One Identity Manager 8.1

Administration Guide for Connecting Unix-Based Target Systems

Legend

WARNING: A WARNING icon indicates a potential for property damage, personal injury, or death.

CAUTION: A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.

IMPORTANT, NOTE, TIP, MOBILE, or VIDEO: An information icon indicates supporting information.

One Identity Manager Administration Guide for Connecting Unix-Based Target Systems
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Contents

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Managing Unix-based target systems

One Identity Manager offers simplified user account administration for Unix. One Identity Manager concentrates on setting up and editing user accounts and providing the required permissions. To equip users with the required permissions, groups are mapped in One Identity Manager. This makes it possible to use Identity and Access Governance processes such as attesting, Identity Audit, user account management and system entitlements, IT Shop, or report subscriptions for Unix based target systems.

One Identity Manager provides company employees with the necessary user accounts. For this, you can use different mechanisms to connect employees to their user accounts. You can also manage user accounts independently of employees and therefore set up administrator user accounts.

Additional information about the Unix core directory is loaded into the One Identity Manager database by data synchronization. There are only limited options for customizing this information in One Identity Manager due to the complex dependencies and far-reaching effects of any changes.

One Identity Manager supports most Unix and Linux derivatives. For more information, see the specifications for One Identity Authentication Services.

Architecture overview

The following servers are used for managing a Unix environment in One Identity Manager:

- Unix host

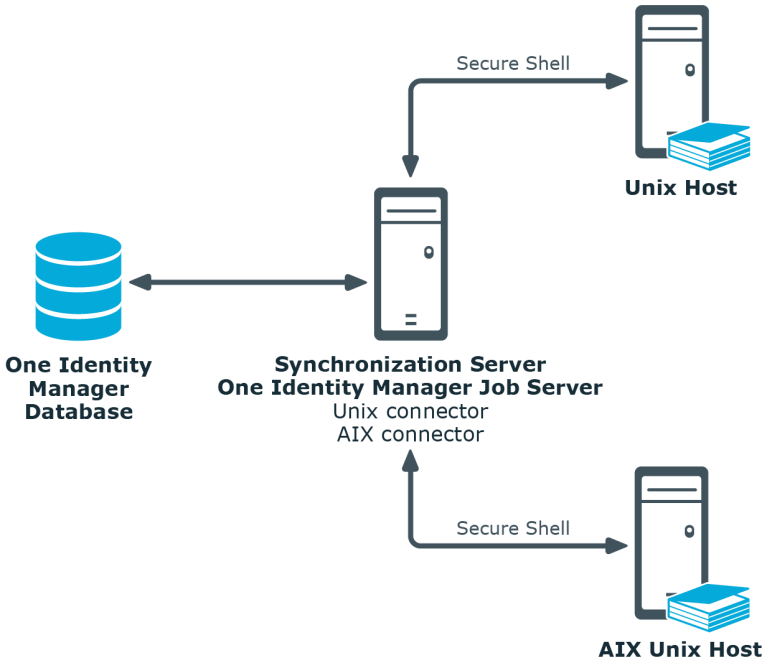
  Unix host, which holds the directory. This host is a selected live host with a good network connection to the synchronization server. The synchronization server connects to this host in order to access the Unix objects.

- Synchronization server

  The synchronization server for synchronizing the One Identity Manager database with the Unix system. The One Identity Manager Service with "Unix" is installed on this server. "Unix" contains the Unix connector and the AIX connector. The Unix connector is used for synchronization and provisioning Unix-based objects. The AIX

connector is implemented for synchronizing and provisioning IBM AIX systems objects. The connectors communicate directly with the Unix host.

Figure 1: Architecture for synchronization



One Identity Manager users for managing a Unix-based target system

The following users are used for setting up and managing Unix-based target systems.

Table 1: Users

Users	Task
Target system administrators	Target system administrators must be assigned to the **Target systems | Administrators** application role. Users with this application role: • Administrate application roles for individual target systems types. • Specify the target system manager. • Set up other application roles for target system managers if required. • Specify which application roles are conflicting for target

Users	Task
	system managers • Authorize other employee to be target system administrators. • Do not assume any administrative tasks within the target system.
Target system managers	Target system managers must be assigned to **Target systems | Unix** or a sub-application role. Users with this application role: • Assume administrative tasks for the target system. • Create, change or delete target system objects, like user accounts or groups. • Edit password policies for the target system. • Prepare groups for adding to the IT Shop. • Can create employees with an identity that differs from the **Primary identity**. • Configure synchronization in the Synchronization Editor and defines the mapping for comparing target systems and One Identity Manager. • Edit the synchronization's target system types and outstanding objects. • Authorize other employees within their area of responsibility as target system managers and create child application roles if required.
One Identity Manager administrators	• Create customized permissions groups for application roles for role-based login to administration tools in Designer as required. • Create system users and permissions groups for non-role-based login to administration tools in Designer as required. • Enable or disable additional configuration parameters in Designer as required. • Create custom processes in Designer as required. • Create and configures schedules as required. • Create and configure password policies as required.
Administrators for the IT Shop	Administrators must be assigned to the **Request & Fulfillment | IT Shop | Administrators** application role. Users with this application role:

Users	Task
	• Assign to IT Shop structures.
Administrators for organizations	Administrators must be assigned to the application role **Identity Management | Organizations | Administrators**. Users with this application role: • Assign to departments, cost centers and locations.
Business roles administrators	Administrators must be assigned to the application role **Identity Management | Business roles | Administrators**. Users with this application role: • Assign to business roles.

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Setting up synchronization with a Unix-based target system

One Identity Manager supports most Unix and Linux derivatives. For more information, see the specifications for One Identity Authentication Services.

To load Unix-based objects into the One Identity Manager database for the first time

1. Prepare a user account with sufficient permissions for synchronizing in the Unix-based target system.
2. The One Identity Manager components for managing Unix-based target systems are available if "TargetSystem\Unix" is set.
   - Check whether the configuration parameter is set in the Designer. Otherwise, set the configuration parameter and compile the database.
   - Other configuration parameters are installed when the module is installed. Check the configuration parameters and modify them as necessary to suit your requirements.
3. Install and configure a synchronization server and declare the server as Job server in One Identity Manager.
4. Create a synchronization project with the Synchronization Editor.

Related Topics

- Users and permissions for synchronizing with a Unix-based target system on page 12
- Setting up the synchronization server on page 13
- Creating a synchronization project for initial synchronization of a Unix host on page 16
- Deactivating synchronization on page 31
- Customizing the synchronization configuration on page 24
- Appendix: Configuration parameters for managing a Unix environment on page 120
- Appendix: Default project template for Unix-based target systems on page 123

Users and permissions for synchronizing with a Unix-based target system

The following users are involved in synchronizing One Identity Manager with a Unix-based target system.

Table 2: Users for synchronization

Users	Permissions
User for accessing the Unix host	You must provide a user account with the following permissions for full synchronization of a Unix-based target system with the supplied One Identity Manager default configuration. • Permissions for establishing a Secure Shell (SSH) connection to the host. • Administration permission for executing write operation in the Unix objects.
One Identity Manager Service user account	The user account for the One Identity Manager Service requires access rights to carry out operations at file level (issuing user rights, adding directories and files to be edited). • The user account must belong to "Domain Users". • The user account must have the extended access right "Log on as a service". • The user account requires access rights to the internal web service. NOTE: If the One Identity Manager Service runs under the network service (NT Authority\NetworkService), you can issue access rights for the internal web service with the following command line call: `netsh http add urlacl url=http://<IP address>:<port number>/ user="NT AUTHORITY\NETWORKSERVICE"` The user account requires full access rights to the One Identity Manager installation directory in order to automatically update One Identity Manager Service. In the default installation, One Identity Manager is installed under: • `%ProgramFiles(x86)%\One Identity` (on 32-bit operating systems) • `%ProgramFiles%\One Identity` (on 64-bit operating systems)

Users	Permissions
User for accessing the One Identity Manager database	The **Synchronization** default system user is provided for executing synchronization with an application server.

Setting up the synchronization server

To set up synchronization with a Unix-based target system, a server must be available with the following software installed on it:

- Windows operating system

  Following versions are supported:

  - Windows Server 2016
  - Windows Server 2012 R2
  - Windows Server 2012
  - Windows Server 2008 R2 (non-Itanium based 64-bit) Service Pack 1 or later
- Microsoft .NET Framework Version 4.7.2 or later

  NOTE: Take the target system manufacturer's recommendations into account.
- One Identity Manager Service, Unix connector
  - Install One Identity Manager components with the installation wizard.
    1. Select **Select installation modules with existing database**.
    2. Select the machine role **Server | Job server | Unix**.

All One Identity Manager Service actions are executed against the target system environment on the synchronization server. Data entries required for synchronization and administration with the One Identity Manager database are processed by the synchronization server. The synchronization server must be declared as a Job server in One Identity Manager.

NOTE: If several target system environments of the same type are synchronized under the same synchronization server, it is useful to set up a Job server for each target system on performance grounds. This avoids unnecessary swapping of connections to target systems because a Job server only has to process tasks of the same type (re-use of existing connections).

Use the Server Installer to install the One Identity Manager Service. The program executes the following steps:

- Setting up a Job server.
- Specifying machine roles and server function for the Job server.
- Remote installation of One Identity Manager Service components corresponding to

the machine roles.

- Configuration of One Identity Manager Service.
- Starts the One Identity Manager Service.

NOTE: The program executes remote installation of the One Identity Manager Service. Local installation of the service is not possible with this program. Remote installation is only supported within a domain or a trusted domain.

For remote installation of One Identity Manager Service, you require an administrative workstation on which the One Identity Manager components are installed. For detailed information about installing a workstation, see the *One Identity Manager Installation Guide*.

To install and configure One Identity Manager Service remotely on a server

1. Start the program Server Installer on your administrative workstation.
2. Enter the valid connection credentials for the One Identity Manager database on the **Database connection** page.
3. Specify the server on which you want to install One Identity Manager Service on the **Server properties** page.
   a. Select a Job server from the **Server** menu.

      - OR -

      To create a new Job server, click **Add**.

   b. Enter the following data for the Job server.

      Table 3: Job Server Properties

Property	Description
Server	Job server name.
Queue	Name of the queue to handle the process steps. Each One Identity Manager Service within the network must have a unique queue identifier. The process steps are requested by the job queue using exactly this queue name. The queue identifier is entered in the One Identity Manager Service configuration file.
Full server name	Full server name in accordance with DNS syntax. Example: `<Name of servers>.<Fully qualified domain name>`

      NOTE: You can use the **Extended** option to make changes to other properties for the Job server. You can also edit the properties later with Designer.

4. Select **Unix** on the **Machine roles** page.
5. Select at least one of the following functions on the **Server functions** page:

- **Unix connector**
- **AIX connector**

6. Check the One Identity Manager Service configuration on the **Service settings** page.

   NOTE: The initial service configuration is predefined already. If further changes need to be made to the configuration, you can do this later with the Designer. For detailed information about configuring the service, see the *One Identity Manager Configuration Guide*.

7. To configure remote installations, click **Next**.
8. Confirm the security prompt with **Yes**.
9. Select the directory with the install files on **Select installation source**.
10. Select the file with the private key on the page **Select private key file**.

    NOTE: This page is only displayed when the database is encrypted.

11. Enter the service's installation data on the **Service access** page.

Table 4: Installation Data

Data	Description
Computer	Server on which to install and start the service from. ***To select a server*** • Enter a name for the server. - OR - • Select a entry from the list.
Service account	User account data for the One Identity Manager Service. ***To enter a user account for the One Identity Manager Service*** • Set the option **Local system account**. This starts the One Identity Manager Service under the **NT AUTHORITY\SYSTEM** account. - OR - • Enter user account, password and password confirmation.
Installation account	Data for the administrative user account to install the service. ***To enter an administrative user account for installation*** • Enable **Advanced**. • Enable **Current user**.

Data	Description
	This uses the user account of the current user. - OR - • Enter user account, password and password confirmation.

12. Click **Next** to start installing the service.

    Installation of the service occurs automatically and may take some time.

13. Click **Finish** on the last page of Server Installer.

    NOTE: The service is entered with the name **One Identity Manager Service** in the server service management.

Creating a synchronization project for initial synchronization of a Unix host

Use the Synchronization Editor to configure synchronization between the One Identity Manager database and the Unix-based target system. The following describes the steps for initial configuration of a synchronization project.

After the initial configuration, you can customize and configure workflows within the synchronization project. Use the workflow wizard in the Synchronization Editor for this. The Synchronization Editor also provides different configuration options for a synchronization project.

For more detailed information about setting up synchronization, see the One Identity Manager Target System Synchronization Reference Guide.

Detailed information about this topic

- Information required for setting up a synchronization project on page 16
- Setting up an initial synchronization project on page 19
- Appendix: Default project template for Unix-based target systems on page 123

Information required for setting up a synchronization project

Have the following information available for setting up a synchronization project.

Table 5: Information required for setting up a synchronization project

Data	Explanation
Server name or IP address of the host	Full name or IP address of the host for connecting to the synchronization server to provide access to Unix objects.
Host communications port	Communications port for establishing a Secure Shell (SSH) connection to the host. The default port is TCP port 22.
User account and password for logging onto the host	User account and password for logging onto the host. This user account is used to access the host by SSH. The user account requires permissions for establishing an SSH connection.
Method, user name and password for escalating permissions	Executing commands requires an administrative context. Make a user account available with sufficient permissions. This user account is used to perform write operations on the Unix objects. Available methods are: • Default The user who logs in to the host already has administrative permissions. • Sudo The user logged in on the host can execute administrative tasks with another user's permissions, for example "root". The configuration for this is done in the `sudoer` file on the host. • su This method uses the `su` command to change the context. Another user with administrative permissions is required.
Synchronization server of the Unix-based target system	All One Identity Manager Service actions are executed against the target system environment on the synchronization server. Data entries required for synchronization and administration with the One Identity Manager database are processed by the synchronization server. The One Identity Manager Service with the Unix connector must be installed on the synchronization server. The synchronization server must be declared as a Job server in One Identity Manager. Use the following properties when you set up the Job server.

<table>
<tr><th>Data</th><th>Explanation</th></tr>
<tr><td></td><td>Table 6: Additional properties for the Job server
<table>
<tr><th>Property</th><th>Value</th></tr>
<tr><td>server function</td><td>Unix connector
AIX connector</td></tr>
<tr><td>machine role</td><td>Server/Job server/Unix</td></tr>
</table></td></tr>
<tr><td>One Identity Manager database connection data</td><td>• Database server
• Database
• SQL Server Login and password
• Specifies whether integrated Windows authentication is used. This type of authentication is not recommended. If you decide to use it anyway, ensure that your environment supports Windows authentication.</td></tr>
<tr><td>Remote connection server</td><td>To configure synchronization with a target system, One Identity Manager must load the data from the target system. One Identity Manager communicates directly with target system to do this. Sometimes direct access from the workstation on which the Synchronization Editor is installed is not possible, because of the firewall configuration, for example, or because the workstation does not fulfill the necessary hardware and software requirements. If direct access to the workstation is not possible, you can set up a remote connection.

The remote connection server and the workstation must be in the same Active Directory domain.

Remote connection server configuration:

• One Identity Manager Service is started
• <code>RemoteConnectPlugin</code> is installed
• Unix connector or AIX connector is installed

The remote connection server must be declared as a Job server in One Identity Manager. The Job server name is required.

TIP: The remote connection server requires the same configuration as the synchronization server (with regard to the installed software and entitlements). Use the synchronization as remote connection server at the same time, by simply installing the <code>RemoteConnectPlugin</code> as well.

For more detailed information about setting up a remote connection, see the One Identity Manager Target System Synchronization Reference Guide.</td></tr>
</table>

Related Topics

- Users and permissions for synchronizing with a Unix-based target system on page 12
- Setting up the synchronization server on page 13

Setting up an initial synchronization project

NOTE: The following sequence describes how you configure a synchronization project if Synchronization Editor is both:

- executed In default mode, and
- started from the launchpad

If you execute the project wizard in expert mode or directly from Synchronization Editor, additional configuration settings can be made. Follow the project wizard instructions through these steps.

To set up an initial synchronization project for a Unix-based target system

1. Start the Launchpad and log on to the One Identity Manager database.

   NOTE: If synchronization is executed by an application server, connect the database through the application server.

2. Select **Target system type Unix** and click **Start**.

   This starts the Synchronization Editor's project wizard.

3. Specify how One Identity Manager can access the target system on the **System access** page.
   - If access is possible from the workstation on which you started Synchronization Editor, you do not need to make any settings.
   - If access is not possible from the workstation on which you started Synchronization Editor, you can set up a remote connection.

     Enable the **Connect using remote connection server** option and select the server to be used for the connection under **Job server**.

4. Enter the connection data for the Unix host in **General connection settings**.
   a. In the **Server or IP** input field, enter the server name or the IP address of the host.
   b. In the **Port** input field, enter the communications port for establishing the SSH connection. The default communications port is the TCP port 22.
   c. Enter the user account and password for SSH login on the host.
   d. Click **Test** to test the connection. The system tries to connect to the host.
5. Click **Test** in the **Verify connection** pane to test the connection to the host.

6. Select the method to use for obtaining administrative permissions on **Change to administrative context**.
    - Select the method "Default" if the user already possesses administrative permissions.
    - Select the method "Sudo" if the current user logged in on the host can run administrative tasks as an administrative user. Enter the alternative user, for example "root", in **User**.
    - Select the method "su" if administrative tasks should be executed using a different user. Enter the login data of the other user in **User** and **Password**. The default user is "root".
7. On the **One Identity Manager Connection** tab, test the data for connecting to the One Identity Manager database. The data is loaded from the connected database. Reenter the password.

    NOTE: If you use an unencrypted One Identity Manager database and have not yet saved any synchronization projects to the database, you need to enter all connection data again. This page is not shown if a synchronization project already exists.
8. The wizard loads the target system schema. This may take a few minutes depending on the type of target system access and the size of the target system.
9. On the **Restrict target system access** page, you specify how system access should work. You have the following options:

Table 7: Specify target system access

Option	Meaning
Read-only access to target system.	Specifies whether a synchronization workflow is only to be set up for the initial loading of the target system into the One Identity Manager database. The synchronization workflow has the following characteristics: • Synchronization is in the direction of **One Identity Manager**. • Processing methods in the synchronization steps are only defined for synchronization in the direction of **One Identity Manager**
Read/write access to target system. Provisioning available.	Specifies whether a provisioning workflow is to be set up in addition to the synchronization workflow for the initial loading of the target system. The provisioning workflow displays the following characteristics:

Option	Meaning
	• Synchronization is in the direction of the **Target system**. • Processing methods are only defined in the synchronization steps for synchronization in the direction of the **Target system**. • Synchronization steps are only created for such schema classes whose schema types have write access.

10. Select the synchronization server to execute synchronization on the **Synchronization server** page.

    If the synchronization server is not declared as a Job server in the One Identity Manager database yet, you can add a new Job server.

    a. Click to add a new Job server.

    b. Enter a name for the Job server and the full server name conforming to DNS syntax.

    c. Click **OK**.

    The synchronization server is declared as Job server for the target system in the One Identity Manager database.

    NOTE: After you save the synchronization project, ensure that this server is set up as a synchronization server.

11. To close the project wizard, click **Finish**.

    This creates and allocates a default schedule for regular synchronization. Enable the schedule for regular synchronization.

    The synchronization project is created, saved and enabled immediately.

    NOTE: If you do not want the synchronization project to be activated immediately, disable the **Activate and save the new synchronization project automatically** option. In this case, save the synchronization project manually before closing the Synchronization Editor.

    NOTE: The connection data for the target system is saved in a variable set and can be modified under **Configuration | Variables** in Synchronization Editor.

To configure the content of the synchronization log

1. Open the synchronization project in the Synchronization Editor.
2. To configure the synchronization log for target system connection, select the category **Configuration | Target system**.
3. To configure the synchronization log for the database connection, select **Configuration | One Identity Manager connection**.

4. Select the **General** view and click **Configure**.
5. Select the **Synchronization log** view and set **Create synchronization log**.
6. Enable the data to be logged.

   NOTE: Some content generates a particularly large volume of log data. The synchronization log should only contain data required for troubleshooting and other analyses.

7. Click **OK**.

To synchronize on a regular basis

1. Open the synchronization project in the Synchronization Editor.
2. Select the category **Configuration | Start up configurations**.
3. Select a start up configuration in the document view and click **Edit schedule**.
4. Edit the schedule properties.
5. To enable the schedule, click **Activate**.
6. Click **OK**.

To start initial synchronization manually

1. Open the synchronization project in the Synchronization Editor.
2. Select the category **Configuration | Start up configurations**.
3. Select a start up configuration in the document view and click **Execute**.
4. Confirm the security prompt with **Yes**.

NOTE:

Following a synchronization, employees are automatically created for the user accounts in the default installation. If an account definition for the host is not yet known at the time of synchronization, user accounts are linked with employees. However, account definitions are not assigned. The user accounts are therefore in a **Linked** state.

To manage the user accounts using account definitions, assign an account definition and a manage level to these user accounts.

To select user accounts through account definitions

1. Create an account definition.
2. Assign an account definition to the host.
3. Assign the account definition and manage level to user accounts in **linked** status.
   a. In Manager, select **Unix | User accounts | Linked but not configured | <Host>**.
   b. Select **Assign account definition to linked accounts**.

Related Topics

- Displaying synchronization results on page 23
- Customizing the synchronization configuration on page 24
- Setting up account definitions on page 33
- Automatic assignment of employees to Unix user accounts on page 95

Displaying synchronization results

Synchronization results are summarized in the synchronization log. You can specify the extent of the synchronization log for each system connection individually. One Identity Manager provides several reports in which the synchronization results are organized under different criteria.

To display a synchronization log

1. Open the synchronization project in the Synchronization Editor.
2. Select **Logs**.
3. Click ▶ in the navigation view toolbar.

   Logs for all completed synchronization runs are displayed in the navigation view.
4. Select a log by double-clicking on it.

   An analysis of the synchronization is shown as a report. You can save the report.

To display a provisioning log.

1. Open the synchronization project in the Synchronization Editor.
2. Select **Logs**.
3. Click ⚡ in the navigation view toolbar.

   Logs for all completed provisioning processes are displayed in the navigation view.
4. Select a log by double-clicking on it.

   An analysis of the provisioning is show as a report. You can save the report.

The log is marked in color in the navigation view. This mark shows you the execution status of the synchronization/provisioning.

Configuring the retention period for logs

Synchronization logs are stored for a fixed length of time.

To modify the retention period for synchronization logs

- In Designer, enable the **DPR | Journal | LifeTime** configuration parameter and enter the maximum retention period.

Customizing the synchronization configuration

You have used the Synchronization Editor to set up a synchronization project for initial synchronization of a Unix host. You can use this synchronization project to load Unix objects into the One Identity Manager database. If you manage user accounts and their authorizations with One Identity Manager, changes are provisioned in the Unix-based target system.

You must customize the synchronization configuration in order to compare the database with the Unix-based target system regularly and to synchronize changes.

- To use One Identity Manager as the master system during synchronization, create a workflow with synchronization in the direction of the **Target system**.
- You can use variables to create generally applicable synchronization configurations that contain the necessary information about the synchronization objects when synchronization starts. Variables can be implemented in base objects, schema classes, or processing methods, for example.
- Use variables to set up a synchronization project which can be used for several different hosts. Store a connection parameter as a variable for logging onto the hosts.
- To specify which Unix objects and database object are included in synchronization, edit the scope of the target system connection and the One Identity Manager database connection. To prevent data inconsistencies, define the same scope in both systems. If no scope is defined, all objects will be synchronized.
- Update the schema in the synchronization project if the One Identity Manager schema or target system schema has changed. Then you can add the changes to the mapping.

IMPORTANT: As long as synchronization is running, you must not start another synchronization for the same target system. This applies especially, if the same synchronization objects would be processed.

- If another synchronization is started with the same start up configuration, this process is stop and is assigned the **Frozen** execution status. An error message is written to the One Identity Manager Service log file.
- If another synchronization is started with another start up configuration, that addresses same target system, it may lead to synchronization error or loss of data. Specify One Identity Manager behavior in this case, in the start up configuration. Group start up configurations with the same start up behavior.

For more detailed information about configuring synchronization, see the One Identity Manager Target System Synchronization Reference Guide.

Detailed information about this topic

- Configuring Unix host synchronization on page 25
- Configuring synchronization of several Unix hosts on page 25
- Updating schemas on page 26

Configuring Unix host synchronization

The synchronization project for initial synchronization provides a workflow for initial loading of target system objects (initial synchronization) and one for provisioning object modifications from the One Identity Manager database to the target system (provisioning). To use One Identity Manager as the master system during synchronization, you also require a workfow with synchronization in the direction of the **Target system**.

To create a synchronization configuration for synchronizing a Unix host

1. Open the synchronization project in the Synchronization Editor.
2. Check whether existing mappings can be used for synchronizing the . Create new maps if required.
3. Create a new workflow with the workflow wizard.

   Creates a workflow with **Target system** as its synchronization direction.
4. Create a new start up configuration. Use the new workflow to do this.
5. Save the changes.
6. Run a consistency check.

Detailed information about this topic

- Configuring synchronization of several Unix hosts on page 25

Configuring synchronization of several Unix hosts

Prerequisites

- The target system schema of both hosts are identical.
- All virtual schema properties used in the mapping must exist in the extended schema of both hosts.

To customize a synchronization project for synchronizing another host

1. Prepare a user account with sufficient permissions for synchronizing in the other host.
2. Open the synchronization project in the Synchronization Editor.
3. Create a new base object for the other host. Use the wizards to attach a base object.
    - In the wizard, select the Unix or AIX connector and declare the connection parameters. The connection parameters are saved in a special variable set.

      A start up configuration is created, which uses the newly created variable set.
4. Change other elements of the synchronization configuration as required.
5. Save the changes.
6. Run a consistency check.

Related Topics

- Configuring Unix host synchronization on page 25

Updating schemas

All the schema data (schema types and schema properties) of the target system schema and the One Identity Manager schema are available when you are editing a synchronization project. Only a part of this data is really needed for configuring synchronization. If a synchronization project is finished, the schema is compressed to remove unnecessary data from the synchronization project. This can speed up loading the synchronization project. Deleted schema data can be added to the synchronization configuration again at a later point.

If the target system schema or the One Identity Manager schema has changed, these changes must also be added to the synchronization configuration. Then the changes can be added to the schema property mapping.

To include schema data that have been deleted through compressing and schema modifications in the synchronization project, update each schema in the synchronization project. This may be necessary if:

- A schema was changed by:
    - Changes to a target system schema
    - Customizations to the One Identity Manager schema
    - A One Identity Manager update migration
- A schema in the synchronization project was shrunk by:
    - enabling the synchronization project
    - saving the synchronization project for the first time
    - compressing a schema

To update a system connection schema

1. Open the synchronization project in the Synchronization Editor.
2. Select the category **Configuration | Target systems**.

   - OR -

   Select the category **Configuration | One Identity Manager connection**.
3. Select the view **General** and click **Update schema**.
4. Confirm the security prompt with **Yes**.

   This reloads the schema data.

To edit a mapping

1. Open the synchronization project in the Synchronization Editor.
2. Select the category **Mappings**.
3. Select a mapping in the navigation view.

   Opens the Mapping Editor. For more detailed information about mappings, see the *One Identity Manager Target System Synchronization Reference Guide*.

NOTE: The synchronization is deactivated if the schema of an activated synchronization project is updated. Reactivate the synchronization project to synchronize.

Post-processing outstanding objects

Objects, which do not exist in the target system, can be marked as outstanding in One Identity Manager by synchronizing. This prevents objects being deleted because of an incorrect data situation or an incorrect synchronization configuration.

Outstanding objects

- Cannot be edited in One Identity Manager.
- Are ignored by subsequent synchronization.
- Are ignored by inheritance calculations.

This means, all memberships and assignments remain intact until the outstanding objects have been processed.

Start target system synchronization to do this.

To post-process outstanding objects

1. In the manager, select the **Unix | Target system synchronization: Unix** category.

   All tables assigned to the target system type **Unix** as synchronization tables are displayed in the navigation view.
2. On the **Target system synchronization** form, in the **Table / object** column, open

the node of the table for which you want to post-process outstanding objects.

All objects that are marked as outstanding are shown. The **Last log entry** and **Last method run** columns display the time at which the last entry was made in the synchronization log and which processing method was executed. The **No log available** entry can mean the following:

- The synchronization log has already been deleted.

  - OR -

- An assignment from a member list has been deleted in the target system.

  The base object of the assignment has been updated during the synchronization. A corresponding entry appears in the synchronization log. The entry in the assignment table is marked as outstanding, but there is no entry in the synchronization log.

- An object that contains a member list has been deleted in the target system.

  During synchronization, the object and all corresponding entries in assignment tables are marked as outstanding. However, an entry in the synchronization log appears only for the deleted object.

TIP:

To display object properties of an outstanding object

a. Select the object on the target system synchronization form.

b. Open the context menu and click **Show object**.

3. Select the objects you want to rework. Multi-select is possible.
4. Click one of the following icons in the form toolbar to execute the respective method.

Table 8: Methods for handling outstanding objects

Icon	Method	Description
	Delete	The object is immediately deleted in the One Identity Manager database. Deferred deletion is not taken into account. The **Outstanding** label is removed for the object. Indirect memberships cannot be deleted.
	Publish	The object is added in the target system. The **Outstanding** label is removed for the object. The method triggers the `HandleOutstanding` event. This runs a target system specific process that triggers the provisioning process for the object. Prerequisites: • The table containing the object can be published. • The target system connector has write access to the target system.

Icon	Method	Description
	Reset	The **Outstanding** label is removed for the object.

5. Confirm the security prompt with **Yes**.

NOTE: By default, the selected objects are processed in parallel, which speeds up execution of the selected method. If an error occurs during processing, the action is stopped and all changes are discarded.

Bulk processing of objects must be disabled if errors are to be localized, which means the objects are processed sequentially. Failed objects are named in the error message. All changes that were made up until the error occurred are saved.

To disable bulk processing

- Deactivate in the form toolbar.

You must customize synchronization to synchronize custom tables.

To add custom tables to the target system synchronization

1. In the result list, select the target system type **Unix**.
2. Select **Assign synchronization tables**.
3. Assign custom tables whose outstanding objects you want to handle in **Add assignments**.
4. Save the changes.
5. Select **Configure tables for publishing**.
6. Select custom tables whose outstanding objects can be published in the target system and set **Publishable**.
7. Save the changes.

NOTE: The target system connector must have write access to the target system in order to publish outstanding objects that are being post-processed. This means that the **Connection is read only** option is not set in the target system connection.

Membership provisioning configuration

Memberships, for example, user accounts in groups, are saved in assignment tables in the One Identity Manager database. During provisioning of modified memberships, changes made in the target system will probably be overwritten. This behavior can occur under the following conditions:

- Memberships are saved in the target system as an object property in list form.
- Memberships can be modified in either of the connected systems.
- A provisioning workflow and provisioning processes are set up.

If a membership in One Identity Manager changes, the complete list of members is transferred to the target system by default. Memberships, previously added to the target system are removed by this; previously deleted memberships are added again.

To prevent this, provisioning can be configured such that only the modified membership is provisioned in the target system. The corresponding behavior is configured separately for each assignment table.

To allow separate provisioning of memberships

1. In the Manager, select **Unix | Basic configuration data | Target system types**.
2. Select **Unix** in the result list.
3. Select **Configure tables for publishing**.
4. Select the assignment tables for which you want to allow separate provisioning. Multi-select is possible.
    - This option can only be enabled for assignment tables that have a base table with `XDateSubItem` or `CCC_XDateSubItem` column.
    - Assignment tables that are grouped together in a virtual schema property in the mapping must be marked identically.
5. Click **Enable merging**.
6. Save the changes.

For each assignment table labeled like this, the changes made in One Identity Manager are saved in a separate table. During modification provisioning, the members list in the target system is compared to the entries in this table. This means that only modified memberships are provisioned and the members list does not get entirely overwritten.

NOTE: The complete members list is updated by synchronization. During this process, objects with changes but incomplete provisioning are not handled. These objects are logged in the synchronization log.

For more detailed information about provisioning memberships, see the One Identity Manager Target System Synchronization Reference Guide.

Help for the analysis of synchronization issues

You can generate a report for analyzing problems which occur during synchronization, for example, insufficient performance. The report contains information such as:

- Consistency check results
- Revision filter settings
- Scope applied

- Analysis of the synchronization buffer
- Object access times in the One Identity Manager database and in the target system

To generate a synchronization analysis report

1. Open the synchronization project in the Synchronization Editor.
2. Select the menu **Help | Generate synchronization analysis report** and answer the security prompt with **Yes**.

   The report may take a few minutes to generate. It is displayed in a separate window.
3. Print the report or save it in one of the available output formats.

Deactivating synchronization

Regular synchronization cannot be started until the synchronization project and the schedule are active.

To prevent regular synchronization

1. Open the synchronization project in the Synchronization Editor.
2. Select the start up configuration and deactivate the configured schedule.

   Now you can only start synchronization manually.

An activated synchronization project can only be edited to a limited extend. The schema in the synchronization project must be updated if schema modifications are required. The synchronization project is deactivated in this case and can be edited again.

Furthermore, the synchronization project must be deactivated if synchronization should not be started by any means (not even manually).

To deactivate the synchronization project

1. Open the synchronization project in the Synchronization Editor.
2. Select **General** on the start page.
3. Click **Deactivate project**.

Detailed information about this topic

- Creating a synchronization project for initial synchronization of a Unix host on page 16

3

Basic data for Unix-based target systems

The following base data is relevant for managing a Unix-based target system in One Identity Manager.

- Configuration parameters

  Use configuration parameters to configure the behavior of the system's basic settings. One Identity Manager provides default settings for different configuration parameters. Check the configuration parameters and modify them as necessary to suit your requirements.

  Configuration parameters are defined in the One Identity Manager modules. Each One Identity Manager module can also install configuration parameters. You can find an overview of all configuration parameters in **Base data | General | Configuration parameters** in Designer.

  For more information, see Appendix: Configuration parameters for managing a Unix environment on page 120.

- Account definitions

  One Identity Manager has account definitions for automatically allocating user accounts to employees during working hours. You can create account definitions for every target system. If an employee does not yet have a user account in a target system, a new user account is created. This is done by assigning account definitions to an employee.

  For more information, see Setting up account definitions on page 33.

- Password policy

  One Identity Manager provides you with support for creating complex password policies, for example, for system user passwords, the employees' central password as well as passwords for individual target systems. Password polices apply not only when the user enters a password but also when random passwords are generated.

  Predefined password policies are supplied with the default installation that you can user or customize if required. You can also define your own password policies.

  For more information, see Password policies for Unix user accounts on page 52.

- Initial password for new user accounts

  You have the different options for issuing an initial password for user accounts. The central password of the assigned employee can be aligned with the user account password, a predefined, fixed password can be used or a randomly generated initial password can be issued.

  For more information, see Initial password for new Unix user accounts on page 62.

- Email notifications about login data

  When a new user account is created, the login data are send to a specified recipient. In this case, two messages are sent with the user name and the initial password. Mail templates are used to generate the messages.

  For more information, see Email notifications about login data on page 63.

- Target system types

  Target system types are required for configuring target system comparisons. Tables containing outstanding objects are maintained on target system types.

  For more information, see Post-processing outstanding objects on page 27.

- Target system managers

  A default application role exists for the target system manager in One Identity Manager. Assign the employees who are authorized to edit all Unix hosts in One Identity Manager to this application role.

  Define additional application roles if you want to limit the edit permissions for target system managers to individual Unixhosts. The application roles must be added under the default application role.

  For more information, see Target system managers on page 64.

- Server

  Servers must know their functionality in order to handle Unix-specific processes in One Identity Manager. For example, the synchronization server.

  For more information, see Editing a server on page 66.

Setting up account definitions

One Identity Manager has account definitions for automatically allocating user accounts to employees during working hours. You can create account definitions for every target system. If an employee does not yet have a user account in a target system, a new user account is created. This is done by assigning account definitions to an employee.

The data for the user accounts in the respective target system comes from the basic employee data. The employees must have a central user account. The assignment of the IT operating data to the employee's user account is controlled through the primary assignment of the employee to a location, a department, a cost center, or a business role (template processing). Processing is done through templates. There are predefined

templates for determining the data required for user accounts included in the default installation. You can customize templates as required.

For detailed information about account definitions, see the *One Identity Manager Target System Base Module Administration Guide*.

The following steps are required to implement an account definition:

- Creating an account definition
- Setting up manage levels
- Creating a mapping rule for IT operating data
- Collecting IT operating data
- Assigning account definitions to employees
- Assigning account definitions to a target system

Creating an account definition

To create a new account definition

1. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions**.
2. Select an account definition in the result list. Select **Change master data**.

   - OR -

   Click in the result list toolbar.
3. Enter the account definition's master data.
4. Save the changes.

Detailed information about this topic

- Master data for an account definition on page 34

Master data for an account definition

Enter the following data for an account definition:

Table 9: Master Data for an Account Definition

Property	Description
Account definition	Account definition name.
User	Table in the One Identity Manager schema that maps user accounts.

Property	Description
account table	
Target system	Target system to which the account definition applies.
Required account definition	Required account definitions. Define the dependencies between account definitions. When this account definition is requested or assigned, the required account definition is automatically requested or assigned with it. Leave empty for Unix hosts.
Description	Spare text box for additional explanation.
Manage level (initial)	Manage level to use by default when you add new user accounts.
Risk index	Value for evaluating the risk of account definition assignments to employees. Enter a value between 0 and 1. This input field is only visible if the configuration parameter **QER | CalculateRiskIndex** is activated. For more detailed information, see the *One Identity Manager Risk Assessment Administration Guide*.
Service item	Service item through which you can request the account definition in the IT Shop. Assign an existing service item or add a new one.
IT Shop	Specifies whether the account definition can be requested through the IT Shop. The account definition can be ordered by an employee over the Web Portal and distributed using a defined approval process. The can also be assigned directly to employees and roles outside of IT Shop.
Only for use in IT Shop	Specifies whether the account definition can only be requested through the IT Shop. The account definition can be ordered by an employee over the Web Portal and distributed using a defined approval process. This means, the account definition cannot be directly assigned to roles outside the IT Shop.
Automatic assignment to employees	Specifies whether the account definition is assigned automatically to all internal employees. The account definition is assigned to every employee not marked as external, on saving. New employees automatically obtain this account definition as soon as they are added. IMPORTANT: Only set this option if you can ensure that all current internal employees in the database and all pending newly added internal employees obtain a user account in this target system. Disable this option to remove automatic assignment of the account definition to all employees. The account definition cannot be reassigned to employees from this point on. Existing account definition assignments

Property	Description
	remain intact.
Retain account definition if permanently disabled	Specifies the account definition assignment to permanently disabled employees. Option set: The account definition assignment remains in effect. The user account stays the same. Option not set: The account definition assignment is not in effect. The associated user account is deleted.
Retain account definition if temporarily disabled	Specifies the account definition assignment to temporarily disabled employees. Option set: The account definition assignment remains in effect. The user account stays the same. Option not set: The account definition assignment is not in effect. The associated user account is deleted.
Retain account definition on deferred deletion	Specifies the account definition assignment on deferred deletion of employees. Option set: The account definition assignment remains in effect. The user account stays the same. Option not set: The account definition assignment is not in effect. The associated user account is deleted.
Retain account definition on security risk	Specifies the account definition assignment to employees posing a security risk. Option set: The account definition assignment remains in effect. The user account stays the same. Option not set: The account definition assignment is not in effect. The associated user account is deleted.
Resource type	Resource type for grouping account definitions.
Spare field 01 - spare field 10	Additional company specific information. Use Designer to customize display names, formats and templates for the input fields.

Setting up manage levels

Specify the manage level for an account definition for managing user accounts. The user account's manage level specifies the extent of the employee's properties that are inherited by the user account. This allows an employee to have several user accounts in one target system, for example:

- Default user account that inherits all properties from the employee
- Administrative user account that is associated to an employee but should not inherit the properties from the employee.

One Identity Manager supplies a default configuration for manage levels:

- **Unmanaged**: User accounts with the **Unmanaged** manage level are linked to the employee but they do no inherit any further properties. When a new user account is added with this manage level and an employee is assigned, some of the employee's properties are transferred initially. If the employee properties are changed at a later date, the changes are not passed onto the user account.
- **Full managed**: User accounts with the **Full managed** manage level inherit defined properties of the assigned assigned employee. When a new user account is created with this manage level and an employee is assigned, the employee's properties are transferred in an initial state. If the employee properties are changed at a later date, the changes are passed onto the user account.

NOTE: The **Full managed** and **Unmanaged** are analyzed in templates. You can customize the supplied templates in the Designer.

You can define other manage levels depending on your requirements. You need to amend the templates to include manage level approaches.

Specify the effect of temporarily or permanently disabling, deleting or the security risk of an employee on its user accounts and group memberships for each manage level. For detailed information about manage levels, see the *One Identity Manager Target System Base Module Administration Guide*.

- Employee user accounts can be locked when they are disabled, deleted or rated as a security risk so that permissions are immediately withdrawn. If the employee is reinstated at a later date, the user accounts are also reactivated.
- You can also define group membership inheritance. Inheritance can be discontinued if desired when, for example, the employee’s user accounts are disabled and therefore cannot be members in groups. During this time, no inheritance processes should be calculated for this employee. Existing group memberships are deleted!

To assign manage levels to an account definition

1. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions**.
2. Select an account definition in the result list.
3. Select **Assign manage level**.
4. Assign the manage levels in **Add assignments**.

   - OR -

   Delete the manage levels in **Remove assignments**.
5. Save the changes.

IMPORTANT: The **Unmanaged** manage level is assigned automatically when you create an account definition and it cannot be removed.

To edit a manage level

1. Select **Unix | Basic configuration data | Account definitions | Manage levels.**
2. Select the manage level in the result list. Select **Change master data**.

   - OR -

   Click in the result list toolbar.
3. Edit the manage level's master data.
4. Save the changes.

Related Topics

- Master data for manage levels on page 38

Master data for manage levels

Enter the following data for a manage level.

Table 10: Master Data for a Manage Level

Property	Description
Manage level	Name of the manage level.
Description	Spare text box for additional explanation.
IT operating data overwrites	Specifies whether user account data formatted from IT operating data is automatically updated. Permitted values are: • **Never**: Data is not updated. • **Always**: Data is always updated. • **Only initially**: The data is only determined at the start.
Retain groups if temporarily disabled	Specifies whether user accounts of temporarily disabled employees retain their group memberships.
Lock user accounts if temporarily disabled	Specifies whether user accounts of temporarily disabled employees are locked.
Retain groups if permanently disabled	Specifies whether user accounts of permanently disabled employees retain group memberships.
Lock user accounts if permanently disabled	Specifies whether user accounts of permanently disabled employees are locked.
Retain groups on deferred deletion	Specifies whether user accounts of employees marked for deletion retain their group memberships.
Lock user accounts if deletion is deferred	Specifies whether user accounts of employees marked for deletion are locked.

Property	Description
Retain groups on security risk	Specifies whether user accounts of employees posing a security risk retain their group memberships.
Lock user accounts if security is at risk	Specifies whether user accounts of employees posing a security risk are locked.
Retain groups if user account disabled	Specifies whether locked user accounts retain their group memberships.

Creating a mapping rule for IT operating data

An account definition specifies which rules are used to form the IT operating data and which default values will be used if no IT operating data can be found through the employee's primary roles.

The following IT operating data is used in the One Identity Manager default configuration for automatic creating and modifying of user accounts for an employee in the target system.

- Login shell
- Groups can be inherited
- Identity
- Privileged user account

To create a mapping rule for IT operating data

1. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions**.
2. Select an account definition in the result list.

3. Select **Edit IT operating data mapping** and enter the following data.

Table 11: Mapping rule for IT operating data

Property	Description
Column	User account property for which the value is set. In the menu, you can select the columns that use the `TSB_ITDataFromOrg` script in their template. For detailed information, see *One Identity Manager Target System Base Module Administration Guide*.
Source	Specifies which roles to use in order to find the user account properties. You have the following options: • Primary department • Primary location • Primary cost center • Primary business roles NOTE: Only use the primary business role if the Business Roles Module is installed. • Empty If you select a role, you must specify a default value and set the option **Always use default value**.
Default value	Default value of the property for an employee's user account if the value is not determined dynamically from the IT operating data.
Always use default value	Specifies whether user account properties are always filled with the default value. IT operating data is not determined dynamically from a role.
Notify when applying the standard	Specifies whether email notification to a defined mailbox is sent when the default value is used. The **Employee - new user account with default properties created** mail template is used. To change the mail template, adjust the **TargetSystem | Unix | Accounts | MailTemplateDefaultValues** configuration parameter.

4. Save the changes.

Related Topics

- Collecting IT operating data on page 41

Collecting IT operating data

To create user accounts with the **Full managed** manage level, the required IT operating data must be determined. The operating data required to automatically supply an employee with IT resources is shown in the departments, locations, cost centers, and business roles. An employee is assigned to one primary location, one primary department, one primary cost center or one primary business role. The necessary IT operating data is ascertained from these assignments and used in creating the user accounts. Default values are used if valid IT operating data cannot be found over the primary roles.

You can also specify IT operating data directly for a specific account definition.

Example

Normally, each employee in department A obtains a default user account in the hostA. In addition, certain employees in department A obtain administrative user accounts in the hostA.

Create an account definition A for the default user account of the host A and an account definition B for the administrative user account of host A. Specify the property "Department" in the IT operating data formatting rule for the account definitions A and B in order to determine the valid IT operating data.

Specify the effective IT operating data of department A for the host A. This IT operating data is used for standard user accounts. In addition, specify the effective account definition B IT operating data for department A. This IT operating data is used for administrative user accounts.

To define IT operating data

1. In Manager, select the role in the **Organizations** or **Business roles** category.
2. Select **Edit IT operating data** in the task view and enter the following data.

Table 12: IT operating data

Property	Description
Organization/Business role	Department, cost center, location or business role for which the IT operating data is valid.
Effects on	IT operating data application scope. The IT operating data can be used for a target system or a defined account definition. ***To specify an application scope*** a. Click → next to the text box.

Property	Description
	b. Under **Table**, select the table that maps the target system for select the `TSBAccountDef` table for an account definition. c. Select the specific target system or account definition under **Effects on**. d. Click **OK**.
Column	User account property for which the value is set. In the menu, you can select the columns that use the `TSB_ITDataFromOrg` script in their template. For detailed information, see *One Identity Manager Target System Base Module Administration Guide*.
Value	Concrete value which is assigned to the user account property.

3. Save the changes.

Related Topics

- Creating a mapping rule for IT operating data on page 39

Modify IT operating data

If IT operating data changes, you must transfer these changes to the existing user accounts. To do this, templates must be rerun on the affected columns. Before you can run the templates, you can check what effect a change to the IT operating data has on the existing user accounts. You can decide whether the change is transferred to the One Identity Manager database in the case of each affected column in each affected database.

Prerequisites

- The IT operating data of a department, cost center, business role, or a location was changed.

  - OR -

- The default values in the IT operating data template were modified for an account definition.

NOTE: If the assignment of an employee to a primary department, cost center, business role or to a primary location changes, the templates are automatically executed.

To execute the template

1. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions**.
2. Select an account definition in the result list.
3. Select **Execute templates** in the task view

   This displays a list of all user account, which are created through the selected account definition and whose properties are changed by modifying the IT operating data.

Old value:	Current value of the object property.
New value:	Value that the object property would have following modification of the IT operating data.
Selection:	Specifies whether the modification shall be adopted for the user account.

4. Mark all the object properties in the **selection** column that will be given the new value.
5. Click **Apply**.

   The templates are applied to all selected user accounts and properties.

Assigning account definitions to employees

Account definitions are assigned to company employees.

Indirect assignment is the default method for assigning account definitions to employees. Account definitions are assigned to departments, cost centers, locations or roles. The employees are categorized into these departments, cost centers, locations or roles depending on their function in the company and thus obtain their account definitions. To react quickly to special requests, you can assign individual account definitions directly to employees.

You can automatically assign special account definitions to all company employees. It is possible to assign account definitions to the IT Shop as requestable products. A department manager can then request user accounts from the Web Portal for his staff. It is also possible to add account definitions to system roles. These system roles can be assigned to employees through hierarchical roles or directly or added as products in the IT Shop.

In the One Identity Manager default installation, the processes are checked at the start to see if the employee already has a user account in the target system that has an account definition. If no user account exists, a new user account is created with the account definition's default manage level.

NOTE: If a user account already exists and is disabled, then it is re-enabled. You have to alter the user account manage level afterwards in this case.

Prerequisites for indirect assignment of account definitions to employees

- Assignment of employees and account definitions is permitted for role classes (department, cost center, location or business role).

NOTE: As long as an account definition for an employee is valid, the employee retains the user account that was created by it. If the assignment of an account definition is removed, the user account that was created from this account definition is deleted.

For detailed information about preparing role classes to be assigned, see the *One Identity Manager Identity Management Base Module Administration Guide*.

Detailed information about this topic

- Assigning account definitions to departments, cost centers, and locations on page 44
- Assigning account definitions to business roles on page 45
- Assigning account definitions to all employees on page 46
- Assigning account definitions directly to employees on page 46
- Assigning account definitions to system roles on page 47
- Adding account definitions in the IT Shop on page 48

Assigning account definitions to departments, cost centers, and locations

To add account definitions to hierarchical roles

1. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions**.
2. Select an account definition in the result list.
3. Select **Assign organizations**.
4. Assign organizations in **Add assignments**.
   - Assign departments on the **Departments** tab.
   - Assign locations on the **Locations** tab.
   - Assign cost centers on the **Cost centers** tab.

   TIP: In the **Remove assignments** area, you can remove the assignment of organizations.

   To remove an assignment

   - Select the organization and double click ✓.
5. Save the changes.

Related Topics

- Assigning account definitions to business roles on page 45
- Assigning account definitions to all employees on page 46
- Assigning account definitions directly to employees on page 46
- Assigning account definitions to system roles on page 47
- Adding account definitions in the IT Shop on page 48

Assigning account definitions to business roles

Installed modules: Business Roles Module

To add account definitions to hierarchical roles

1. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions**.
2. Select an account definition in the result list.
3. Select **Assign business roles**.
4. Assign business roles in **Add assignments**.

   TIP: In the **Remove assignments** area, you can remove the assignment of business roles.

   To remove an assignment

   - Select the business role and double click .
5. Save the changes.

Related Topics

- Assigning account definitions to departments, cost centers, and locations on page 44
- Assigning account definitions to all employees on page 46
- Assigning account definitions directly to employees on page 46
- Assigning account definitions to system roles on page 47
- Adding account definitions in the IT Shop on page 48

Assigning account definitions to all employees

To assign an account definition to all employees

1. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions**.
2. Select an account definition in the result list.
3. Select **Change master data**.
4. Set **Automatic assignment to employees** on **General**.

   IMPORTANT: Only set this option if you can ensure that all current internal employees in the database and all pending newly added internal employees obtain a user account in this target system.

5. Save the changes.

The account definition is assigned to every employee that is not marked as external. New employees automatically obtain this account definition as soon as they are added. The assignment is calculated by the DBQueue Processor.

NOTE: Disable **Automatic assignment to employees** to remove automatic assignment of the account definition to all employees. The account definition cannot be reassigned to employees from this point on. Existing assignments remain intact.

Related Topics

- Assigning account definitions to departments, cost centers, and locations on page 44
- Assigning account definitions to business roles on page 45
- Assigning account definitions directly to employees on page 46
- Assigning account definitions to system roles on page 47
- Adding account definitions in the IT Shop on page 48

Assigning account definitions directly to employees

To assign an account definition directly to employees

1. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions**.
2. Select an account definition in the result list.
3. Select **Assign to employees**.

4. Assign employees in **Add assignments**.

   TIP: In the **Remove assignments** area, you can remove the assignment of employees.

   To remove an assignment

   - Select the employee and double click ✓.

5. Save the changes.

Related Topics

- Assigning account definitions to departments, cost centers, and locations on page 44
- Assigning account definitions to business roles on page 45
- Assigning account definitions to all employees on page 46
- Assigning account definitions to system roles on page 47
- Adding account definitions in the IT Shop on page 48

Assigning account definitions to system roles

Installed modules: System Roles Module

NOTE: Account definitions with **Only use in IT Shop** can only be assigned to system roles that also have this option set.

To add account definitions to a system role

1. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions**.
2. Select an account definition in the result list.
3. Select **Assign system roles**.
4. Assign system roles in **Add assignments**.

   TIP: In the **Remove assignments** area, you can remove the assignment of system roles.

   To remove an assignment

   - Select the system role and double click ✓.

5. Save the changes.

Related Topics

- Assigning account definitions to departments, cost centers, and locations on page 44
- Assigning account definitions to business roles on page 45

- Assigning account definitions to all employees on page 46
- Assigning account definitions directly to employees on page 46
- Adding account definitions in the IT Shop on page 48

Adding account definitions in the IT Shop

A account definition can be requested by shop customers when it is assigned to an IT Shop shelf. To ensure it can be requested, further prerequisites need to be guaranteed.

- The account definition must be labeled with the **IT Shop** option.
- The account definition must be assigned to a service item.

  TIP: In Web Portal, all products that can be requested are grouped together by service category. To make the account definition easier to find in Web Portal, assign a service category to the service item.
- If the account definition is only assigned to employees using IT Shop assignments, you must also set **Only for use in IT Shop**. Direct assignment to hierarchical roles may not be possible.

NOTE: IT Shop administrators can assign account definitions to IT Shop shelves if login is role-based. Target system administrators are not authorized to add account definitions in the IT Shop.

To add an account definition to the IT Shop

1. In Manager select **Unix | Basic configuration data | Account definitions | Account definitions** (non-role-based login).

   - OR -

   In Manager, select **Entitlements | Account definitions** (role-based login).
2. Select an account definition in the result list.
3. Select **Add to IT Shop**.
4. Assign the account definitions to the IT Shop shelves in **Add assignments**.
5. Save the changes.

To remove an account definition from individual IT Shop shelves

1. In Manager select **Unix | Basic configuration data | Account definitions | Account definitions** (non-role-based login).

   - OR -

   In Manager, select **Entitlements | Account definitions** (role-based login).
2. Select an account definition in the result list.
3. Select **Add to IT Shop**.

4. Remove the account definitions from the IT Shop shelves in **Remove assignments**.
5. Save the changes.

To remove an account definition from all IT Shop shelves

1. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions** (with non-role-based login).

   - OR -

   In the Manager, select **Entitlements | Account definitions** (with role-based login).
2. Select an account definition in the result list.
3. Select **Remove from all shelves (IT Shop)**.
4. Confirm the security prompt with **Yes**.
5. Click **OK**.

   The account definition is removed from all shelves by One Identity Manager Service. All requests and assignment requests with this account definition are canceled in the process.

For detailed information about requesting company resources through IT Shop, see the *One Identity Manager IT Shop Administration Guide*.

Related Topics

- Master data for an account definition on page 34
- Assigning account definitions to departments, cost centers, and locations on page 44
- Assigning account definitions to business roles on page 45
- Assigning account definitions to all employees on page 46
- Assigning account definitions directly to employees on page 46
- Assigning account definitions to system roles on page 47

Assigning account definitions to a target system

The following prerequisites must be fulfilled if you implement automatic assignment of user accounts and employees resulting in administered user accounts (state **Linked configured**):

- The account definition is assigned to the target system.
- The account definition has the default manage level.

User accounts are only linked to the employee (**Linked**) if no account definition is given. This is the case on initial synchronization, for example.

To assign the account definition to a target system

1. In Manager, select the host in **Unix | Hosts**.
2. Select **Change master data**.
3. Select the account definition for user accounts from **Account definition (initial)**.
4. Save the changes.

Detailed information about this topic

- Automatic assignment of employees to Unix user accounts on page 95

Deleting an account definition

You can delete account definitions if they are not assigned to target systems, employees, hierarchical roles or any other account definitions.

To delete an account definition

1. Remove automatic assignments of the account definition from all employees.
    a. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions**.
    b. Select an account definition in the result list.
    c. Select **Change master data**.
    d. Disable **Automatic assignment to employees** on the **General** tab.
    e. Save the changes.
2. Remove direct assignments of the account definition to employees.
    a. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions**.
    b. Select an account definition in the result list.
    c. Select **Assign to employees**.
    d. Remove employees from **Remove assignments**.
    e. Save the changes.
3. Remove the account definition's assignments to departments, cost centers and locations.
    a. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions**.
    b. Select an account definition in the result list.
    c. Select **Assign organizations**.
    d. In **Remove assignments**, remove the relevant departments, cost centers,

and locations.

e. Save the changes.

4. Remove the account definition's assignments to business roles.

   a. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions**.

   b. Select an account definition in the result list.

   c. Select **Assign business roles**.

      Remove the business roles in **Remove assignments**.

   d. Save the changes.

5. If the account definition was requested through the IT Shop, it must be canceled and removed from all IT Shop shelves.

   For more detailed information about unsubscribing requests, see the *One Identity Manager Web Portal User Guide*.

   To remove an account definition from all IT Shop shelves

   a. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions** (with non-role-based login).

      - OR -

      In the Manager, select **Entitlements | Account definitions** (with role-based login).

   b. Select an account definition in the result list.

   c. Select **Remove from all shelves (IT Shop)**.

   d. Confirm the security prompt with **Yes**.

   e. Click **OK**.

      The account definition is removed from all shelves by One Identity Manager Service. All requests and assignment requests with this account definition are canceled in the process.

6. Remove the account definition assignment as required account definition for another account definition. As long as the account definition is required for another account definition, it cannot be deleted. Check all the account definitions.

   a. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions**.

   b. Select an account definition in the result list.

   c. Select **Change master data**.

   d. Remove the account definition in the **Required account definition** menu.

   e. Save the changes.

7. Remove the account definition's assignments to target systems.
    a. In Manager, select the host in **Unix | Hosts**.
    b. Select **Change master data**.
    c. Remove the assigned account definitions on the **General** tab.
    d. Save the changes.
8. Delete the account definition.
    a. In the Manager, select **Unix | Basic configuration data | Account definitions | Account definitions**.
    b. Select an account definition in the result list.
    c. Click to delete an account definition.

Password policies for Unix user accounts

One Identity Manager provides you with support for creating complex password policies, for example, for system user passwords, the employees' central password as well as passwords for individual target systems. Password polices apply not only when the user enters a password but also when random passwords are generated.

Predefined password policies are supplied with the default installation that you can user or customize if required. You can also define your own password policies.

Detailed information about this topic

- Predefined password policies on page 52
- Using a password policy on page 54
- Editing password policies on page 56
- Custom scripts for password requirements on page 59
- Password exclusion list on page 61
- Checking a password on page 61
- Testing password generation on page 62

Predefined password policies

You can customize predefined password policies to meet your own requirements, if necessary.

Password for logging in to One Identity Manager

The **One Identity Manager password policy** is applied for logging in to One Identity Manager. This password policy defined the settings for the system user passwords (`DialogUser.Password` and `Person.DialogUserPassword`) as well as the access code for a one off log in on the Web Portal (`Person.Passcode`).

NOTE: The **One Identity Manager password policy** is marked as the default policy. This password policy is applied if no other password policy can be found for employees, user accounts or system users.

For detailed information about password policies for employees, see the *One Identity Manager Identity Management Base Module Administration Guide*.

Password policy for forming employees' central passwords

An employee's central password is formed from the target system specific user accounts by respective configuration. The **Employee central password policy** password policy defines the settings for the (`Person.CentralPassword`) central password. Members of the **Identity Management | Employees | Administrators** application role can adjust this password policy.

IMPORTANT: Ensure that the **Employee central password policy** password policy does not violate the system-specific requirements for passwords.

For detailed information about password policies for employees, see the *One Identity Manager Identity Management Base Module Administration Guide*.

Password policies for user accounts

Predefined password policies are provided, which you can apply to the user account password columns of the user accounts.

IMPORTANT: If you do not use password policies that are specific to the target system, the **One Identity Manager password policy** standard policy applies. in this case, ensure that the default policy does not violate the target systems requirements.

NOTE: When you update One Identity Manager version 7.x to One Identity Manager version 8.1, the configuration parameter settings for forming passwords are passed on to the target system specific password policies.

The **UnixPassword policy** password policy is predefined for Unix-based target systems. You can apply this password policy to Unix user accounts (`UNXUser.Password`) of a Unix host.

If the hosts' password requirements differ, it is recommended that you set up your own password policies for each host.

Furthermore, you can apply password policies based on the account definition of the user accounts or based on the manage level of the user accounts.

Using a password policy

The **UnixPassword policy** password policy is predefined for Unix-based target systems. You can apply this password policy to Unix user accounts (`UNXUser.Password`) of a Unix host.

If the hosts' password requirements differ, it is recommended that you set up your own password policies for each host.

Furthermore, you can apply password policies based on the account definition of the user accounts or based on the manage level of the user accounts.

The password policy that is to be used for a user account is determined in the following sequence:

1. Password policy of the account definition of the user account
2. Password policy of the manage level of the user account
3. Password policy for the host of the user account
4. Password policy **One Identity Manager password policy** (default policy)

IMPORTANT: If you do not use password policies that are specific to the target system, the **One Identity Manager password policy** standard policy applies. in this case, ensure that the default policy does not violate the target systems requirements.

To reassign a password policy

1. Select **Unix | Basic configuration data | Password policies** in Manager.
2. Select the password policy in the result list.
3. Select **Assign objects**.

4. Click **Add** in the **Assignments** section and enter the following data.

Table 13: Assigning a Password Policy

Property	Description
Apply to	Application scope of the password policy. ***To specify an application scope*** a. Click → next to the text box. b. Select one of the following references under **Table**: • The table that contains the base objects of synchronization. • Select the `TSBAccountDef` table to apply the password policy based on the account definition. • Select the `TSBBehavior` table to apply the password policy based on the manage level. c. Select the table that contains the base objects under **Apply to**. • If you have selected the table containing the base objects of synchronization, next select the specific target system. • If you have selected the `TSBAccountDef` table, next select the specific account definition. • If you have selected the `TSBBehavior` table, next select the specific manage level. d. Click **OK**.
Password column	The password column's identifier.
password policy	The identifier of the password policy to be used.

5. Save the changes.

To change a password policy's assignment

1. Select **Unix | Basic configuration data | Password policies** in Manager.
2. Select the password policy in the result list.
3. Select **Assign objects**.
4. Select the assignment you want to change in **Assignments**.
5. Select the new password policy to apply from the **Password Policies** menu.
6. Save the changes.

Editing password policies

To edit a password policy

1. Select **Unix | Basic configuration data | Password policies** in Manager.
2. Select the password policy in the result list and select **Change master data**.

   - OR -

   Click in the result list toolbar.
3. Edit the password policy's master data.
4. Save the changes.

Detailed information about this topic

- General master data for password policies on page 56
- Policy settings on page 57
- Character classes for passwords on page 58
- Custom scripts for password requirements on page 59

General master data for password policies

Enter the following master data for a password policy.

Table 14: Master data for a password policy

Property	Meaning
Display name	Password policy name. Translate the given text using the button.
Description	Spare text box for additional explanation.Translate the given text using the button.
Error Message	Custom error message outputted if the policy is not fulfilled. Translate the given text using the button.
Owner (Application Role)	Application roles whose members can configure the password policies.
Default policy	Mark as default policy for passwords. NOTE: The **One Identity Manager password policy** is marked as the default policy. This password policy is applied if no other password policy can be found for employees, user accounts or system users.

Policy settings

Define the following settings for a password policy on the **Password** tab.

Table 15: Policy Settings

Property	Meaning
Initial password	Initial password for newly created user accounts. If a password is not entered or if a random password is not generated when a user account is created, the initial password is used.
Password confirmation	Reconfirm password.
Max. length	Minimum length of the password. Specify the number of characters a password must have.
Max. length	Maximum length of the password. Specify the number of characters a password can have.
Max. errors	Maximum number of errors. Set the number of invalid passwords. Only taken into account when logging in to One Identity Manager. If a user has reached the number of maximum failed logins, the employee or system user can no longer log in to One Identity Manager. You can reset the passwords of employees and system users who have been blocked in Password Reset Portal. For more detailed information, see the *One Identity Manager Web Portal User Guide*.
Validity period	Maximum age of the password. Enter the length of time a password can be used before it expires.
Password history	Enter the number of passwords to be saved. If, for example, a value of **5** is entered, the user's last five passwords are stored.
Min. password strength	Specifies how secure the password must be. The higher the password strength, the more secure it is. The value **0** means that the password strength is not tested. The values **1**, **2**, **3** and **4** specify the required complexity of the password. The value **1** represents the lowest requirements in terms of password strength. The value **4** requires the highest level of complexity.
Name properties denied	Specifies whether name properties are permitted or not permitted in the password. If this option is enabled, name properties are not permitted in passwords. The values of the columns for which the **Contains name properties for**

Property	Meaning
	password check option is set are taken into account. Adjust this option in the column definition in Designer.

Character classes for passwords

Use the **Character classes** tab to specify which characters are permitted for a password.

Table 16: Character classes for passwords

Property	Meaning
Min. number letters	Specifies the minimum number of alphabetical characters the password must contain.
Min. number lowercase	Specifies the minimum number of lowercase letters the password must contain.
Min. number uppercase	Specifies the minimum number of uppercase letters the password must contain.
Min. number digits	Specifies the minimum number of digits the password must contain.
Min. number special characters	Specifies the minimum number of special characters the password must contain.
Permitted special characters	List of permitted characters.
Max. identical characters in total	Maximum number of identical characters that can be present in the password in total.
Max. identical characters in succession	Maximum number of identical character that can be repeated after each other.
Denied special characters	List of characters, which are not permitted.
Lowercase not allowed	Specifies whether the password can contain lower case letters. This setting is only applies when passwords are generated.
Uppercase not allowed	Specifies whether the password can contain upper case letters. This setting is only applies when passwords are generated.
Digits not allowed	Specifies whether the password can contain digits. This setting is only applies when passwords are generated.
Special characters not allowed	Specifies whether the password can contain special characters. This setting is only applies when passwords are generated.

Custom scripts for password requirements

You can implement custom scripts for testing and generating password if the password requirements cannot be mapped with the existing settings options. Scripts are applied in addition to the other settings.

Detailed information about this topic

- Script for checking passwords on page 59
- Script for generating a password on page 60

Script for checking passwords

You can implement a check script if additional policies need to be used for checking a password, which cannot be mapped with the available settings.

Syntax for Check Scripts

```
Public Sub CCC_CustomPwdValidate( policy As VI.DB.Passwords.PasswordPolicy, spwd As System.Security.SecureString)
```

With parameters:

policy = password policy object

spwd = password to test

TIP: To use a base object, take the property `Entity` of the `PasswordPolicy` class.

Example for a script for testing a password

A password cannot start with **?** or **!**. The script checks a given password for validity.

```
Public Sub CCC_PwdValidate( policy As VI.DB.Passwords.PasswordPolicy, spwd As System.Security.SecureString)
    Dim pwd = spwd.ToInsecureArray()
    If pwd.Length>0
        If pwd(0)="?" Or pwd(0)="!"
            Throw New Exception(#LD("Password can't start with '?' or '!'")#)
        End If
    End If
    If pwd.Length>2
        If pwd(0) = pwd(1) AndAlso pwd(1) = pwd(2)
            Throw New Exception(#LD("Invalid character sequence in password")#)
```

```
            End If
        End If
End Sub
```

To use a custom script for checking a password

1. Create your script in the category **Script Library** in the Designer.
2. Edit the password policy.
    a. Select **Unix | Basic configuration data | Password policies** in Manager.
    b. Select the password policy in the result list.
    c. Select **Change master data**.
    d. Enter the name of the script to be used to check a password in the **Check script** input field on the **Scripts** tab.
    e. Save the changes.

Related Topics

- Script for generating a password on page 60

Script for generating a password

You can implement a generating script if additional policies need to be used for generating a random password, which cannot be mapped with the available settings.

Syntax for generating script

```
Public Sub CCC_PwdGenerate( policy As VI.DB.Passwords.PasswordPolicy, spwd As
System.Security.SecureString)
```

With parameters:

policy = password policy object

spwd = generated password

TIP: To use a base object, take the property `Entity` of the `PasswordPolicy` class.

Example for a script to generate a password

In random passwords, the script replaces the **?** and **!** characters, which are not permitted.

```
Public Sub CCC_PwdGenerate( policy As VI.DB.Passwords.PasswordPolicy, spwd As
System.Security.SecureString)
    Dim pwd = spwd.ToInsecureArray()
    ' replace invalid characters at first position
    If pwd.Length>0
```

```
            If pwd(0)="?" Or pwd(0)="!"
                  spwd.SetAt(0, CChar("_"))
            End If
      End If
End Sub
```

To use a custom script for generating a password

1. Create your script in the category **Script Library** in the Designer.
2. Edit the password policy.
    a. Select **Unix | Basic configuration data | Password policies** in Manager.
    b. Select the password policy in the result list.
    c. Select **Change master data**.
    d. Enter the name of the script to be used to generate a password in the **Generating script** input field on the **Scripts** tab.
    e. Save the changes.

Related Topics

- Script for checking passwords on page 59

Password exclusion list

You can add words to a list of restricted terms to prohibit them from being used in passwords.

NOTE: The restricted list applies globally to all password policies.

To add a term to the restricted list

1. Select **Base Data | Security settings | Restricted passwords** in Designer.
2. Create a new entry with **Object | New** an enter the term to excluded to the list.
3. Save the changes.

Checking a password

When you test a password, all the password policy settings, custom scripts and the restricted passwords are taken into account.

To test whether a password conforms to the password policy

1. Select **Unix | Basic configuration data | Password policies** in Manager.
2. Select the password policy in the result list.
3. Select **Change master data**.
4. Select the **Test** tab.
5. Select the table and object to be tested in **Base object for test**.
6. Enter a password in **Enter password to test**.

   A display next to the password shows whether it is valid or not.

Testing password generation

When you generate a password, all the password policy settings, custom scripts and the restricted passwords are taken into account.

To generate a password that conforms to the password policy

1. Select **Unix | Basic configuration data | Password policies** in Manager.
2. Select the password policy in the result list.
3. Select **Change master data**.
4. Select the **Test** tab.
5. Click **Generate**.

   This generates and displays a password.

Initial password for new Unix user accounts

You have the following possible options for issuing an initial password for a new Unix user account.

- Create user accounts manually and enter a password in their master data.
- Assign a randomly generated initial password to enter when you create user accounts.
  - Enable the **TargetSystem | Unix | Accounts | InitialRandomPassword** configuration parameter in Designer.
  - Apply target system specific password policies and define the character sets that the password must contain.
  - Specify which employee will receive the initial password by email.

- User the employee's central password. The employee's central password is mapped to the user account password. For detailed information about an employee's central password, see *One Identity Manager Identity Management Base Module Administration Guide*.

Related Topics

- Password policies for Unix user accounts on page 52
- Email notifications about login data on page 63

Email notifications about login data

You can configure the login information for new user accounts to be sent by email to a specified person. In this case, two messages are sent with the user name and the initial password. Mail templates are used to generate the messages. The mail text is defined in several languages in a mail template. which means the recipient's language can be taken into account when the email is generated. Mail templates are supplied in the default installation with which you can configure the notification procedure.

The following prerequisites must be fulfilled in order to use notifications:

1. Ensure that the email notification system is configured in One Identity Manager. For detailed information, see the *One Identity Manager Installation Guide*.
2. In Designer, enable the **Common | MailNotification | DefaultSender** configuration parameter and enter the sender address for sending the email notifications.
3. Ensure that all employees have a default email address. Notifications are sent to this address. For more detailed information, see the *One Identity Manager Identity Management Base Module Administration Guide*.
4. Ensure that a language can be determined for all employees. Only then can they receive email notifications in their own language. For more detailed information, see the *One Identity Manager Identity Management Base Module Administration Guide*.

When a randomly generated password is issued for the new user account, the initial login data for a user account is sent by email to a previously specified person.

To send initial login data by email

1. In the Designer, activate the configuration parameter **TargetSystem | Unix | Accounts | InitialRandomPassword**.
2. In the Designer, activate the configuration parameter **TargetSystem | Unix | Accounts | InitialRandomPassword | SendTo** and enter the recipient of the notification as a value.
3. In the Designer, activate the configuration parameter **TargetSystem | Unix | Accounts | InitialRandomPassword | SendTo | MailTemplateAccountName**.

By default, the message sent uses the mail template **Employee - new user account created**. The message contains the name of the user account.

4. In the Designer, activate the configuration parameter **TargetSystem | Unix | Accounts | InitialRandomPassword | SendTo | MailTemplatePassword**.

   By default, the message sent uses the mail template **Employee - initial password for new user account**. The message contains the initial password for the user account.

TIP: Change the value of the configuration parameter in order to use custom mail templates for these mails.

Target system managers

A default application role exists for the target system manager in One Identity Manager. Assign the employees who are authorized to edit all Unix hosts in One Identity Manager to this application role.

Define additional application roles if you want to limit the edit permissions for target system managers to individual Unixhosts. The application roles must be added under the default application role.

For detailed information about implementing and editing application roles, see the *One Identity Manager Authorization and Authentication Guide*.

Implementing application roles for target system managers

1. The One Identity Manager administrator assigns employees to be target system managers.
2. These target system managers add employees to the default application role for target system managers.

   Target system managers with the default application role are authorized to edit all Unix hosts in One Identity Manager.
3. Target system managers can authorize other employees within their area of responsibility as target system managers and if necessary, create additional child application roles and assign these to individual Unix hosts.

Table 17: Default Application Roles for Target System Managers

Users	Tasks
target system managers	Target system managers must be assigned to **Target systems | Unix** or a sub-application role. Users with this application role: • Assume administrative tasks for the target system.

Users	Tasks
	• Create, change or delete target system objects, like user accounts or groups. • Edit password policies for the target system. • Prepare groups for adding to the IT Shop. • Can create employees with an identity that differs from the **Primary identity**. • Configure synchronization in the Synchronization Editor and defines the mapping for comparing target systems and One Identity Manager. • Edit the synchronization's target system types and outstanding objects. • Authorize other employees within their area of responsibility as target system managers and create child application roles if required.

To initially specify employees to be target system administrators

1. Log in to One Identity Manager as Manager administrator (**Base role | Administrators**)
2. Select **One Identity Manager Administration | Target systems | Administrators**.
3. Select **Assign employees**.
4. Assign the employee you want and save the changes.

To add the first employees to the default application as target system managers.

1. Log yourself into Manager as target system administrator (**Target systems | Administrators**).
2. Select **One Identity Manager Administration | Target systems | Unix**.
3. Select **Assign employees** in the task view.
4. Assign the employees you want and save the changes.

To authorize other employees as target system managers when you are a target system manager

1. Login to Manager as target system manager.
2. Select the application role in Unix **| Basic configuration data | Target system managers**.
3. Select **Assign employees**.
4. Assign the employees you want and save the changes.

To specify target system managers for individual hosts

1. Login to Manager as target system manager.
2. Select **Unix | Hosts**.
3. Select the host in the result list.
4. Select **Change master data**.
5. On the **General** tab, select the application role in the **Target system manager** menu.

   - OR -

   Next to the **Target system manager** menu, click to create a new application role.

   a. Enter the application role name and assign the **Target systems | Unix** parent application role.

   b. Click **OK** to add the new application role.
6. Save the changes.
7. Assign employees to this application role who are permitted to edit the host in One Identity Manager.

Related Topics

- One Identity Manager users for managing a Unix-based target system on page 8
- General master data for Unix hosts on page 72

Editing a server

Servers must know your server functionality in order to handle Unix specific processes in One Identity Manager. For example, the synchronization server.

You have several options for defining a server's functionality:

- Create an entry for the Job server in Designer under **Base Data | Installation | Job server**. For detailed information, see the *One Identity Manager Configuration Guide*.
- Select an entry for the Job server in the category Manager **| Basic configuration data | Server** in the Unix and edit the Job server master data.

  Use this task if the Job server has already been declared in One Identity Manager and you want to configure special functions for the Job server.

NOTE: One Identity Manager must be installed, configured, and started in order for a server to execute its function in the One Identity Manager Service network. Proceed as described in the *One Identity Manager Installation Guide*.

To edit a Job server and its functions

1. In Manager, select the category **Unix | Basic configuration data | Server**.
2. Select the Job server entry in the result list.
3. Select **Change master data**.
4. Edit the Job server's master data.
5. Select **Assign server functions** in the task view and specify server functionality.
6. Save the changes.

Detailed information about this topic

- Master data for a Job server on page 67
- Server functions of a Job server on page 69

Master data for a Job server

NOTE: All editing options are also available in Designer under **Base Data | Installation | Job server**.

NOTE: More properties may be available depending on which modules are installed.

Table 18: Job Server Properties

Property	Meaning
Server	Job server name.
Full server name	Full server name in accordance with DNS syntax. Example: `<Name of servers>.<Fully qualified domain name>`
Target system	Computer account target system.
Language	Language of the server.
Server is cluster	Specifies whether the server maps a cluster.
Server belongs to cluster	Cluster to which the server belongs. NOTE: The properties **Server is cluster** and **Server belongs to cluster** are mutually exclusive.
IP address	Internet protocol version 6 (IPv6) server address.

Property	Meaning
(IPv6)	
IP address (IPv4)	Internet protocol version 4 (IPv4) server address.
Copy process (source server)	Permitted copying methods that can be used when this server is the source of a copy action. At present, only copy methods that support the Robocopy and rsync programs are supported. If no method is given, the One Identity Manager Service determines the operating system of the server during runtime. Replication is then performed with the Robocopy program between servers with a Windows operating system or with the rsync program between servers with a Linux operating system. If the operating systems of the source and destination servers differ, it is important that the right copy method is applied for successful replication. A copy method is chosen that supports both servers.
Coding	Character set coding that is used to write files to the server.
Parent Job server	Name of the parent Job server.
Executing server	Name of the executing server. The name of the server that exists physically and where the processes are handled. This input is evaluated when One Identity Manager Service is automatically updated. If the server is handling several queues the process steps are not supplied until all the queues that are being processed on the same server have completed their automatic update.
Queue	Name of the queue to handle the process steps. Each One Identity Manager Service within the network must have a unique queue identifier. The process steps are requested by the job queue using exactly this queue name. The queue identifier is entered in the One Identity Manager Service configuration file.
Server operating system	Operating system of the server. This input is required to resolve the path name for replicating software profiles. The values **Win32**, **Windows**, **Linux** and **Unix** are permitted. If no value is specified, **Win32** is used.
Service account data	One Identity Manager Service user account information. In order to replicate between non-trusted systems (non-trusted domains, Linux server) the One Identity Manager Service user information has to be declared for the servers in the database. This means that the service account, the service account domain and the service account password have to be entered for the server.
One Identity	Specifies whether a One Identity Manager Service is installed on this server. This option is enabled by the procedure QBM_PJobQueueLoad the moment the queue is called for the first time.

Property	Meaning
Manager Service installed	The option is not automatically removed. If necessary, you can reset this option manually for servers whose queue is no longer enabled.
Stop One Identity Manager Service	Specifies whether the One Identity Manager Service has stopped. If this option is set for the Job server, the One Identity Manager Service does not process any more tasks. You can make the service start and stop with the appropriate administrative permissions in the program "Job Queue Info". For more detailed information, see the *One Identity Manager Process Monitoring and Troubleshooting Guide*.
No automatic software update	Specifies whether to exclude the server from automatic software updating. NOTE: Servers must be manually updated if this option is set.
Software update running	Specifies whether a software update is currently being executed.
Server function	Server functionality in One Identity Manager. One Identity Manager processes are handled depending on the server function.

Related Topics

- Server functions of a Job server on page 69

Server functions of a Job server

The server function defines the functionality of a server in One Identity Manager. One Identity Manager processes are handled depending on the server function.

NOTE: All editing options are also available in Designer under **Base Data | Installation | Job server**.

NOTE: More server functions may be available depending on which modules are installed.

Table 19: Permitted server functions

Server function	Remark
CSV connector	Server on which the CSV connector for synchronization is installed.
Domain	The Active Directory domain controller. Servers that are not labeled as

Server function	Remark
controller	domain controller are considered to be member servers.
Printer server	Server which acts as a print server.
Generic server	Server for generic synchronization with a custom target system.
Home server	Server for adding home directories for user accounts.
Update Server	This server executes automatic software updating of all other servers. The server requires a direct connection to the database server that One Identity Manager database is installed on. The server can execute SQL tasks. The server with the installed One Identity Manager database, is labeled with this functionality during initial installation of the schema.
SQL processing server	The server can execute SQL tasks. Several SQL processing servers can be set up to spread the load of SQL processes. The system distributes the generated SQL processes throughout all the Job servers with this server function.
CSV script server	The server can process CSV files using the `ScriptComponent` process component.
Native database connector	The server can connect to an ADO.Net database.
One Identity Manager database connector	Server on which the One Identity Manager connector is installed. This server executes synchronization with the target system One Identity Manager.
One Identity Manager Service installed	Server on which a One Identity Manager Service is installed.
Primary domain controller	Primary domain controller.
Profile server	Server for setting up profile directories for user accounts.
SAM synchronization Server	Server for running synchronization with an SMB-based target system.
SMTP host	Server from which One Identity Manager Service sends email notifications. Prerequisite for sending mails using One Identity Manager Service is SMTP host configuration.

Server function	Remark
Default report server	Server on which reports are generated.
Windows PowerShell connector	The server can run Windows PowerShell version 3.0 or later.
Unix connector	The server can connect to a Unix system using SSH.
AIX connector	The server can connect to an AIX system using SSH.

Related Topics

- Master data for a Job server on page 67

4

Unix Host

The Synchronization Editor sets up the hosts in the One Identity Manager database by using a default template.

NOTE: After initial synchronization of the hosts, you must enter the primary group, which will be used by default to set up the user accounts.

To edit the master data for a Unix host

1. Select **Unix | Hosts**.
2. Select the host in the result list.
3. Select **Change master data**.
4. Edit the host's master data.
5. Save the changes.

Related Topics

- General master data for Unix hosts on page 72

General master data for Unix hosts

Enter the following data on **General**:

Table 20: General master data for a host

Property	Description
Host name	Name of the host.
Primary group	User account's primary group. This group is used as primary group when creating a user account.
Device	The computer is connected to this device. Specify a new device using the button next to the menu.

Property	Description
AIX system	Specifies whether this host is an IBM AIX system. The following properties are offered additionally for user accounts on IBM AIX systems.
Account definition (initial)	Initial account definition for creating user accounts. This account definition is used if automatic assignment of employees to user accounts is used for this host and user accounts should be created that are already managed (**Linked configured**). The account definition's default manage level is applied. User accounts are only linked to the employee (**Linked**) if no account definition is given. This is the case on initial synchronization, for example.
Target system managers	Application role, in which target system managers are specified for the host. Target system managers only edit the objects from hosts that are assigned to them. Therefore, each host can have a different target system manager assigned to it. Select the One Identity Manager application role whose members are responsible for administration of this host. Use the button to add a new application role.
Synchronized by	Type of synchronization through which the data is synchronized between the host and One Identity Manager. As soon as objects for this host are available in One Identity Manager, the type of synchronization can no longer be changed. **One Identity Manager** is used when you create a host with the Synchronization Editor. **Table 21: Permitted values** **Value** / **Synchronization by** / **Provisioned by** One Identity Manager / Unix connector / Unix connector No synchronization / none / none NOTE: If you select **No synchronization**, you can define custom processes to exchange data between One Identity Manager and the target system.
Operating system description	Description of the operating system.
Distribution	Installed distribution of the operating system.
Distribution version	Version of the installed distribution.

Property	Description
Kernel version	Current version of the kernel.
Operating system type	Type of operating system, for example, Linux, AIX, UNIX.

Specifying categories for inheriting permissions

In One Identity Manager, groups can be selectively inherited by user accounts. For this purpose, the groups and the user accounts are divided into categories. The categories can be freely selected and are specified using a mapping rule. Each category is given a specific position within this mapping rule. The template contains two tables; the user account table and the group table. Use the user account table to specify categories for target system dependent user accounts. In the group table enter your categories for the target system-dependent groups. Each table contains the category positions **Position 1** to **Position 31**.

To define a category

1. In Manager, select the host in **Unix | Hosts**.
2. Select **Change master data**.
3. Switch to the **Mapping rule category** tab.
4. Extend the relevant roots of the user account table or group table.
5. Click to enable category.
6. Enter a category name of your choice for user accounts and groups and in the login language used.
7. Save the changes.

Detailed information about this topic

- Unix group inheritance based on categories on page 114

Editing a synchronization project

Synchronization projects in which a host is already used as a base object can also be opened via Manager. You can, for example, check the configuration or view the synchronization log in this mode. The Synchronization Editor is not started with its full functionality. You cannot run certain functions, such as, running synchronization or simulation, starting the target system browser and others.

NOTE: The Manager is locked for editing throughout. To edit objects in the Manager, close the Synchronization Editor.

To open an existing synchronization project in the Synchronization Editor

1. Select **Unix | Hosts**.
2. Select the host in the result list. Select **Change master data**.
3. Select **Edit synchronization project...** from the task view.

Related Topics

- Customizing the synchronization configuration on page 24

Overview of the Unix host

Use this task to obtain an overview of the most important information about a host.

To obtain an overview of a host

1. Select **Unix | Hosts**.
2. Select the host in the result list.
3. Select **Unix host overview**.

Displaying Unix login shells

This information about a host's login shells is loaded into One Identity Manager and cannot be edited. You can use login shells when setting up user accounts.

To display login shells

1. Select **Unix | Hosts | <host name> | Login shells**.
2. Select the login shell in the result list.
3. Select **Unix login shell overview**.

Related Topics

- Creating a mapping rule for IT operating data on page 39
- General master data for a Unix user account on page 85

5

Unix user accounts

You can use One Identity Manager to manage your local Unix-based target system user accounts. User accounts obtain the required access rights to the resources through membership in groups.

Detailed information about this topic

- Linking user accounts to employees on page 76
- Supported user account types on page 77
- Entering master data for Unix user accounts on page 83
- Automatic assignment of employees to Unix user accounts on page 95

Linking user accounts to employees

The central component of One Identity Manager is to map employees and their master data with permissions through which they have control over different target systems. For this purpose, information about user accounts and permissions can be read from the target system into the One Identity Manager database and linked to employees. This gives an overview of the permissions for each employees in all of the connected target systems. One Identity Manager provides the possibility to manage user accounts and their permissions. You can provision modifications in the target systems. Employees are supplied with the necessary permissions in the connected target systems according to their function in the company. Regular synchronization keeps data consistent between target systems and the One Identity Manager database.

Because requirements vary between companies, One Identity Manager offers different methods for supplying user accounts to employees. One Identity Manager supports the following method for linking employees and their user accounts.

- Employees can automatically obtain their account definitions using user account resources. If an employee does not yet have a user account in a host, a new user account is created. This is done by assigning account definitions to an employee

using the integrated inheritance mechanism and subsequent process handling.

When you manage account definitions through user accounts, you can specify the way user accounts behave when employees are enabled or deleted.

- When user accounts are inserted, they can be automatically assigned to an existing employee or a new employee can be created if necessary. In the process, the employee master data is created on the basis of existing user account master data. This mechanism can be implemented if a new user account is created manually or by synchronization. However, this procedure is not the default procedure for One Identity Manager. Define criteria for finding employees for automatic employee assignment.
- Employees and user accounts can be entered manually and assigned to each other.

Related Topics

- Entering master data for Unix user accounts on page 83
- Setting up account definitions on page 33
- Automatic assignment of employees to Unix user accounts on page 95
- For more detailed information about handling and administration of employees and user accounts, see the One Identity Manager Target System Base Module Administration Guide.

Supported user account types

Different types of user accounts, such as default user accounts, administrative user accounts, service accounts, or privileged user accounts can be mapped in One Identity Manager.

The following properties are used for mapping different user account types.

- Identity

  The **Identity** property (`IdentityType` column) is used to describe the type of user account.

  Table 22: Identities of user accounts

Identity	Description	Value of the IdentityType column
Primary identity	Employee's default user account.	Primary
Organizational	Secondary user account used for different roles in	Organizational

Identity	Description	Value of the IdentityType column
identity	the organization, for example for subcontracts with other functional areas.	
Personalized admin identity	User account with administrative permissions, used by one employee.	Admin
Sponsored identity	User account that is used for training purposes, for example.	Sponsored
Shared identity	User account with administrative permissions, used by several employees.	Shared
Service identity	Service account.	Service

NOTE: To enable working with identities for user accounts, the employees also need identities. You can only link user accounts to which an identity is assigned with employees who have this same identity.

The primary identity, the organizational identity, and the personal admin identity are used for different user accounts, which can be used by the same actual employee to execute their different tasks within the company.

To provide user accounts with a personal admin identity or an organizational identity for an employee, you create subidentities for the employee. These subidentities are then linked to user accounts, enabling you to assign the required Entitlements to the different user accounts.

User accounts with a sponsored identity, group identity, or service identity are linked to dummy employees that do not refer to a real person. These dummy employees are needed so that Entitlements can be inherited by the user accounts. When evaluating reports, attestations, or compliance checks, check whether dummy employees need to be considered separately.

For detailed information about mapping employee identities, see the *One Identity Manager Identity Management Base Module Administration Guide*.

- Privileged user account

  Privileged user accounts are used to provide employees with additional privileges. This includes administrative user accounts or service accounts, for example. The user accounts are marked as **Privileged user account** (Column `IsPrivilegedAccount`).

Detailed information about this topic

- Default user accounts on page 79
- Administrative user accounts on page 80
- Providing administrative user accounts for one employee on page 80

- Providing administrative user accounts for several employees on page 81
- Privileged user accounts on page 82

Default user accounts

Normally, each employee obtains a default user account, which has the permissions they require for their regular work. The user accounts are linked to the employee. The effect of the link and the scope of the employee's inherited properties on the user accounts can be configured through an account definition and its manage levels.

To create default user accounts through account definitions

1. Create an account definition and assign the **Unmanaged** and **Full managed** manage levels.
2. Specify the effect of temporarily or permanently disabling, deleting or the security risk of an employee on its user accounts and group memberships for each manage level.
3. Create a formatting rule for IT operating data.

   You use the mapping rule to define which rules are used to map the IT operating data for the user accounts, and which default values are used if no IT operating data can be determined via a person's primary roles.

   Which IT operating data is required depends on the target system. The following setting are recommended for default user accounts:

   - In the mapping rule for the `IsGroupAccount` column, use the default value **1** and enable **Always use default value**.
   - In the mapping rule for the `IdentityType` column, use the default value **Primary** and enable **Always use default value**.
4. Enter the effective IT operating data for the target system. Select the concrete target system under **Effects on**.

   Specify in the departments, cost centers, locations, or business roles which IT operating data should apply when you set up a user account.
5. Assign the account definition to employees.

   When the account definition is assigned to an employee, a new user account is created through the inheritance mechanism and subsequent processing.

Related Topics

- Setting up account definitions on page 33

Administrative user accounts

An administrative user account must be used for certain administrative tasks. Administrative user accounts are usually predefined by the target system and have fixed names and login names, such as **Administrator**.

Administrative user accounts are imported into One Identity Manager during synchronization.

NOTE: Some administrative user accounts can be automatically identified as privileged user accounts. To do this, enable the **Mark selected user accounts as privileged** schedule in Designer.

Related Topics

- Providing administrative user accounts for one employee on page 80
- Providing administrative user accounts for several employees on page 81

Providing administrative user accounts for one employee

Prerequisites

- The user account must be labeled as a personalized admin identity.
- The employee who will be using the user account must be labeled as a personalized admin identity.
- The employee who will be using the user account must be linked to a main identity.

To prepare an administrative user account for a person

1. Label the user account as a personalized admin identity.
    a. In Manager, select **Unix | User accounts**.
    b. Select the user account in the result list.
    c. Select **Change master data**.
    d. On the **General** tab, in the **Identity** selection list, select **Personalized administrator identity**.
2. Link the user account to the employee who will be using this administrative user account.
    a. In Manager, select **Unix | User accounts**.
    b. Select the user account in the result list.
    c. Select **Change master data**.

d. On the **General** tab, in the **Person** selection list, select the employee who will be using this administrative user account.

TIP: If you are the target system manager, you can choose to create a new person.

Related Topics

- Providing administrative user accounts for several employees on page 81
- For detailed information about mapping employee identities, see the *One Identity Manager Identity Management Base Module Administration Guide*.

Providing administrative user accounts for several employees

Prerequisite

- The user account must be labeled as a shared identity.
- A dummy employee must exist. The dummy employee must be labeled as a shared identity and must have a manager.
- The employees who are permitted to use the user account must be labeled as a primary identity.

To prepare an administrative user account for multiple employees

1. Label the user account as a shared identity.
    a. In Manager, select **Unix | User accounts**.
    b. Select the user account in the result list.
    c. Select **Change master data**.
    d. On the **General** tab, in the **Identity** selection list, select **Shared identity**.
2. Link the user account to a dummy employee.
    a. In Manager, select **Unix | User accounts**.
    b. Select the user account in the result list.
    c. Select **Change master data**.
    d. On the **General** tab, select the dummy employee from the **Employee** selection list.

    TIP: If you are the target system manager, you can choose to create a new dummy employee.
3. Assign the employees who will use this administrative user account to the user account.

a. In Manager, select **Unix | User accounts**.

b. Select the user account in the result list.

c. Select the task **Assign employees authorized to use**.

d. Assign employees in **Add assignments**.

TIP: In the **Remove assignments** area, you can remove the assignment of employees.

To remove an assignment

- Select the employee and double click .

Related Topics

- Providing administrative user accounts for one employee on page 80
- For detailed information about mapping employee identities, see the *One Identity Manager Identity Management Base Module Administration Guide*.

Privileged user accounts

Privileged user accounts are used to provide employees with additional privileges. This includes administrative user accounts or service accounts, for example. The user accounts are marked as **Privileged user account** (Column `IsPrivilegedAccount`).

NOTE: The criteria according to which user accounts are automatically identified as privileged are defined as extensions to the view definition (ViewAddOn) in the `TSBVAccountIsPrivDetectRule` table (which is a table of the **Union** type). The evaluation is done in the script `TSB_SetIsPrivilegedAccount`.

To create privileged users through account definitions

1. Create an account definition. Create a new manage level for privileged user accounts and assign this manage level to the account definition.
2. If you want to prevent the properties for privileged user accounts from being overwritten, set the **IT operating data overwrites** property for the manage level to **Only initially**. In this case, the properties are populated just once when the user accounts is created.
3. Specify the effect of temporarily or permanently disabling or deleting, or the security risk of an employee on its user accounts and group memberships for each manage level.
4. Create a formatting rule for IT operating data.

   You use the mapping rule to define, for example, which rules are used to map the IT operating data for the user accounts, and which default values are used if no IT operating data can be determined via a person's primary roles.

Which IT operating data is required depends on the target system. The following settings are recommended for privileged user accounts:

- In the mapping rule for the `IsPrivilegedAccount` column, use the default value **1** and enable **Always use default value**.
- You can also specify a mapping rule for the `IdentityType` column. The column owns different permitted values that represent user accounts.
- To prevent privileged user accounts from inheriting the Entitlements of the default user, define a mapping rule for the `IsGroupAccount` column with a default value of **0** and enable **Always use default value**.

5. Enter the effective IT operating data for the target system.

   Specify in the departments, cost centers, locations, or business roles which IT operating data should apply when you set up a user account.

6. Assign the account definition directly to employees who work with privileged user accounts.

   When the account definition is assigned to an employee, a new user account is created through the inheritance mechanism and subsequent processing.

TIP: If customization requires that the login names of privileged user accounts follow a defined naming convention, create the template according to which the login names are formed.

- To use a prefix for the login name, enable the **TargetSystem | Unix | Accounts | PrivilegedAccount | AccountName_Prefix** configuration parameter in Designer.
- To use a postfix for the login name, enable the **TargetSystem | Unix | Accounts | PrivilegedAccount | AccountName_Postfix** configuration parameter in Designer.

These configuration parameters are evaluated in the default installation, if a user account is marked with the property **Privileged user account** (`IsPrivilegedAccount` column). The user account login names are renamed according to the formatting rules. This also occurs if the user accounts are labeled as privileged using the **Mark selected user accounts as privileged** schedule.

Related Topics

- Setting up account definitions on page 33

Entering master data for Unix user accounts

A user account can be linked to an employee in One Identity Manager. You can also manage user accounts separately from employees.

NOTE: It is recommended to use account definitions to set up user accounts for company employees. In this case, some of the master data described in the following is mapped through templates from employee master data.

NOTE: If employees are to obtain their user accounts through account definitions, the employees must own a central user account and obtain their IT operating data through assignment to a primary department, a primary location or a primary cost center.

To create a user account

1. In Manager, select **Unix | User accounts**.
2. Click in the result list toolbar.
3. On the master data form, edit the master data for the user account.
4. Save the changes.

To edit master data for a user account

1. In Manager, select **Unix | User accounts**.
2. Select the user account in the result list and run **Change master data**.
3. Edit the user account's resource data.
4. Save the changes.

To manually assign or create a user account for an employee

1. Select the **Employees | Employees**.
2. Select the employee in the result list and run **Assign Unix user accounts** from the task view.
3. Assign a user account.
4. Save the changes.

Detailed information about this topic

- General master data for a Unix user account on page 85
- User account master data for AIX systems on page 87

Related Topics

- Setting up account definitions on page 33
- Supported user account types on page 77
- Linking user accounts to employees on page 76

General master data for a Unix user account

Enter the following data on **General**:

Table 23: Additional Master Data for a User Account

Property	Description
Host	The user account's host.
Employee	Employee that uses this user account. An employee is already entered if the user account was generated by an account definition. If you create the user account manually, you can select an employee in the menu. If you are using automatic employee assignment, an associated employee is found and added to the user account when you save the user account. For a user account with an identity of type **Organizational identity**, **Personalized administrator identity**, **Sponsored identity**, **Shared identity** or **Service identity**, you can create a new employee. To do this, click next to the input field and enter the required employee master data. Which login data is required depends on the selected identity type.
Account definition	Account definition through which the user account was created. Use the account definition to automatically fill user account master data and to specify a manage level for the user account. The One Identity Manager finds the IT operating data of the assigned employee and enters it in the corresponding fields in the user account. NOTE: The account definition cannot be changed once the user account has been saved.
Manage level	Manage level of the user account. Select a manage level from the menu. You can only specify the manage level can if you have also entered an account definition. All manage levels of the selected account definition are available in the menu.
Login shell	Shell that is executed if a user logs in to Unix using a terminal-based login.
User name	Name of the user account for logging in to a Unix host. If an account definition is assigned, this field is automatically filled with the employee's central user account depending on the manage level.
User ID	User ID for the user account in the Unix host.
Password	Password for the user account. Based on the **QER | Person | UseCentralPassword** configuration parameter, the central password of the assigned employee is mapped to the password of the user account. If you use an initial password for the user accounts, it is automatically entered when a user account is created.

Property	Description
	NOTE: One Identity Manager password policies are taken into account when a user password is being verified. Ensure that the password policy does not violate the target system's requirements.
Password confirmation	Reconfirm password.
Primary group ID	Identifier of the user account's primary group.
Primary group	Name of the user account's primary group. This defines the group ownership of files created by the user. A user account's primary group is determined as follows: • If you entered a primary group in the host, the group is used as primary group when a user account is created. • If you did not enter a primary group, a new group is created with the display name of the new user account assigned as the primary group.
Home directory	The user's full home directory path, for example, `/home/user001`.
Risk index (calculated)	Maximum risk index value of all assigned groups. The property is only visible if the **QER | CalculateRiskIndex** configuration parameter is enabled. For more detailed information, see the *One Identity Manager Risk Assessment Administration Guide*.
Category	Categories for the inheritance of groups by the user account. Groups can be selectively inherited by user accounts. To do this, groups and user accounts or contacts are divided into categories. Select one or more categories from the menu.
Comment (GECOS)	Spare text box for additional explanation. Additional information about the user account, which is found in the GECOS in `/etc/password`. If an account definition is assigned, this field is automatically filled with the employee's internal name depending on the manage level.
Identity	User account's identity type Permitted values are: • **Primary identity**: Employee's default user account. • **Organizational identity**: Secondary user account used for different roles in the organization, for example for subcontracts with other functional areas. • **Personalized administrator identity**: User account with administrative entitlements, used by one employee. • **Sponsored identity**: User account that is used for training

Property	Description
	purposes, for example. • **Shared identity**: User account with administrative entitlements, used by several employees. Assign all employees show use the user account. • **Service identity**: Service account.
Groups can be inherited	Specifies whether the user account can inherit groups via the employee. If this option is set, the user account inherits groups via hierarchical roles or IT Shop requests. • If you add an employee with a user account to a department, for example, and you have assigned groups to this department, the user account inherits these groups. • If an employee has requested group membership in the IT Shop and the request is granted approval, the employee's user account only inherits the group if the option is set.
Privileged user account	Specifies whether this is a privileged user account.

Related Topics

- Setting up account definitions on page 33
- Password policies for Unix user accounts on page 52
- Initial password for new Unix user accounts on page 62
- Unix group inheritance based on categories on page 114
- Supported user account types on page 77
- General master data for Unix hosts on page 72
- Disabling user accounts for AIX systems on page 100

User account master data for AIX systems

You can enter additional master data for user accounts in an IBM AIX system, like limits, password data, security data or information about encrypting the file system. This data is shown if the host is labeled with **AIX system**.

Detailed information about this topic

- User account limits on page 88
- Password data for user accounts on page 89

- Security-relevant user account master data on page 90
- Master data for a user account on an encrypted file system on page 92
- General master data for Unix hosts

User account limits

On **Limits**, enter the following limits for resources of the user's processes in an AIX system. This data is mapped in `/etc/security/limits`.

Table 24: Limits for user accounts in an AIX system

Property	Description
Core size (soft)	Soft limit for the size of the core dump file that can be created by a user process. (Parameter `core`).
Core size (hart)	Absolute maximum limit for the size of the core dump file that can be created by a user process. (Parameter `core_hard`).
CPU time (soft)	Soft limit for the time (in seconds) a user process may take. (Parameter `cpu`).
CPU time (hard)	Maximum amount of time (in seconds) the user process may take. (Parameter `cpu_hard`).
Data size (soft)	Soft limit for the size of the process' data segment for a user process. (Parameter `data`).
Data size (hard)	Maximum size of a process' data segment for a user process. (Parameter `data_hard`).
File size (soft)	Soft limit for the size of a file a user process can create or extend. (Parameter `fsize`).
File size (hard)	Absolute maximum size of a file a user process can create or extend. (Parameter `fsize_hard`).
Memory size (soft)	Soft limit for the maximum amount of physical memory a user process can take up. (Parameter `rss`).
Memory size (hard)	Maximum amount of physical memory a user process can take up. (Parameter `rss_hard`).
Stack size (soft)	Soft limit for the size of the process' stack segment for a user process. (Parameter `stack`).
Stack size (hard)	Maximum size of a process' stack segment for a user process. (Parameter `stack_hard`).
File descriptors (soft)	Soft limit for the number of file descriptors a user process can have open at the same time. (Parameter `nofiles`).

Property	Description
File descriptors (hard)	Absolute maximum number of file descriptors a user process can have open at the same time. (Parameter `nofiles_hard`).
Threads (soft)	Soft limit for the number of threads per process. (Parameter `threads`).
Threads (hard)	Absolute maximum number of threads per process. (Parameter `threads_hard`).
Processes (soft)	Soft limit for the number of processes per user. (Parameter `nproc`).
Processes (hard)	Absolute maximum for the number of processes per user. (Parameter `nproc_hard`).

Password data for user accounts

On **Password**, enter the following additional information about a user account in the AIX system. This data is mapped in `/etc/security/user`.

Table 25: Password data for user accounts in an AIX system

Property	Description
minlen	Minimum number of characters a password must have. (Parameter `minlen`).
maxrepeats	Maximum number of characters that can be repeated in passwords. The default value 8 specifies that a maximum has not been fixed. (Parameter `maxrepeats`).
mindiff	Minimum number of unique characters that passwords must contain. (Parameter `mindiff`).
minalpha	Specifies the minimum number of alphabetical characters a new password must contain. (Parameter `minalpha`).
minloweralpha	Specifies the minimum number of lowercase letters a new password must contain. (Parameter `minloweralpha`).
minupperalpha	Specifies the minimum number of uppercase letters a new password must contain. (Parameter `minupperalpha`).
mindigit	Specifies the minimum number of digits a new password must contain. (Parameter `mindigit`).
minspecialchar	Specifies the minimum number of special characters a new password must contain. (Parameter `minspecialchar`).

Property	Description
minother	Specifies the minimum number of non-alphabetical characters a new password must contain. (Parameter `minother`).
dictionlist	Dictionary file of black listed passwords. Verifies passwords do not include standard Unix words. (Parameter `dictionlist`).
histexpire	Number of weeks before a password can be reused. (Parameter `histexpire`).
histsize	Number of password iterations allowed before an old password can be used again. (Parameter `histsize`).
minage	Minimum number of weeks before a password can be changed. (Parameter `minage`).
maxage	Maximum number of weeks before a password must be changed. (Parameter `maxage`).
maxexpired	Maximum number of weeks beyond maxage that an expired password can be changed by the user. (Parameter `maxexpired`).
pwdchecks	Methods to apply to new passwords that check the password quality. The value contains a comma delimited list of method names. (Parameter `pwdchecks`).
pwdwarntime	Number of days before the system issues a warning that a password change is required. (Parameter `pwdwarntime`).

Security-relevant user account master data

On **Security**, enter the following additional information about a user account in the AIX system. This data is mapped in `/etc/security/user`.

Table 26: Additional security relevant data for user accounts in an AIX system

Property	Description
account_ locked	Specifies whether the user account is locked. (Parameter `account_locked`).
admin	Defines the administrative status of the user. (Parameter `admin`).
admgroups	Lists the groups the user administrates. (Parameter `admgroups`).
auditclasses	The user account's audit classes. (Parameter `auditclasses`).
auth1	Additional mandatory methods for authenticating the user. (Parameter `auth1`).
auth2	Additional optional methods for authenticating the user. (Parameter `auth2`).

Property	Description
core_ compress	Enables or disables core file compression. (Parameter core_compress).
core_path	Enables or disables core file path specification. (Parameter core_path). If this attribute has a value of On, core files will be placed in the given directory. otherwise, core files are placed in the user's current working directory.
core_ naming	Naming conventions for the core file. If this option is set, the core file is stamped with a process ID, time, and date. (Parameter core_naming).
daemon	Specifies whether the user can execute programs using the cron daemon or the src (system resource controller) daemon. (Parameter daemon).
dce_export	Specifies whether the DCE registry can overwrite the local user information with the DCE user information during a DCE export operation. (Parameter dce_export).
expires	Expiration date of the user account. (Parameter expires).
login	Specifies whether the user can log in to the system with the login command. (Parameter login).
logintimes	Times, days, or both, the user is allowed to access the system. (Parameter logintimes).
loginretries	Number of unsuccessful login attempts allowed after the last successful login before the system locks the account. (Parameter loginretries). A value of 0 or a negative value, indicates no maximum age.
projects	List of projects that the user's processes can be assigned to. The value is a list of comma-delimited project names. (Parameter projects).
registry	Defines the authentication registry where the user is administered. (Parameter registry).
rlogin	Permits access to the account from a remote location with the telnet or rlogin commands. (Parameter rlogin).
su	Specifies whether another user can switch to the specified user account with the su command. (Parameter su).
sugroups	Groups that can use the su command to switch to the specified user. (Parameter sugroups).
SYSTEM	System's authentication mechanism for the user. (Parameter SYSTEM).
tpath	The user's trusted path status. (Parameter tpath).
ttys	Lists the terminals that can access the user. (Parameter ttys).
umask	Determines file permissions. (Parameter umask). The default value is 022.

Related Topics

- Disabling user accounts for AIX systems on page 100

Master data for a user account on an encrypted file system

On **Encrypted File System**, enter the following additional information for using encrypted file system (EFS) for a user account in an AIX system. This data is mapped in `/etc/security/user`.

Table 27: User account master data for encrypted file systems

Property	Description
efs_adminks_access	Defines the `efs_admin` keystore location (Parameter `efs_adminks_access`). Permitted values: • file • ldap
efs_ allowksmodechangebyuser	Specifies whether the user can change the mode or not. (Parameter `efs_allowksmodechangebyuser`).
efs_file_algo	Algorithm used to generate the file protection key. (Parameter `efs_file_algo`). Permitted values: • AES_128_CBC • AES_192_CBC • AES_256_CBC
efs_initialks_mode	Initial mode of the user keystore. (Parameter `efs_initialks_mode`). Permitted values: • guard • admin
efs_keystore_access	User keystore location. (Parameter `efs_keystore_access`). Permitted values: • none • file
efs_keystore_algo	Algorithm used to generate the user private key when the keystore is created. (Parameter `efs_keystore_algo`). Permitted values: • RSA_1024 • RSA_2048 • RSA_4096

Additional tasks for managing Unix user accounts

After you have entered the master data, you can apply different tasks to it. The task view contains different forms with which you can run the following tasks.

Overview of Unix user accounts

Use this task to obtain an overview of the most important information about a user account.

To obtain an overview of a user account

1. Select the category **Unix | User accounts**.
2. Select the user account in the result list.
3. Select **Unix user account overview**.

Changing the manage level of a Unix user account

The default manage level is applied if you create user accounts using automatic employee assignment. You can change a user account manage level later.

To change the manage level for a user account

1. In Manager, select **Unix | User accounts**.
2. Select the user account in the result list.
3. Select **Change master data**.
4. On the **General** tab, select the manage level in the **Manage level** menu.
5. Save the changes.

Related Topics

- Entering master data for Unix user accounts on page 83

Assigning Unix groups directly to a Unix user account

Groups can be assigned directly or indirectly to a user account. Indirect assignment is carried out by allocating the employee and groups in hierarchical roles, such as departments, cost centers, locations, or business roles. If the employee has a user account in Unix, the groups in the role are inherited by this user account.

To react quickly to special requests, you can assign groups directly to the user account.

To assign groups directly to user accounts

1. In Manager, select **Unix | User accounts**.
2. Select the user account in the result list.
3. Select **Assign groups**.
4. Assign groups in **Add assignments**.

   TIP: you can remove the assignment of groups in the **Remove assignments** area.

   To remove an assignment

   - Select the group and double click .
5. Save the changes.

Related Topics

- Assigning Unix groups to Unix user accounts on page 104

Assigning extended properties to a Unix user account

Extended properties are meta objects that cannot be mapped directly in One Identity Manager, for example, operating codes, cost codes or cost accounting areas.

To specify extended properties for a user account

1. In Manager, select **Unix | User accounts**.
2. Select the user account in the result list.
3. Select **Assign extended properties**.

4. Assign extended properties in **Add assignments**.

   TIP: In the **Remove assignments** area, you can remove the assignment of extended properties.

   To remove an assignment

   - Select the extended property and double click .

5. Save the changes.

For detailed information about using extended properties, see the *One Identity Manager Identity Management Base Module Administration Guide*.

Automatic assignment of employees to Unix user accounts

Table 28: Configuration parameters for automatic employee assignment

Configuration parameter	Meaning
TargetSystem\Unix\PersonAutoFullsync	This configuration parameter specifies the mode for automatic employee assignment for user accounts added to or updated in the database through synchronization.
TargetSystem\Unix\PersonAutoDefault	This configuration parameter specifies the mode for automatic employee assignment for user accounts added to the database outside synchronization.
TargetSystem\Unix\PersonExcludeList	List of all user accounts for which automatic employee assignment should not take place. Names are listed in a pipe (|) delimited list that is handled as a regular search pattern. Example: ROOT
TargetSystem\Unix\ PersonAutoDisabledAccounts	This configuration parameters specifies whether employees are automatically assigned to disable user accounts. User accounts do not obtain an account definition.

When you add a user account, an existing employee can be assigned automatically or added if necessary. In the process, the employee master data is created based for existing user master data. This mechanism can follow after a new user account has been created manually or through synchronization. Define criteria for finding employees to apply to automatic employee assignment. If a user account is linked to an employee through the current mode, the user account is given, through an internal process, the default manage

level of the account definition entered in the user account's target system. You can customize user account properties depending on how the behavior of the manage level is defined.

If you run this procedure during working hours, automatic assignment of employees to user accounts takes place from that moment onwards. If you disable the procedure again later, the changes only affect user accounts added or updated after this point in time. Existing employee assignment to user accounts remain intact.

NOTE: It is not recommended to assign employees using automatic employee assignment in the case of administrative user accounts. Use **Change master data** to assign employees to administrative user account for the respective user account.

Run the following tasks to assign employees automatically.

- If employees can be assigned by user accounts during synchronization, set "TargetSystem\Unix\PersonAutoFullsync" in the Designer and select the required mode.
- If employees can be assigned by user accounts outside synchronization, set "TargetSystem\Unix\PersonAutoDefault" in the Designer and select the required mode.
- Specify the user accounts in "TargetSystem\Unix\PersonExcludeList", which must not be assigned automatically to employees.

  Example:

  ROOT
- Use "TargetSystem\Unix\PersonAutoDisabledAccounts" to specify whether employees can be automatically assigned to disabled user accounts. User accounts do not obtain an account definition.
- Assign an account definition to the host. Ensure that the manage level to be used is entered as the default manage level.
- Define the search criteria for employees assigned to the host.

NOTE:

The following applies for synchronization:

- Automatic employee assignment takes effect if user accounts are added or updated.

The following applies outside synchronization:

- Automatic employee assignment takes effect if user accounts are added.

NOTE:

Following a synchronization, employees are automatically created for the user accounts in the default installation. If an account definition for the host is not yet known at the time of synchronization, user accounts are linked with employees. However, account definitions are not assigned. The user accounts are therefore in a **Linked** state.

To manage the user accounts using account definitions, assign an account definition and a manage level to these user accounts.

To select user accounts through account definitions

1. Create an account definition.
2. Assign an account definition to the host.
3. Assign the account definition and manage level to user accounts in **linked** status.
    a. In Manager, select **Unix | User accounts | Linked but not configured | <Host>**.
    b. Select **Assign account definition to linked accounts**.

For more detailed information about assigning employees automatically, see the One Identity Manager Target System Base Module Administration Guide.

Related Topics

- Creating an account definition on page 34
- Assigning account definitions to a target system on page 49
- Editing search criteria for automatic employee assignment on page 97

Editing search criteria for automatic employee assignment

The criteria for employee assignment are defined for the host. In this case, you specify which user account properties must match the employee's properties such that the employee can be assigned to the user account. You can limit search criteria further by using format definitions. The search criterion is written in XML notation to the **Search criteria for automatic employee assignment** column (`AccountToPersonMatchingRule`) in the `UNXHost` table.

Search criteria are evaluated when employees are automatically assigned to user accounts. Furthermore, you can create a suggestion list for assignments of employees to user accounts based on the search criteria and make the assignment directly.

NOTE: When the employees are assigned to user accounts on the basis of search criteria, user accounts are given the default manage level of the account definition entered in the user account's target system. You can customize user account properties depending on how the behavior of the manage level is defined.

It is not recommended to make assignment to administrative user accounts based on search criteria. Use **Change master data** to assign employees to administrative user account for the respective user account.

NOTE: One Identity Manager supplies a default mapping for employee assignment. Only carry out the following steps when you want to customize the default mapping.

To specify criteria for employee assignment

1. Select **Unix | Host**.
2. Select the host in the result list.
3. Select **Define search criteria for employee assignment** in the task view.
4. Specify which user account properties must match with which employee so that the employee is linked to the user account.

Table 29: Standard search criteria for user accounts and contacts

Apply to	Column for employee	Column for user account
Unix User accounts	Central user account (`CentralAccount`)	User name (`AccountName`)

5. Save the changes.

Direct assignment of employees to user accounts based on a suggestion list

In **Assignments**, you can create a suggestion list for assignments of employees to user accounts based on the search criteria and make the assignment directly. User accounts are grouped in different views for this.

Table 30: Manual Assignment View

View	Description
Suggested assignments	This view lists all user accounts to which One Identity Manager can assign an employee. All employees are shown who were found using the search criteria and can be assigned.
Assigned user accounts	This view lists all user accounts to which an employee is assigned.

View	Description
Without employee assignment	This view lists all user accounts to which no employee is assigned and for which no employee was found using the search criteria.

TIP: By double-clicking on an entry in the view, you can view the user account and employee master data.

To apply search criteria to user accounts

- Click **Reload**.

  All possible assignments based on the search criteria are found in the target system for all user accounts. The three views are updated.

To assign employees directly over a suggestion list

1. Click **Suggested assignments**.
   a. Click **Select** for all user accounts to which you want to assign the suggested employees. Multi-select is possible.
   b. Click **Assign selected.**
   c. Confirm the security prompt with **Yes**.

      The employees determined using the search criteria are assigned to the selected user accounts.

   – OR –
2. Click **No employee assignment**.
   a. Click **Select employee** for the user account to which you want to assign an employee. Select an employee from the menu.
   b. Click **Select** for all user accounts to which you want to assign the selected employees. Multi-select is possible.
   c. Click **Assign selected**.
   d. Confirm the security prompt with **Yes**.

      The employees displayed in the **Employee** column are assigned to the selected user accounts.

To remove assignments

1. Click **Assigned user accounts**.
   a. Click **Select** for all user accounts for which you want to delete the employee assignment. Multi-select is possible.
   b. Click **Remove selected**.
   c. Confirm the security prompt with **Yes**.

      The assigned employees are removed from the selected user accounts.

For more detailed information about defining search criteria, see the One Identity Manager Target System Base Module Administration Guide.

Related Topics

- Automatic assignment of employees to Unix user accounts on page 95

Disabling user accounts for AIX systems

NOTE: The behavior described in the following, only apples to user account in an AIX system.

The way you disable user accounts depends on how they are managed.

Scenario:

- The user account is linked to employees and is managed through account definitions.

User accounts managed through account definitions are disabled when the employee is temporarily or permanently disabled. The behavior depends on the user account manage level. Accounts with the manage level **Full managed** manage level are disabled depending on the account definition settings. For user accounts with a manage level, configure the required behavior using the template in the `UNXAccount.AIX_account_LockedPAGUser.IsDisabled` column.

Scenario:

- The user accounts are linked to employees. No account definition is applied.

User accounts managed through user account definitions are disabled when the employee is temporarily or permanently disabled. The behavior depends on the **QER | Person | TemporaryDeactivation** configuration parameter

- If the configuration parameter is set, the employee's user accounts are disabled if the employee is permanently or temporarily disabled.
- If the configuration parameter is not set, the employee's properties do not have any effect on the associated user accounts.

To disable the user account when the configuration parameter is disabled.

1. In Manager, select **Unix | User accounts**.
2. Select the user account in the result list.
3. Select **Change master data**.

4. Set **account_locked** on **Security**.
5. Save the changes.

Scenario:

- User accounts not linked to employees.

To disable a user account that is no longer linked to an employee.

1. In Manager, select **Unix | User accounts**.
2. Select the user account in the result list.
3. Select **Change master data**.
4. Set **account_locked** on **Security**.
5. Save the changes.

Related Topics

- Setting up account definitions on page 33
- Setting up manage levels on page 36
- Deleting and restoring Unix user accounts on page 101
- For more detailed information about deactivating and deleting employees and user accounts, see the One Identity Manager Target System Base Module Administration Guide.

Deleting and restoring Unix user accounts

NOTE: As long as an account definition for an employee is valid, the employee retains the user account that was created by it. If the assignment of an account definition is removed, the user account that was created from this account definition is deleted.

To delete a user account

1. Select the category **Unix | User accounts**.
2. Select the user account in the result list.
3. Delete the user account.
4. Confirm the security prompt with **Yes**.

To restore a user account

1. Select the category **Unix | User accounts**.
2. Select the user account in the result list.

3. Click **Undo delete** in the result list toolbar.

Configuring deferred deletion

By default, user accounts are finally deleted from the database after 30 days.The user accounts are initially disabled. You can reenable the user accounts until deferred deletion is run. After deferred deletion is run, the user account are deleted from the database and cannot be restored anymore. You can configure an alternative delay on the table UNXAccount in the Designer.

Related Topics

- Disabling user accounts for AIX systems on page 100
- For more detailed information about deactivating and deleting employees and user accounts, see the One Identity Manager Target System Base Module Administration Guide.

6

Unix groups

In the Unix host, user accounts can be gathered into groups that can be used to regulate access to resources. Local groups are loaded into One Identity Manager by synchronization. You can set up new groups or to edit already existing groups.

To add users to groups, you assign the groups directly to users. This can be assignments of groups to departments, cost centers, location, business roles, or to the IT Shop.

Detailed information about this topic

- Entering master data for Unix groups on page 103
- Assigning Unix groups to Unix user accounts on page 104

Entering master data for Unix groups

To edit group master data

1. In Manager, select **Unix | Groups**.
2. Select the group in the result list and run **Change master data**.
3. On the master data form, edit the master data for the group.
4. Save the changes.

Detailed information about this topic

- General master data for a Unix group on page 103

General master data for a Unix group

Enter the following data on **General**:

Table 31: General Master Data

Property	Description
Group name	Name of the group.
Group ID	Group's identifier.
Host	Group's host.
IT Shop	Specifies whether the group can be requested through the IT Shop. If this option is set, the group can be requested by the employees through the Web Portal and distributed with a defined approval process. The group can still be assigned directly to hierarchical roles.
Only for use in IT Shop	Specifies whether the group can only be requested through the IT Shop. If this option is set, the group can be requested by the employees through the Web Portal and distributed with a defined approval process. Direct assignment of the group to hierarchical roles or user accounts is no permitted.
Service item	Service item data for requesting the group through the IT Shop.
Risk index	Value for evaluating the risk of assigning the group to user accounts. Enter a value between 0 and 1. This input field is only visible if the configuration parameter **QER | CalculateRiskIndex** is activated. For more detailed information about risk assessment, see the One Identity Manager Risk Assessment Administration Guide.
Category	Categories for group inheritance. Groups can be selectively inherited by user accounts. To do this, groups and user accounts are divided into categories. Select one or more categories from the menu.

Related Topics

- Unix group inheritance based on categories on page 114
- For more detailed information about preparing groups for requesting through the IT Shop, see the One Identity Manager IT Shop Administration Guide.

Assigning Unix groups to Unix user accounts

Groups can be assigned directly or indirectly to user accounts. In the case of indirect assignment, employees and groups are assigned to hierarchical roles, such as , departments, cost centers, locations or business roles. The groups assigned to an employee are calculated from the position in the hierarchy and the direction of inheritance.

If you add an employee to roles and that employee owns a user account, the user account is added to the groups. Prerequisites for the indirect assignment of employees to user accounts:

- Assignment of employees and groups is permitted for role classes (department, cost center, location or business role).
- The user accounts are marked with the option **Groups can be inherited**.

Furthermore, groups can be assigned to employees through IT Shop requests. Add employees to a shop as customers so that groups can be assigned through IT Shop requests. All groups are assigned to this shop can be requested by the customers. Requested groups are assigned to the employees after approval is granted.

Detailed information about this topic

- Assigning Unix groups to departments, cost centers, and locations on page 105
- Assigning Unix groups to business roles on page 106
- Assigning Unix user accounts directly to a Unix group on page 107
- Adding Unix groups to system roles on page 108
- Adding Unix groups to the IT Shop on page 109

Assigning Unix groups to departments, cost centers, and locations

Assign groups to departments, cost centers, or locations so that the group can be assigned to user accounts through these organizations.

To assign a group to departments, cost centers or locations (non role-based login)

1. In Manager, select **Unix | Groups**.
2. Select the group in the result list.
3. Select **Assign organizations**.
4. Assign organizations in **Add assignments**.
   - Assign departments on the **Departments** tab.
   - Assign locations on the **Locations** tab.
   - Assign cost centers on the **Cost centers** tab.

TIP: In the **Remove assignments** area, you can remove the assignment of organizations.

To remove an assignment

- Select the organization and double click .

5. Save the changes.

To assign groups to a department, cost center or location (role-based login)

1. Select **Organizations | Departments** in Manager.

   - OR -

   Select **Organizations | Cost centers** in Manager.

   - OR -

   In Manager, select **Organizations | Locations**.
2. Select the department, cost center or location in the result list.
3. Select the **Assign Unix groups** task.
4. Assign groups in **Add assignments**.

   TIP: you can remove the assignment of groups in the **Remove assignments** area.

   To remove an assignment

   - Select the group and double click .
5. Save the changes.

Related Topics

- Assigning Unix groups to business roles on page 106
- Assigning Unix user accounts directly to a Unix group on page 107
- Adding Unix groups to system roles on page 108
- Adding Unix groups to the IT Shop on page 109

Assigning Unix groups to business roles

Installed modules: Business Roles Module

Assign the group to business roles so that the group is assigned to user accounts through these business roles.

To assign a group to a business role (non role-based login)

1. In Manager, select **Unix | Groups**.
2. Select the group in the result list.
3. Select **Assign business roles**.

4. Assign business roles in **Add assignments**.

   TIP: In the **Remove assignments** area, you can remove the assignment of business roles.

   To remove an assignment

   - Select the business role and double click ✓.

5. Save the changes.

To assign groups to a business role (non role-based login)

1. In Manager, select **Business roles | <role class>**.
2. Select the business role in the result list.
3. Select **AssignUnix groups**.
4. Assign groups in **Add assignments**.

   TIP: you can remove the assignment of groups in the **Remove assignments** area.

   To remove an assignment

   - Select the group and double click ✓.

5. Save the changes.

Related Topics

- Assigning Unix groups to departments, cost centers, and locations on page 105
- Assigning Unix user accounts directly to a Unix group on page 107
- Adding Unix groups to system roles on page 108
- Adding Unix groups to the IT Shop on page 109

Assigning Unix user accounts directly to a Unix group

Groups can be assigned directly or indirectly to user accounts. Indirect assignment is done by allocating the employee and groups into company structures such as departments, cost centers, locations or business roles. If the employee has a user account in a Unix-based target system, the groups in the role are inherited by this user account.

To react quickly to special requests, you can assign groups directly to user accounts.

To assign a group directly to user accounts

1. In Manager, select **Unix | Groups**.
2. Select the group in the result list.

3. Select **Assign user accounts**.
4. Assign user accounts in **Add assignments**.

   TIP: In the **Remove assignments** area, you can remove the assignment of user accounts.

   To remove an assignment

   - Select the user account and double click ✓.

5. Save the changes.

Related Topics

- Assigning Unix groups directly to a Unix user account on page 94
- Assigning Unix groups to departments, cost centers, and locations on page 105
- Assigning Unix groups to business roles on page 106
- Adding Unix groups to system roles on page 108
- Adding Unix groups to the IT Shop on page 109

Adding Unix groups to system roles

Installed modules: System Roles Module

Use this task to add a group to system roles. If you assign a system role to employees, all the user accounts belonging to these employees inherit the group.

NOTE: Groups with **Only use in IT Shop** set can only be assigned to system roles that also have this option set. For more detailed information, see the *One Identity Manager System Roles Administration Guide*.

To assign a group to system roles

1. In Manager, select **Unix | Groups**.
2. Select the group in the result list.
3. Select **Assign system roles**.
4. Assign system roles in **Add assignments**.

   TIP: In the **Remove assignments** area, you can remove the assignment of system roles.

   To remove an assignment

   - Select the system role and double click ✓.

5. Save the changes.

Related Topics

- Assigning Unix groups to departments, cost centers, and locations on page 105
- Assigning Unix groups to business roles on page 106
- Assigning Unix user accounts directly to a Unix group on page 107
- Adding Unix groups to the IT Shop on page 109

Adding Unix groups to the IT Shop

Once a group has been assigned to an IT Shop shelf, it can be requested by the shop customers. To ensure it can be requested, further prerequisites need to be guaranteed.

- The group must be labeled with the option **IT Shop**.
- The group must be assigned to a service item.
- If you want the group to be assigned only to employees via IT Shop, the group must also be marked with the **Only use in IT Shop**. Direct assignment to hierarchical roles may not be possible.

NOTE: IT Shop administrators can assign groups to IT Shop shelves if login is role-based. Target system administrators are not authorized to add groups in the IT Shop.

To add a group to the IT Shop

1. Select the category **Unix | Groups** (non role-based login).

   - OR -

   Select **Entitlements | Unix Groups** (role-based login).
2. Select the group in the result list.
3. Select **Add to IT Shop**.
4. In **Add assignments** view, add to the IT Shop shelves.
5. Save the changes.

For more detailed information about request from company resources through the IT Shop, see the One Identity Manager IT Shop Administration Guide.

Related Topics

- General master data for a Unix group on page 103
- Removing a Unix group from an IT Shop shelf on page 110
- Removing a Unix group from all IT Shop shelves on page 110

Removing a Unix group from an IT Shop shelf

To remove a group from individual IT Shop shelves

1. Select the category **Unix | Groups** (non role-based login).

   - OR -

   Select **Entitlements | Unix Groups** (role-based login).
2. Select the group in the result list.
3. Select **Add to IT Shop**.
4. Remove the group from the IT Shop shelves in **Remove assignments**.
5. Save the changes.

Removing a Unix group from all IT Shop shelves

To remove a group from all IT Shop shelves

1. Select the category **Unix | Groups** (non role-based login).

   - OR -

   Select **Entitlements | Unix Groups** (role-based login).
2. Select the group in the result list.
3. Select **Remove from all shelves (IT Shop)**.
4. Confirm the security prompt with **Yes**.
5. Click **OK**.

   The group is removed from all shelves by the One Identity Manager Service. All requests and assignment requests with this group are canceled in the process.

Additional tasks for managing Unix groups

After you have entered the master data, you can apply different tasks to it. The task view contains different forms with which you can run the following tasks.

Overview of Unix groups

Use this task to obtain an overview of the most important information about a group.

To obtain an overview of a group

1. Select **Unix | Groups**.
2. Select the group in the result list.
3. Select **Unix group overview**.

Adding Unix groups to Unix groups

Use this task to add a group to another group.

To assign groups directly to a group

1. In Manager, select **Unix | Groups**.
2. Select the group in the result list.
3. Select **Assign groups**.
4. Assign the groups that are are subordinate to the selected group in **Add assignments**.

   TIP: you can remove the assignment of groups in the **Remove assignments** area.

   To remove an assignment

   - Select the group and double click .
5. Save the changes.

Effectiveness of group memberships

Table 32: Configuration Parameter for Conditional Inheritance

Configuration parameter	Effect when set
QER | Structures | Inherite | GroupExclusion	Preprocessor relevant configuration parameter for controlling effectiveness of group memberships. If the parameter is set, memberships can be reduced on the basis of exclusion definitions. Changes to the parameter require recompiling the database.

When groups are assigned to user accounts an employee may obtain two or more groups, which are not permitted in this combination. To prevent this, you can declare mutually exclusive groups. To do this, you specify which of the two groups should apply to the user accounts if both are assigned.

It is possible to assign an excluded group directly, indirectly or by IT Shop request at any time. One Identity Manager determines whether the assignment is effective.

NOTE:

- You cannot define a pair of mutually exclusive groups. That means, the definition "Group A excludes group B" AND "Group B excludes groups A" is not permitted.
- You must declare each group to be excluded from a group separately. Exclusion definitions cannot be inherited.
- One Identity Manager does not check whether membership of an excluded group is permitted in another group (table).

The effectiveness of the assignments is mapped in the UNXAccountInUNXGroup and BaseTreeHasUNXGroup via the column XIsInEffect.

Example of the effect of group memberships

- Group A is defined with permissions for triggering requests in a host A group B is authorized to make payments. A group C is authorized to check invoices.
- Group A is assigned through the department "Marketing", group B through "Finance" and group C through the business role "Control group".

Clara Harris has a user account in this host. She primarily belongs to the department "marketing". The business role "Control group" and the department "Finance" are assigned to her secondarily. Without an exclusion definition, the user account obtains all the permissions of groups A, B and C.

By using suitable controls, you want to prevent an employee from being able to trigger a request and to pay invoices. That means, groups A, B and C are mutually exclusive. An employee that checks invoices may not be able to make invoice payments as well. That means, groups B and C are mutually exclusive.

Table 33: Specifying excluded groups (table AADGroupExclusion))

Effective Group	Excluded Group
Group A	
Group B	Group A
Group C	Group B

Table 34: Effective Assignments

Employee	Member in Role	Effective Group
Ben King	Marketing	Group A
Jan Bloggs	Marketing, finance	Group B

Employee	Member in Role	Effective Group
Clara Harris	Marketing, finance, control group	Group C
Jenny Basset	Marketing, control group	Group A, Group C

Only the group C assignment is in effect for Clara Harris. It is published in the target system. If Clara Harris leaves the business role "control group" at a later date, group B also takes effect.

The groups A and C are in effect for Jenny Basset because the groups are not defined as mutually exclusive. That means that the employee is authorized to trigger request and to check invoices. If this should not be allowed, define further exclusion for group C.

Table 35: Excluded groups and effective assignments

Employee	Member in Role	Assigned Group	Excluded Group	Effective Group
Jenny Basset	Marketing	Group A		Group C
	Control group	Group C	Group B	
			Group A	

Prerequisites

- The configuration parameter **QER | Structures | Inherite | GroupExclusion** is enabled.
- Mutually exclusive groups belong to the same host.

To exclude a group

1. In Manager, select **Unix | Groups**.
2. Select a group in the result list.
3. Select **Exclude groups**.
4. Assign the groups that are mutually exclusive to the selected group in **Add assignments**.

   - OR -

   In **Remove assignments**, remove the groups that are not longer mutually exclusive.
5. Save the changes.

Unix group inheritance based on categories

In One Identity Manager, groups can be selectively inherited by user accounts. For this purpose, the groups and the user accounts are divided into categories. The categories can be freely selected and are specified using a mapping rule. Each category is given a specific position within this mapping rule. The template contains two tables; the user account table and the group table. Use the user account table to specify categories for target system dependent user accounts. In the group table enter your categories for the target system-dependent groups. Each table contains the category positions **Position 1** to **Position 31**.

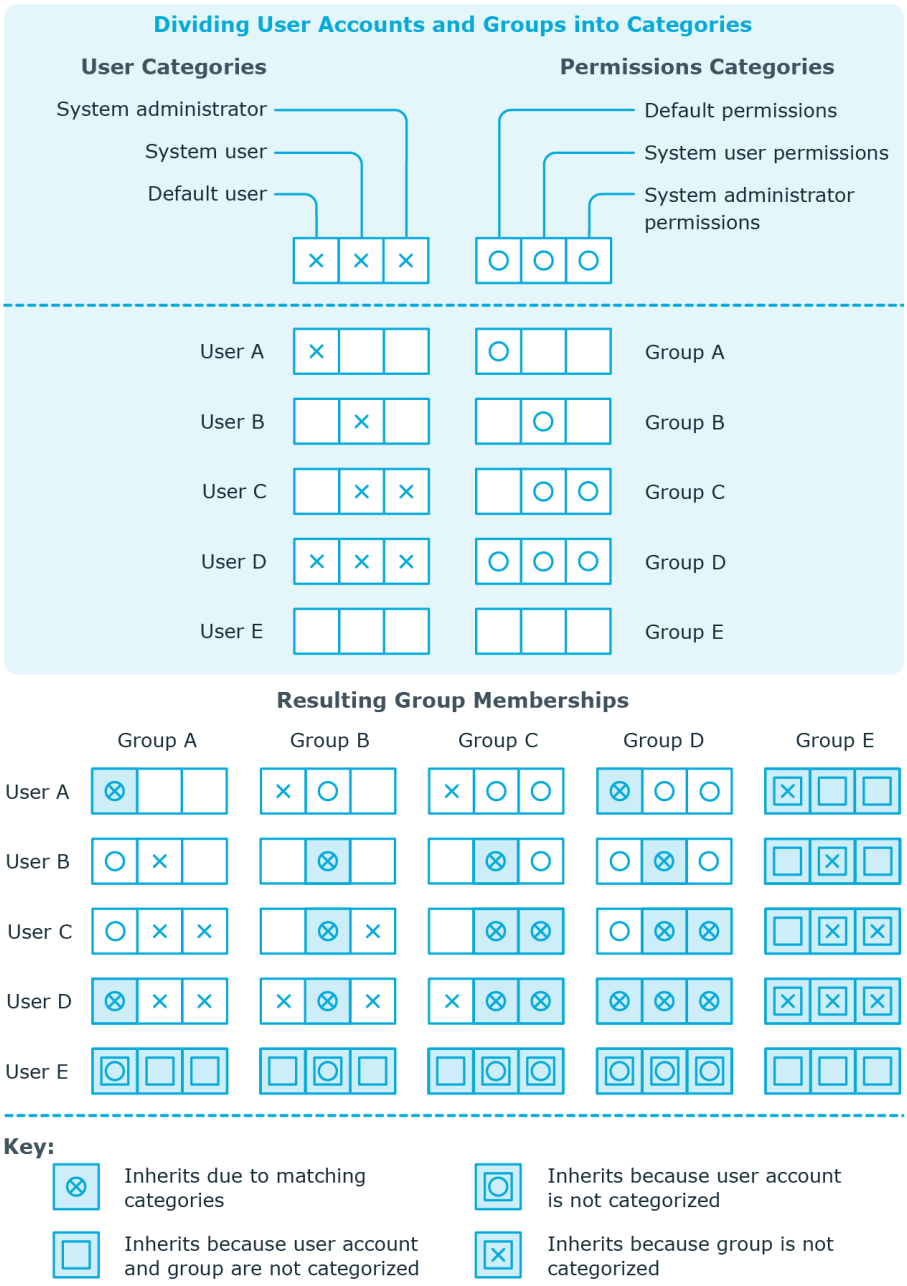
Every user account can be assigned to one or more categories. Each group can also be assigned to one or more categories. The group is inherited by the user account when at least one user account category item matches an assigned group. The group is also inherited by the user account if the group or the user account is not put into categories.

NOTE: Inheritance through categories is only taken into account when groups are assigned indirectly through hierarchical roles. Categories are not taken into account when groups are directly assigned to user accounts.

Table 36: Category Examples

Category Position	Categories for User Accounts	Categories for Groups
1	Default user	Default permissions
2	System user	System user permissions
3	System administrator	System administrator permissions

Figure 2: Example of inheriting through categories.



To use inheritance through categories

- Define the categories in the host environment.
- Assign categories to user accounts through their master data.
- Assign categories to groups through their master data.

Related Topics

- Specifying categories for inheriting permissions on page 74
- General master data for a Unix user account on page 85
- General master data for a Unix group on page 103

Assigning extended properties to a Unix group

Extended properties are meta objects that cannot be mapped directly in One Identity Manager, for example, operating codes, cost codes or cost accounting areas.

To specify extended properties for a group

1. In Manager, select **Unix | Groups**.
2. Select the group in the result list.
3. Select **Assign extended properties**.
4. Assign extended properties in **Add assignments**.

   TIP: In the **Remove assignments** area, you can remove the assignment of extended properties.

   To remove an assignment

   - Select the extended property and double click .
5. Save the changes.

For more detailed information about setting up extended properties, see the *One Identity Manager Identity Management Base Module Administration Guide*.

Deleting Unix groups

To delete a group

1. Select **Unix | Groups**.
2. Select the group in the result list.
3. Delete the group using .
4. Confirm the security prompt with **Yes**.

The group is deleted completely from the One Identity Manager database and from Unix.

7

Unix object reports

One Identity Manager makes various reports available containing information about the selected base object and its relations to other One Identity Manager database objects. The following reports are available for Unix-based target systems.

NOTE: Other sections may be available depending on the which modules are installed.

Table 37: Reports for the Target System

Report	Description
Overview of all assignments	This report finds all roles containing employees with at least one user account in the selected host system.
Show orphaned user accounts	This report shows all host's user accounts that are not assigned to an employee. The report contains group memberships and risk assessment.
Show employees with multiple user accounts	This report shows all employees with more than one user account in the host. The report contains a risk assessment.
Show unused user accounts	This report shows all user accounts in the host that have not been used in the last few months. The report contains group memberships and risk assessment.
Show system entitlement drifts	This report shows all host's groups that are the result of manual operations in the target system rather than using One Identity Manager.
Show user accounts with an above average number of system entitlements	This report contains all the host's user accounts with an above average number of group memberships.
Unix user account and group administration	This report contains a summary of user account and group distribution in all host systems. You can find this report in **My One Identity Manager**.
Data quality summary for Unix user accounts	This report contains different evaluations of user account data quality in all host systems. You can find this report in **My One Identity Manager**.

Overview of all assignments

The **Overview of all assignments** report is displayed for some objects, such as authorizations, compliance rules, or roles. The report finds all the roles, for example, departments, cost centers, locations, business roles and IT Shop structures in which there are employee who own the selected base object. In this case, direct as well as indirect base object assignments are included.

Example

- If the report is created for a resource, all roles are determined in which there are employees with this resource.
- If the report is created for a group or another system entitlement, all roles are determined in which there are employees with this group or system entitlement.
- If the report is created for a compliance rule, all roles are determined in which there are employees with this compliance rule.
- If the report is created for a department, all roles are determined in which employees of the selected department are also members.
- If the report is created for a business role, all roles are determined in which employees of the selected business role are also members.

To display detailed information about assignments

- To display the report, select the base object from the navigation or the result list and select the report **Overview of all assignments**.
- Click the **Used by** button in the report toolbar to select the role class for which you want to determine whether roles exist that contain employees with the selected base object.

  All the roles of the selected role class are shown. The color coding of elements identifies the role in which there are employees with the selected base object. The meaning of the report control elements is explained in a separate legend. To access the legend, click the icon in the report's toolbar.
- Double-click a control to show all child roles belonging to the selected role.
- By clicking the button in a role's control, you display all employees in the role with the base object.
- Use the small arrow next to to start a wizard that allows you to bookmark this list of employee for tracking. This creates a new business role to which the employees are assigned.

Figure 3: Toolbar of the Overview of all assignments report.

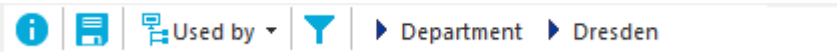


Table 38: Meaning of Icons in the Report Toolbar

Icon	Meaning
	Show the legend with the meaning of the report control elements
	Saves the current report view as a graphic.
	Selects the role class used to generate the report.
	Displays all roles or only the affected roles.

Appendix: Configuration parameters for managing a Unix environment

The following configuration parameters are additionally available in One Identity Manager after the module has been installed.

Table 39: Configuration parameters

Configuration parameters	Description
TargetSystem\Unix	Preprocessor relevant configuration parameter to control the component parts for the managing Unix-based custom target systems. If the parameter is set, the target system components are available. Changes to the parameter require recompiling the database.
TargetSystem\Unix\Accounts	This configuration parameter permits configuration of user account data.
TargetSystem\Unix\Accounts\InitialRandomPassword	This configuration parameter specifies whether a random generated password is issued when a new user account is added. The password must contain at least those character sets that are defined in the password policy.
TargetSystem\Unix\Accounts\InitialRandomPassword\SendTo	This configuration parameter specifies to which employee the email with the randomly generated password should be sent (manager cost center/department/location/role, employee's manager or XUserInserted). If no recipient can be found, the password is sent to the address stored in "TargetSystem\Unix\DefaultAddress".
TargetSystem\Unix\Accounts\InitialRandomPassword\SendTo\MailTemplateAccountName	This configuration parameter contains the name of the mail template sent to provide users with the login data for their user accounts. The **Employee - new user account created** mail template is used.

Configuration parameters	Description
TargetSystem\Unix\Accounts\InitialRandomPassword\SendTo\MailTemplatePassword	This configuration parameter contains the name of the mail template sent to provide users with information about their initial password. The **Employee - initial password for new user account** mail template is used.
TargetSystem\Unix\Accounts\MailTemplateDefaultValues	This configuration parameter contains the mail template used to send notifications if default IT operating data mapping values are used for automatically creating a user account. The **Employee - new user account with default properties created** mail template is used.
TargetSystem\Unix\Accounts\PrivilegedAccount	This configuration parameter allows configuration of settings for privileged Unix user accounts.
TargetSystem\Unix\Accounts\PrivilegedAccount\AccountName_Postfix	This configuration parameter contains the postfix for formatting login names for privileged user accounts.
TargetSystem\Unix\Accounts\PrivilegedAccount\AccountName_Prefix	This configuration parameter contains the prefix for formatting login names for privileged user accounts.
TargetSystem\Unix\DefaultAddress	The configuration parameter contains the recipient's default email address for sending notifications about actions in the target system.
TargetSystem\Unix\MaxFullsyncDuration	This configuration parameter contains the maximum runtime for synchronization. No recalculation of group memberships by the DBQueue Processor can take place during this time. If the maximum runtime is exceeded, group membership are recalculated.
TargetSystem\Unix\PersonAutoDefault	This configuration parameter specifies the mode for automatic employee assignment for user accounts added to the database outside synchronization.
TargetSystem\Unix\PersonAutoDisabledAccounts	This configuration parameters specifies whether employees are automatically assigned to disable user accounts. User accounts do not obtain an account definition.
TargetSystem\Unix\PersonAutoFullSync	This configuration parameter specifies the mode for automatic employee assignment for user accounts added to or updated in the database through synchronization.
TargetSystem\Unix\	List of all user accounts for which automatic

Configuration parameters	Description
PersonExcludeList	employee assignment should not take place. Names are listed in a pipe (|) delimited list that is handled as a regular search pattern. Example: `ROOT`

Appendix: Default project template for Unix-based target systems

A default project template ensures that all required information is added in One Identity Manager. This includes mappings, workflows and the synchronization base object. If you do not use a default project template you must declare the synchronization base object in One Identity Manager yourself.

Use a default project template for initially setting up the synchronization project. For custom implementations, you can extend the synchronization project with the Synchronization Editor.

The template uses mappings for the following schema types.

Table 40: Mapping Unix schema types to tables in the One Identity Manager schema.

Schema type in Unix-based target system	Table in the One Identity Manager Schema
Group	UNXGroup
Host	UNXHost
LoginShell	UNXLoginShell
User	UNXAccount

About us

One Identity solutions eliminate the complexities and time-consuming processes often required to govern identities, manage privileged accounts and control access. Our solutions enhance business agility while addressing your IAM challenges with on-premises, cloud and hybrid environments.

Contacting us

For sales or other inquiries, visit https://www.oneidentity.com/company/contact-us.aspx or call +1-800-306-9329.

Technical support resources

Technical support is available to One Identity customers with a valid maintenance contract and customers who have trial versions. You can access the Support Portal at https://support.oneidentity.com/.

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- Engage in community discussions
- Chat with support engineers online
- View services to assist you with your product

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