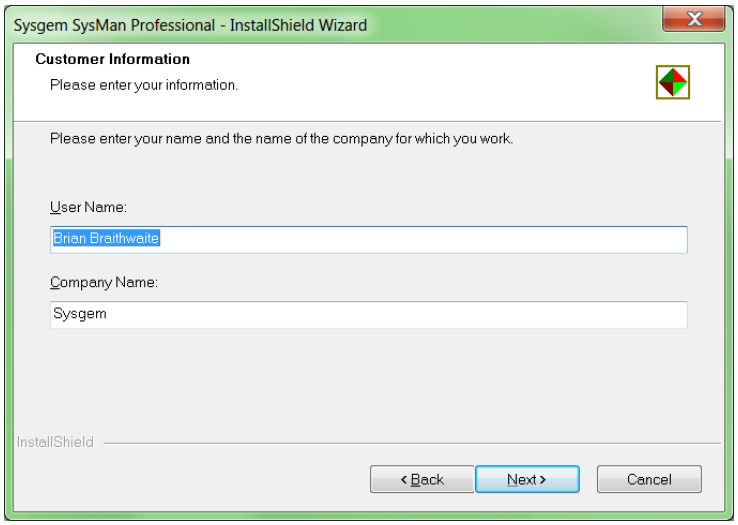


Click “Next” to proceed with the installation.

The license agreement form is displayed:

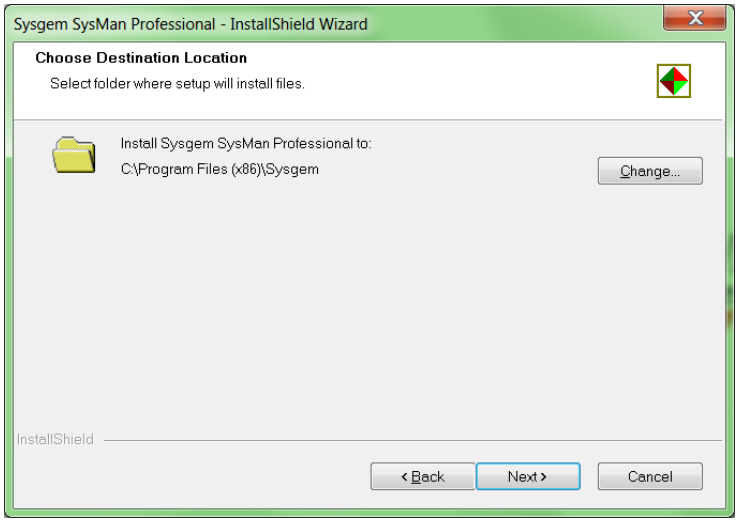


If you agree with the license agreement terms then press the “I accept…” button and press “Next” to proceed with the installation.



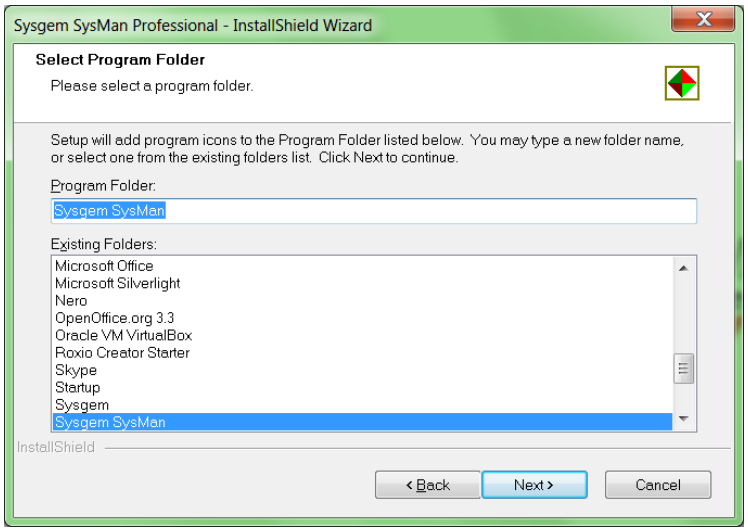
Enter your name and your company name and press “Next”.

SysMan will create a root directory (named: “Sysgem”) under which it will also create several sub-folders and files. Determine where the Sysgem root directory should be installed and either accept the default by pressing “Next” or press “Change” to select an alternative location:



Press “Next”.

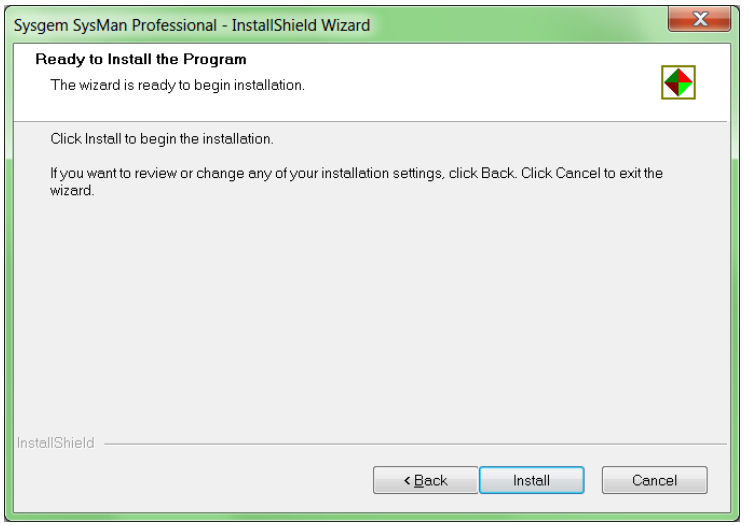
A “Start” program folder will be created called “Sysgem SysMan”. Change this name if you prefer an alternative.



Press “Next”.

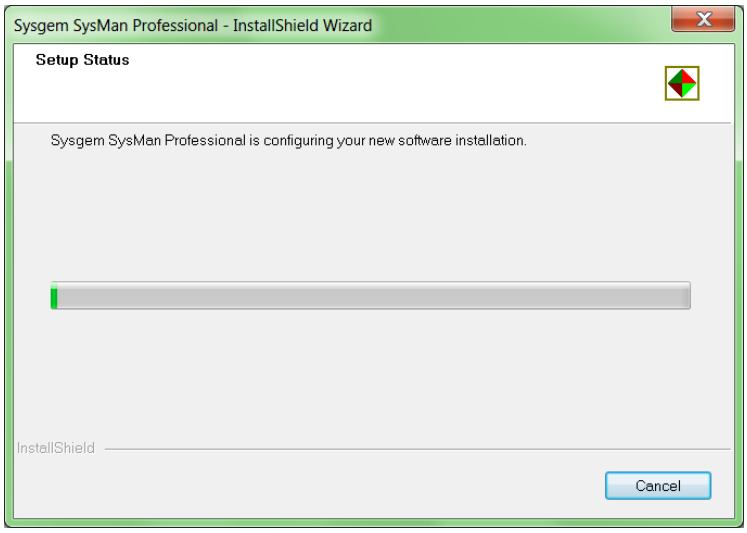
The following step gives the option to install the Authorization Server or just the Management Console. For the installation of the SysMan Authorization Server click the icon next to “Install a new Authorization Server”:

The screen will automatically move to the next page of the installation:



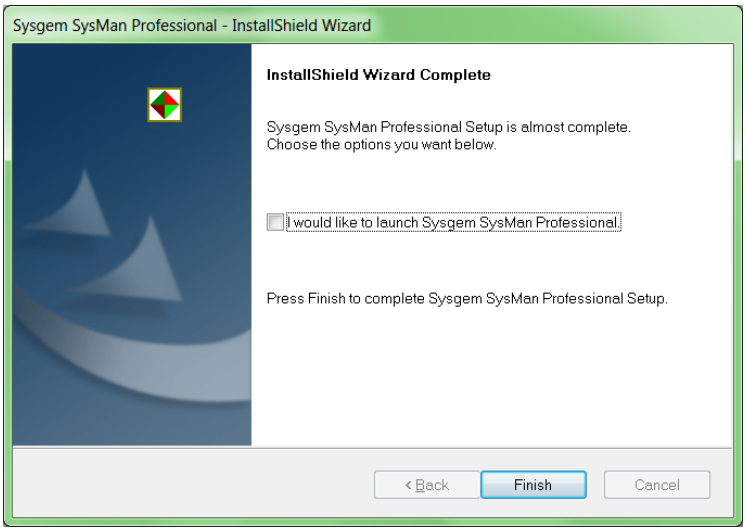
The installation is now ready to complete, press “Install” to commence.

A progress bar will be shown as files are copied into the system:



A number of small message boxes will pop-up in quick succession giving the status of the installation.

When the installation is complete a display window will be shown giving the option to launch the SysMan GUI. Select the checkbox and press “Finish” to complete the installation:



A new SysMan installation will include two new SysMan user accounts:

- "System"
- "SysMan"

The initial password for these two accounts is: "sysgem" (case sensitive)

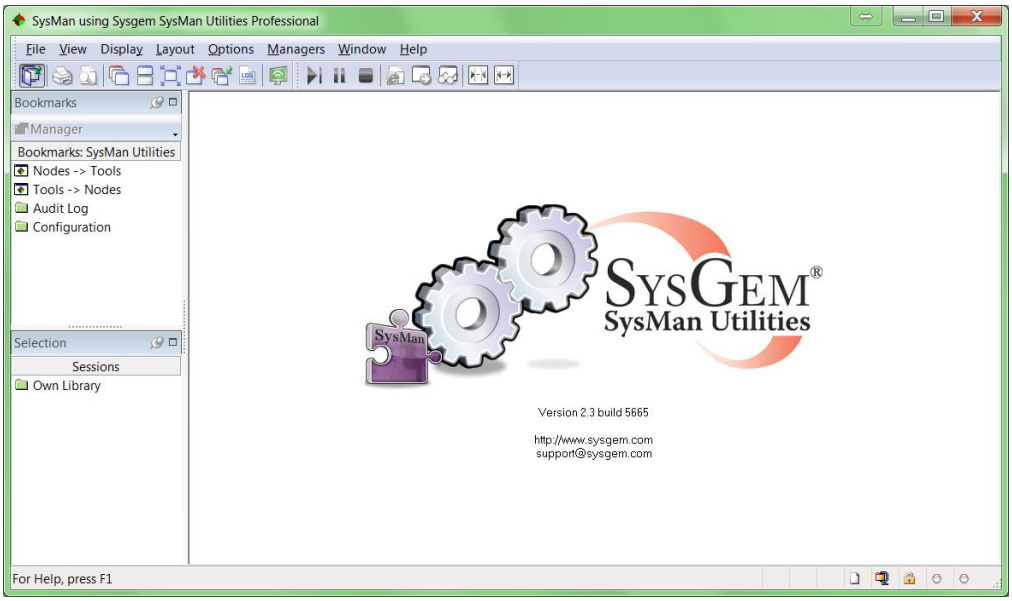
As soon as you have logged in to each account you should change the password.

Log in using the "System" account as you need this to be in this account for Step 2.

Notice from the above screenshot that the Authorization Server is set to be "Localhost", i.e. both the Management Console (GUI) and the Authorization Server are on this machine. When starting the GUI from another machine such as a workstation (for the first time after installing it on the workstation), the machine name (or IP address) running the Authorization Server needs to be entered as a start-up parameter. Press "Select" on the login screen to identify the Authorization Server.

The screenshot below shows the SysMan desktop after a successful login by the 'SysMan' user.

Please refer to later sections in this guide for creating SysMan accounts and to the SysMan Utilities User Guide for further information about using SysMan Utilities and SysMan Remote Control.



Step 2: Obtaining an Installation Key

Step 2 and Step 3 are required for installing the SysMan Management Console on additional workstations. You can skip these steps if additional consoles are not required.

Having installed the Authorization Server on a central Windows system, the next step is to have it issue an "Installation Key" so that SysMan Management Console software can be linked for access to this Authorization Server.

Generating a Key Using the SysMan GUI

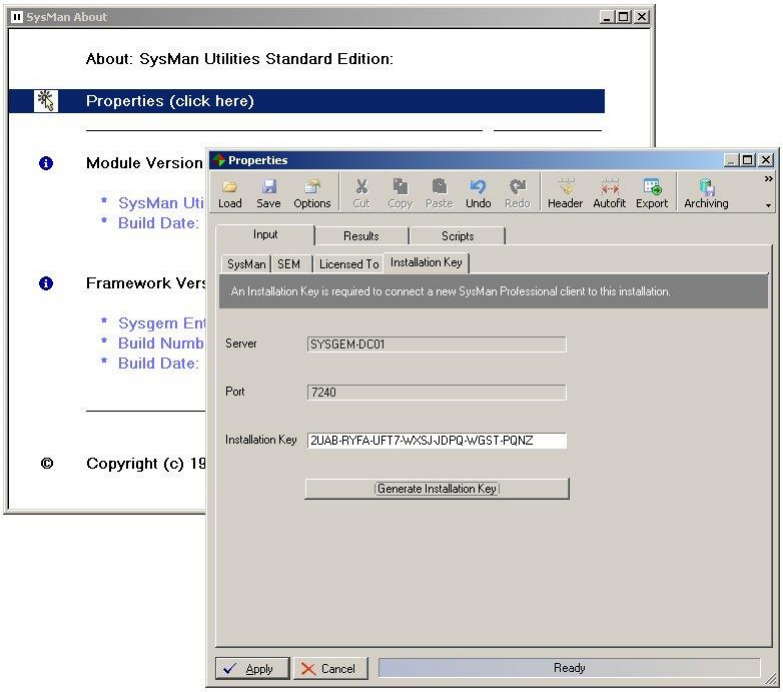
First, you need to be logged in to SysMan as the "System" user on the Authorization Server installed in Step 1.

From the Bookmarks pane, select the "SysMan About" display under the "Configuration" folder. Double click on "Properties" and select the "Installation Key" tab. (If there is no such tab, make sure you are logged into the Authorization Server as System and try again.)

Click on the "Generate Installation Key" button.

Select the Installation Key text and use <Ctrl>C to copy the text into the paste buffer.

Make this key, the Server and the Port details, available for the installation of the Management Console on another machine.



Generating a Key Using a Command Interface

Alternatively, an Installation key can be obtained by using the command interface to the Authorization Server.

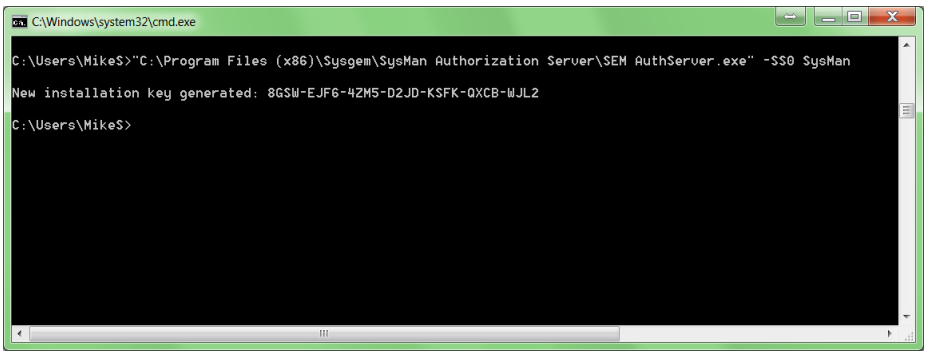
Start a command window and then run the “SEM Authorization Server.exe” with the parameters as follows:

```
"SEM Authorization Server.exe" -SS0 SysMan
```

The “SEM Authorization Server.exe” program is located under the Sysgem root directory whose location was chosen during the installation of the Authorization Server:

```
Sysgem\SysMan Authorization Server\
```

The following is an example of the Authorization Server issuing an Installation Key:

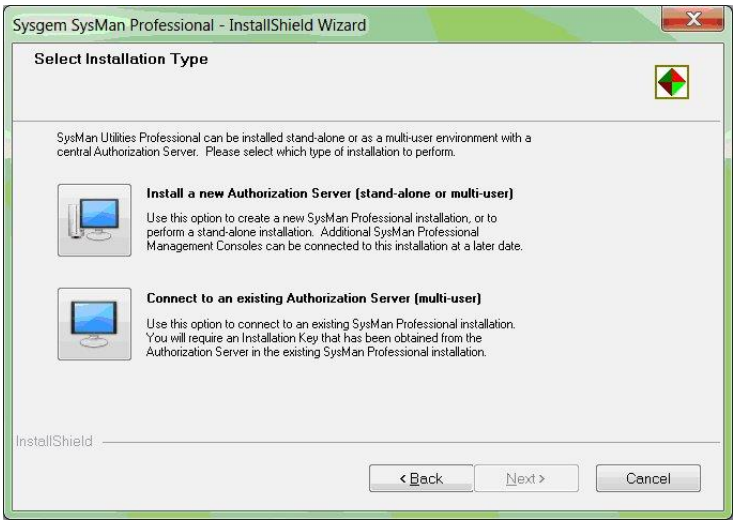


The key (made up of seven four-character text groups each separated by a hyphen) needs to be copied and made available on the machine where the Management Console component is about to be installed.

Step 3: Installing the SysMan Management Console

The SysMan Management Console (GUI) software is typically installed on the workstation of administrators who will use the product. It can, of course, also be installed on a central server and accessed through Windows Terminal Services or a Citrix Server.

The installation procedure starts in the same way as it did for the SysMan Authorization Server up to the request for the type of installation:



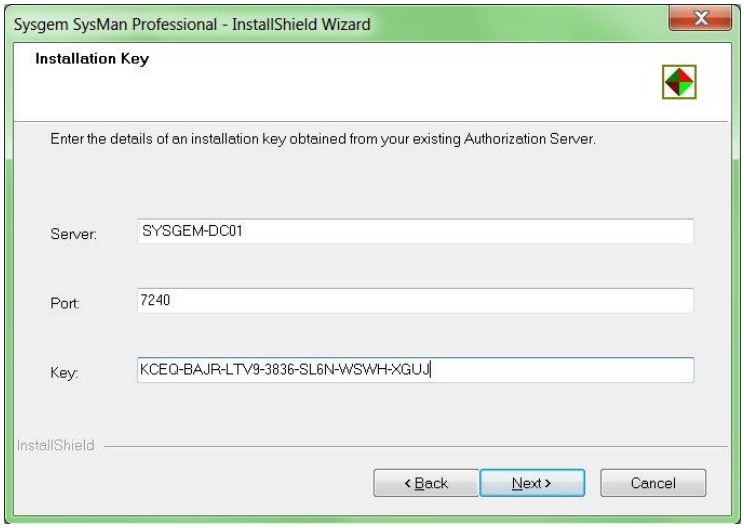
After clicking on the icon next to: “Connect to an existing Authorization Server”, the next page is automatically displayed prompting for the Installation Key that was issued by the Authorization Server in Step 2.

Enter the name or IP address of the Windows server where the SysMan Authorization Server has been installed.

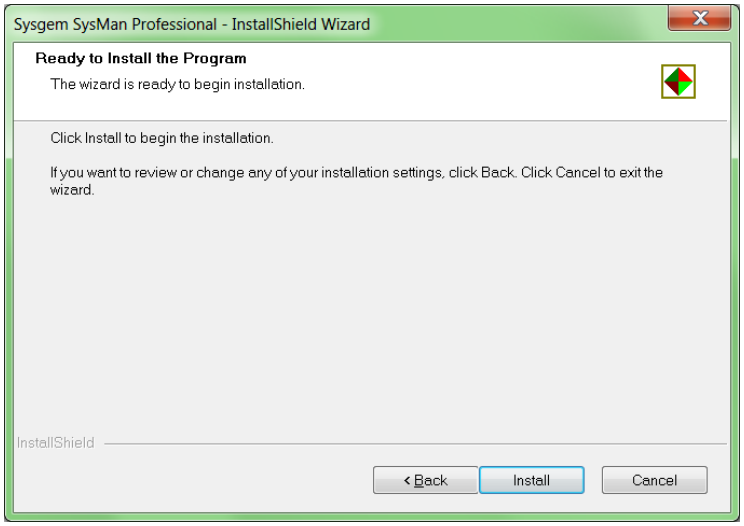
Leave the default port number of "7240" in the "Port" field.

Enter the Installation Key obtained from the Authorization Server into the "Key" field. The installation key has the format of seven four-character text blocks as shown in the example below.

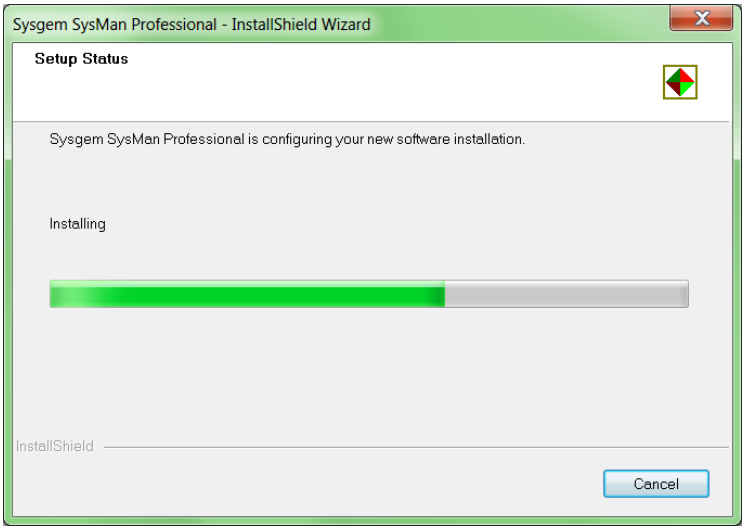
All three fields of information required in this window were shown when the key was generated in Step 2.



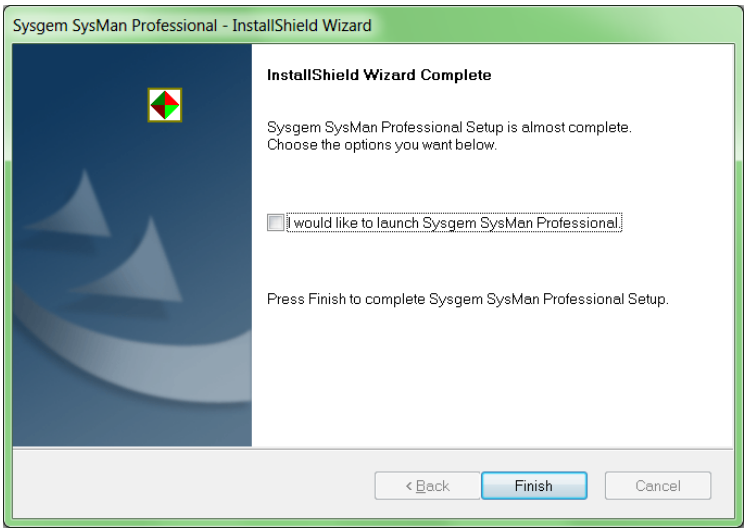
Press "Next" and the installation is ready to proceed to completion.



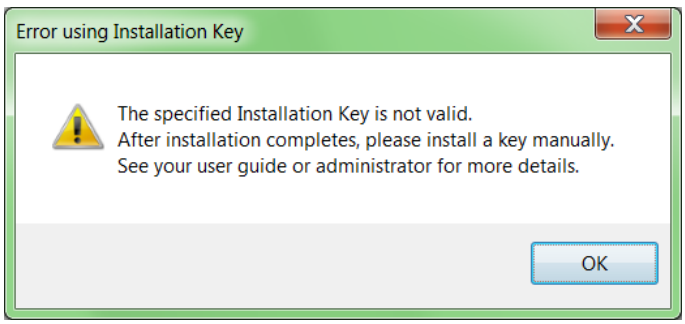
Click "Install" and the procedure continues for the rest of the installation as described in the previous section when installing the Authorization Server.



If the Installation key is valid, the installation will finish normally.



Otherwise an error message similar to the following will be displayed.



See the section below entitled: “Applying a New Installation Key” if the installation of the key should fail.

Further Information: Installation Keys / Security Keys

Overview

Installation keys and Security Keys are required only for an installation, or if an error has been displayed indicating a security key mismatch and the keys need to be re-applied.

As a security measure, SysMan Management Consoles (GUIs) will only be allowed to connect to an Authorization Server if the GUI has been given an "*Installation Key*" that was previously issued by that particular Authorization Server.

"*Security Key*" in the Authorization Server

Normally, only a single Authorization Server is required on a customer network, but provision for multiple Authorization Servers has been built into the design of the system, should this be required.

Each Authorization Server has a "Security Key". A security key should not be confused with an "Installation Key". It is a variable length alpha-numeric text phrase and (like a password) can be changed at any time on a particular Authorization Server.

> ***However, take care when considering a change to an Authorization Server's Security key, because once it has been changed all Management Consoles that are connected to that server need to have Installation Keys re-registered.***

Change the Authorization Server Security Key by invoking the "SEM Authorization Server.exe" program in a command window, giving it the following command parameters, from a Windows user account that has Administrator permissions:

```
"SEM AuthServer.exe" -SK0 FortKnox
```

… this program can be found in the folder:

```
\Sysgem\SysMan Authorization Server
```

… which, depending on the installation, could be found in:

```
\Program Files (x86)
```

In the above example, the "-SK0" parameter indicates that it is the Security Key in position zero and the key value that will be encrypted is "FortKnox". (There are 10 possible security keys numbered: SK0 to SK9)

An Authorization Server can have multiple Security Keys, but normally one is enough.

The SysMan Authorization Server installs with a pre-prepared Security Key which is set as:

"SysMan"

"*Installation Key*" in the Management Console (GUI)

An Installation key is issued by an Authorization Server and takes the form of seven four-character text blocks each separated by a hyphen, for example:

KCEQ-BAJR-LTV9-3836-SL6N-WSWH-XQUJ

Installation keys are used by the SysMan Management Console (GUI) to authorize access to the Authorization Server that issued them.

Without an installation key, a SysMan Management Console (GUI) cannot connect to an Authorization Server.

Once a key has been registered with a SysMan Management Console on a workstation it is retained on that workstation and should not be required to be entered again unless MAC addresses change on the Ethernet cards on either the workstations or Authorization Servers.

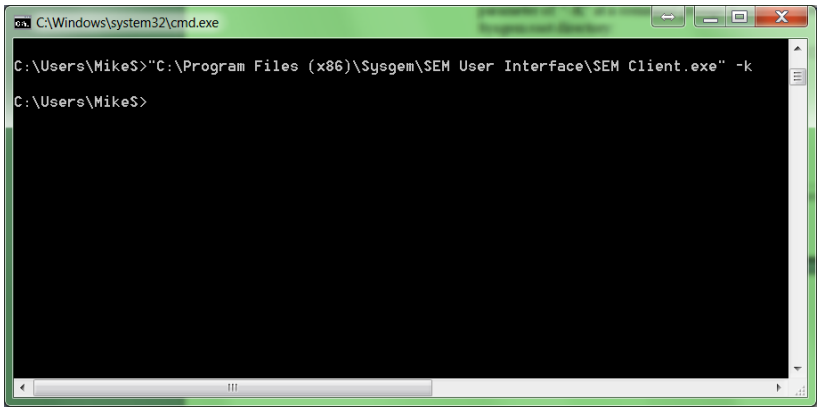
See the earlier section on how to create an Installation key by using the "Properties" option on the "SysMan About" window or by using the command interface to the SEM Authorization Server.exe.

Applying a New Installation Key

You can, if you wish, change the Installation key without re-installing.

To reset the key, without re-installing the software, run the "SEM Client.exe" with a parameter of "-K" at a command prompt from the following location under the Sysgem root directory:

```
"Sysgem\SEM User Interface\SEM Client.exe" -K
```



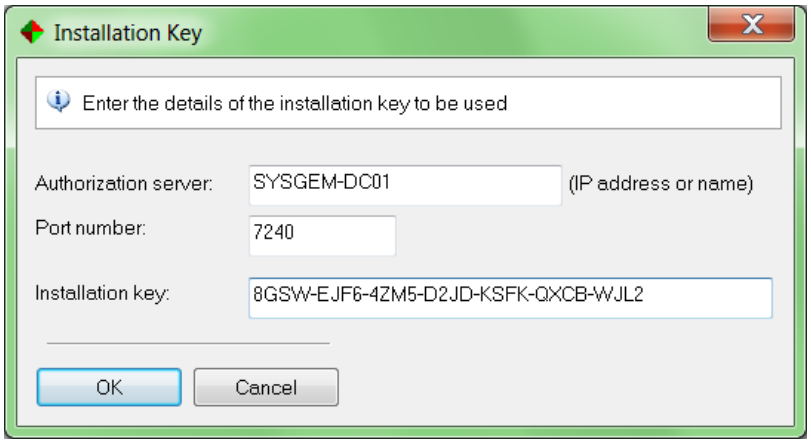
A display window is shown allowing the Security/Installation Keys to be reset on the SysMan Management Console:

Please note that "standard security keys" (Key 0 – Key 9) have no relevance for the Management Console in the Professional Edition.

Click the button "Use Installation Key" and the following window is displayed:

Enter the name (or IP Address) of the Authorization Server. Ensure that the Port Number is set to 7240, and enter a newly acquired Installation Key that has not been used before.

All three fields of information required in this window were shown when the key was generated, as described in the section: 'Step 2: Obtaining an Installation Key'.



Then click OK and the new installation key will be validated by the Authorization Server and, if accepted, will be assigned to the Management Console.

Save the changes and restart the SysMan Management Console Login to log into your SysMan account on the Authorization Server.

Multiple Authorization Servers

Installing Multiple Authorization Servers

Should it be required, it is possible to install more than one Authorization Server on a network. Each Authorization Server has its own set of SysMan user accounts and its own Audit Database.

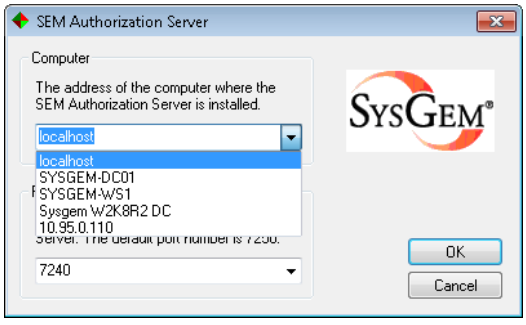
The procedure for installing the Authorization Server is the same as described for "Step 1" in the Example Installation section.

The important thing to remember with multiple Authorization Servers is that the Installation Key that is used to link a SysMan Management Console must have been issued by the appropriate Authorization Server if the Management Console is to successfully link to the correct Authorization Server.

To link a Management Console that has already been installed to another Authorization Server, use the technique described earlier for "Applying a New Installation Key". Click on the "Use Installation Key" button. Enter the name or IP Address of the Windows system for the required Authorization Server and enter the Installation Key issued by that server. There is no limit to the number of Installation keys that may be assigned to a Management Console.

Connecting a Management Console to More than One Authorization Server

When logging in to one of several SysMan Authorization Servers, click on the "Select" button in the SysMan Login Screen (a pop-up window similar to the following is displayed). Then identify the required server by using the IP Address or machine name for that server. Remember that the SysMan username and password is specific to each Authorization Server.



Licenses

Trial License

A trial license is automatically installed the first time SysMan software is installed on a machine.

The trial license will be valid for one month giving the user a fully functional system for evaluation.

Thereafter, a permanent license has to be installed for the system to continue to operate (re-installing the trial kit will not re-activate the trial license!).

If you require an extension to a trial period before purchasing a full license, please contact:

sales@sysgem.eu

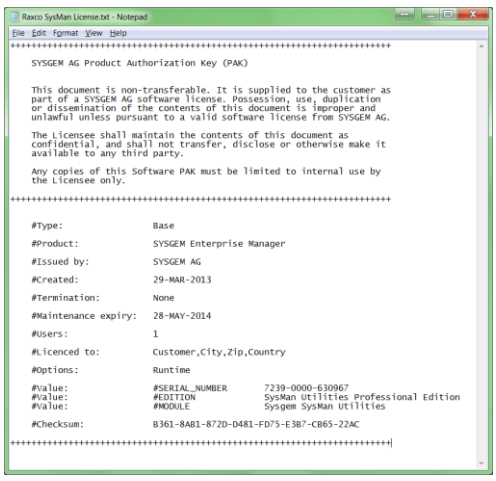
Permanent License

A permanent SysMan license is issued in the form of text file that is imported into SysMan.

From the main menu bar on the SysMan desktop use the following menu options:

File > Import and Export > Import License

The format of the license file resembles the following:



Managing SysMan User Accounts

User Accounts, Access Control Profiles and Tokens

Each user of SysMan has to have a *'SysMan User Account'* that has been allocated an *'Access Control Profile'* and an *'Access Control Token'*.

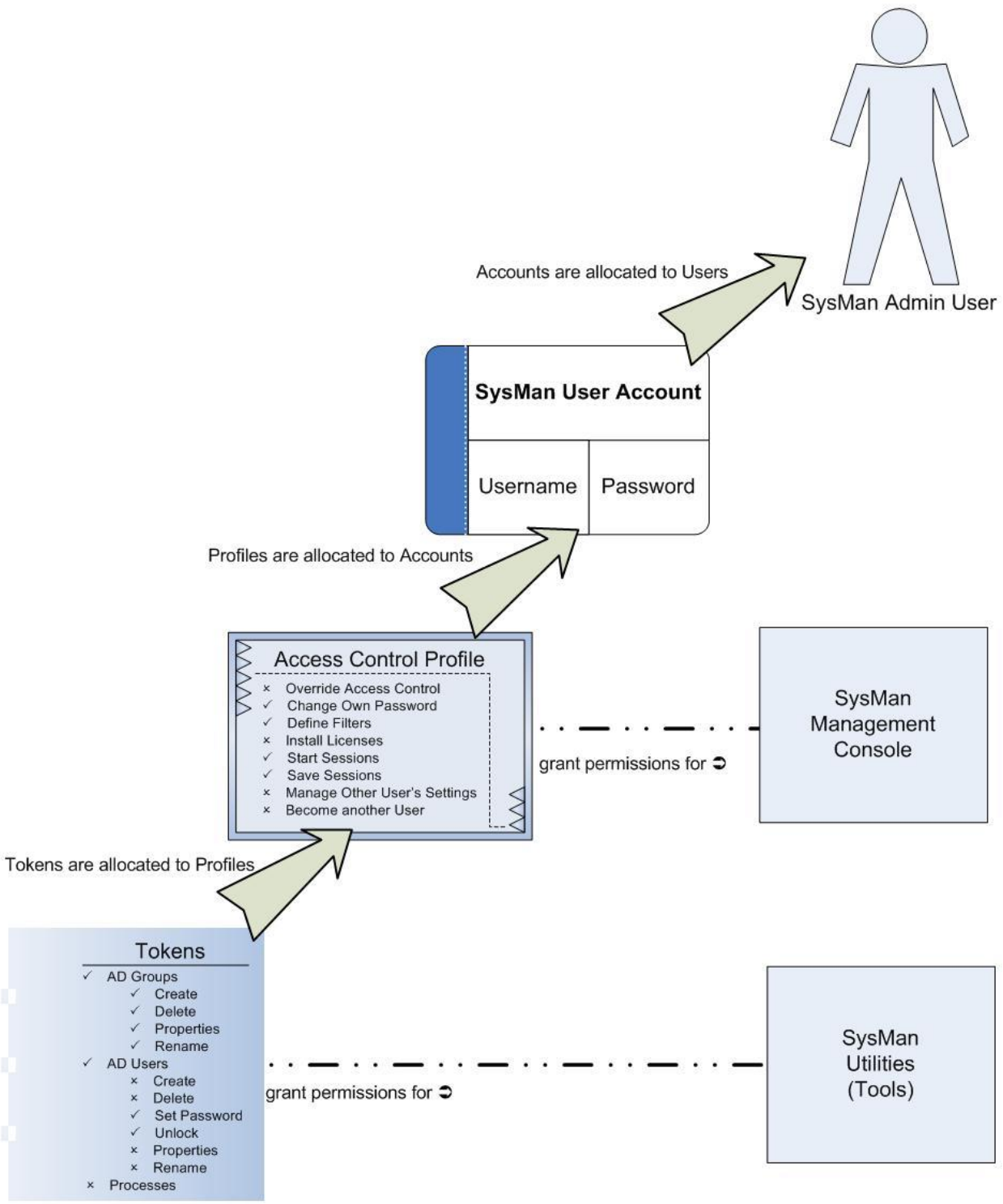
The *Access Control Profile* gives the set of privileges needed to control the SysMan Management Console software.

The *Access Control Token* controls the availability of features in the SysMan Utilities component.

The combination of Accounts – Profiles – Tokens gives SysMan a very powerful mechanism for controlling who has access to which features and thereby giving a fine granularity of delegated permissions.

The diagram on the following page gives the principles of Tokens, Profiles and Accounts and how they relate to each other.

Control of Permissions Granted to the SysMan Admin User

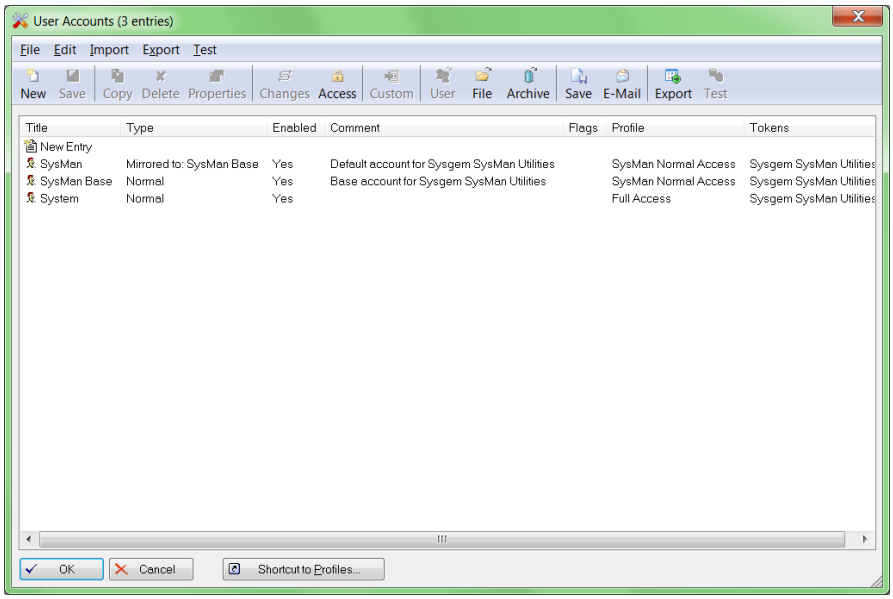


Managing SysMan Professional Accounts

Having logged into the SysMan "*System*" account, start the SysMan Account Manager by selecting the main SysMan menu option:

- "Managers" > "Accounts"

The following window is displayed:



Note that SysMan is provided with three separate accounts when the product is first installed:

- *System* (an account used for the management and configuration of SysMan Professional – including the management of SysMan user accounts).
- *SysMan Base* (an account that is 'mirrored' by other user accounts – see below regarding 'Mirroring').
- *SysMan* (an account with normal privileges – use this account as a template to copy when creating accounts for other users). The *SysMan* account has all privileges and access to all features except those needed to configure the SysMan Professional product. The '*SysMan'* account is mirrored to '*SysMan Base'*.

To create a new account simply select the SysMan account, copy it and rename the copy giving it an appropriate name for the new user, together with a new password unique for that user. Since the *SysMan* account is mirrored to the '*SysMan Base'* account, so too will the new account be mirrored to the *SysMan Base* account.

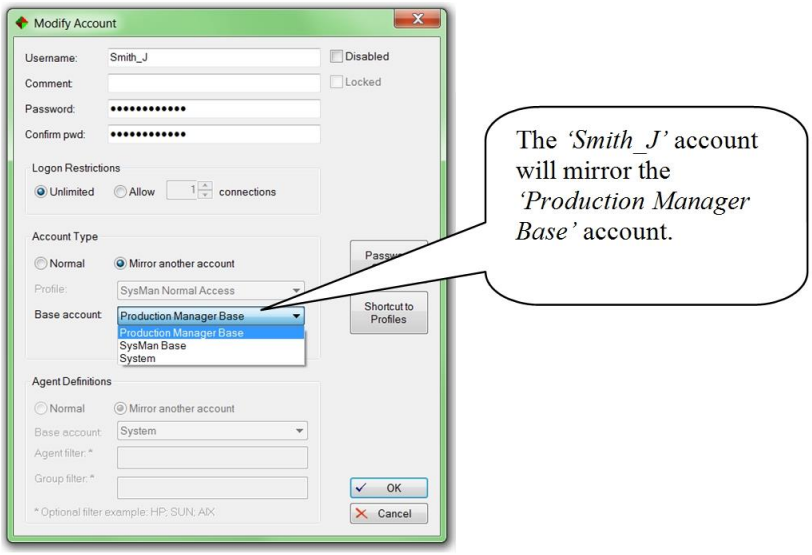
Mirrored Accounts

A convenient way to control permissions for groups of users is to have all users in a particular group 'mirror' another account. One account that is mirrored to a second account will adopt all the privileges allocated to the second account. So, by changing the permissions of the second account, all users mirrored to it will have the new set of permissions the next time they log into the system.

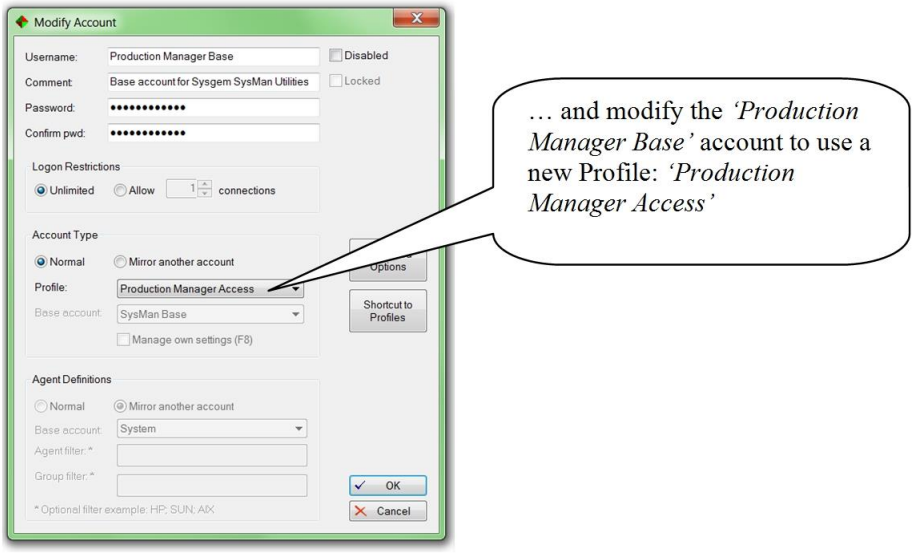
You therefore make the changes only once (to the base account) and thereafter all users mirrored to that account adopt the same permissions.

In the set of accounts provided by a newly installed product the *'SysMan'* account is mirrored to *SysMan Base*, thus acquiring the privileges of '*SysMan Base*'.

If you require two (or more) different groups of users each with their own refinement of permissions and access to tools – then simply make a copy of the *SysMan Base* account giving it a different name (for example "Production Manager Base"), then make a copy of the *SysMan* template account, giving it a name for the particular user (such as "Smith_J") and modify it so that it mirrors the Production Manager Base account.



… and you would change the Production Manager Base account to have a new profile with different permissions set (see the section below regarding changing Profiles and Tokens).

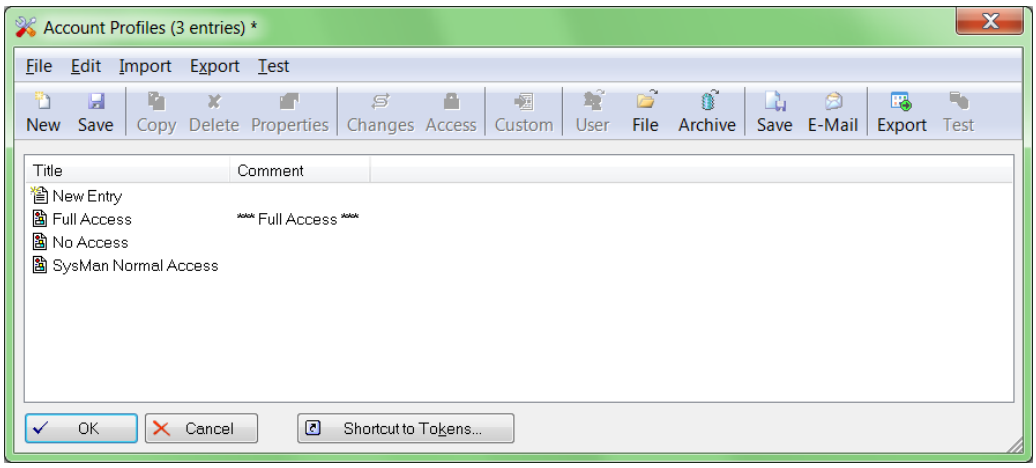


Subsequently you could copy and rename the Smith_J account for another user (e.g. Jones_D) and Jones_D would also mirror the Production Manager Base account.

Profiles

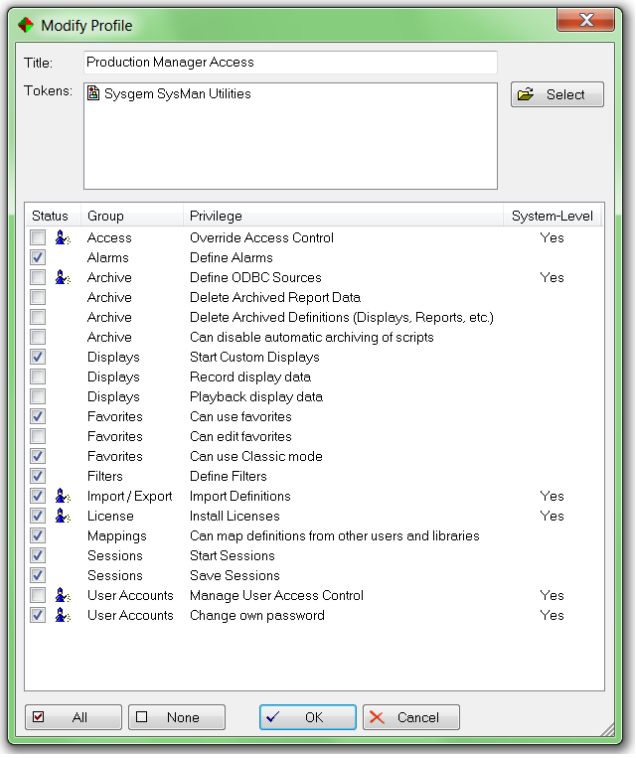
To manage Access Control Profiles from the System account, use the main SysMan menu option:

- "Managers" > "Profiles"



To create a new Profile: select and copy an existing profile and rename it.

Below, the "*SysMan Normal Access*" profile has been copied and renamed to "*Production Manager Access*"



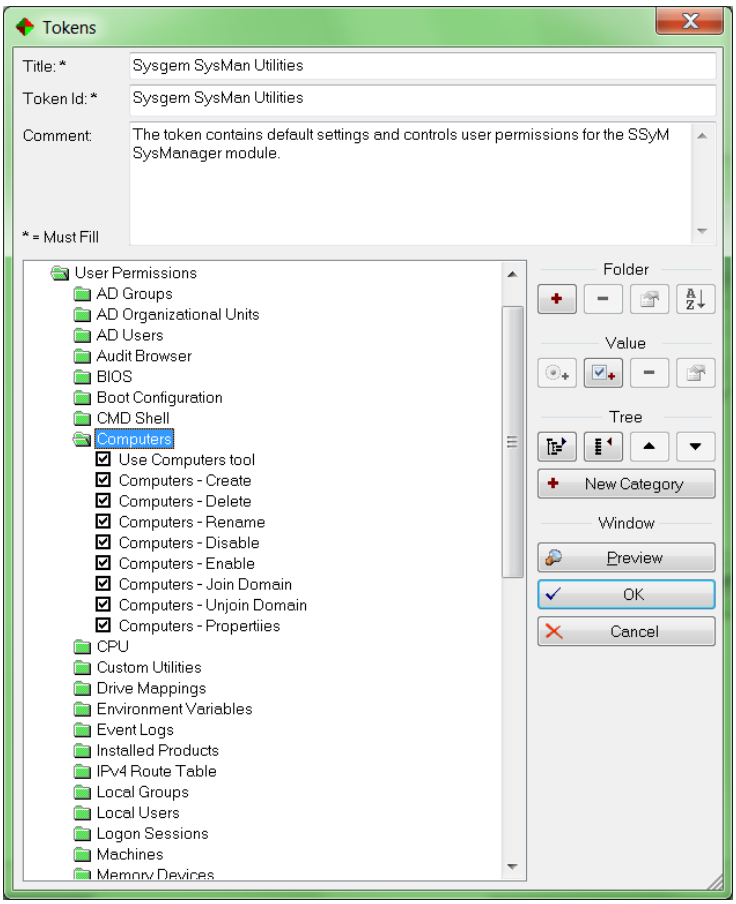
In this Profile: the ability to save and start sessions has been removed by de-selecting the appropriate checkboxes.

Tokens

Access Control Tokens give a very fine level of control over which SysMan Tools are available.

To modify a Token use the main SysMan menu option:

- "Managers" > "Tokens"



Pick and choose which checkboxes are selected to grant or deny access to tools or menu options appropriate for the users that share the Token and Profile.

Tokens can be copied and renamed (but see the IMPORTANT notice below).

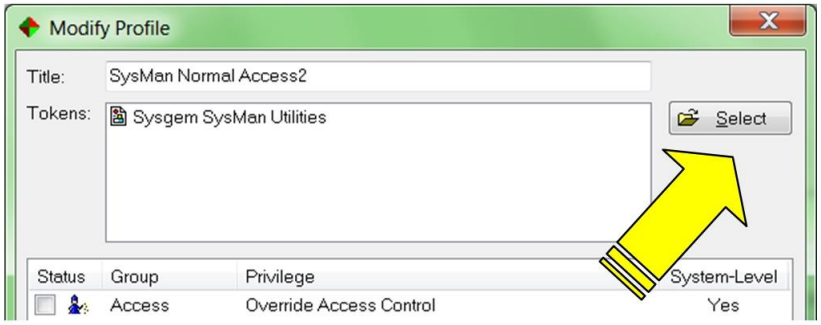
A renamed copy of a Token can be assigned to a new Profile thereby giving the users that share the Profile a different set of permissions granted by this Token.

IMPORTANT

When copying and renaming a Token only the "Title" field should be changed to give it a new name. Under no circumstances change the "Token ID" field, otherwise the token will fail to be recognized by the software.

Assigning a Token to a Profile

To assign a Token to a Profile … use the 'Select' button on the "Modify Profile" window:



From the list of available tokens, only have one Sysgem SysMan Utilities token (or copy thereof) assigned to one profile so as to ensure that the selected permissions are applied correctly.

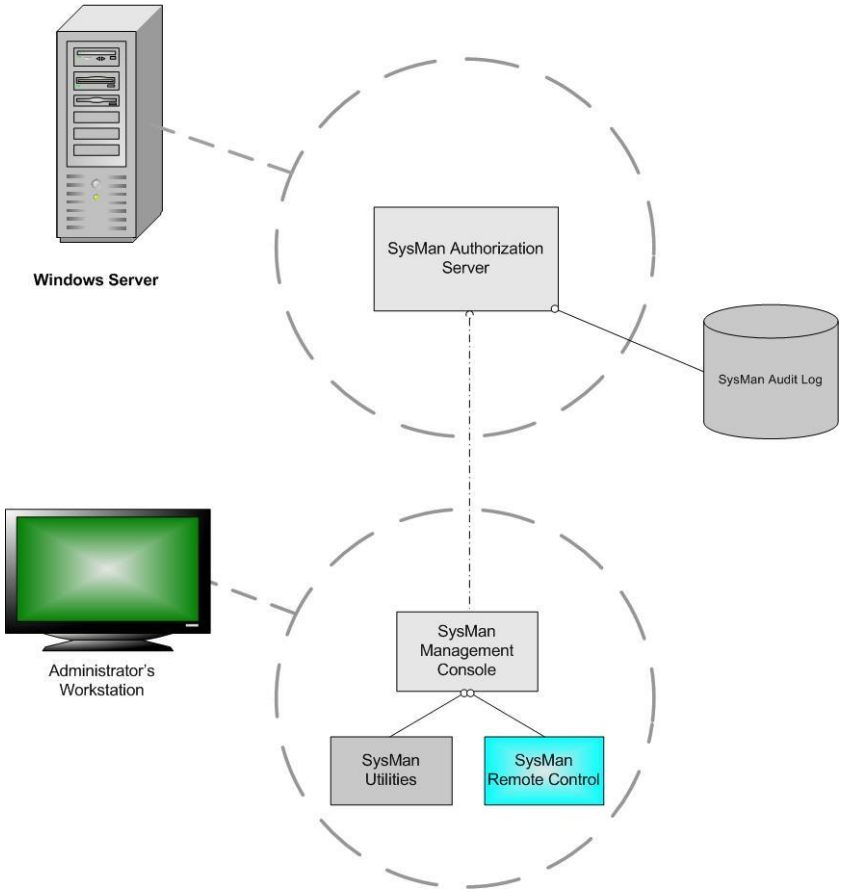
Remember that:

- Tokens are assigned to Profiles
- Profiles are assigned to Accounts
- Base Accounts can be mirrored by a group of other Accounts
- Accounts are assigned to people

SysMan Audit Trail

Central Audit Database

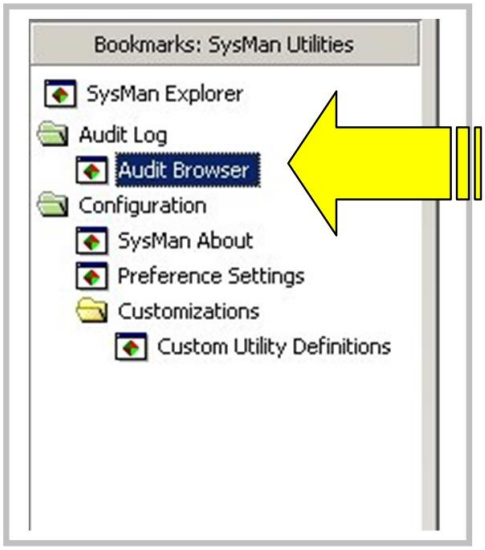
All Management tasks undertaken using the SysMan tools are recorded in a central Audit Trail database.



Browsing the Audit Database

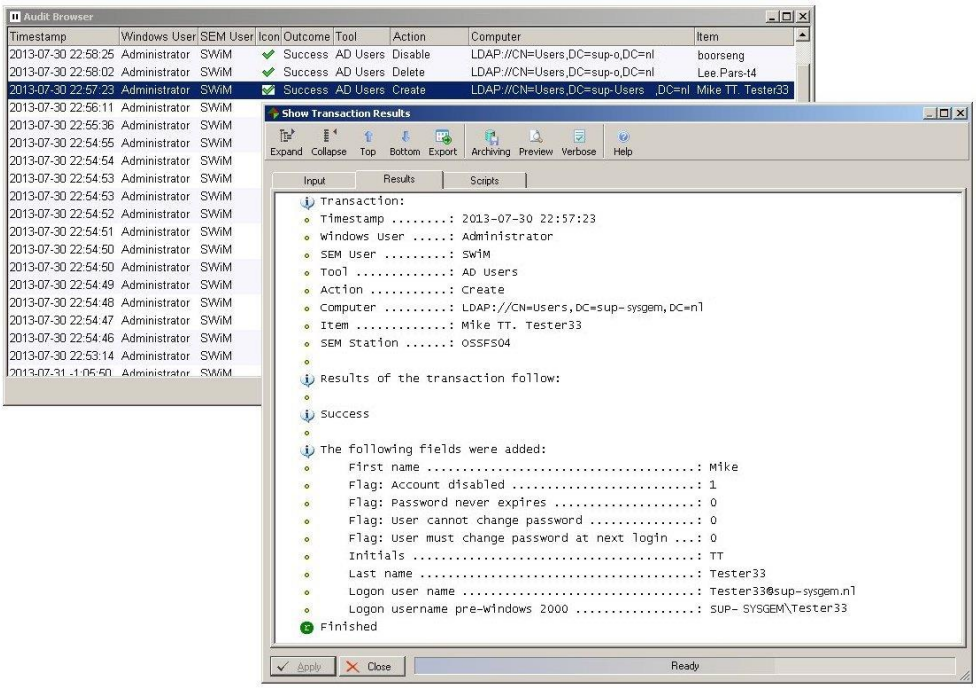
With the appropriate permissions granted by the Access Control Tokens, a SysMan user can browse, filter and export reports from the Audit Trail.

Start the SysMan Audit Browser from the following location:



Some basic filtering of the audit log is available on the browser start-up window, but use the “Find” option on the main SysMan menu bar to further refine the filtering of the audit details.

The example below shows the information recorded after an AD user account has been created using the “AD Users” tool.



Troubleshooting

Knowledge Base Pages on the Sysgem Web Site

Please consult the Knowledge Base Pages on the Sysgem web site for any difficulties that you may encounter when using this guide.

http://www.sysgem.eu/knowledgebase.

If that fails to resolve the issue, please email the support team at the following email address:

support@sysgem.eu