One Identity Manager 8.1.5

IT Shop Administration Guide

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Trademarks

Legend

WARNING: A WARNING icon highlights a potential risk of bodily injury or property damage, for which industry-standard safety precautions are advised. This icon is often associated with electrical hazards related to hardware.

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

One Identity Manager IT Shop Administration Guide
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Contents

Setting up an IT Shop solution

The IT Shop allows users to request company resources such as software, system roles, or group membership as well as non-IT resources such as mobile telephones or keys. Furthermore, membership of a hierarchical role (department, location, cost center, or business role) can be requested through the IT Shop. The requests are processed by a flexible policy-based approval process. Introducing the IT Shop avoids time-consuming demands within the company and reduces the administration effort. The request history makes it possible to follow who requested which company resource or hierarchical role and when it was requested, renewed, or canceled.

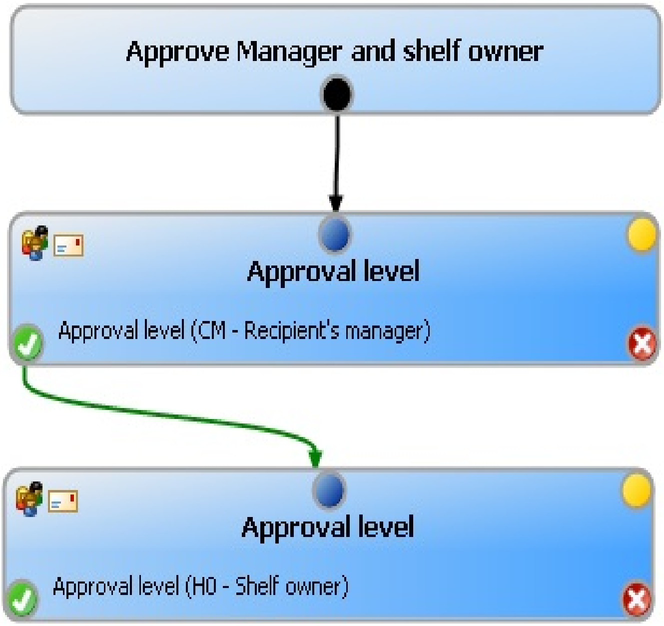
Shops, shelves, customers, and products all belong to an IT Shop solution. Several shops can be grouped together into shopping centers. The shelves are assigned company resources in the form of products. Products can be grouped into service categories. All the service categories are summarized in a service catalog. Customers can select products from a service catalog in the Web Portal, add them to a cart, and send a purchase request.

The following figure shows an example of a service catalog with service categories.

Figure 1: Example of a service catalog

Requests follow a defined approval process that determines whether a product may be assigned or not. Products can be renewed or canceled. Approval processes can also be specified for renewals and cancellations. Approval policies are defined for approval processes. The approval policies are assigned to approval workflows for product requests, renewals, or cancellations.

Figure 2: Example of a simple approval workflow



The products are requested, renewed, and canceled through the Web Portal. Authorized employees have the option to approve requests and cancellations. For detailed information, see the *One Identity Manager Web Portal User Guide*.

One Identity Manager users in the IT Shop

The following users are involved in the setting up and operating of an IT Shop system.

Table 1: Users

User	Tasks
Administrators for the IT Shop	Administrators must be assigned to the **Request & Fulfillment | IT Shop | Administrators** application role. Users with this application role: • Create the IT Shop structure with shops, shelves, customers, templates, and service catalog. • Create approval policies and approval workflows. • Specify which approval procedure to use to find attestors. • Create products and service items. • Set up request notifications.

User	Tasks
	• Monitor request procedures. • Administrate application roles for product owners and attestors. • Set up other application roles as required. • Create extended properties for company resources of any type. • Edit the resources and assign them to IT Shop structures and employees. • Assign system entitlements to IT Shop structures.
Product owners	Product owners must be assigned to the **Request & Fulfillment | IT Shop | Product owners** application role or a child application role. Users with this application role: • Approve through requests. • Edit service items and service categories under their management.
One Identity Manager administrators	• Create customized permissions groups for application roles for role-based login to administration tools in the Designer as required. • Create system users and permissions groups for non role-based login to administration tools in the Designer as required. • Enable or disable additional configuration parameters in the Designer as required. • Create custom processes in the Designer as required. • Create and configure schedules as required. • Create and configure password policies as required.
Role approver	• Request approval in the Web Portal. Approvers are determined through approval procedures.
Attestors for requests	Attestors must be assigned to the **Request & Fulfillment | IT Shop | Attestors** application role. Users with this application role: • Attest correct assignment of company resource to IT Shop structures for which they are responsible. • Can view master data for these IT Shop structures but not edit them. NOTE: This application role is available if the module Attestation Module is installed.

User	Tasks
Chief approval team	Chief approvers must be assigned to the **Request & Fulfillment | IT Shop | Chief approval team** application role. Users with this application role: • Approve through requests. • Assign requests to other approvers.

Implementing the IT Shop

Identity & Access Lifecycle is already included in the default installation of One Identity Manager. This shop contains several shelves that have standard products assigned to them. You can use these products to request role or group memberships, for example, or to delegate duties. All active employees automatically become members of this shop and can therefore make requests.

You can use the **Identity & Access Lifecycle** shop to request standard products. Default approval policies are implemented for approving these requests. You can request any company resources you like by taking the default shop and extending it with your own shelves or by setting up your own IT Shop solution.

To use the Identity & Access Lifecycle shop

1. In the Designer, set the **QER | ITSHOP** configuration parameter.

   In the default installation, the configuration parameter is set and the IT Shop is available. If the configuration parameter is not set, you can set it in the Designer and then compile the database.

2. Install and configure the Web Portal.

   The products are requested, renewed, and canceled through the Web Portal. Authorized employees have the option to approve requests and cancellations.

   For more information about this, see the One Identity Manager Installation Guide and the One Identity Manager Web Portal User Guide.

IMPORTANT: This shop's customers are determined by a dynamic role. If a shop contains a large number of customers, the calculations in the IT Shop can cause a heavy load on the DBQueue Processor and therefore on the database server, as well.

Formulate the condition for the dynamic role so that no more than 30,000 employees are found. If necessary, set up your own IT Shop solution with several shops and customer nodes.

To customize the Identity & Access Lifecycle shop

1. Set up more shelves.

   For more information, see Managing an IT Shop on page 174.

2. Prepare company resources for requesting.

   For more information, see Preparing products for requesting on page 19.

3. Assign requestable products to the shelves.

   For more information, see Assigning and removing products on page 45.

4. Set up the approval process.

   In the default installation, different default approval policies are assigned to the **Identity & Access Lifecycle** shop. Therefore, requests from this shop are run through predefined approval processes.

   You can also assign your own approval policy to the shop. For more information, see Approval processes for IT Shop requests on page 73.

5. If necessary, edit the dynamic role condition.

   For more information, see Assigning employees through dynamic roles on page 193. For more information about creating the condition, see the *One Identity Manager Identity Management Base Module Administration Guide*.

To set up your own IT Shop solution

1. In the Designer, set the **QER | ITSHOP** configuration parameter.

   In the default installation, the configuration parameter is set and the IT Shop is available. If the configuration parameter is not set, you can set it in the Designer and then compile the database.

2. Set up shops, shelves, and customer node.

   For more information, see Managing an IT Shop on page 174.

3. Prepare company resources for requesting.

   For more information, see Preparing products for requesting on page 19.

4. Assign requestable products to the IT Shop.

   For more information, see Assigning and removing products on page 45.

   One Identity Manager makes different default products available, which can be requested through the **Identity & Access Lifecycle** shop. You can also add these standard products to your own IT Shop.

5. Set up the approval process.

   For more information, see Approval processes for IT Shop requests on page 73.

6. Install and configure the Web Portal.

   The products are requested, renewed, and canceled through the Web Portal. Authorized employees have the option to approve requests and cancellations.

   For more information about this, see the One Identity Manager Installation Guide and the One Identity Manager Web Portal User Guide.

Requestable products

Requestable products in the IT Shop are company resources such as target system groups, software, and non-IT resources after they have been assigned to a shelf. The following company resources can be assigned to shelves as requestable products.

Table 2: Requestable products

Company resource	Available in module	Documentation guide
Groups of custom target systems	Target System Base Module	One Identity Manager Target System Base Module Administration Guide
Active Directory groups	Active Directory Module	One Identity Manager Administration Guide for Connecting to Active Directory
SharePoint groups and SharePoint roles	SharePoint Module	One Identity Manager Administration Guide for Connecting to SharePoint
IBM Notes groups	IBM Notes Module	One Identity Manager Administration Guide for Connecting to IBM Notes
LDAP groups	LDAP Module	One Identity Manager Administration Guide for Connecting to LDAP
SAP groups, SAP roles, and SAP profiles	SAP R/3 User Management Module	One Identity Manager Administration Guide for Connecting to SAP R/3
SAP structural profiles	SAP R/3 Structural Profiles Add-on Module	One Identity Manager Administration Guide for SAP R/3 Structural Profiles Add-on
SAP BI analysis authorizations	SAP R/3 Analysis Authorizations Add-on Module	One Identity Manager Administration Guide for SAP R/3 Analysis Authorizations Add-on
E-Business Suite permissions	Oracle E-Business Suite Module	One Identity Manager Administration Guide for Connecting to Oracle E-Business Suite
Azure Active	Azure Active	One Identity Manager Administration Guide for Connecting to Azure Active Directory

Company resource	Available in module	Documentation guide
Directory groups	Directory Module	
Azure Active Directory administrator roles	Azure Active Directory Module	One Identity Manager Administration Guide for Connecting to Azure Active Directory
G Suite groups, G Suite products, and SKUs	G Suite Module	One Identity Manager Administration Guide for Connecting to G Suite
Resources	Identity Management Base Module	One Identity Manager Identity Management Base Module Administration Guide
Multi-request resources	Identity Management Base Module	One Identity Manager Identity Management Base Module Administration Guide
Account definitions	Target System Base Module	One Identity Manager Target System Base Module Administration Guide
System roles	System Roles Module	One Identity Manager System Roles Administration Guide
Subscribable reports	Report Subscription Module	One Identity Manager Report Subscriptions Administration Guide
Software	Software Management Module	One Identity Manager Software Management Administration Guide
Assignment resources	Identity Management Base Module Business Roles Module	Use assignment resources to request any number of assignments to hierarchical roles or to delegate responsibilities through the IT Shop. For more information, see Assignment requests and delegating on page 51.
Azure Active Directory groups	Azure Active Directory Module	One Identity Manager Administration Guide for Connecting to Azure Active Directory
Azure Active Directory	Azure Active Directory	One Identity Manager Administration Guide for Connecting to Azure Active Directory

Company resource	Available in module	Documentation guide
administrator roles	Module	
PAM user groups	Privileged Account Governance Module	One Identity Manager Administration Guide for Privileged Account Governance
Password requests	Privileged Account Governance Module	One Identity Manager Administration Guide for Privileged Account Governance
Remote desktop session requests	Privileged Account Governance Module	One Identity Manager Administration Guide for Privileged Account Governance
SSH session requests	Privileged Account Governance Module	One Identity Manager Administration Guide for Privileged Account Governance
Telnet session requests	Privileged Account Governance Module	One Identity Manager Administration Guide for Privileged Account Governance

Software and system roles can also be requested for workdesks. The request's UID_Workdesk is given as additional information here (`PersonWantsOrg.UID_WorkdeskOrdered`).

Multi-request resources

The IT Shop distinguishes between single or multiple requestable products. Single request products are, for example, software, system roles, or Active Directory groups. These products cannot be requested if they have already been be requested for the same time period.

Furthermore, an employee may need several of one type of company resources, for example, consumables. You can find company resources such as these mapped in One Identity Manager as **Multi-request resource** or **Multi requestable/unsubscribable resources**.

Table 3: Resource types

Type	Description	Table
Resources	Resources that an employee (workstation, device) may own just once. The resources can be requested in the IT Shop just once. The resources are assigned to the employees after approval has been granted. They remain assigned until the request is canceled. You can request them again a later point. Example: phone, company car.	`QERResource`
Multi-request resources	Resources that can be requested more than once in the IT Shop. Requests are automatically canceled once approved. The resources are not explicitly assigned to employees. Example: resource for requesting remote desktop sessions for assets in a PAM system; consumables, such as pens, printing paper.	`QERReuse`
Multi-requestable/unsubscribable resources	Resources that an employee can request more than once in the IT Shop but must return them explicitly once they are no longer needed. The resources are assigned to the employees after approval has been granted. They remain assigned until the request is canceled. Example: printer, monitor.	`QERReuseUS`

To set up multi-request resources and add them as products in the IT Shop

1. In the Manager, select the **Entitlements | Multi-request resources for IT Shop** category.
2. Click in the result list.
3. Edit the resource's master data.
4. Save the changes.
5. Select the **Add to IT Shop** task.

   In the **Add assignments** pane, assign a shelf.

   > TIP: In the **Remove assignments** pane, you can remove shelf assignments.
   >
   > ***To remove an assignment***
   >
   > - Select the shelf and double-click .
6. Save the changes.

To set up multi-requestable/unsubscribable resources and to add them as products to the IT Shop

1. Select the **Entitlements | Multi requestable/unsubscribable resources for IT Shop** category.
2. Click in the result list.
3. Edit the resource's master data.
4. Save the changes.
5. Select the **Add to IT Shop** task.

   In the **Add assignments** pane, assign a shelf.

   > TIP: In the **Remove assignments** pane, you can remove shelf assignments.
   >
   > ***To remove an assignment***
   >
   > - Select the shelf and double-click .
6. Save the changes.

For more information about multi requestable products, see the *One Identity Manager Identity Management Base Module Administration Guide*.

Preparing products for requesting

Company resources have to fulfill at least the following prerequisites before you can request them in the Web Portal:

- The company resource must be labeled with the **IT Shop** option.
- A service item must be assigned to the company resource.
- The company resource must be assigned to a shelf as a product.
- If the company resource is only assigned to employees using IT Shop requests, the company resource must also be labeled with the **Only use in IT Shop** option. This means that the company resource cannot be directly assigned to roles outside the IT Shop.

The **Entitlements** category displays all company resources that can be requested using the IT Shop. This includes software, system entitlements, system roles, account definitions, resources, multi-request resources, and assignment resources if the corresponding modules are installed.

You can prepare the company resources for requesting in the IT Shop if you are an IT Shop administrator and have logged in as role-based. You can assign service items, edit the **IT Shop** and **Only use in IT Shop** options and assign the company resources to IT Shop shelves.

To prepare company resources for requesting

1. In the Manager, select the **Permissions** category.
2. From the navigation view and results list, select the company resources you want and result list.
3. Select the **Change master data** task.
4. Enable the **IT Shop** option.
5. Assign a new service item in the **Service item** field.

   To add a new service item, click . Copy the name of the company resource as identifier for the service item. Enter the other properties on the service item master data form.
6. Save the changes.
7. Select the **Add to IT Shop** task.
8. In the **Add assignments** pane, assign the company resource to shelves.
9. Save the changes.

Customer keep their requested products on the shelf until they unsubscribe them. Sometimes, however, products are only required for a certain length of time and can be canceled automatically after this time. There are other settings required to provide limited period products.

Detailed information about this topic

- Entering service items on page 20
- Products for requests with time restrictions on page 39

Entering service items

In order to request company resources in the Web Portal, a service item must be assigned to them. Service items contain additional information about the company resources. For example, you can specify article numbers, request properties, product supervisors, or approvers for requests. A service catalog can be put together from the service items the Web Portal. These contain all the requestable products. You can use service categories, tags, and service item names to find the product in the service catalog.

To edit service items

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

   - OR -

   In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.

2. In the result list, select the product's service item and select the **Change master data** task.

   - OR -

   Click in the result list.
3. Enter the service item's master data.
4. Save the changes.

General master data for a service item

Enter the following data on the **General** tab. If you add a new service item, you must fill out the required fields.

Table 4: General master data for a service item

Master data	Meaning
Service item	Service item name.
Special service item	If a product is used for a specific purpose, for example, for product collection, then mark it as a special service item.
Service category	Group individual products into a collection of products. Select an existing service category from the list or add a new one. To create a new service category, click . Enter at least one name for the service item.
Product owners	Assign a **Request & Fulfillment | IT Shop | Product owner** application role. Product owners can be used as approvers in a defined approval process within the IT Shop. They can decide on approval of the service item request. To create a new application role, click . Enter the application role name and assign a parent application role. If no product owner is assigned, the product owner of the assigned service category is determined by template.
Attestors	Assign a **Request & Fulfillment | IT Shop | Attestor** application role. The members of this application role can chosen as attestor in an attestation procedure. To create a new application role, click . Enter the application role name and assign a parent application role.
Cost center	Cost center for booking the service item in the accounts.

Master data	Meaning
Manufacturer	Manufacturer data.
Terms of use	Terms of use for the product. The product can only be requested if the requester has accepted the terms of use.
Request number, product code, product code (foreign).	Company-specific service item properties.
Functional area	Company-specific service item property.
Approval policies	Approval policy used to determine the approver when the service item is requested in the IT Shop.
Request property	Select the group for defining extended properties for a request. The request properties are displayed in the Web Portal depending on the configuration, requester, or approver.
Calculation info	Enter the calculation mode as accounting information.
Availability	Company-specific information about the service item's availability.
Sort order	Customer-specific criteria for sorting service items.
Website	Web page with more information about the service item. This field allows you to link product descriptions in the internet or intranet to the service item. To open the website, select **Visit website** in the default web browser.
Validity period	Time period for limited assignments through IT Shop. The service item is automatically canceled when the time expires. When multi-request resources are requested (`QERReuse`), this value has no effect.
Description	Text field for additional explanation.
Retain service item assignment on relocation	Specifies whether requests belonging to this service item remain intact when a customer or a product relocates..
Not available	Specifies whether the service item can still be requested in the IT Shop. If this option is enabled, no new requests can be placed for this item. Existing requests remain intact.
Request properties must be defined separately per	Specifies whether additional request properties must be entered separately for each recipient of this product, if the product is requested for different recipients in one request procedure.

Master data	Meaning
recipient	If this option is not set, the selected requested properties apply uniformly to all recipients of the product.
Approval by multi-factor authentication	The approval of requests with this service item requires multi-factor authentication.

For detailed information about attestation, see the *One Identity Manager Attestation Administration Guide*. For detailed information about cost centers, see the *One Identity Manager Identity Management Base Module Administration Guide*.

Detailed information about this topic

- Entering service categories on page 33
- Selecting responsible approvers on page 90
- Product owners on page 183
- Attestors on page 184
- Business partners on page 180
- Functional areas on page 181
- Determining the effective approval policies on page 89
- Entering product-specific properties on page 37
- Products for requests with time restrictions on page 39
- Product request on customer or product relocation on page 40
- Moving products to another shelf on page 48
- Entering terms of use on page 41
- Preparing the IT Shop for multi-factor authentication on page 49

Pricing information

Enter the required pricing information for booking the service item to the accounts on the **Calculation** tab.

Table 5: Pricing for a service item

Property	Description
Purchase price	Purchase price.
Sales price	Sales price.
Internal price	Internal transfer price.

Property	Description
Rental rate (purchasing)	Purchase price on product rental.
Rental rate (selling)	Sales price on product rental
Rental rate (internal)	Internal transfer price on product rental
Currency	Currency unit
Sales tax	Sale tax to apply in percent (%)

Extended master data for a service item

On the **Picture** tab, you can import an image of the product into the data base. Select the path where the picture is stored.

On the **User-defined** tab, enter additional company-specific information in the spare fields. Use the Designer to customize display names, formats, and templates for the input fields.

Default service items

One Identity Manager provides service items by default. These service items are assigned to the **Identity & Access Lifecycle** shop. You can request them as standard products through the Web Portal.

To edit default service items

- In the Manager, select the **IT Shop | Service catalog | Predefined** category.

Additional tasks for managing service items

After you have entered the master data, you can run the following tasks.

The service item overview

On the overview form, you can see the most important information about a service item.

To obtain an overview of a service item

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

   - OR -

In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.

2. Select the service item in the result list.
3. Select the **Service item overview** task.

Editing product dependencies for requests

Dependencies between products are taken into account by Web Portal requests.

Detailed information about this topic

- Specifying product dependencies on page 30

Defining hierarchy for service items

You can structure service items hierarchically. To do this, assign a service item below or above another service item.

To structure service items hierarchically

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

   \- OR -

   In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.
2. In the result list, select a service item in the result list and run the task **Edit service item hierarchy**.
3. Select the **Child service items** tab.

   In the **Add assignments** pane, assign child service items.

   > TIP: In the **Remove assignments** pane, you can remove service item assignments.
   >
   > ***To remove an assignment***
   >
   > - Select the service item and double-click .
4. Select the **Parent service items** tab.

   In the **Add assignments** pane, assign parent service items.
5. Save the changes.

Assigning hierarchical roles

You can use One Identity Manager to assess the risk of assignments. The assessments can be evaluated separately by role. Prerequisite is that service items are assigned to the roles. For more detailed information about risk assessment, see the *One Identity Manager Risk Assessment Administration Guide*.

Assigning organizations

To assign a service item to departments, cost centers, and locations

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

   - OR -

   In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.
2. Select the service item in the result list.
3. Select the **Assign organizations** task.

   In the **Add assignments** pane, assign the organizations:

   - On the **Departments** tab, assign departments.
   - On the **Locations** tab, assign locations.
   - On the **Cost centers** tab, assign cost centers.

   TIP: In the **Remove assignments** pane, you can remove assigned organizations.

   To remove an assignment

   - Select the organization and double-click ✅.
4. Save the changes.

Assigning business roles

Installed modules:	Business Roles Module

You can issue separate invoices according to the different company structures. Assign service items to business roles to do this.

To assign service items to business roles

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

   - OR -

   In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.
2. Select the service item in the result list.
3. Select the **Assign business roles** task.

   In the **Add assignments** pane, assign business roles.

   TIP: In the **Remove assignments** pane, you can remove assigned business roles.

> ***To remove an assignment***
>
> - Select the business role and double-click ✅.

4. Save the changes.

Assigning functional areas

You can use One Identity Manager to assess the risk of assignments. The assessments can be evaluated separately by functional area. To do this, service items must be assigned to functional areas. For more detailed information, see the *One Identity Manager Risk Assessment Administration Guide*.

To assign functional areas to a service item

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

   - OR -

   In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.
2. Select the service item in the result list.
3. Select the **Assign functional areas** task.

   Assign the functional areas in **Add assignments**.

   > TIP: In **Remove assignments**, you can remove functional area assignments.
   >
   > ***To remove an assignment***
   >
   > - Select the functional area and double-click ✅.
4. Save the changes.

Related topics

- Approval by peer group analysis on page 128

Assigning extended properties

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

To assign extended properties to a service item

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

   - OR -

   In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.

2. Select the service item in the result list.
3. Select the **Assign extended properties** task.

   In the **Add assignments** pane, assign extended properties.

   > TIP: In the **Remove assignments** pane, you can remove assigned extended properties.
   >
   > ***To remove an assignment***
   >
   > - Select the extended property and double-click ✓.
4. Save the changes.

Displaying websites

You can link product descriptions in internet or intranet with the service item. For this, you enter the URL of a website in **Website** on the master data form.

To open the website in a standard browser

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

   - OR -

   In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.
2. Select the service item in the result list.
3. Select the **Visit website** task.

Related topics

- General master data for a service item on page 21

Changing products

A product can be replaced by another product at a specified time. All employees who have requested this product are notified by an email telling them to request a replacement product.

To replace a product with another one

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

   - OR -

   In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.
2. Select the product's service item to replace in the result list.

3. Select the **Change product** task.
4. Enter the following data:
    - **Expiry date**: Date on which the product is replaced by a different product.
    - **Alternative product**: Service item that can be requested instead.
5. Click **OK**.

Related topics

- Product change notifications on page 166

Adding and assigning tags

Use this task to assign tags to service items and to add new tags.

To assign a tag to a service item

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

    \- OR -

    In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.
2. Select the service item in the result list.
3. Select the **Assign tag** task.

    In the **Add assignments** pane, assign the tag.

    > TIP: In the **Remove assignments** pane, you can remove tag assignments.
    >
    > ***To remove an assignment***
    >
    > - Select the tag and double-click ✓.
4. Save the changes.

To add a tag for a service item

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

    \- OR -

    In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.
2. Select the service item in the result list.
3. Select the **Assign tag** task.
4. Select the **Create tag** task.
5. Enter the tag and a description for it.
6. Save the changes.

The new tag is shown on the assignment form.

7. Double-click on the tag to assign it to the selected service item.
8. Save the changes.

TIP: You can add more tags. For more information, see Entering tags on page 43.

Assigning object-dependent references

Object-dependent references can be assigned to service items. Use object-dependent references to configure your Web Portal with the Web Designer. All object-dependent references whose type references the `AccProduct` table can be assigned. For detailed information, see the *One Identity Manager Web Designer Reference Guide*.

To assign object-dependent references to a service item

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

   - OR -

   In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.
2. Select the service item in the result list.
3. Select the **Assign object-dependent references** task.

   In the **Add assignments** pane, assign object-dependent references.

   TIP: In the **Remove assignments** pane, you can remove object-dependent reference assignments.

   To remove an assignment

   - Select the object-dependent reference and double-click ✅.
4. Save the changes.

Specifying product dependencies

You can define dependencies for products. For example, when a printer is requested, a flat-rate installation charge has to be requested at the same time, and toner may be requested optionally. You can also specify if two products should never be requested simultaneously.

Dependencies between requestable products are created using service items.

When a product is requested, it is tested for dependencies and in this case, dependent products are added to the request.

To specify dependencies between products

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

   - OR -

   In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.
2. Select the product's service item in the result list.
3. Select the **Edit product dependencies for requests** task.
   - In the **Dependent products** tab, specify the dependent products.

     In the **Add assignments** pane, assign the service items.
   - In the **Depends on products** tab, specify which selected service item is dependent on which products.

     In the **Add assignments** pane, assign the service items.
4. Save the changes.
5. Select the **Service item overview** task.
6. Define the properties of the product dependency.
   a. On the **Dependent products** or **Depends on products** form element, select the dependent product.

      This opens the product dependency master details form.

   b. Specify the dependency conditions. Select one of the following options:
      - Cannot request products together

        This option prevents the dependent product from being acquired by the same request. The product can be assigned at any time with a separate, direct request.
      - Product must be requested at the same time
      - Product can optionally be requested with another
7. Save the changes.

Reports about service items

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 service items.

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

Table 6: Reports about service items

Report	Description
Overview of all assignments	This report finds all roles containing employees with the selected service item.

Related topics

- Overview of all assignments on page 32

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 employees who own the selected base object. In this case, direct as well as indirect base object assignments are included.

Examples

- 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 who violate 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 **Overview of all assignments** report.
- 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 employees 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 7: 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.

Entering service categories

You can group individual service items into service categories to create a service catalog.

To edit service categories

1. In the Manager, select the **IT Shop | Basic configuration data | Service categories** category.

   \- OR -

   In the Manager, select the **IT Shop | Service catalog** category.
2. In the result list, select the service category and run the **Change master data** task.
3. Edit the service category's master data.
4. Save the changes.

Service category master data

Enter the following master data for a service category. If you add a new service category, you must fill out the required fields.

Table 8: General master data for a service category

Master data	Meaning
Service category	The service item’s name.

Master data	Meaning
Special service category	Specifies whether the service category has a special purpose.
Parent service category	If you want to have service categories in a hierarchical structure, select a parent service category from the list.
Product owners	Assign a **Request & Fulfillment | IT Shop | Product owner** application role. Product owners can be used as approvers in a defined approval process within the IT Shop. They can decide on approval of the service item request. To create a new application role, click . Enter the application role name and assign a parent application role.
Attestors	Assign a **Request & Fulfillment | IT Shop | Attestor** application role. The members of this application role can chosen as attestor in an attestation procedure. To create a new application role, click . Enter the application role name and assign a parent application role. For more detailed information, see the *One Identity Manager Attestation Administration Guide*.
Approval policies	Approval policies used to determine the approver when the service item is requested from a service category in the IT Shop.
Request property	Select the group for defining extended properties for a request. The request properties are displayed in the Web Portal depending on the configuration, requester, or approver.
Purchase price, sales price, internal price, currency	Enter the required price information for the service category accounting.
Sort order	Customer specific criteria for sorting assigned service items.
Description	Text field for additional explanation.
Image	Image for this service category. Select the path where the picture is stored.
Spare field no. 01 - spare field no. 10	Additional company-specific information. Use the Designer to customize display names, formats, and templates for the input fields.

Detailed information about this topic

- Selecting responsible approvers on page 90
- Product owners on page 183
- Attestors on page 184
- Determining the effective approval policies on page 89
- Entering product-specific properties on page 37

Default service categories

One Identity Manager provides service categories by default. These service categories make up the default service items in the service catalog.

To edit default service categories

- Select the **IT Shop | Basic configuration data | Service categories | Predefined** category.

Additional tasks for managing service categories

After you have entered the master data, you can run the following tasks.

The service category overview

The overview form, shows you the most important information about a service category, at a glance.

To obtain an overview of a service category

1. In the Manager, select the **IT Shop | Basic configuration data | Service categories** category.

   - OR -

   In the Manager, select the **IT Shop | Service catalog** category.
2. Select the service category in the result list.
3. Select the **Service category overview** task.

Assigning service items

Use this task to assign any number of service items to the service category.

To assign service items to a service category

1. In the Manager, select the **IT Shop | Basic configuration data | Service categories** category.

   - OR -

   In the Manager, select the **IT Shop | Service catalog** category.
2. Select the service category in the result list.
3. Select the **Assign service items** task.

   In the **Add assignments** pane, assign service items.

   > TIP: In the **Remove assignments** pane, you can remove service item assignments.
   >
   > ***To remove an assignment***
   >
   > - Select the service item and double-click ✅.
4. Save the changes.

Assigning object-dependent references

Object-dependent references can be assigned to service categories. Use object-dependent references to configure your Web Portal with the Web Designer. All object-dependent references whose type references the `AccProductGroup` table can be assigned. For detailed information, see the *One Identity Manager Web Designer Reference Guide*.

To assign object-dependent references to a service category

1. In the Manager, select the **IT Shop | Basic configuration data | Service categories** category.

   - OR -

   In the Manager, select the **IT Shop | Service catalog** category.
2. Select the service category in the result list.
3. Select the **Assign object-dependent references** task.

   In the **Add assignments** pane, assign object-dependent references.

   > TIP: In the **Remove assignments** pane, you can remove object-dependent reference assignments.
   >
   > ***To remove an assignment***
   >
   > - Select the object-dependent reference and double-click ✅.
4. Save the changes.

Entering product-specific properties

When products are requested in the Web Portal, product-specific request properties can be queried dynamically. These request properties are displayed in the Web Portal depending on the configuration, requester, or approver. Request properties are saved as additional information in the shopping cart and in the request procedure.

In order to use product-specific request properties, define which properties are permitted for which product. To do this, assign the request properties to service items or service categories. When a product is requested, the request properties are displayed for the service item. If there are no extended request properties stored for the service item, the request properties from the service category are used.

To supply request properties with a request, define request properties groups. Request property groups include any number of request properties.

To add a request property

1. In the Manager, select the **IT Shop | Basic configuration data | Request properties** category.
2. Click in the result list.
3. Enter the name and a description for the request property group.
4. To add a request property, click **Add**.
5. Edit the request property's master data.
6. To add more request properties, click **Add**.
7. Save the changes.

To edit request properties

1. Select the **IT Shop | Basic configuration data | Request properties** category.
2. In the result list, select the request property group.
3. Select the **Change master data** task.
4. Edit the request property's master data.
5. Save the changes.

Detailed information about this topic

- Request property master data on page 37

Request property master data

In a request property's master data, you specify the column in `ShoppingCartItem` in which to save the request property when the request is made. If the selected column is a foreign key column, the requester can select permitted values from a list in the Web Portal. The values can be limited by a condition. If the selected column allows free text, the requester must enter the request property as text in the Web Portal.

NOTE: If you want to use custom column to store request properties, add identical columns to the tables `ShoppingCartItem` and `PersonWantsOrg`.

If you add a new request group, you must fill out the compulsory fields.

Table 9: Master data of a request property group

Property	Description
Request property group	Name of the request property group.
Description	Exact description of the request properties. This text is shown with the request in the Web Portal.

To group request properties

- Click **Add**.

Enter the following master data for each request property.

Table 10: Request property master data

Property	Description
Column	Column of the table `ShoppingCartItem` in which to save the request property when the request is saved.
Display value	Name used to display the request property in the Web Portal. Click to enter language-dependent display values.
Sort order	Sort order in which to display the request properties in the Web Portal.
Mandatory parameter	Specifies whether it is mandatory to enter the request property when a product is requested.
Read-only	Specifies whether the request property should only be viewable in the Web Portal and not editable.
Editable for approver	Specifies whether both requester and approver can edit the request property. If this option is disabled, only the requester can edit this request property.
Condition	Condition limiting a foreign key value list.

Additional tasks for managing request properties

After you have entered the master data, you can run the following tasks.

The request properties overview

On the overview form, you see, at a glance, the most important information about a request property group.

To obtain an overview of a request property group

1. Select the **IT Shop | Basic configuration data | Request properties** category.
2. In the result list, select a request property group.
3. Select the **Request properties overview** task.

Copy request properties

You can copy selected request property groups.

To copy a request property group

1. Select the **IT Shop | Basic configuration data | Request properties** category.
2. In the result list, select the request property group.
3. Select the **Create copy** task.
4. Confirm the security prompt with **OK**.

   This creates a request property group with the given name. You can now edit the request properties of this request property group.

Products for requests with time restrictions

Customers retain their requested products until they cancel them themselves. Sometimes, however, products are only required for a certain length of time and can be canceled automatically after this time. Products that are intended to have a limited shelf life need to be marked with a validity period.

To enter a validity period for products

To specify a validity period for a product request

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

   - OR -

   In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.
2. Select the service item in the result list.
3. Select the **Change master data** task.

4. Enter in the **Validity period (max. # days)** field the time period within which the product can be requested.

   > INFORMATION: This value has no effect on requests for multi-request resources (`QERReuse`).

5. Save the changes.

One Identity Manager calculates the date that the product is automatically canceled from the current data and validity period at the time of request and approval.

Product request on customer or product relocation

If a customer requests a product from a shop or shopping center and then changes to another at a later date, you must decide how the existing request should be handled. The same applies if a product is moved to another shelf. One Identity Manager checks whether the request recipient and the product belong to the same shop after relocating.

Table 11: Effects of relocating

Request recipient and product	Effect on closed requests	Effect on pending requests
In different shops	The request is canceled. The assignment is removed.	The request is canceled.
In the same shop	Behavior is defined by **Retain service item assignment on relocation** in the service item.	

Table 12: Effect of the "retain service item assignment on relocation" option

Option Value	Effect on approved requests	Effect on pending requests
Not set	The request is canceled. The assignment is removed.	The request is canceled.
Enabled	The request remains intact. Shelf and shop are updated in the request procedure. Assignment of requested company resources remains intact.	The request remains intact. Shelf and shop are updated in the request procedure. Approvals already granted, are reset. The request runs through the approval process implemented in the new shop.

> NOTE: The request is realized in the shop in which the request recipient is customer and that contains the requested product. If several shelves or shops are found to which the condition applies, One Identity Manager selects one of the shelves or shop, respectively, to relocate.

The complete approval sequence is shown in the approval history.

To obtain a product's requests on relocation

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

   - OR -

   In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.
2. Select the service item in the result list.
3. Select the **Change master data** task.
4. Set the **Retain service item assignment on relocation** option.
5. Save the changes.

Non-requestable products

Products that have already been requested but can only be requested for a limited period, can be specially labeled for it. Existing request for the product remain intact. However, no new requests may be made for the product.

To label a product as not requestable

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.
2. Select the product's service item in the result list.
3. Select the **Change master data** task.
4. Set **Not available**.
5. Save the changes.

Entering terms of use

Terms of use that explain conditions of use for a product can be stored for individual service items (for example, software license conditions). When someone requests this product, the requester, and request recipient must accept the terms of use before the request can be finalized.

To add or edit terms of use

1. In the Manager, select the **IT Shop | Service catalog | Terms of use** category.
2. In the result list, select a terms of use and run the **Change master data** task.

   - OR -

Click in the result list.

3. Edit the terms of use master data.
4. Save the changes.

Enter the following properties for the terms of use.

Table 13: General master data for terms of use

Property	Meaning
Terms of use	Name of the terms of use.
Description	Text field for additional explanation.
Contents	Full text of the terms of use.

In order for the request recipient to accept the terms of use, the request must be assigned to the request recipient in the approval process. Set an approval workflow for such requests that contain a BR approval step and enable the **No automatic approval** option for this approval step. One Identity Manager provides a default approval procedure and a **Terms of Use acknowledgment for third-party orders (sample)** default approval policy that you can use for this.

Related topics

- Approving requests with terms of use on page 139

Additional tasks for terms of use

After you have entered the master data, you can run the following tasks.

The terms of use overview

You can see the most important information about a tag on the overview form.

To obtain an overview of the terms of use

1. In the Manager, select the **IT Shop | Service catalog | Terms of use** category.
2. Select the terms of use in the result list.
3. Select the **Terms of use overview** task.

Assigning service items

Specify the products to which the terms of use apply. Assign service items to the terms of use to do this.

To assign service items to the terms of use

1. In the Manager, select the **IT Shop | Service catalog | Terms of use** category.
2. Select the terms of use in the result list.
3. Select the **Assign service items** task.

   In the **Add assignments** pane, assign service items.

   > TIP: In the **Remove assignments** pane, you can remove service item assignments.
   >
   > ***To remove an assignment***
   >
   > - Select the service item and double-click .
4. Save the changes.

Entering tags

Product owners are able to add tags to their products. These tags can be used as search criteria by requests in the Web Portal. There are two ways of adding tags.

To add or edit a tag

1. In the Manager, select the **IT Shop | Basic configuration data | Tags** category.
2. In the result list, select a tag and run the **Change master data** task.

   - OR -

   Click in the result list.
3. Edit the tag data.
4. Save the changes.

Enter the following data for a tag.

Table 14: General master data for a tag

Property	Meaning
Tag	Tag.
Description	Tag description.
Comment	Text field for additional explanation.
Parent tag	Tags can be organized hierarchically. Assign a parent tag to do this.

To add a tag directly to a product

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

   - OR -

   In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.
2. Select the service item in the result list.
3. Select the **Assign tag** task.
4. Select the **Create tag** task.
5. Enter the tag and a description for it.
6. Click **Ok** to save the tag.

   The new tag is shown on the assignment form.
7. Double-click on the tag to assign it to the selected service item.
8. Save the changes.

Additional tasks for tags

After you have entered the master data, you can run the following tasks.

The tags overview

The overview form contains the most important information about a tag.

To get an overview of a tag

1. In the Manager, select the **IT Shop | Basic configuration data | Tags** category.
2. Select a tag in the result list.
3. Select the **Tag overview** task.

Assigning service items

Assign service items to the tags so that you can use the tags as search terms in the Web Portal. The Web Portal finds all the requestable service items assigned to a tag.

To assign a tag to a service item

1. In the Manager, select the **IT Shop | Basic configuration data | Tags** category.
2. Select a tag in the result list.
3. Select the **Assign service items** task.

In the **Add assignments** pane, assign service items.

> TIP: In the **Remove assignments** pane, you can remove service item assignments.
>
> ***To remove an assignment***
>
> - Select the service item and double-click .

4. Save the changes.

Assigning and removing products

Once you have prepared the product to be requested, assign it to a shelf or a shelf template. A shelf has several tasks available for assigning and removing products.

> NOTE: The tasks are only displayed if the **Assignments permitted** and **Direct assignment permitted** options are enabled for the **IT Shop structure** or **IT Shop template** role classes.

Table 15: Tasks for assigning and removing requestable products

Products	Task
Software	Assign software
Resources	Assign resource
Multi-request resources	Assign resource
Multi-requestable/unsubscribable resources	Assign resource
System roles	Assign system roles
Groups of custom target systems	Assign groups of custom target systems
Active Directory groups	Active Directory Assign groups
Azure Active Directory permissions	Azure Active Directory Assign groups Azure Active Directory Assign administrator roles Azure Active Directory assign subscriptions Assigning disabled Azure Active Directory service plans
SharePoint permissions	SharePoint Assign groups
	Assign SharePoint roles
LDAP groups	LDAP Assign groups

Products	Task
IBM Notes groups	Notes Assign groups
SAP R/3 permissions	Assign BI analysis authorizations
	SAP Assign groups
	Assign SAP profiles
	Assign SAP roles
	Assigning structural profiles
E-Business Suite permissions	Assign E-Business Suite authorizations
Exchange Online permissions	Assign Exchange Online mail-enabled distribution groups Office 365 Assign groups
Privileged Account Management permissions	Assign PAM user groups
SharePoint Online permissions	SharePoint Online Assign groups Assign SharePoint Online roles
G Suite permissions	G Suite Assign groups G Suite Assign products and SKUs
Unix groups	Unix Assign groups
Cloud groups	Assign cloud groups
Subscribable reports	Assign subscribable reports
Assignment resources	Assign resource
Account definitions	assign account definition

Detailed information about this topic

- Role classes for the IT Shop on page 178

Assigning products to shelves

There are different tasks available for assigning a single product from a shelf. The following example based on a resource shows you how to assign individual products.

To assign a resource to the Identity Lifecycle shelf as a product

1. In the Manager, select the **IT Shop | IT Shop | Identity & Access Lifecycle | Shelf: Identity Lifecycle** category.
2. Select the **Assign resources** task.
3. In the **Add assignments** pane, assign resources.
4. Save the changes.

Products are automatically assigned to shelves at the same time, if:

- Groups are automatically added to the IT Shop
- Rule templates are used to set up the IT Shop

Use the DBQueue Processor inheritance mechanism and subsequent post-processing to create a separate product node for each assigned product within the shelf. These product nodes are displayed with the name of the product’s service item. If products are added in bulk to the IT Shop by automatic processes, you can specify how many product nodes are created in one DBQueue Processor run in the **QER | ITShop | LimitOfNodeCheck** configuration parameter. Once this number has been exceeded, the task is closed and queued again in the DBQueue for generating the rest of the product nodes. By default, 500 objects are processed in one run.

Related topics

- Adding Active Directory and SharePoint groups to the IT Shop automatically on page 69
- Templates for automatically filling the IT Shop on page 197

Removing products from shelves

There are different tasks available for removing a product from a shelf. In the following section, we take the example of a resource to show how to remove a product.

To remove a resource from the Identity Lifecycle shelf

1. In the Manager, select the **IT Shop | IT Shop | Identity & Access Lifecycle | Shelf: Identity Lifecycle** category.
2. Select the **Assign resources** task.
3. Remove the resource from **Remove assignments**.
4. Save the changes.

When you remove a product from a shelf, pending requests for the product are closed and approved requests are unsubscribed.

To remove a product from all shelves

- Select the **Remove from all shelves** task.

  You will find the task on the master data form of the respective product, for example, a resource.

The task immediately removes product assignments to manually configured shelves and shelf templates. Then, the DBQueue Processor removes product assignments to shelves, based on a template definition. All assignments are unsubscribed if the product is part of an assignment request.

Information on bulk processing

If products are added in bulk to the IT Shop by automatic processes, you can specify how many product nodes are created in one DBQueue Processor run in the **QER | ITShop | LimitOfNodeCheck** configuration parameter. Once this number has been exceeded, the task is closed and queued again in the DBQueue for generating the rest of the product nodes. By default, 500 objects are processed in one run. The number of requests submitted in bulk can be considerably larger than other processes.

Set a lower value if performance issues arise when executing the `QER-K-OrgAutoChild` process task.

Moving products to another shelf

A product can be moved to another shelf. If the shelf is in another shop, the system checks whether the request recipient is also a customer in the new shop.

To move a product to another shelf

NOTE: Standard products cannot be moved.

1. In the Manager, select the **IT Shop | IT Shop | <shop> | Shelf: <shelf>** category.
2. Select an object in the result list.
3. Select the **Move to another shelf** task.
4. Select the new shelf.
5. Click **OK**.

Detailed information about this topic

- Product request on customer or product relocation on page 40

Replacing products

A product can be replaced by another product at a specified time. All employees who have requested this product are notified by an email telling them to request a replacement product.

To replace a product with another one

1. In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | <service category>** category.

   - OR -

   In the Manager, select the **IT Shop | Service catalog | Hierarchical by service categories | Singles** category.
2. Select the product's service item to replace in the result list.
3. Select the **Change product** task.
4. Enter the following data:
   - **Expiry date**: Date on which the product is replaced by a different product.
   - **Alternative product**: Service item that can be requested instead.
5. Click **OK**.

Related topics

- Product change notifications on page 166

Preparing the IT Shop for multi-factor authentication

You can use multi-factor authentication for specific security-critical resource requests, which requires every requester or approver to enter a security code for the request or request approval. Define which products require this authentication in your service items.

Use One Identity Manager One Identity Starling Two-Factor Authentication for multi-factor authentication. The authentication information required is defined in the subparameters under the **QER | Person | Starling** or the **QER | Person | Defender** configuration parameter. For detailed information about setting up multi-factor authentication, see the *One Identity Manager Authorization and Authentication Guide*.

To use multi-factor authentication in the IT Shop

1. Set up multi-factor authentication as described in the *One Identity Manager Authorization and Authentication Guide*.

2. In the Manager, create service items for the product that can only be requested with multi-factor authentication.
    - Enable the **Approval by multi-factor authentication** option.

    TIP: If the requester is also going to use multi-factor authentication, assign terms of use to the service item. For more information, see Using multi-factor authentication for requests on page 50.

IMPORTANT: An approval cannot be sent by email if multi-factor authentication is configured for the requested product. Approval mails for such requests produce an error message.

For more information about requesting products requiring multi-factor authentication and about canceling products, see the *One Identity Manager Web Portal User Guide*.

Related topics

- General master data for a service item on page 21
- Approval by mail on page 167

Using multi-factor authentication for requests

Multi-factor authentication can be implemented for requests as well as for request approvals.

Once the **Approval by multi-factor authentication** option is enabled for a service item, a security code is requested in every decision step of the approval process. This means that every approver who makes approval decisions about this product must have a Starling 2FA token.

To enable the requester to use multi-factor authentication, you can assign terms of use to the service item, as well. The requester must enter the security code when they confirm the terms of use. The request recipient must also enter a security code if the approval workflow is accordingly configured. For more information, see Approving requests with terms of use on page 139.

Table 16: Variations of multi-factor authentication for making requests in the IT Shop

Active approval policy	Terms of use	Security code is requested from	
		Requester	Approver
Self-service	None		
Self-service	Assigned	x	
No self-service	None		x
No self-service	Assigned	x	x

Related topics

- Entering terms of use on page 41

Assignment requests and delegating

You can also use One Identity Manager to request hierarchical roles, like departments, or business roles, through the IT Shop and assign them to employees, devices, and workdesks. This allows any number of assignments to be made through IT Shop requests. The advantage of this method is that any assignments can be authorized using an approval process. Assignment renewals and assignment recall are also subject to an approval process in the same way. The request history makes it possible to follow which assignments were requested, renewed, or canceled, why, when, and by whom.

Managers of hierarchical roles can make assignment requests for their roles.

Delegation is a special type of assignment request. This allows an employee to pass on a role assignment to another person for a limited period of time. Delegations are also subject to a fixed approval process.

Hierarchical role managers can view the role assignment requests they manage in the Web Portal. Use the **QER | ITShop | ShowClosedAssignmentOrders** configuration parameter to specify whether all assignment requests are displayed or only open ones. By default, pending as well as closed assignment requests are displayed.

To only display a manager's pending assignment requests in the Web Portal

- Disable the **QER | ITShop| ShowClosedAssignmentOrders** configuration parameter in the Designer.

Standard products for assignment requests and delegation

You require special resources for assignment requests and delegation, also called assignment resources. Assignment resources are linked to service items and can thus be made available as products in the IT Shop.

One Identity Manager provides standard products for assignment requests and delegation. These are used to:

- Request membership in business roles or organizations for which the logged-in One Identity Manager user is responsible.
- Order assignments of system entitlements or other company resources to business roles or organizations for which the logged in One Identity Manager user is responsible.
- Delegate responsibilities or memberships in hierarchical roles.

Table 17: Standard products for assignment requests and delegation

Assignment resource	Service item	Shop | Shelf	Request
Members in roles	Members in roles	Identity & Access Lifecycle | Identity Lifecycle	Memberships in business roles, application roles and organizations
Role entitlement assignments	Role entitlement assignments		Assignment of company resources to business roles and organizations
Delegation	Delegation		Delegations

In the default installation, all active One Identity Manager database employees are customers of the **Identity & Access Lifecycle** shop. This allows all active employees to request memberships and assignments or delegate roles. Assignment requests with default products are automatically approved through self-service and delegation.

You can add default products for assignment requests and delegations to your own IT Shop.

Assignments can only be requested from and for customers of this shop. This means, the manager of the hierarchical roles as well as the employees that are also members of these roles, must be customers in the shop. The same applies to delegation.

TIP: Assignment requests can also be made for custom assignment tables (many-to-many tables), if they have an `XOrigin` column. The properties for this column must correspond to the column definition for `XOrigin` columns in the One Identity Manager data model.

Example for an assignment request

Clara Harris is the project X project leader. A business role (Project X) is added in the Manager to ensure that all the project staff obtain the necessary entitlements. Clara Harris is assigned as manager of this business role. All project staff have a user account in the Active Directory domain P.

Clara Harris can request memberships in the Project X business role in the Web Portal because she is a manager. Clara Harris requests memberships for herself and all project staff.

Furthermore, Clara Harris wants all project staff to obtain their entitlements in Active Directory through the Project X AD permissions Active Directory group. To this, she requests Project X AD permissions in the Web Portal for the Project X business role.

The user accounts of all project staff become members in the Project X AD permissions Active Directory group through internal inheritance processes.

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

Detailed information about this topic

- Preparing for delegation on page 56

Related topics

- Examples of request results on page 229

Requesting memberships in business roles

Installed modules: Business Roles Module

You have the option to limit assignment requests to single business roles. To do this, an assignment resource is created for a fixed requestable business role. The business role is automatically part of the request in an assignment resource request. If the request has been approved, the requester becomes a member of the application role.

Each requestable business role of this kind can have its own approval process defined. The service items connected with the assignment resources are assigned separate approval policies in order to do this.

To limit assignment requests to single business roles

1. In the Manager, select **Business roles | <role class>** category.
2. Select the business role in the result list.
3. Select the **Create assignment resource** task.

   This starts a wizard that takes you through the steps for adding an assignment resource.

   a. Enter a description and allocate a resource type.

      This creates a new assignment resource with the following custom properties:

      - **Table**: Org
      - **Object**: Full name of business role

   b. Enter the service item properties to allocate to the assignment resource.

      - Assign a service category so that the assignment resource in the Web Portal can be ordered using the service category.

      A new service item is created and linked to the assignment resource.
4. Assign the assignment resource to an IT Shop shelf as a product.
5. Assign an approval policy to the shelf or the assignment resource’s service item.

Assignment resource and service item master data can be processed later on if required.

The assignment resource can be requested in the Web Portal like any other company resource. After the request has been successfully assigned, the employee for whom it was requested becomes a member of the associated business role through internal inheritance processes. For more detailed information about requesting assignment resources, see the *One Identity Manager Web Portal User Guide*.

The assignment resource cannot be used to request the assignment of company resources to this business role. Instead, use the **Role entitlement assignment** default assignment resource.

Related topics

- Adding assignment resources to the IT Shop on page 62
- General master data for a service item on page 21
- Assigning requestable products to shelves on page 190
- Setting up assignment resources on page 59
- Entering service items on page 20

Requesting memberships in application roles

You have the option to limit assignment requests to single business roles. To do this, an assignment resource is created for a fixed requestable application role. The application role then automatically becomes part of the assignment resource request. If the request is approved, the requester becomes a member of the application role.

Each requestable application role of this kind can have its own approval process defined. The service items connected with the assignment resources are assigned separate approval policies in order to do this.

To limit assignment requests to single application roles

1. In the Manager, select an application role in the **One Identity Manager Administration** category.
2. Select the **Create assignment resource** task.

   This starts a wizard, which takes you through adding an assignment resource.

   a. Enter a description and allocate a resource type.

      This creates a new assignment resource with the following custom properties:

      - **Table**: AERole
      - **Object**: Full name of application role

   b. Enter the service item properties to allocate to the assignment resource.

      - Assign a service category so that the assignment resource in the Web Portal can be ordered using the service category.

      A new service item is created and linked to the assignment resource.
3. Assign the assignment resource to an IT Shop shelf as a product.
4. Assign an approval policy to the shelf or the assignment resource's service item.

Assignment resource and service item master data can be processed later on if required.

The assignment resource can be requested in the Web Portal like any other company resource. After the request has been successfully assigned, the employee for whom it was requested becomes a member of the associated application role through internal inheritance processes. For more detailed information about requesting assignment resources, see the *One Identity Manager Web Portal User Guide*.

Related topics

- Adding assignment resources to the IT Shop on page 62
- General master data for a service item on page 21
- Assigning requestable products to shelves on page 190
- Setting up assignment resources on page 59
- Entering service items on page 20

Customizing assignment requests

Assignment requests with standard products are automatically approved through self-service. If assignment requests are going to be approved by an approval supervisor, assign a suitable approval policy to the default assignment resource. This means that assignment requests also go through the defined approval process.

To approve assignment requests through an approver

- Assign separate approval policies to the default assignment resources service items.

  \- OR -

- Assign any approval policy to the **Identity Lifecycle** shelf.

Sometimes assignment requests should be subject to various approval processes depending on the object requested. For example, a department manager should approve department assignment, but department membership should be approved by the employee's manager. You can define assignment resources to do this. You can assign these assignment resources to any shelf in your IT Shop.

> NOTE: To use these assignment resources, you must make more modifications to the Web Designer configuration.

To configure custom assignment requests

1. Create a new assignment resource.
    a. In the Manager, select the **Entitlements | Assignment resource for IT Shop** category.
    b. Click in the result list.
    c. Select the **Change master data** task.
    d. Enter the assignment resource name.

e. Assign a new service item.
f. Save the changes.

2. Assign the assignment resource to an IT Shop shelf as a product.
   a. Select the **Add to IT Shop** task.
   b. In the **Add assignments** pane, assign a shelf.
   c. Save the changes.
3. Assign an approval policy to the shelf or the assignment resource's service item.
4. In the Web Designer, configure usage of the assignment resource.

   For more detailed information, see the *One Identity Manager Web Designer Reference Guide*.

Detailed information about this topic

- General master data for an assignment resource on page 60
- Adding assignment resources to the IT Shop on page 62
- General master data for a service item on page 21
- Assigning requestable products to shelves on page 190
- Assigning approval policies on page 189

Related topics

- Approval processes for IT Shop requests on page 73

Preparing for delegation

Delegation is a special type of assignment request. It allows an employee to temporarily pass on responsibilities or a role assignment to another person.

To run delegation in One Identity Manager

- In the Designer, set the **QER | ITShop | Delegation** configuration parameter.

Delegations are also subject to a fixed approval process. For delegations, you need a separate **Delegation** assignment resource. In the standard installation, this already exists as a product in the **Identity Lifecycle** shop on **Identity Lifecycle** shelf.

The following objects in the standard installation can be delegated.

Membership in:	Business roles
	Application roles
Responsibilities for:	Departments

- Cost centers
- Locations
- Business roles
- Employees
- IT Shop Structures (owner)

TIP: Specify the role classes associated to business roles for which memberships can be delegated. This option is available when the Business Roles Module is installed.

Delegation only takes effect if the delegated membership or responsibility does not yet exist.

Example

Jenny Basset is member of the Project X business role. She delegates this membership to Jan Bloggs. Jan Bloggs is also a member of this business role. The delegation is saved but is not yet in effect. After Jan Bloggs loses his membership in the business role, delegation takes effect. This way Jan Bloggs remains a member in the business role. After delegation is canceled, Jan Bloggs is removed from the business role.

To permit delegation of a role class

1. Select the **Business roles | Basic configuration data | Role classes** category.
2. Select the role class in the result list.
3. Select the **Change master data** task.
4. Set **Delegable**.
5. Save the changes.

Use the Web Portal to delegate roles or responsibilities. For detailed information, see the *One Identity Manager Web Portal User Guide* and the *One Identity Manager Business Roles Administration Guide*.

Canceling assignments and delegations

Assignments and delegations can, like all other products, be canceled through the Web Portal. You should limit the delegation time period when you make the request. These requests are automatically canceled when the validity period expires. For more detailed information, see the *One Identity Manager Web Portal User Guide*.

Detailed information about this topic

- Requests with limited validity period on page 149

Removing customers from a shop

If a customer has requested assignments through a shop or has delegated role memberships and is removed from the shop at a later date, the assignment request is closed and the assignments revoked or delegation ended. In this case, however, assignments to roles should be retained if required.

To prevent the assignment from being revoked

1. In the Designer, set the **QER | ITShop | ReplaceAssignmentRequestOnLeaveCU** configuration parameter.
2. (Optional) Enable the **QER | ITShop | ReplaceAssignmentRequestOnLeaveCU | UID_PersonFallback** configuration parameter in the Designer.
    - In the **Value** field, enter the `UID_Person` of the person that should be used as the fallback if no other request recipient can be found.

      This person must be a customer in all shops in which which assignments can be requested.
3. Save the changes.
4. In the Manager, select the **Entitlements | Assignment resource for IT Shop** category.
5. In the result list, select an assignment resource and select the **Change master data** task.
6. Set the **Keeps requested assignment resource** option.
7. Save the changes.

This option is enabled by default for the **Role entitlement assignment** default assignment resource. These configuration parameters are disabled by default.

If this option is enabled and the request recipient is removed from the customer node, then the request is updated according to the following rules:

1. If the service item
    - Has the **Retain service item assignment on relocation** option set
    - The request recipient and service item are available in another shop

   The assignment request is transferred into this shop. The request recipient remains the same.
2. If by doing this the request recipient does not remain the same, then a new request recipient is determined.

a. The manager of the business role or organization that has been requested (`PersonWantsOrg.ObjectKeyOrgUsedInAssign`).

b. A member of the business role or organization that has been requested.

c. A member of the chief approval team.

d. The employee given in the **QER | ITShop | ReplaceAssignmentRequestOnLeaveCU | UID_PersonFallback** configuration parameter.

These rules are applied in the order given. The person who is found must be a customer in the shop.

If no authorized approver can be found or the **QER | ITShop | ReplaceAssignmentRequestOnLeaveCU** configuration parameter is disabled, then the assignment request is converted into a direct assignment. If direct assignment for the assigned product is not permitted to the requested business role or organization, the request is canceled and the assignment is removed.

> NOTE: This option does not influence membership requests in roles or delegation.
>
> Membership assignments are not removed, if the requester is removed from the customer node. They are removed when the recipient of the assignment request is deleted from the customer node.
>
> Delegation ends when the delegate is deleted from the customer node.

Related topics

- General master data for an assignment resource on page 60
- Relocating a customer or product to another shop on page 152

Setting up assignment resources

To edit an assignment resource

1. In the Manager, select the **Entitlements | Assignment resource for IT Shop** category.
2. In the result list, select an assignment resource and run the **Change master data** task.
3. Edit the assignment resource's master data.
4. Save the changes.

To create an assignment resource

1. In the Manager, select the **Entitlements | Assignment resource for IT Shop** category.
2. Click in the result list.

3. Edit the assignment resource's master data.
4. Save the changes.

Detailed information about this topic

- General master data for an assignment resource on page 60

General master data for an assignment resource

Enter the following master data for an assignment resource.

Table 18: Master data for an assignment resource

Property	Description
Assignment resource	Name for the assignment resource.
Resource type	Resource type for grouping assignment resources. For detailed information, see *One Identity Manager Identity Management Base Module Administration Guide*.
IT Shop	Specifies whether the assignment resource can be requested through the IT Shop. The assignment resource can be ordered by an employee over the Web Portal and distributed using a defined approval process. This option cannot be disabled.
Only for use in IT Shop	Specifies whether the assignment resource can only be requested through the IT Shop. The assignment resource can be ordered by an employee over the Web Portal and distributed using a defined approval process. This means, the assignment resource cannot be directly assigned to roles outside the IT Shop. This option cannot be disabled.
Service item	Service item through which you can request the assignment resource in the IT Shop. Assign an existing service item or add a new one.
Table	Table where the assignment should be made. Assignment requests can be limited to a specific hierarchical role. Choose the table from which the role should be selected.
Object	Specific hierarchical role that employees can request. Only one assignment resource can be created per role.
Description	Text field for additional explanation.
Risk index	Value for evaluating the risk of assignment resource assignments to

Property	Description
	employees. Enter a value between 0 and 1. This input field is only visible if the **QER | CalculateRiskIndex** configuration parameter is set. For detailed information, see *One Identity Manager Risk Assessment Administration Guide*.
Requested assignments remain intact.	If this option is set, requested role assignments are converted into direct assignments if the request recipient is removed from the customer node of the associate shops. The option can only be edited as long as there is a request has not been assigned with this assignment resource.
Spare field no. 01 ... Spare field no. 10	Additional company-specific information. Use the Designer to customize display names, formats, and templates for the input fields.

Detailed information about this topic

- Entering service items on page 20
- Removing customers from a shop on page 58

Related topics

- Requesting memberships in business roles on page 53
- Requesting memberships in application roles on page 54

Default assignment resources

One Identity Manager provides standard products for assignment requests and delegation. These are assigned to the **Identity & Access Lifecycle** shop as default assignment resources.

To edit default assignment resources

- In the Manager, select the **Entitlements | Assignment resource for IT Shop | Predefined** category.

Additional tasks for managing assignment resources

After you have entered the master data, you can run the following tasks.

The assignment resource overview

Use this task to obtain an overview of the most important information about an assignment resource. For this, you need to take into account the affiliation of the assignment resource to IT Shop structures.

To obtain an overview of a service item

1. In the Manager, select the **Entitlements | Assignment resource for IT Shop** category.
2. Select the assignment resource in the result list.
3. Select the **Assignment resource overview** task.

Adding assignment resources to the IT Shop

An assignment resource can be requested by shop customers when it is assigned to an IT Shop shelf.

To add a resource assignment to the IT Shop

1. In the Manager, select the **Entitlements | Assignment resource for IT Shop** category.
2. Select the assignment resource in the result list.
3. Select the **Add to IT Shop** task.
4. In the **Add assignments** pane, assign the assignment resource to the IT Shop shelves.
5. Save the changes.

Removing assignment resources from the IT Shop

To remove an assignment resource from all IT Shop shelves.

1. Select the **Entitlements | Assignment resource for IT Shop** category.
2. Select the assignment resource in the result list.
3. Select the **Add to IT Shop** task.
4. In the **Remove assignments** pane, remove the assignment resource from the IT Shop shelves.
5. Save the changes.

To remove an assignment resource from all IT Shop shelves.

1. Select the **Entitlements | Assignment resource for IT Shop** category.
2. Select the assignment resource in the result list.
3. Select the **Remove from all shelves (IT Shop)** task.

4. Confirm the security prompt with **Yes**.
5. Click **OK**.

   The One Identity Manager Service removes the assignment resource from all shelves. All assignment requests with this assignment resource are canceled in the process.

Creating IT Shop requests from existing user accounts, assignments, and role memberships

You can create One Identity Manager requests for existing user accounts, membership in system entitlements, assignments to employees, and hierarchical roles when IT Shop goes into operation. One Identity Manager provides several methods to implement this. Using these methods, requests are created that are completed and approved. These requests can therefore be canceled at a later date. In addition to the initial request data, you can run a custom script from each method that sets other custom properties for a request.

Table 19: Methods for transforming direct assignments into requests

Method	Description
CreateITShopOrder (string CustomScriptName)	Creates a request from a direct assignment. This method can be applied to all tables used to find a `UID_Person`.
CreateITShopOrder (string uidOrgProduct, string uidPersonOrdered, string CustomScriptName)	Creates an assignment request from an assignment or membership. This method can be applied to all tables that cannot be used to find a `UID_Person`.
CreateITShopOrder (string uidOrgProduct, string uidWorkdeskOrdered, string uidPersonOrdered, string CustomScriptName)	Creates an assignment request from an assignment or membership and, in addition, saves a `UID_WorkdeskOrdered` with the request procedure.
CreateITShopWorkdeskOrder (string uidPerson, string CustomScriptName)	Creates a request for a workdesk from a direct assignment. This method can be applied to the `WorkDeskHasApp`, `WorkDeskHasESet` and `WorkDeskHasDriver` tables.

To run the methods

1. Create a script in the Designer with the Script Editor to call the desired method.

   You can find an example script for calling a Customizer method in VB syntax on the One Identity Manager installation medium in the `Modules\QBM\AddOn\SDK\ScriptSamples\03 Using database objects\11 Call database object methods.vb` directory. You can use this example script as a template to create a script for call the methods described here.
2. Run the script.

   You can use the script test from the Script Editor to do this.

For more information about creating scripts, see the *One Identity Manager Configuration Guide*.

Creating requests for employees

You can create requests for employees or memberships in system entitlements with `CreateITShopOrder (string CustomScriptName)`. Prepare the IT Shop accordingly in order to create the requests.

To create requests from direct assignments to employees or memberships in system entitlements

1. Prepare the company resources or system entitlements for use in the IT Shop.
2. Assign the company resources or system entitlements to a shelf in the IT Shop.
3. Link each user account for whose memberships requests are to be created with an employee.
4. Add employees as customers to shops to which the company resources or system entitlements are assigned as products.
5. (Optional): Create a script that populates other properties of the requests.
   - Pass the script name as a `CustomScriptName` parameter to the task.
6. Create a script to run `CreateITShopOrder (CustomScriptName string)` for the affected tables.

One Identity Manager creates requests from direct assignments to employees in the following way:

1. Determine employees and their assigned company resources.
2. Determine shops assigned to company resources and employees.
3. Create the requests with initial data.
4. Execute custom scripts.
5. Save the requests (entry in the `PersonWantsOrg` table).

6. Assign employees to the product structure (entry in `PersonInITShopOrg` table).
7. Transform direct company resource assignments into indirect assignments to employees (for example, in the `PersonHasQERResource` table).

One Identity Manager creates requests for memberships in system entitlements in the following way:

1. Establish the user accounts and their memberships.
2. Determine the affected employees.
3. Determine the shops to which employees and the system entitlements are assigned.
4. Create the requests with initial data.
5. Execute custom scripts.
6. Save the requests (entry in the `PersonWantsOrg` table).
7. Assign employees to the product structure (entry in `PersonInITShopOrg` table).
8. Transform direct company memberships into indirect memberships for affected user accounts (for example, in the `ADSAccountInADSGroup` table).

Related topics

- Preparing products for requesting on page 19

Creating user account requests

To assign user accounts to employees, use One Identity Manager account definitions. You can request matching account definitions for existing user accounts linked to the employees through the IT Shop. To create these requests, you can use `CreateITShopOrder (string CustomScriptName)`. This method can be used for all user account tables (for example, `ADSAccount` or `SAPUser`) and for the `ADSContact`, `EX0MailBox`, `EX0MailContact`, and `EX0MailUser`.

Prepare the IT Shop accordingly in order to create the requests.

To create requests for user accounts

1. Create an account definition for the target system. Assign the account definition to the target system.
2. Prepare the account definition for use in the IT Shop.
3. Assign the account definition to a shelf in the IT Shop.
4. Link the user account to an employee.
5. Add employee as customers to shops to which the account definition is assigned as product.
6. (Optional): Create a script that populates other properties of the requests.

- Pass the script name as a CustomScriptName parameter to the task.
7. Create a script that runs the method for the tables affected.

One Identity Manager creates requests for user accounts in the following way:

1. Determine the valid account definition.
2. Determine the affected employees.
3. Determine the shops to which employees and the account definition are assigned.
4. Create the requests with initial data.
5. Execute custom scripts.
6. Save the requests (entry in the PersonWantsOrg table).
7. Assign employees to the product structure (entry in PersonInITShopOrg table).
8. Transform any possible direct account definition assignments to indirect assignments (entry in PersonHasTSBAccountDef table).

Related topics

- Preparing products for requesting on page 19

Creating workdesk requests

Requests for workdesks are created with `CreateITShopWorkdeskOrder (string uidPerson, string CustomScriptName)`. Prepare the IT Shop accordingly in order to create the requests.

To create requests from assignments to workdesks

1. Prepare the company resources (software, system role, or driver) for use in the IT Shop.
2. Assign the company resources to a shelf in the IT Shop.
3. Select an employee as requester for the assignment to workdesks.
   - Pass this employee's UID_Person as a uidPerson parameter to the task.
4. Add the selected employee as a customer to the shops to which the company resources are assigned as products.
5. (Optional): Create a script that populates other properties of the requests.
   - Pass the script name as a CustomScriptName parameter to the task.
6. Create a script to run `CreateITShopWorkdeskOrder (string uidPerson, string CustomScriptName)` for the affected tables.

One Identity Manager creates requests for workdesk requests in the following way:

1. Determine workdesks and their assigned company resources.
2. Determine requester from the uidPerson parameter.

3. Determine shops assigned to company resources and requester.
4. Create the requests with initial data.
5. Execute custom scripts.
6. Save the requests (entry in the `PersonWantsOrg` table).
7. Assign employees to the product structure (entry in `PersonInITShopOrg` table).
8. Transform direct company resource assignments into indirect assignments to workdesks (for example, in the `WorkDeskHasApp` table).

Related topics

- Preparing products for requesting on page 19

Creating assignment requests

You can create assignment requests for existing company resource assignments to hierarchical roles and for memberships of employees, devices, or workdesks in hierarchical roles. The following methods are available.

Table 20: Methods for transforming direct assignments into assignment requests

Method	Description
CreateITShopOrder (string uidOrgProduct, string uidPersonOrdered, string CustomScriptName)	Creates an assignment request from an assignment or membership. This method can be applied to all tables which cannot be used to find a `UID_Person`.
CreateITShopOrder (string uidOrgProduct, string uidWorkdeskOrdered, string uidPersonOrdered, string CustomScriptName)	Creates an assignment request from an assignment or membership and, in addition, saves a `UID_WorkdeskOrdered` with the request procedure.

Prepare the IT Shop accordingly in order to create the requests.

To create assignment requests from direct assignment to hierarchical roles and role memberships

1. Select an assignment resource from the **IT Shop | Identity & Access Lifecycle | Shelf: Identity Lifecycle** shelf.
    - Pass the product's `UID_ITShopOrg` as the `uidOrgProduct` parameter to the method.

2. Select an employee from the customer node of the **IT Shop | Identity & Access Lifecycle** shop as a requester for the assignment request.

    - Pass this employee's `UID_Person` as a `uidPersonOrdered` parameter to the method.

3. (Optional): Create a script that populates other properties of the requests.

    - Pass the script name as a `CustomScriptName` parameter to the method.

4. Create a script to run the `CreateITShopOrder (string uidOrgProduct, string uidPersonOrdered, string CustomScriptName)` method for the affected tables.

TIP: You can also create your own assignment resource and assign it to a shelf in any shop. Select an employee as requester for the assignment request from this shop's customer node. For more information, see Customizing assignment requests on page 55.

One Identity Manager creates assignment requests from existing assignments to hierarchical roles as follows:

1. Determine the hierarchical roles and their assigned company resources and employees (employees, devices, or workdesks).
2. Determine the requester from the `uidPersonOrdered` parameter.
3. Determine the assignment resource from the `uidOrgProduct` parameter.
4. Determine shops assigned to the assignment resource and requester.
5. Create the requests with initial data.
6. Execute custom scripts.
7. Save the requests (entry in the `PersonWantsOrg` table).
8. Transform direct company resource assignments to hierarchical roles into indirect assignments to workdesks (for example, in the `DepartmentHasQERResource`) table. Transform direct company memberships to hierarchical roles into indirect memberships (for example, in the `PersonInDepartment`) table.

If the assignment request is to be created for a workdesk, pass the method the workdesk's `UID_WorkDesk` as `uidWorkdeskOrdered` parameter. The method saves this UID as `UID_WorkdeskOrdered` in the request (`PersonWantsOrg` table).

Detailed information about this topic

- Standard products for assignment requests and delegation on page 51

Related topics

- Preparing products for requesting on page 19

Adding Active Directory and SharePoint groups to the IT Shop automatically

Table 21: Configuration parameter for automatically add groups in the IT Shop

Configuration parameter	Description
QER | ITShop | GroupAutoPublish	Preprocessor-relevant configuration parameter for automatically adding groups to the IT Shop. This configuration parameter specifies whether all Active Directory and SharePoint target system groups are automatically added to the IT Shop. Changes to this parameter require the database to be recompiled. In effect in modules: SharePoint Module, Active Directory Module, Active Roles Module
QER | ITShop | GroupAutoPublish | ADSGroupExcludeList	This configuration parameter contains a list of all Active Directory groups for which automatic IT Shop assignment should not take place. Names are listed in a pipe (|) delimited list that is handled as a regular search pattern. Example: `.*Administrator.*|Exchange.*|.*Admins|.*Operators|IIS_IUSRS` In effect in modules: Active Directory Module, Active Roles Module
TargetSystem | ADS | ARS_SSM	Preprocessor-relevant configuration parameter for controlling the database model components for Active Roles Self-Service Management in the One Identity Manager IT Shop. If the parameter is set, Self-Service Management components are available. Changes to this parameter require recompilation of the database. In effect in module: Active Roles Module

To add groups automatically to the IT Shop

1. In the Designer, set the configuration parameter for automatically adding groups to the IT Shop depending on existing modules.
2. Compile the database.

The groups are added automatically to the IT Shop from now on.

- Synchronization ensures that the groups are added to the IT Shop. If necessary, you can manually start synchronization with the Synchronization Editor.
- New groups created in One Identity Manager are added to the IT Shop.

The following steps are run to add a group to the IT Shop.

1. A service item is determined for the group.

   The service item is tested and modified for each group as required. The service item name corresponds to the name of the group. The service item is assigned to one of the default service categories.

   - The service item is modified for groups with service items.
   - Groups without service items are allocated new service items.

2. An application role for product owners is determined and the service item is assigned. Product owners can approve requests for membership in these groups. By default, the group's account manager or owner is established as the product owner.

   NOTE: The application role for the product owner must be added under the **Request & Fulfillment | IT Shop | Product owner** application role.

   - If the account manager or owner of the group is already a member of an application role for product owners, this application role is assigned to the service item. Therefore, all members of this application role become product owners of the group.
   - If the account manager or owner of the group is not yet a member of an application role for product owners, a new application role is created. The name of the application corresponds to the name of the account manager or owner.
     - If the account manager or owner is a user account, the user account's employee is added to the application role.
     - If it is a group of account managers or owners, the employees of all this group's user accounts are added to the application role.
   - If the group does not have an account manager or owner, the **Request & Fulfillment | IT Shop | Product owner | Without owner in AD/SharePoint** default application role is used.

3. The group is labeled with the IT Shop option and assigned to the **Active Directory Groups** or **SharePoint Groups IT Shop** shelf in the **Identity & Access Lifecycle** shop.

Then the shop customers can request group memberships through the Web Portal.

NOTE: When a One Identity Manager group is irrevocably deleted from the database, the associated service item is also deleted.

Related topics

- Entering service items on page 20
- Deleting unused application roles for product owners on page 71
- Product owners on page 183

Deleting unused application roles for product owners

The list of product owner application roles can quickly become confusing when groups are automatically added to the IT Shop. This is because an application role is added for each account manager. These application roles are no longer required when a groups are deleted.

Redundant application roles for product owners can be deleted through a scheduled process task. This deletes all the application role from the database for which the following applies:

- The parent application role is **Request & Fulfillment | IT Shop | Product owner**.
- The application role is not assigned to a service item.
- The application role is not assigned to a service category.
- The application role does not have members.

To delete application roles automatically

- In the Designer, configure and enable the **Cleans up application role "Request & Fulfillment | IT Shop | Product owners"** schedule.

Related topics

- Adding Active Directory and SharePoint groups to the IT Shop automatically on page 69
- Product owners on page 183

Adding Privileged Account Management user groups to the IT Shop automatically

Using the following steps, you can add local PAM user groups to the IT Shop automatically. Synchronization ensures that the user groups are added to the IT Shop. If necessary, you can manually start synchronization with the Synchronization Editor.

NOTE: Directory group are not added to the IT Shop automatically.

To add local PAM user groups to the IT Shop automatically

1. In the Designer, set the **QER | ITShop | PAGUsrGroupAutoPublish** configuration parameter.

   From this time on, local PAM user groups are added to the IT Shop automatically.

2. In order not to add local PAM user groups to the IT Shop automatically, in the Designer, set the **QER | ITShop | PAGUsrGroupAutoPublish | PAGUsrGroupExcludeList** configuration parameter.

   This configuration parameter contains a listing of all PAM user groups that should not be allocated to the IT Shop automatically.

   You can extend this list if required. To do this, enter the name of the user groups in the configuration parameter using a pipe (|) delimited list.

3. Assign the employees that are allowed to make approval decisions about local user group request to the **Request & Fulfillment | IT Shop | Product owners | PAM user groups** application role.

   The **Approval of PAM user group membership requests** approval policy establishes product owners of the user groups as approvers. If no product owners are found, the requests are presented to the target system managers for approval.

The following steps are executed to add a local PAM user group to the IT Shop automatically.

1. A service item is determined for the user group.

   The service item is tested for each user groups and modify is required. The service item name corresponds to the name of the group.

   - The service item is modified for groups with service items.
   - Groups without service items are allocated new service items.

2. The service item is assigned to the **PAM user groups** service category by default.
3. The **Request & Fulfillment | IT Shop | Product owners | PAM user groups** application role is assigned to the service item as the product owner.
4. The user group is labeled with the **IT Shop** option and assigned to the **PAM user groups** IT Shop shelf in the **Identity & Access Lifecycle** shop.

Then the shop customers can request group memberships through the Web Portal.

Related topics

- Product owners on page 183

2

Approval processes for IT Shop requests

All IT Shop requests are subject to a defined approval process. During this approval process, authorized employees grant or deny approval for the product assignments. You can configure this approval process in various ways and therefore customize it to meet your company policies.

You define approval policies and approval workflows for approval processes. Specify which approval workflows are going to be used for the request in the approval policies. Use approval workflows to specify which employee is authorized to grant or deny approval for the request at the time it was placed. An approval workflow can contain a number of approval levels, and this can, in turn, contain several approval steps, for example, when several management hierarchy layers need to give approval for a request. A special approval procedure is used to determine the approvers in each approval procedure.

In the default installation, different default approval policies are assigned to the **Identity & Access Lifecycle** shop. Therefore, requests from this shop are run through predefined approval processes. Assign an approval policy to the shop, the shelf or the service item of the **Identity & Access Lifecycle** shelf if requests from this shop should go through customized approval process.

Detailed information about this topic

- Approval policies for requests on page 73
- Approval workflows for requests on page 77
- Editing approval levels on page 82
- Default approval procedures on page 91

Approval policies for requests

One Identity Manager uses approval policies to determine the approver for each request process.

To edit an approval policy

1. Select the **IT Shop | Basic configuration data | Approval policies** category.
2. Select an approval policy in the result list and run the **Change master data** task.

   - OR -

   Click in the result list.
3. Edit the approval policy master data.
4. Save the changes.

General master data for approval policies

Enter the following master data for an approval policy. If you add a new approval step, you must fill out the compulsory fields.

Table 22: General master data for approval policies

Master data	Meaning
Approval policies	Approval policy name.
Role type	Role type to determine inheritance of approval policies within an IT Shop solution. Add the required role types in **IT Shop | Basic configuration data | Roles types** category.
Priority	An integral number with a maximum of one digit. A priority is used to decided which approval policy should be used if several approval policies are found to be valid following the given rules. The highest priority has the largest number.
Approval workflow	Workflow for determining approvers when a product is requested. Select any approval workflow from the menu or click to set up a new workflow.
Renewal workflow	Approval workflow for determining approvers when a product is renewed. Select any approval workflow from the menu or click to set up a new workflow. If no renewal workflow is specified, the approval workflow of the request is used when the request is renewed (`UID_SubMethodOrderProduct`).
Cancellation workflow	Approval workflow for determining approvers when a requested product is canceled. Select any approval workflow from the menu or click to set up a new workflow.

Master data	Meaning
	If there is no cancellation workflow given, cancellation is approved immediately.
Mail templates	Mail template used for creating email notifications for granting or denying approval for a request and extended, expired, or canceled requests.
Description	Text field for additional explanation.

Detailed information about this topic

- Determining the effective approval policies on page 89
- Role types for the IT Shop on page 179
- Setting up approval workflows on page 81
- Notifications in the request process on page 157

Default approval policies

One Identity Manager supplies service items by default. These approval policies are used in the **Identity & Access Lifecycle** shop approval processes. You can store mail templates with default approval policies for sending notifications during the request process and specifying a priority.

To edit default approval policies

- In the Manager, select the **IT Shop | Basic configuration data | Approval policies | Predefined** category.

Additional tasks for approval policies

After you have entered the master data, you can run the following tasks.

The approval policy overview

On the overview form, you see, at a glance, the most important information about an approval policy.

To obtain an overview of an approval policy

1. In the Manager, select the **IT Shop | Basic configuration data | Approval policies** category.
2. Select the approval policy in the result list.
3. Select the **Approval policy overview** task.

Adding to the IT Shop

You can assign approval policies to shops, shopping centers, or shelves. The approval policy is applied to the request from the respective IT Shop nodes if there are no approval policies assigned to child IT Shop nodes. For more information, see Determining the effective approval policies on page 89.

To assign an approval policy to shops, shopping centers, or shelves

1. In the Manager, select the **IT Shop | Basic configuration data | Approval policies** category.
2. In the result list, select the approval policy.
3. Select the **Add to IT Shop** task.

   In the **Add assignments** pane, assign the shops, shopping centers, or shelves.

   > TIP: In the **Remove assignments** pane, you can remove shop, shopping center, or shelf assignments.
   >
   > ***To remove an assignment***
   >
   > Select the shop, shopping center, or shelf and double-click ✅.
4. Save the changes.

Validity checking

Once you have edited an approval policy, you need to test it. This checks whether the approval steps can be used in the approval workflows in this combination. Non-valid approval steps are displayed in the error window.

To test an approval policy

1. In the Manager, select the **IT Shop | Basic configuration data | Approval policies** category.
2. Select the approval policy in the result list.
3. Select the **Validity check** task.

Editing approval workflows

You can edit approval workflow that are assigned an approval policy here.

To edit approval workflow properties

1. In the Manager, select the **IT Shop | Basic configuration data | Approval policies** category.
2. Select the approval policy in the result list.
3. To edit the approval workflow for requests, select task **1. Edit approval workflow**.
4. To edit the renewal workflow for requests, select task **2. Edit approval workflow**.
5. To edit the cancellation workflow, select task **3. Edit approval workflow**.
6. This opens the Workflow Editor.

Detailed information about this topic

- Working with the workflow editor on page 78

Approval workflows for requests

You need to allocate an approval workflow to the approval policies in order to find the approvers. In an approval workflow, you specify the approval procedures, the number of approvers and a condition for selecting the approvers.

Use the workflow editor to create and edit approval workflows.

To edit an approval workflow

1. In the Manager, select the **IT Shop | Basic configuration data | Approval workflows** category.
2. Select the approval workflow in the result list and run the **Change master data** task.

   - OR -

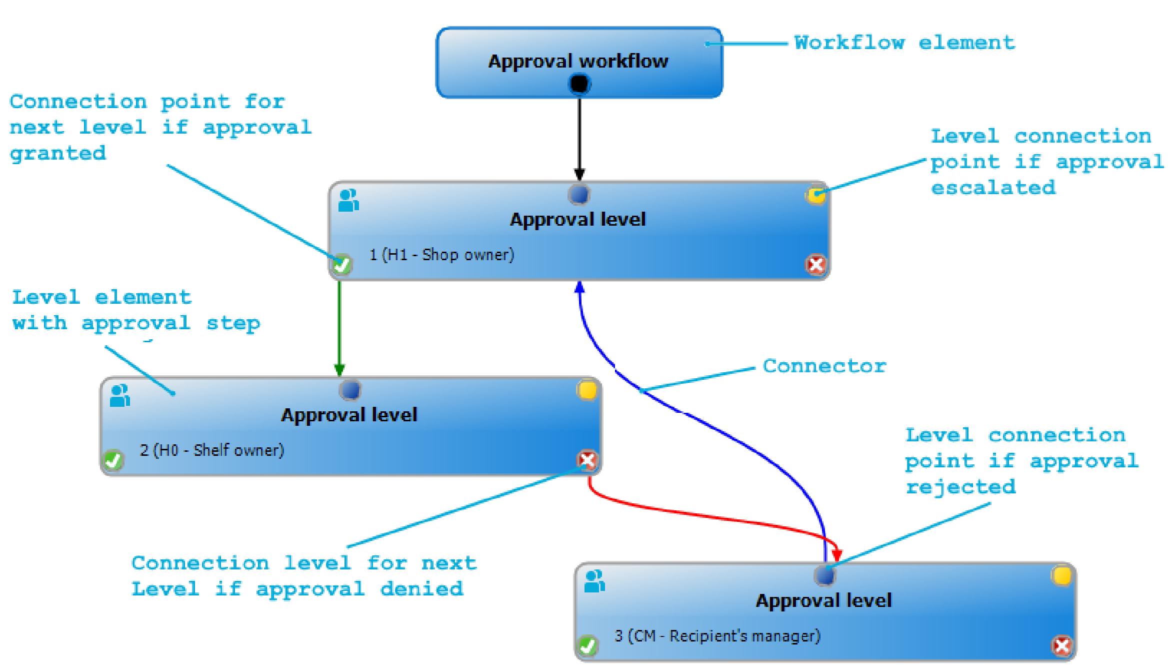
   Click in the result list.

   This opens the Workflow Editor.
3. Edit the approval workflow master data.
4. Save the changes.

Working with the workflow editor

Use the workflow editor to create and edit approval workflows. The workflow editor allows approval levels to be linked together. Multi-step approval processes are clearly displayed in a graphical form.

Figure 4: Workflow editor



Approval levels and approval steps belonging to the approval workflow are edited in the workflow editor using special control elements. The workflow editor contains a toolbox. The toolbox items are activated or deactivated depending on how they apply to the control. You can move the layout position of the control elements in the workflow editor with the mouse or these can be moved automatically.

Table 23: Entries in the toolbox

Control	Item	Meaning
Workflow	Edit	Edit the properties of the approval workflow.
	Layout automatically	The workflow elements are aligned automatically. The workflow layout is recalculated.
Approval levels	Add	A new approval level is added to the workflow.
	Edit	Edit the properties of the approval workflow.
	Delete	Deletes the approval level.

Control	Item	Meaning
Approval steps	Add	Add a new approval step to the approval level.
	Edit	Edit the properties of the approval step.
	Delete	Deletes the approval step.
Assignments	Remove positive	The **Approved** connector for the selected approval level is deleted.
	Remove negative	The **Deny** connector for the selected approval level is deleted.
	Remove reroute	The **Reroute** connector for the selected approval level is deleted.
	Remove escalation	The **Escalate** connector for the selected approval level is deleted.

Each of the controls has a properties window for editing the data of the approval workflow, level, or step. To open the properties window, select the **Toolbox | < Control> | Edit** item.

To delete a control, select the element and then the **Toolbox | <Control> | Delete** item.

Individual elements are linked to each other with a connector. Activate the connection points with the mouse. The cursor changes into an arrow icon for this. Hold down the left mouse button and pull a connector from one connection point to the next.

Figure 5: Approval workflow connectors

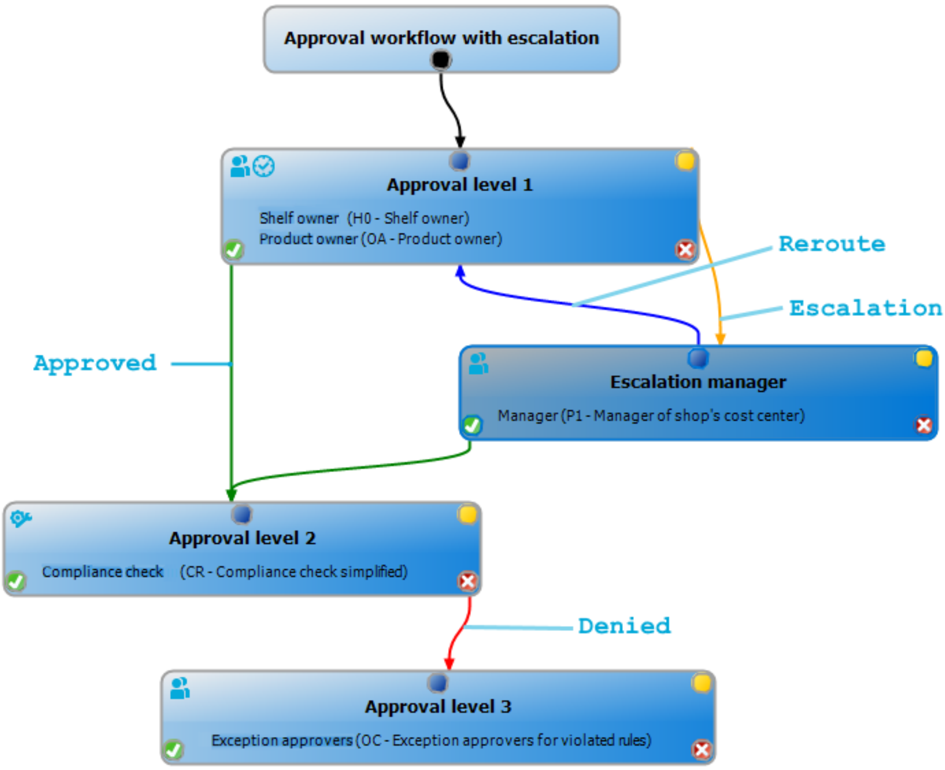


Table 24: Approval workflow connectors

Connector	Meaning
Approve	Link to next approval level if the current approval level was granted approval.
Deny	Link to next approval level if the current approval level was not granted approval.
Reroute	Link to other approval levels to bypass the current approval.
Escalation	Connection to another approval level when the current approval level is escalated after timing out.

By default, a connection between workflow elements and level elements is created immediately when a new element is added. If you want to change the level hierarchy, drag a new connector to another level element.

Alternatively, you can release connectors between level elements using the **Toolbox | Assignments** items. To do this, mark the level element where the connector starts. Then add a new connector.

Different icons are displayed on the level elements depending on the configuration of the approval steps.

Table 25: Icons on the level elements

Icon	Meaning
	The approval decision is made by the system.
	The approval decision is made manually.
	The approval step contains a reminder function.
	The approval step contains a timeout.

Changes to individual elements in the workflow do not take place until the entire approval workflow is saved. The layout position in the workflow editor is saved in addition to the approval policies.

Setting up approval workflows

An approval workflow consists of one or more approval levels. An approval level can contain one approval step or several parallel approval steps. Within the approval process, all of the approval steps for one approval level must be executed before the next approval level is called. Use connectors to set up the sequence of approval levels in the approval workflow.

When you add a new approval workflow, the first thing to be created is a new workflow element.

To edit approval level properties

1. Open the Workflow Editor.
2. Select the **Toolbox | Workflow | Edit** item.
3. Edit the workflow properties.
4. Click **OK**.

Table 26: Approval workflow properties

Property	Meaning
Name	Approval workflow name.
System abort (days)	Number of days to elapse after which the approval workflow, and therefore the system, automatically ends the entire approval procedure.
Description	Text field for additional explanation.

Detailed information about this topic

- Cancel request on timeout on page 137

Editing approval levels

An approval level provides a method of grouping individual approval steps. All the approval steps in one approval level are executed in parallel. All the approval steps for different approval levels are executed one after the other. You use the connectors to specify the order of execution.

Specify the individual approval steps in the approval levels. At least one approval step is required per level. Enter the approval steps first before you add an approval level.

To add an approval level

1. Select the **Toolbox | Approval levels | Add** item.

   This opens the properties dialog for the first approval step.
2. Enter the approval step properties.
3. Save the changes.

You can edit the properties of an approval level as soon as you have added an approval level with at least one approval step.

To edit approval level properties

1. Select the approval level.
2. Select the **Toolbox | Approval levels | Edit** item.
3. Enter a display name for the approval level.
4. Save the changes.

NOTE: You can define more than one approval step for each approval level. In this case, the approvers of an approval level can make a decision about a request in parallel rather than sequentially. The request cannot be presented to the approvers at the next approval level until all approval steps of an approval level have been completed within the approval procedure.

To add more approval steps to an approval level

1. Select the approval level.
2. Select the **Toolbox | Approval levels | Add** item.
3. Enter the approval step properties.
4. Save the changes.

Detailed information about this topic

- Properties of an approval step on page 83
- Editing approval steps on page 83

Editing approval steps

To edit approval level properties

1. Select the approval step.
2. Select the **Toolbox | Approval steps | Edit** item.
3. Edit the approval step properties.
4. Save the changes.

Detailed information about this topic

- Properties of an approval step on page 83

Properties of an approval step

On the **General** tab, enter the data described below. On the **Mail templates** tab, select the mail templates for generating mail notifications. If you add a new approval step, you must fill out the required fields.

Table 27: General properties of an approval step

Property	Meaning
Single step	Approval step name.
Approval procedure	Procedure to use for determining the approvers.
Processing status	Processing status of the success or failure case of the approval step. The processing status for the request is set according to the decision and whether it has been made positively or negatively. Define the processing status in the basic configuration data.
Role	Hierarchical role from which the approvers are to be determined using the default approval procedures OM and OR.
Fallback approver	Application role whose members are authorized to approve requests if an approver cannot be determined through the approval procedure. Assign an application from the menu. To create a new application role, click . Enter the application role name and assign a parent application role. For detailed information, see the *One Identity Manager Authorization and Authentication Guide*. NOTE: The number of approvers is not applied to the fallback approvers. The approval step is considered approved the moment as soon as one fallback approver has approved the request.
Relevance	Specifies whether the approver is notified when a request leads to a rule

Property	Meaning
for compliance	violation. The following values are permitted: • **Not relevant**: Information about rule violations is not relevant for approvers in this approval step. No additional information is displayed for the approver in the approval process. • **Information**: Approvers in this approval step receive information during the approval process if the request causes a compliance rule violation. The approvers decided whether to grant or deny the request. • **Necessary measures**: Approvers in this approval step receive information during the approval process if the request causes a compliance rule violation. The request is automatically denied.
Condition	Condition for calculating approval with approval procedures CD, EX, or WC. Comparison value for the risk index in the approval procedure RI. Enter a number in the range 0.1 to 1.0. 1.0. You can use **,** or **.** as a decimal point.
Number of approvers	Number of approval required to approve a request. Use this number to further restrict the maximum number of approvers of the implemented approval procedure. If there are several people allocated as approvers, then this number specifies how many people from this group have to approve a request. A request can only be passed on to the next level if this has been done. If not enough approvers can be found, the approval step is presented to the fallback approvers. The approval step is considered approved as soon as one fallback approver has approved the request. If you want approval decisions to be made by all the employees found using the applicable approval procedure, for example all members of a role (default approval procedure OR), enter the value **-1**. This overrides the maximum number of approvers defined in the approval procedure. The number of approvers defined in an approval step is not taken into account in the approval procedures CD, EX,or WC.
Description	Text field for additional explanation.
Approval reason	Reason entered in the request if approval is automatically granted. This field is only shown for the approval procedures CD, CR, RI, SB, EX, and WC.
Reject reason	Reason entered in the request and the approval history, if approval is automatically denied. This field is only shown for the approval procedures CD, CR, RI, SB, EX, and WC.
Reminder	Number of working hours to elapse after which the approver is notified by

Property	Meaning
interval (hours)	mail that there are still pending requests for approval. NOTE: Ensure that a state, county, or both is entered into the employee's master data for determining the correct working hours. If this information is missing, a fallback is used to calculate the working hours. For more detailed information about calculating employees' working hours, see the *One Identity Manager Identity Management Base Module Administration Guide*. If more than one approver was found, each approver will be notified. The same applies if an additional approver has been assigned. If an approver delegated the approval, the time point for reminding the delegation recipient is recalculated. The delegation recipient and all the other approvers are notified. The original approver is not notified. If an approver has made an inquiry, the time point for reminding the queried employee is recalculated. As long as the inquiry has not been answered, only this employee is notified.
TimeOut (working hours)	Number of working hours to elapse after which the approval step is automatically granted or denied approval. The working hours of the respective approver are taken into account when the time is calculated. NOTE: Ensure that a state, county, or both is entered into the employee's master data for determining the correct working hours. If this information is missing, a fallback is used to calculate the working hours. For more detailed information about calculating employees' working hours, see the *One Identity Manager Identity Management Base Module Administration Guide*. If more than one approver was found, the an approval decision for the approval step is not automatically made until the timeout for all approvers has been exceeded. The same applies if an additional approver has been assigned. If an approver delegated approval, the time point for automatic approval is recalculated for the new approver. If this approval is rejected, the time point for automatic approval is recalculated for the original approver. If an approver is queried, the approval decision must be made within the defined timeout anyway. The time point for automatic approval is not recalculated.
Timeout behavior	Action that is executed if the timeout expires. • **Approved**: The request is approved in this approval step. The next approval level is called. • **Deny**: The request is denied in this approval step. The approval level for denying is called.

Property	Meaning
	• **Escalation**: The request process is escalated. The escalation approval level is called. • **Abort**: The approval step, and therefore the entire approval process for the request, is aborted.
Additional approver possible	Specifies whether a current approver is allowed to instruct another employee as an approver. This additional approver has parallel authorization to make approvals for the current request. The request is not passed on to the next approval level until both approvers have made a decision. This option can only be set for approval levels with a single, manual approval step.
Approval can be delegated	Specifies whether a current approver can delegate the approval of the request to another employee. This employee is added to the current approval step as the approver. This employee then makes the approval decision instead of the approver who made the delegation. This option can only be set for approval levels with a single, manual approval step.
Approval by affected employee	Specifies whether the employee who is affected by the approval decision can also approve this request. If this option is set, requester, and request recipients can approve the request. If this option is not set, use the **QER | ITShop | PersonInsertedNoDecide**, **QER | ITShop | PersonOrderedNoDecide**, **QER | ITShop | PersonInsertedNoDecideCompliance**, and **QER | ITShop | PersonOrderedNoDecideCompliance** configuration parameters to specify for all requests whether requester and request recipient can approve the request.
Do not show in approval history	Specifies whether or not the approval step should be displayed in the approval history. For example, this behavior can be applied to approval steps with the **CD - calculated approval** procedure, which are used only for branching in the approval workflow. It makes it easier to follow the approval history.
No automatic approval	Specifies whether the approval step is decided manually. The request is presented again to an approver even if they are the requester themselves or the request has been approved in a previous approval step. The setting of the **DecisionOnInsert**, **ReuseDecision** and **AutoDecision** configuration parameters is ignored in this approval step.

Detailed information about this topic

- Request risk analysis on page 114
- Notifications in the request process on page 157
- Processing status on page 176
- Reminding approvers on page 158

- Escalating an approval step on page 132
- Automatic approval on timeout on page 135
- Cancel request on timeout on page 137
- Automatically approving requests on page 126
- Using specific roles to find approvers on page 96
- Waiting for further approval on page 102
- Approvals to be made externally on page 105
- Calculated approval on page 103

Related topics

- Selecting responsible approvers on page 90
- Approvers cannot be established on page 134
- Approval by the chief approval team on page 138
- Approving requests from an approver on page 124
- Restricting exception approvers on page 120

Connecting approval levels

When you set up an approval workflow with several approval levels, you have to connect each level with another. You may create the following links.

Table 28: Links to approval levels

Link	Description
Approve	Link to next approval level if the current approval level was granted approval.
Deny	Link to next approval level if the current approval level was not granted approval.
Reroute	Link to another approval level to bypass the current approval. Approvers can let other approval levels make the approval decision, for example, if approval is required by a manager in an individual case. To do this, create a connection to the approval level to which the approval can be rerouted. This way, approvals can also be rerouted to a previous approval level, for example, if an approval decision is considered not to be well-founded. It is not possible to reroute approval steps with the approval procedures OC, OH, EX, CR, CD, SB, or WC.
Escalation	Link to another approval level when the current approval level is escalated after timing out.

If there are no further approval levels after the current approval level, the request is considered approved if the approval decision was to grant approval. If approval is not granted, the request is considered to be finally denied. The approval method is closed in both cases.

Additional tasks for approval workflows

After you have entered the master data, you can run the following tasks.

The approval workflow overview

To obtain an overview of an approval workflow

1. In the Manager, select the **IT Shop | Basic configuration data | Approval workflows** category.
2. Select the approval workflow in the result list.
3. Select **Approval workflow overview**.

Copying approval workflows

You can copy default approval workflows in order to customize them.

To copy an approval workflow

1. In the Manager, select the **IT Shop | Basic configuration data | Approval workflows** category.
2. Select an approval workflow in the result list and run the **Change master data** task.
3. Select the **Copy workflow** task.
4. Enter a name for the copy.
5. Click **OK** to start copying.

   - OR -

   Click **Cancel** to cancel copying.
6. To edit the copy immediately, click **Yes**.

   - OR -

   To edit the copy later, click **No**.

Deleting approval workflows

The approval workflow can only be deleted if it is not assigned to an approval policy.

To delete an approval workflow

1. Remove all assignments to approval policies.
   a. Check to which approval policies the approval workflow is assigned.
   b. Go to the master data form for the approval policy and assign a different approval workflow.
2. In the Manager, select the **IT Shop | Basic configuration data | Approval workflows** category.
3. Select an approval workflow in the result list.
4. Click .
5. Confirm the security prompt with **Yes**.

Detailed information about this topic

- The approval workflow overview on page 88
- General master data for approval policies on page 74

Default approval workflows

One Identity Manager provides approval workflows by default. These approval workflows are used in the **Identity & Access Lifecycle** shop approval processes. Each default approval workflow is linked to a default approval policy. You can edit different properties of the approval step, for example, to configure notifications in the request process.

To edit default approval workflows

- In the Manager, select the **IT Shop | Basic configuration data | Approval workflows | Predefined** category.

Determining the effective approval policies

You can apply approval policies to different IT Shop structures and service items. If you have several approval policies within your IT Shop, which policy is to be used is based on the rules that are specified.

Effective approval policies are defined in the following way:

1. The effective approval policy is the one assigned to the requested service item.
2. If there is no approval policy assigned to the service item, the approval policy from the service category is used.
3. If there is no approval policy assigned to the service item, the approval policy assigned to the requested product's shelf is used.
4. If there is no approval policy assigned to the shelf, one of the approval policies assigned to the shop is used.
5. If there is no approval policy assigned to the shop, one of the approval policies assigned to the shopping center is used.

An approval policy found by one of these methods is applied under the following conditions:

- The approval policy is not assigned a role type.

  - OR -

- The assigned role type corresponds to the shelf role type.

If more several effective approval policies are identified by the rules, the effective approval policy is determined by the following criteria (in the given order).

1. The approval policy has the highest priority (alphanumeric sequence).
2. The approval policy has the lowest number of approval steps.
3. The first approval policy found is taken.

If no approval policy can be found, a request cannot be started. If no approver can be determined for one level of an approval policy, the request can be neither approved nor denied. Pending requests are rejected and closed. Canceled products remain assigned. Products for renewal remain assigned until the **valid until** date is reached.

NOTE: If an approval workflow for pending requests changes, you must decide how to proceed with these requests. Configuration parameters are used to define the desired procedure.

For more information, see Changing approval workflows of pending requests on page 152.

Selecting responsible approvers

One Identity Manager can make approvals automatically in an approval process or through approvers. An approver is an employee or a group of employees who can grant or deny approval for a request (renewal or cancelation) within an approval process. It takes several approval procedures to grant or deny approval. You specify in the approval step which approval procedure should be used.

If several people are determined to be approvers by an approval procedure, the number given in the approval step specifies how many people must approve the step. Only then is the request presented to the approvers in the next approval level. The request is aborted if an approver cannot be found for an approval step.

One Identity Manager provides approval procedures by default. You can also define your own approval procedures.

The DBQueue Processor calculates which employee is authorized as an approver and in which approval level. Take into account the special cases for each approval procedure when setting up the approval workflows to determine those authorized to grant approval.

Default approval procedures

The following approval procedures are defined to select the responsible approvers by default.

Table 29: Approval procedures for IT Shop requests

Approval procedure name	Responsible approvers
BR - Back to recipient	Employee who receives the request For more information, see Finding requesters on page 107.
BS - Back to requester	Employee who trigger the request For more information, see Finding requesters on page 107.
CD - Calculated approval	- For more information, see Calculated approval on page 103.
CM - Recipient's manager	Manager For more information, see Using request recipients to find approvers on page 96.
CR - Compliance check (simplified)	- For more information, see Compliance checking requests on page 115.
D0 - Manager of shelf's department	Manager and deputy manager For more information, see Using IT Shop structures to find approvers on page 95.
D1 - Manager of shop's department	Manager and deputy manager For more information, see Using IT Shop structures to find approvers on page 95.
D2 - Manager of shopping center's department	Manager and deputy manager For more information, see Using IT Shop structures to find approvers on page 95.

Approval procedure name	Responsible approvers
DI - Named (IT) approvers of department provided in request	All members of the assigned application role For more information, see Using departments to find approvers on page 101.
DM - Manager of recipient's department	Manager and deputy manager For more information, see Using request recipients to find approvers on page 96.
DP - Manager of department provided in request	Manager and deputy manager For more information, see Using departments to find approvers on page 101.
DR - Named approvers of department provided in request	All members of the assigned application role For more information, see Using departments to find approvers on page 101.
EX - Approvals to be made externally	- For more information, see Approvals to be made externally on page 105.
H0 - Shelf owner	Owner and deputy For more information, see Using IT Shop structures to find approvers on page 95.
H1 - Shop owner	Owner and deputy For more information, see Using IT Shop structures to find approvers on page 95.
H2 - Shopping center owner	Owner and deputy For more information, see Using IT Shop structures to find approvers on page 95.
ID - Named (IT) approvers of recipient's department	All members of the assigned application role For more information, see Using approval roles to find approvers on page 98.
IL - Named (IT) approvers of recipient's location	All members of the assigned application role For more information, see Using approval roles to find approvers on page 98.
IO - Named (IT) approvers of recipient's primary role	All members of the assigned application role For more information, see Using approval roles to find approvers on page 98.
IP - Named (IT) approvers of recipient's cost center	All members of the assigned application role

Approval procedure name	Responsible approvers
	For more information, see Using approval roles to find approvers on page 98.
MS - Manager of the requested business role or organization	Manager and deputy of the business role, department, cost center or location requested by assignment request. For more information, see Using requested roles to find approvers on page 102.
OA - product owner	All members of the assigned application role For more information, see Using requested products to find approvers on page 97.
OC - Exception approver for violated rules	All members of the assigned application role For more information, see Finding exception approvers on page 118.
OH - Exception approver for worst rule violation	All members of the assigned application role For more information, see Finding exception approvers on page 118.
OM - Manager of a specific role	Manager of the role selected in the approval workflow. For more information, see Using specific roles to find approvers on page 96.
OR - Members of a certain role	All employees assigned to a secondary business role. For more information, see Using specific roles to find approvers on page 96.
P0 - Manager of shelf's cost center	Manager and deputy manager For more information, see Using IT Shop structures to find approvers on page 95.
P1 - Manager of shop's cost center	Manager and deputy manager For more information, see Using IT Shop structures to find approvers on page 95.
P2 - Manager of shopping center's cost center	Manager and deputy manager For more information, see Using IT Shop structures to find approvers on page 95.
PA - Additional owner of the Active Directory group	All employees to be found through the additional owner of the requested Active Directory group. For more information, see Using requested products to find approvers on page 97.

Approval procedure name	Responsible approvers
PG - owners of the requested privileged access request	All employees who can be determined as an owner of the requested privileged access request. For more information, see Using requested products to find approvers on page 97.
PI - Named (IT) approvers of cost center provided in request	All members of the assigned application role For more information, see Using cost centers to find approvers on page 100.
PM - Manager of recipient's cost center	Manager and deputy manager For more information, see Using request recipients to find approvers on page 96.
PP - Manager of cost center provided in request	Manager and deputy manager For more information, see Using cost centers to find approvers on page 100.
PR - Named approvers of cost center provided in request	All members of the assigned application role For more information, see Using cost centers to find approvers on page 100.
RD - Named approvers of cost center provided in request	All members of the assigned application role For more information, see Using approval roles to find approvers on page 98.
RI - Employee's risk index	- For more information, see Request risk analysis on page 114.
RL - Named approvers of recipient's location	All members of the assigned application role For more information, see Using approval roles to find approvers on page 98.
RO - Named approvers of recipient's primary role	All members of the assigned application role For more information, see Using approval roles to find approvers on page 98.
RP - Named approvers of recipient's cost center	All members of the assigned application role For more information, see Using approval roles to find approvers on page 98.
SB - Self-service	- For more information, see Self-service on page 95.
TO - Target system manager of the requested system	All members of the assigned application role

Approval procedure name	Responsible approvers
entitlement	For more information, see Using requested products to find approvers on page 97.
WC - Waiting for further approval	- For more information, see Waiting for further approval on page 102.

Self-service

Use the SB (self-service) approval procedure to approve requests automatically. You do not have to specify approvers for this approval procedure. A self-service request is always granted immediate approval. Always define an approval workflow with the approval procedure SB as a one-step workflow. That means you cannot set up more approval steps in addition to a self-service approval step.

The approval workflow and the **Self-service** approval policy are available by default and assigned to the **Identity & Access Lifecycle** shop.

Using IT Shop structures to find approvers

Use the following approval procedures to establish an IT Shop structure owner, an IT Shop structure department manager or an IT Shop structure cost center manager as approver.

Table 30: Approval procedures for determining approvers for IT Shop structures

Approval procedure	Approver
The IT Shop structure from which the request comes is assigned an owner or a deputy.	
H0	Owner and deputy of the shelf
H1	Owner and deputy of the shop
H2	Owner and deputy of the shopping center
A department is assigned to the IT Shop structure from which the request is made. The department is assigned a manager or a deputy manager.	
D0	Manager and deputy manager of the department's shelf
D1	Manager and deputy manager of the department's shop
D2	Manager and deputy manager of the department's shopping center
A cost center is assigned to the IT Shop structure from which the request is made. The cost center is assigned a manager or a deputy manager.	

Approval procedure	Approver
P0	Manager and deputy manager of the cost center's shelf
P1	Manager and deputy manager of the cost center's shop
P2	Manager and deputy manager of the cost center's shopping center

Using request recipients to find approvers

Use the following approval procedure if you want to determine the manager of the request recipient to be approver.

Table 31: Approval procedures for determining approvers for request recipients

Approval procedure	Approver
The request recipient is assigned a manager.	
CM	Request recipient's manager
The request recipient is assigned to a department. The department is assigned a manager or a deputy manager.	
DM	Manager and deputy manager of the request recipient's department.
The request recipient is assigned a cost center. The cost center is assigned a manager or a deputy manager.	
PM	Manager and deputy manager of the request recipient's cost center.

Using specific roles to find approvers

If members of a specific role are to be determined as approvers, use the OR or OM approval procedure. In the approval step, also specify the role to be used to find the approver. The approval procedures determine the following approvers. If a **deputy IT Shop** has been entered in the master data for these employees, they are also authorized as approver.

Table 32: Approval procedures for determining approvers for a specific role

Selectable roles	Approver
OM	
Departments (`Department`)	Manager and deputy manager of the hierarchical role specified in the approval step.

Selectable roles	Approver
Cost centers (ProfitCenter) Locations (Locality) Business roles (Org)	
OR	
Departments (Department) Cost centers (ProfitCenter) Locations (Locality) Business roles (Org) Application roles (AERole)	All secondary members of the hierarchical role specified in the approval step.

Using requested products to find approvers

If the owner of the requested product is to be determined as an approver, use the following approval procedures:

OA - product owner

Assign an application role to the product's service item in the **Product owner** input field to make it possible to find owners of a product as approvers. In this case, all the employees assigned to the application role through secondary assignment are recognized as approvers.

PA - Additional owner of the Active Directory group

Installed modules:	Active Roles Module

If an Active Directory group is requested, the approvers can be found through the additional owner of this Active Directory group. All employees are found that are:

- A member in the assigned Active Directory group through their Active Directory user account
- Linked to the assigned Active Directory user account

NOTE: Only use this approval procedure if the **TargetSystem | ADS | ARS_SSM** configuration parameter is set.

The column **Additional owners** is only available in this case.

PG - owners of the requested privileged access request

Installed modules:	Privileged Account Governance Module

If an access request is made for a privileged object within a Privileged Account Management system, such as PAM assets, PAM asset accounts and PAM directory accounts, then the owner of the privileged objects is determined as the approver in the approval process for these. The owners of the privileged objects must have the **Privileged Account Governance | Asset and account owners** application role or a child application role.

To make an access request, additional system prerequisites must be met by the Privileged Account Management system. For more detailed information about PAM access requests, see the *One Identity Manager Administration Guide for Privileged Account Governance*.

TO - target system manager of the requested system entitlement

Installed modules:	Target System Base Module
	Other target system modules

If a system entitlement is requested, the target system managers can be found as approvers using this approval procedure. Assign the synchronization base object of the target system to the target system manager (for example Active Directory domain, SAP client, target system type in the Unified Namespace). This finds, as approvers, all employees assigned to the application role assigned here and all members of the parent application roles.

This finds all target system managers of the system entitlement that are stored as the final product with the request (`PersonWantsOrg.UID_ITShopOrgFinal` column).

Using approval roles to find approvers

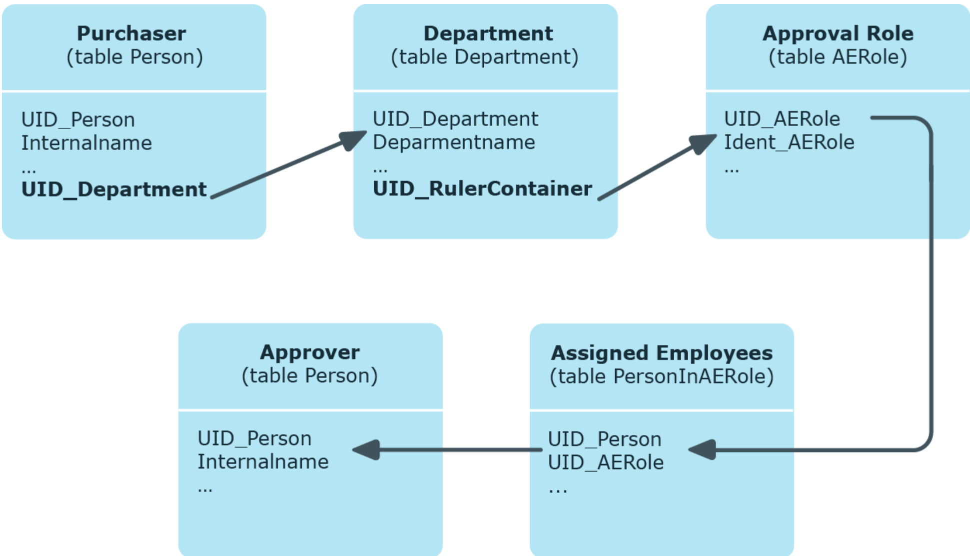
Use the following approval procedure if you want to establish the approver of a hierarchical role to be approver.

Table 33: Approval procedures to determine approvers through an approval role

Approval procedure	Approver
RD	The request recipient is assigned a primary department. The department is assigned an application role in the **Role approver** menu. All secondarily assigned employees of this application role are determined to be approvers.
RL	The request recipient is assigned a primary location. The location is assigned an application role in the **Role approver** menu.

Approval procedure	Approver
	All secondarily assigned employees of this application role are determined to be approvers.
RO	Installed modules: Business Roles Module The request recipient is assigned a primary business role. The business role is assigned an application role in the **Role approver** menu. All secondarily assigned employees of this application role are determined to be approvers.
RP	The request recipient is assigned a primary cost center. The cost center is assigned an application role in the **Role approver** menu. All secondarily assigned employees of this application role are determined to be approvers.

Figure 6: Determining approvers through a department's role approver



Approval procedure	Approver
ID	The request recipient is assigned a primary department. The department is assigned an application role in the **Role approver (IT)** menu. All secondarily assigned employees of this application role are determined to be approvers.
IL	The request recipient is assigned a primary location. The location is assigned an application role in the **Role approver (IT)** menu. All secondarily assigned employees of this application role are determined to be approvers.

Approval procedure	Approver
IO	Installed modules: Business Roles Module The request recipient is assigned a primary business role. The business role is assigned an application role in the **Role approver (IT)** menu. All secondarily assigned employees of this application role are determined to be approvers.
IP	The request recipient is assigned a primary cost center. The cost center is assigned an application role in the **Role approver (IT)** menu. All secondarily assigned employees of this application role are determined to be approvers.

Determining the approver using the example of an approval role for the request's recipient primary department (approval procedure RD):

1. Determine the requester’s primary department (`UID_Department`).
2. The application role (`UID_AERole`) is determined through the department’s role approver (`UID_RulerContainer`).
3. Determine the secondary employees assigned to this application role. These can issue approval.
4. If there is no approval role given for the primary department or the approval role does not have any members, the approval role is determined for the parent department.
5. The request cannot be approved if no approval role with members is found by drilling up to the top department.

NOTE: When approvers are found using the approval procedures RO or IO, and inheritance for business roles is defined from the bottom up, note the following:

If no role approver is given for the primary business role, the role approver is determined from the child business role.

Using cost centers to find approvers

Use the following procedure to determine the approver through a cost center given in the request.

Table 34: Approval procedures for determining approvers for a cost center

Approval procedure	Approver
PP	A cost center is entered in the request. The cost center is assigned a manager.

Approval procedure	Approver
	The manager of the given cost center is established as approver.
PR	A cost center is entered in the request. The cost center is assigned an application role in the **Role approver** menu. All secondarily assigned employees of this application role are determined to be approvers. Approvers are determined following the same method as described in Using approval roles to find approvers.
PI	A cost center is entered in the request. The cost center is assigned an application role in the **Role approver (IT)** menu. All secondarily assigned employees of this application role are determined to be approvers. Approvers are determined following the same method as described in Using approval roles to find approvers.

Using departments to find approvers

Use the following procedure to determine the approver through a department given in the request.

Table 35: Approval procedures for determining approvers for a department

Approval procedure	Approver
DP	A department is entered in the request. The department is assigned a manager. The manager of the given department is established as approver.
DR	A department is entered in the request. The department is assigned an application role in the **Role approver** menu. All secondarily assigned employees of this application role are determined to be approvers. Approvers are determined following the same method as described in Using approval roles to find approvers.
DI	A department is entered in the request. The department is assigned an application role in the **Role approver (IT)** menu. All secondarily assigned employees of this application role are determined to be approvers. Approvers are determined following the same method as described in Using approval roles to find approvers.

Using requested roles to find approvers

If membership in or assignment to a hierarchical role is requested and the manager of the requested role is to be the approver, use the MS approval procedure. Then the manager and deputy of the requested department, cost center, business role or location are determined as the approvers. This approval procedure can only be used for assignment requests.

Waiting for further approval

NOTE: Only one approval step can be defined with the WC approval procedure per approval level.

Use the WC approval procedure within an approval process to ensure that a defined prerequisite is fulfilled before the request is approved. Therefore, the approval of a permissions group request should only take place if the corresponding user account exists. Deferred approval is useful when a request should be tested for rule conformity. If the user account does not exist when the requested permissions groups are tested, any rule violations that may occur due to the request will not be logged.

You can specify which prerequisites have to be fulfilled so that a request can be presented for approval by defining an appropriate condition. The condition is evaluated as a function call. The function must accept the request UID as a parameter (`PersonWantsOrg.UID_PersonWantsOrg`). It must define three return values as integer values. One of the following actions is carried out depending on the function's return value.

Table 36: Return value for deferred approval

Return value	Action
Return value > 0	The condition is fulfilled. Deferred approval has completed successfully. The next approval step (in case of success) is carried out.
Return value = 0	The condition is not yet fulfilled. Approval is rolled back and is retested the next time DBQueue Processor runs.
Return value < 0	The condition is not fulfilled. Deferred approval has failed. The next approval step (in case of failure) is carried out.

To use an approval procedure

1. Create a database function which tests the condition for the request.
2. Create an approval step with the WC approval procedure. Enter the function call in **Condition**.

   Syntax: `dbo.<function name>`

3. Specify an approval step in the case of success. Use an approval procedure with which One Identity Manager can determine the approvers.
4. Specify an approval step in the case of failure.

Example

To check whether the necessary user account exists when the permissions group is requested, you can use the `TSB_FGIPWODecisionForGroup` function that is supplied.

Table 37: Example of an approval step with deferred approval

Single step:	Waiting Condition
Approval procedures:	WC - Waiting for further approval
Condition:	dbo.TSB_FGIPWODecisionForGroup
Number of approvers:	1

Table 38: Return value for deferred approval decisions in the `TSB_FGIPWODecisionForGroup` function

Return value	Action
Return value > 0	The user account exists, thus fulfilling the condition. The delayed approval is decided positively. The request is passed onto the next approval step. Now an approval step must follow which can establish the approvers for the request.
Return value = 0	The condition is not fulfilled. There is an request pending for a user account or the employee has an account definition with which a user account could be created. Approval is, therefore, deferred, and tested again on the next DBQueue Processor run.
Return value < 0	The condition is not fulfilled. There is no request for a user account and the employee does not have an account definition with which a user account could be created. The delayed approval is decided negatively. The request is passed onto the next approval step.

Calculated approval

> NOTE: Only one approval step can be defined with the CD approval procedure per approval level.

It is possible to determine who should be presented with the request for approval on the basis of a defined condition. For example, if the price of the request is below a defined limit, then the department manager can grant approval. If this limit is exceeded, the request has to be presented to the cost center manager. In another case, requests from members of department "XY" can be granted immediate approval as long as the request does not exceed the defined price limit. If the limit is exceeded or if the employee belongs to another department, the approval has to be granted by the department manager.

If approval should be calculated (CD approval procedure), enter a condition when you set up the approval step. If the condition returns a result, the approval step is approved through One Identity Manager. If the condition does not return a result, the approval step is denied by One Identity Manager. If there are no subsequent steps to be carried out, the request is finally granted or denied approval. The condition is defined as a valid where clause for database queries. You can enter the SQL query directly or with a wizard. The condition is always checked for the current request and requester.

> NOTE: If there is reference to the current request in the condition, use the following variables. The variable must be in quotes.
>
> Syntax: `'@UID_PersonWantsOrg'`

Example for calculated approval

Requests with a price of under 1000 euros can be approved by the customer's department manager. Requests over 1000 euros must be presented to the cost center manager.

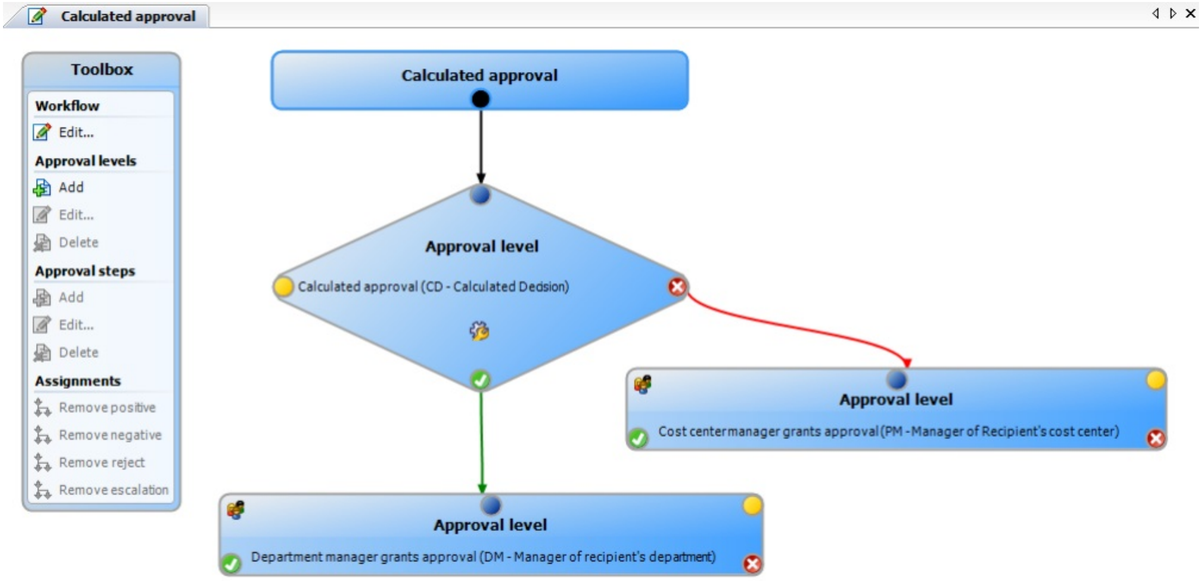
Table 39: Approval step with calculated approval

Single step:	Calculated approval
Approval procedures:	CD - Calculated approval
Condition:	`isnull(UID_Org, '') in (Select UID_ITShopOrg From ITShopOrg Where isnull(UID_AccProduct, '') In (Select UID_AccProduct From AccProduct Where isnull (PurchasePrice, 0) < 1000))`
Number of approvers:	1

Then the query is composed as:

```
select 1 from PersonWantsOrg
where (isnull(UID_Org, '') in
     (Select UID_ITShopOrg From ITShopOrg Where isnull(UID_AccProduct, '') In
           (Select UID_AccProduct From AccProduct Where isnull(PurchasePrice,
           0) < 1000)))
and UID_PersonWantsOrg = '@UID_PersonWantsOrg'
```

Figure 7: Approval workflow showing calculated approval



Approvals to be made externally

Use external approvals (EX approval procedure) if a request needs to be approved once a defined event from outside One Identity Manager takes place. You can also use this procedure to allow users with no access to One Identity Manager to approve requests.

Specify an event in the approval step that triggers an external approval. The event triggers a process that initiates the external approval for the request and evaluates the result of the approval decision. The approval process waits for the external decision to be passed to One Identity Manager. Define the subsequent approval steps depending on the result of the external approval.

To use an approval procedure

1. Define your own processes that:
    - Triggers an external approval.
    - Analyzes the results of the external approval.
    - Grants or denies approval in the subsequent external approval step in One Identity Manager.
2. Defines an event that starts the process for external approval. Enter the result in **Result** in the approval step.

If the external event occurs, the approval step status in One Identity Manager must be changed. Use the `CallMethod` process task with the `MakeDecision` method for this. Pass the following parameters to the process task:

```
MethodName: Value = "MakeDecision"
```

```
ObjectType: Value = "PersonWantsOrg"
```

```
Param1: Value = "sa"
Param2: Value = <approval> ("true" = granted; "false" = denied)
Param3: Value = <reason for approval decision>
Param4: Value = <standard reason>
Param5: Value = <number approval steps> (PWODecisionStep.SubLevelNumber)
WhereClause: Value = "UID_PersonWantsOrg ='"& $UID_PersonWantsOrg$ &"'"
```

Use these parameters to specify which request is to be approved by external approval (`WhereClause`). `Param1` specifies the approver. The approver is always the **sa** system user. `Param2` passes down the approval decision. If the request was granted, a value of **True** must be returned. If the request was denied, a value of **False** must be returned. Use `Param3` to pass a reason text for the approval decision; use `Param4` to pass a predefined standard reason. If more than one external approval steps have been defined in an approval level, use `Param5` to pass the approval step count. This ensures the approval is aligned with the correct approval step.

Use the Process Editor to define and edit processes.

Example

All approved requests should be entered into an external ticketing system and started. If a request is completed in an external ticketing system, it must also be completed in One Identity Manager. Use this approval procedure to make external approvals and define:

- A P1 process that creates a ticket with the information about the requested product in the external system and passes the ticket number to One Identity Manager in the request instance.
- An E1 event that starts the P1 event.
- A P2 process that checks whether the ticket status is "closed" and calls the `CallMethod` process task with the `MakeDecision` method in One Identity Manager.
- An E2 event that starts the P2 process.
- A schedule that starts the E2 event on a regular basis.

Enter E1 in the **Event** box as the trigger for the external decision.

Pass the product and customer data that the product is being requested for in the P1 process to the external ticket system. In another parameter, pass the ticket number from the external ticketing system to One Identity Manager.

Use the ticket number to check the ticket status in P2 process. If the ticket is closed, call the `MakeDecision` method and pass the ticket status from the external system to One Identity Manager in a parameter (`Param2`). In another parameter, specify the system user that changes the approval step status in One Identity Manager (`Param1`). Pass **sa** as the value for this parameter. Pass the reason for the approval decision in `Param3`.

For more detailed information about defining processes, see *One Identity Manager Configuration Guide*.

Detailed information about this topic

- Properties of an approval step on page 83

Finding requesters

Use the BS and BR approval procedures to return the approval to the requester or request recipient. The BS approval procedure finds the request requester and the BR approval procedure finds the request recipient. As a result, the requester and the request recipient can also influence the approval. Their approval can be viewed in the approval history. The approval workflow can be continued from any approval level.

The requesters are also found if the **QER | ITShop | PersonInsertedNoDecide** and **QER | ITShop | PersonOrderedNoDecide** configuration parameters are set. For more information, see Approving requests from an approver on page 124.

Setting up approval procedures

You can create your own approval procedures if the default approval procedures for finding the responsible approvers do not meet your requirements. The condition through which the approvers are determined is formulated as a database query. Several queries may be combined into one condition.

To set up an approval procedure

1. In the Manager, select the **IT Shop | Basic configuration data | Approval procedures** category.
2. Select an approval procedure in the result list and run the **Change master data** task.

   - OR -

   Click in the result list.
3. Edit the approval procedure master data.
4. Save the changes.

To edit the condition

1. In the Manager, select the **IT Shop | Basic configuration data | Approval procedures** category.
2. Select an approval procedure from the result list.
3. Select **Change queries for approver selection**.

Detailed information about this topic

- General master data for an approval procedure on page 108
- Queries for approver selection on page 108

General master data for an approval procedure

Enter the following master data for an approval procedure.

Table 40: General master data for an approval procedure

Property	Description
Approval procedure	Descriptor for the approval procedure (maximum two characters).
Description	Approval procedure identifier.
DBQueue Processor task	Approvals can either be made automatically through a DBQueue Processor calculation task or by specified approvers. Assign a custom DBQueue Processor task if the approval procedure should make an automatic approval decision. You cannot assign a DBQueue Processor task if a query is entered for determining the approvers.
Max. number approvers	Maximum number of approvers to be determined by the approval procedure. Specify how many employees must really make approval decisions in the approval steps used by this approval procedure.
Sort order	Value for sorting approval procedures in the menu. Specify the value 10 to display this approval procedure at the top of the menu when you set up an approval step.

Related topics

- Properties of an approval step on page 83

Queries for approver selection

The condition through which the approvers are determined is formulated as a database query. Several queries may be combined into one condition. This adds all employees determined by single queries to the group of approvers.

To edit the condition

1. In the Manager, select the **IT Shop | Basic configuration data | Approval procedures** category.
2. Select an approval procedure from the result list.
3. Select **Change queries for approver selection**.

To create single queries

1. Click **Add**.

   This inserts a new row in the table.
2. Mark this row. Enter the query properties.
3. Add more queries if required.
4. Save the changes.

To edit a single query

1. Select the query you want to edit in the table. Edit the query's properties.
2. Save the changes.

To remove single queries

1. Select the query you want to remove in the table.
2. Click **Delete**.
3. Save the changes.

Table 41: Query properties

Property	Description
Approver selection	Query identifier that determines the approvers.
Query	Database query for determining the approvers. The database query must be formulated as a select statement. The column selected by the database query must return a `UID_Person`. Every query must return a value for `UID_PWORulerOrigin`. The query returns one or more employees to whom the request is presented for approval. If the query fails to a result, the request is aborted. A query contains exactly one select statement. To combine several select statements, create several queries. If a DBQueue Processor task is assigned, you cannot enter a query to determine approvers.

You can, for example, determine predefined approvers with the query (example 1). The approver can also be found dynamically depending on the request to approve. To do this, access the request to be approved within the database query using the @UID_PersonWantsOrg variable (example 2).

Example 1

Requests should be approved by a specific approver.

Query:
```
select UID_Person, null as UID_PWORulerOrigin from Person where
InternalName='Bloggs, Jan'
```

Example 2

Approval for requests should be granted or denied through the requester’s parent department. The approver is the cost center manager that is assigned to the requester‘s primary department. The requester is the employee that started the request (UID_PersonInserted, for example, when placing requests for employees).

Query:
```
select pc.UID_PersonHead as UID_Person, null as UID_PWORulerOrigin from
PersonWantsOrg pwo
      join Person p on pwo.UID_PersonInserted = p.UID_Person
      join Department d on p.UID_Department = d.UID_Department
      join ProfitCenter pc on d.UID_ProfitCenter = pc.UID_ProfitCenter
      where pwo.UID_PersonWantsOrg = @UID_PersonWantsOrg
```

Taking delegation into account

To include delegation when determining approvers, use the query to also determine the employees to whom a responsibility has been delegated. If the managers of hierarchical roles are to make the approval decision, determine the approvers from the HelperHeadOrg table. This table groups all hierarchical role managers, their deputy managers, and employees to whom a responsibility has been delegated. If the members of business or application roles are to make the approval decision, determine the approvers from the PersonInBaseTree table. This table groups all hierarchical role members and employees to whom a responsibility has been delegated.

Determine the UID_PWORulerOrigin in order to notify delegators when the recipient of the delegation has made a decision on a request and thus allow the Web Portal to show if the approver was originally delegated.

To determine the UID_PWORulerOrigin of the delegation

- Determine the UID_PersonWantsOrg of the delegation and copy this value as UID_PWORulerOrigin to the query. Use the dbo.QER_FGIPWORulerOrigin table function to do this.

  ```
  select dbo.QER_FGIPWORulerOrigin(XObjectKey) as UID_PWORulerOrigin
  ```

Modified query from example 2:

```
select hho.UID_PersonHead as UID_Person, dbo.QER_FGIPWORulerOrigin
(hho.XObjectkey) as UID_PWORulerOrigin from PersonWantsOrg pwo
     join Person p on pwo.UID_PersonInserted = p.UID_Person
     join Department d on p.UID_Department = d.UID_Department
     join ProfitCenter pc on d.UID_ProfitCenter = pc.UID_ProfitCenter
     join HelperHeadOrg hho on hho.UID_Org = pc.UID_ProfitCenter
     where pwo.UID_PersonWantsOrg = @UID_PersonWantsOrg
```

Copying an approval procedure

You can copy default approval procedures in order to customize them.

To copy an approval procedure

1. In the Manager, select the **IT Shop | Basic configuration data | Approval procedures** category.
2. Select an approval procedure in the result list. Select the **Change master data** task.
3. Select the **Create copy** task.
4. Confirm the security prompt with **Yes**.
5. Enter the short name for the copy.

   The short name for an approval procedure consists of a maximum of two characters.
6. Click **OK** to start copying.

   - OR -

   Click **Cancel** to cancel copying.

Deleting approval procedures

To delete an approval procedure

1. Remove all assignments to approval steps.
   a. On the approval procedure overview form, check which approval steps are assigned to the approval procedure.
   b. Switch to the approval workflow and assign another approval procedure to the approval step.
2. In the Manager, select the **IT Shop | Basic configuration data | Custom defined | Approval procedures** category.
3. Select an approval procedure from the result list.

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

Determining the responsible approvers

The DBQueue Processor calculates which employee is authorized as an approver and in which approval level. Once a request is triggered, the approvers are determined for every approval step of the approval workflow to be processed. Changes to responsibilities may lead to an employee no longer being authorized as an approver for a request that is not yet finally approved. In this case, approvers must be recalculated. The following changes can trigger a recalculation for as yet unapproved requests:

- Approval policy, workflow, step, or procedure changes.
- An authorized approver loses their responsibility in One Identity Manager, for example, if a change is made to the department manager, product owner, or target system manager.
- An employee obtains responsibilities in One Identity Manager and therefore is authorized as an approver, for example as the manager of the request recipient.
- An employee authorized as an approver is deactivated.

Once an employee's responsibilities have changed in One Identity Manager, an approver recalculation task is queued in the DBQueue. By default, all approval steps of the pending approval procedures are recalculated at the same time. Approval steps that have already been approved remain approved, even if their approver has changed. Recalculating approvers may take a long time depending on the configuration of the system environment and the amount of data to be processed. To optimize this processing time, you can specify the approval steps for which the approvers are to be recalculated.

To configure recalculation of approvers

- In the Designer, set the **QER | ITShop | ReducedApproverCalculation** configuration parameter and select one of the following options as the value.

Table 42: Options for recalculating approvers

Option	Description
No	All approval steps are recalculated. This behavior also applies if the configuration parameter is not set. Advantage: All valid approvers are displayed in the approval process. The rest of the approval sequence is transparent. Disadvantage: Recalculating approvers may take a long time.
CurrentLevel	Only approvers for the approval level that is currently to be edited are recalculated. Once an approval level has been approved, the

Option	Description
	approvers are determined for the next approval level. Advantage: The number of approval levels to calculate is lower. Calculating the approvers may be faster. TIP: Use this option if performance problems occur in your environment in connection with the recalculation of approvers. Disadvantage: The originally calculated approvers are still displayed in the approval sequence for each subsequent approval step, even though they may no longer have approval authorization. The rest of the approval sequence is not correctly represented.
NoRecalc	No recalculation of approvers The previous approvers remain authorized to approve the current approval levels. Once an approval level has been approved, the approvers are determined for the next approval level. Advantage: The number of approval levels to calculate is lower. Calculating the approvers may be faster. TIP:Use this option if performance problems occur in your environment in connection with the recalculation of approvers, even though the **CurrentLevel** option is used. Disadvantage: The originally calculated approvers are still displayed in the approval sequence for each subsequent approval step, even though they may no longer have approval authorization. The rest of the approval sequence is not correctly represented. Employees that are no longer authorized can approve the current approval level. In the worst-case scenario, the only attestors originally calculated here now have no access to One Identity Manager, for example, because they have left the company. The approval level cannot be approved. ***To see approval steps of this type through*** • Define a timeout and timeout behavior when you set up the approval workflows on the approval steps. - OR - • When setting up the IT Shop, assign members to the chief approval team. These can access open approval processes at any time.

Detailed information about this topic

- Properties of an approval step on page 83
- Chief approval team on page 182

Related topics

- Changing approval workflows of pending requests on page 152

Request risk analysis

Everyone with IT system authorization in a company represents a security risk for that company. For example, an employee with permission to edit financial data in SAP carries a higher risk than an employee with permission to edit their own personal data. To quantify the risk, you can enter a risk value for every company resource in One Identity Manager. A risk index is calculated from this value for every employee who is assigned this company resource, directly, or indirectly. Company resources include target system entitlements (for example, Active Directory groups or SAP profiles), system roles, subscribable reports, software, and resources. In this way, all employees representing a particular risk to the company can be found.

Every time a company resource with a specified risk index is assigned, the employee's risk index may exceed a permitted level. You can check the risk index of company resources if they are requested through the IT Shop. If the risk index is higher than the specified value, the request is denied.

To set up risk assessment for requests

- Create an approval workflow.
    1. Add an approval step with the RI approval procedure.
    2. In the **Condition** field, enter the comparison value for the risk index. Enter a number in the range **0.0 to 1.0**.
    3. Enter other approval levels if required.

The approval step is granted approval by One Identity Manager if the risk index of the requested company resource is lower than the comparison value. If the risk index is higher or equal to the comparison value, the approval step is not granted approval.

Risk assessment of requests works for both direct company resource request and assignment requests. Only risk indexes with inputted values are examined for the approval decision; calculated risk indexes are not taken into account. Therefore, risk assessment of requests only works if the product's original table or one of the member tables of a requested assignment has a `RiskIndex` column. If the table only has the `RiskIndexCalculated` column, the request is automatically approved. If both member tables of an assignment request have a `RiskIndex` column, the highest of the two risk indexes is used as the basis for the approval.

If the company resource request or an assignment has been granted approval, the employee's risk index is recalculated the next time the scheduled calculation task is run.

For more detailed information about risk assessment, see the *One Identity Manager Risk Assessment Administration Guide*.

Related topics

- Properties of an approval step on page 83

Testing requests for rule compliance

Installed modules:	Compliance Rules Module

You can integrate rule conformity testing for IT Shop requests within an approval workflow. A separate approval procedure is supplied for this. This approval procedure checks whether the request's recipient will violate compliance rules if the requests are granted approval. The result of the test is logged in the request's approval sequence and approval history.

Table 43: Approval procedures for compliance checking

Approval procedure	Description
CR - compliance check (simplified)	Checks the current request for possible rule violations. It takes into account the requested product and all the company resources already assigned to the request recipient.

Prerequisites for request validation

- Compliance rules are defined.

  For detailed information, see the *One Identity Manager Compliance Rules Administration Guide*.
- The approval workflow contains an approval step with the CR approval procedure.

  For more information, see Compliance checking requests on page 115.

Compliance checking requests

To retain an overview of potential rule violations, you can run a simplified compliance check. Use the CR approval procedure to test requests for possible rule violations before finally approving them.

The following data of a recipient's request is taken into account by the compliance check:

- All pending requests
- All company resources already assigned to the recipient
- All the recipient's user accounts

- All entitlement in the target system (for example, Active Directory groups or SAP roles) the recipient has obtained through these user accounts

Auxiliary tables for object assignments are regularly evaluated for the compliance check. Auxiliary tables are calculated on a scheduled basis. Furthermore, the approval procedure only takes into account compliance rules that are created using the simplified definition.

Rule checking does not completely check the requests with this. It is possible that under the following conditions, rule checking does not identify a rule violation:

- Customer permissions change after the auxiliary table have been calculated.
- A rule is not violated by the requested product but rather an object inherited through the requested product. Inheritance is calculated after request approval and can therefore not be identified until after the auxiliary table is calculated again.
- The customer does not belong to the rule's employee group affected until the request is made.
- The rule condition was created in expert node or as a SQL query.

TIP: A complete check of assignments is achieved with cyclical testing of compliance rule using schedules. This finds all the rule violations that result from the request.

It is possible that under the following conditions, rule checking identifies a rule violation where one does not exist:

- Two products violate one rule when they are assigned at the same time. The product requests are, however, for a limited period. The validity periods does not overlap. Still a potential rule violation is identified.

TIP: These requests can be approved after checking by exception approver as permitted by the definition of the violation rule.

The compliance check is not only useful for specifying which rule is violated by a request, but it can also find out which product in the request caused the rule violation. This makes a detailed analysis possible of the rule violation. The request can still be approved by exception approval, the definition of compliance rules permitting. Additional approval steps are added in approval workflows to deal with exception approval.

Conditions for compliance checking requests

- You can add only one approval step per approval policy with the CR approval procedure.
- The rule conditions were created in the simple definition.
- IT Shop properties that are specified for each rule are taken into account in the rule testing. Identification of a rule violation depends on the setting on **Rule violation identified**.
- The compliance check should be added as the last approval level in the approval workflow. The subsequent approval levels only get one approval step to determine the exception approver if approval is denied.

Compliance check sequence

1. If an approval step for compliance checking using the CR approval procedure is found in the request's approval procedure, all products in pending requests are assigned to the customer. It is assumed that all pending requests will be approved and therefore the customer will obtain all the products. The current request is then analyzed with respect to potential violations against the defined rules.
2. If no rule violations are found, the approval step is automatically granted approval and the request is passed on to the approver at the next approval level above.
3. If a rule violation is detected, the request is automatically not granted approval. The request can still be approved by exception approval, the definition of rule violations permitting.

For more detailed information about compliance checking, see the *One Identity Manager Compliance Rules Administration Guide*.

Detailed information about this topic

- Identifying rule violations on page 117
- Finding exception approvers on page 118

Identifying rule violations

If the **QER | ComplianceCheck | EnableITSettingsForRule** configuration parameter is set, properties can be added to compliance rules that are taken into account when rule checking requests.

Specify which violation should be logged for the rule by using the **Rule violation identified** IT Shop property.

Table 44: Permitted values

Value	Description
New rule violation due to a request	Only rule violations that are added through approval of the current request are logged.
Unapproved exception	Rule violations that are added through approval of the current request are logged. Already known rule violations that have not yet been granted an exception are also logged.
Any compliance violation	All rule violations are logged, independent of whether an exception approval has already been granted or not. This value is automatically set when the **Explicit exception approval** option is set.

If the **QER | ComplianceCheck | EnableITSettingsForRule** configuration parameter is not set, new rule violations are logged through the current request.

For detailed information, see the *One Identity Manager Compliance Rules Administration Guide*.

Finding exception approvers

Requests that may cause a rule violation can still be approved by exception approval.

To allow exception approval for request with rule violations

1. Enable the **Exception approval allowed** option for the compliance rule and assign an exception approver.

   For more information, see the*One Identity Manager Compliance Rules Administration Guide*.

2. Enter an approval step in the approval workflow with the OC or OH procedure. Connect this approval level with the compliance checking approval level at the connection point for denying this approval decision.

   NOTE:

   - Only apply this approval procedure immediately after an approval level with the CR approval procedure.
   - For each approval workflow, **only one** approval step can be defined using the OC or OH approval procedure.

3. If the **QER | ComplianceCheck | EnableITSettingsForRule** configuration parameter is set, you can use the rule's IT Shop properties to configure which rule violations are presented to an exception approver. Set or unset **Explicit exception approval** to do this.

   For more information, see Explicit exception approval on page 122.

Table 45: Approval procedures for exception approval

Approval procedure	Description
OC (Exception approvers for violated rules)	The approval decision is agreed on by the exception approvers of the violated rule. As it may be possible that several rule are broken with one request, the request is presented to all the exception approvers in parallel. If one of the exception approvers rejects the exception, the request is rejected.
OH (exception approver for worst rule	The approval decision is agreed on by the rule's exception approver which poses the highest threat. In this way, you can accelerate the exception approval procedure for a request that violates several rules. Ensure the following apply for this approval procedure:

Approval procedure	Description
violation)	• The severity level is set in the assessment criteria for all compliance rules. • The exception approver for the worst rule violation in all affected rules is one of the exception approvers.

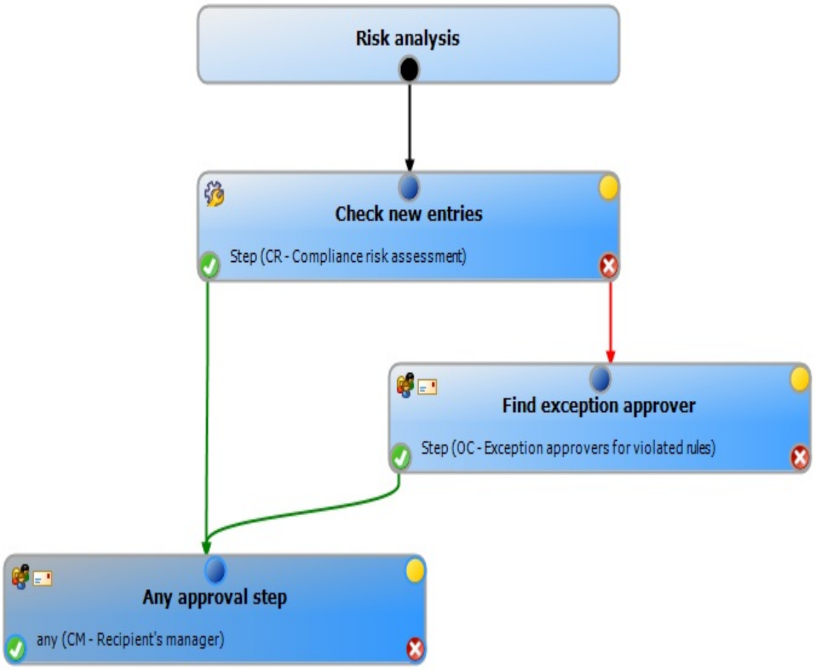
Example

Four different compliance rules are violated by a request for Active Directory group membership. The target system manager of the Active Directory domain is entered as exception approver for all the compliance rules.

Using the OC approval procedure, the target system manger must grant approval exceptions for all four compliance rules.

Using the OH approval procedure, the target system manager is presented with the request only for the compliance rule with the highest severity code. The manager's decision is automatically passed on to the other violated rules.

Figure 8: Example of an approval workflow with compliance checking and exception approval



Sequence of compliance checking with exception approval

1. If a rule violation is detected during compliance checking, the request is automatically not granted approval. The request is passed on to the approver of the next approval level for approval.
2. Exception approvers are found according to the given approval procedure.
3. If exception approval is granted, the request is approved and assigned.
4. If exception approval is not granted, the request is denied.

IMPORTANT: If the **QER | ITShop | ReuseDecision** configuration parameter is set and the exception approver has already approved as the request an approver in a previous approval step, exception approval is automatically granted. For more information, see Automatically approving requests on page 126.

NOTE:

- As opposed to the manager/deputy principle normally in place, an exception approver’s deputy is NOT permitted to grant exception approval alone.
- You cannot determine fallback approvers for exception approvers. The request is aborted if no exception approver can be established.
- The chief approval team cannot grant exception approvals.

Restricting exception approvers

By default, exception approvers can also make approval decisions about requests in which they are themselves requester (`UID_PersonInserted`) or recipient (`UID_PersonOrdered`). To prevent this, you can specify the desired behavior in the following configuration parameter and in the approval step:

- **QER | ComplianceCheck | DisableSelfExceptionGranting** configuration parameter
- **QER | ITShop | PersonOrderedNoDecideCompliance** configuration parameter
- **QER | ITShop | PersonInsertedNoDecideCompliance** configuration parameter
- **Approval by affected employee** option in the approval step for finding exception approvers

If the requester or approver is not allowed to grant approval exceptions, their main identity and all sub identities are removed from the circle of exception approvers.

Summary of configuration options

Requesters can grant exception approval for their own requests, if:

- **PersonInsertedNoDecideCompliance** configuration parameter is not set.

  - OR -

- **Approval by affected employee** option is set.

Recipients can grant exception approval for their own requests, if:

- **DisableSelfExceptionGranting** configuration parameter is not set.

  PersonOrderedNoDecideCompliance configuration parameter is not set.

  - OR -

- **DisableSelfExceptionGranting** configuration parameter is not set.

  Approval by affected employee option is set.

Requesters cannot grant exception approval, if:

- **PersonInsertedNoDecideCompliance** configuration parameter is set.

  Approval by affected employee option is not set.

Recipients cannot grant exception approval, if:

- **DisableSelfExceptionGranting** configuration parameter is set.

  - OR -

- **PersonOrderedNoDecideCompliance** configuration parameter is set.

  Approval by affected employee option is not set.

Related topics

- Setting up exception approver restrictions on page 121
- Approving requests from an approver on page 124

Setting up exception approver restrictions

To prevent recipients of request becoming exception approvers

- In the Designer, disable the **QER | ComplianceCheck | DisableSelfExceptionGranting** configuration parameter.

  This configuration parameter takes effect:

  - When requests are granted approval exception.
  - During cyclical rule checking. For more information about cyclical rule checking, see the *One Identity Manager Compliance Rules Administration Guide*.

  - OR -

- In the Designer, enable the **QER | ITShop | PersonOrderedNoDecideCompliance** configuration parameter.

  This configuration parameter takes effect:

- When requests are granted approval exception.
- If the **Approval by affected employee** option is disabled in the approval step.

To prevent requesters becoming exception approvers

- In the Designer, set the **QER | ITShop | PersonInsertedNoDecideCompliance** configuration parameter.

  This configuration parameter takes effect:

  - When requests are granted approval exception.
  - If the **Approval by affected employee** option is disabled in the approval step.

For individual approval workflows, you can allow exceptions to the general rule in the **PersonInsertedNoDecide** and **PersonOrderedNoDecide** configuration parameters. Use these options if the requester or recipient of requests is allowed to grant themselves exception approval only for certain requests.

To allow request recipients or requesters to become exception approvers in certain cases

- In the approval step for determining exception approvers, enable the **Approval by affected employee** option.

Related topics

- Properties of an approval step on page 83
- Approving requests from an approver on page 124
- Restricting exception approvers on page 120

Explicit exception approval

If the **QER | ComplianceCheck | EnableITSettingsForRule** configuration parameter is set, properties can be added to compliance rules that are taken into account when rule checking requests.

Use the **Explicit exception approval** IT Shop property to specify whether the reoccurring rule violation should be presented for exception approval or whether an existing exception approval can be reused.

Table 46: Permitted values

Option is	Description
Enabled	A known rule violation must always be presented for exception approval, even if there is an exception approval from a previous violation of the rule.

Option is	Description
Not set	A known rule violation is not presented again for exception approval if there is an exception approval from a previous violation of the rule. This exception approval is reused and the known rule violation is automatically granted exception.

If several rules are violated by a request and **Explicit exception approval** is set for one of the rules, the request is presented for approval to **all** exception approvers for this rule.

Rules that have **Explicit exception approval** set result in a renewed exception approval if:

- A rule check is carried out within the approval process for the current request.

  - AND -

  a. The rule is violated by the current request.

     - OR -

  b. The IT Shop customer has already violated the rule.

In case (a), the request for the IT Shop customer is presented to the exception approver. If the request is approved, case (b) applies to the next request. In case (b), every request for the IT Shop customer must be decided by the violation approver, even when the request itself does not result in a rule violation. The result you achieve is that assignments for employees who have been granted an exception, are verified and reapproved for every new request.

For more detailed information about exception approvals, see the *One Identity Manager Compliance Rules Administration Guide*.

Rule checking for requests with self-service

Self-service (SB approval procedure) is always defined as a one-step procedure. That means you cannot set up more approval steps in addition to a self-service approval step.

To realize compliance checking for requests with self-service

- Create an approval workflow with a single approval level. The approval workflow contains an approval step with the CR approval procedure. For more information, see Compliance checking requests on page 115.

  If the rule check is successful, the request is granted approval and self-service is accomplished implicitly.

  To make exception approval possible for rule violations, add an approval level with the OC or OH approval procedure. For more information, see Finding exception approvers on page 118.

Approving requests from an approver

By default, approvers can make approval decisions about requests in which they are themselves requester (`UID_PersonInserted`) or recipient (`UID_PersonOrdered`). To prevent this, you can specify the desired behavior in the following configuration parameter and in the approval step.

- **QER | ITShop | PersonOrderedNoDecide** configuration parameter
- **QER | ITShop | PersonInsertedNoDecide** configuration parameter
- **Approval by affected employee** option in the approval step.

If the requester or approver is not allowed to make approval decisions, their main identity and all subidentities are removed from the group of approvers.

NOTE:

- The configuration parameter setting also applies for fallback approvers; it does not apply to the chief approval team.
- This configuration parameter does not affect the BS and BR approval procedures. These approval procedures also find the requester and the request recipient if the configuration parameter is not set. For more information, see Finding requesters on page 107.

Summary of configuration options

Requesters can approve their own requests if:

- The **PersonInsertedNoDecide** configuration parameter is not set.

  \- OR -

- The **Approval by affected employee** option is set.

Recipients can approve their own requests if:

- The **PersonOrderedNoDecide** configuration parameter is not set.

  \- OR -

- The **Approval by affected employee** option is set.

Requesters cannot approve if:

- The **PersonInsertedNoDecide** configuration parameter is set.

  The **Approval by affected employee** option is not set.

Recipients cannot approve if:

- The **PersonOrderedNoDecide** configuration parameter is set.

  The **Approval by affected employee** option is not set.

Example

A department manager places a request for an employee. Both of them are found to be approvers by the approval procedure. To prevent the department manager from approving the request, set the **QER | ITShop | PersonInsertedNoDecide** parameter. To prevent the employer from approving the request, set the **QER | ITShop | PersonOrderedNoDecide** parameter.

Approving requests from an exception approver

Similarly, you specify whether exception approvers are allowed to approve their own requests if compliance rules are violated by a request. For more information, see Restricting exception approvers on page 120.

Related topics

- Setting up approver restrictions on page 125

Setting up approver restrictions

To prevent recipients of requests becoming approvers

- In the Designer, set the **QER | ITShop | PersonOrderedNoDecide** configuration parameter.

  This configuration parameter takes effect if the **Approval by affected employee** option is not set on the approval step.

To prevent requesters becoming approvers

- In the Designer, set the **QER | ITShop | PersonInsertedNoDecide** configuration parameter.

  This configuration parameter takes effect if the **Approval by affected employee** option is not set on the approval step.

For individual approval workflows, you can allow exceptions to the general rule in the **PersonInsertedNoDecide** and **PersonOrderedNoDecide** configuration parameters. Use these options to allow the requester or recipient of requests to make approval decisions themselves in single approval steps.

To allow request recipients or requesters to become approvers in certain cases

- On the approval step, enable the **Approval by affected employee** option.

Related topics

- Properties of an approval step on page 83
- Approving requests from an approver on page 124

Automatically approving requests

Approvers may be involved in an approval procedure more than once, for example, if they are also requesters or determined as approvers in various approval steps. In such cases, the approval process can be speeded up with automatic approval.

NOTE: Automatic approvals apply to all fallback approvers but not for the chief approval team.

Use configuration parameters to specify when automatic approvals are used. You can specify exceptions from default behavior for individual approval steps. Specify the behavior you expect in the following configuration parameters and approval steps.

- **QER | ITShop | DecisionOnInsert** configuration parameter
- **QER | ITShop | AutoDecision** configuration parameter
- **QER | ITShop | ReuseDecision** configuration parameter
- **No automatic approval** option in the approval step

Summary of configuration options

Approval steps are automatically approved or denied if:

- The **QER | ITShop | DecisionOnInsert** configuration parameter is set.

  The **No automatic approval** option is not set.

  - OR -
- The **QER | ITShop | AutoDecision** configuration parameter is set.

  The **No automatic approval** option is not set.

  - OR -
- The **QER | ITShop | ReuseDecision** configuration parameter is set.

  The **No automatic approval** option is not set.

Requests are manually approved or denied if:

- The **QER | ITShop | DecisionOnInsert** configuration parameter is not set.

  - OR -
- The **QER | ITShop | AutoDecision** configuration parameter is not set.

  - OR -
- The **QER | ITShop | ReuseDecision** configuration parameter is not set.

- OR -

- The **No automatic approval** option is set.

Detailed information about this topic

- Configuring automatic approval on page 127

Related topics

- Approval by the chief approval team on page 138
- Approvers cannot be established on page 134
- Timeout on saving requests on page 218

Configuring automatic approval

Scenario: An approver can grant or deny approval in several approval steps.

An approver may be authorized to approve several levels of an approval workflow. By default, the request is presented to the approver in each approval level. You can allow automatic approval so that the approver is not presented with a request more than once.

To allow an approver's decisions to be met automatically in several sequential approval levels

- In the Designer, set the **QER | ITShop | AutoDecision** configuration parameter.

  The approval decision of the first approval levels is applied to subsequent approval levels for which the approver is authorized.

  The configuration parameter takes effect if the **No automatic approval** option is not enabled for the approval step.

To attain automatic acceptance for an approver's decisions for all non-sequential approval levels

- In the Designer, set the **QER | ITShop | ReuseDecision** configuration parameter.

  If the approver granted approval to this request in an earlier approval step, the approval decision is transferred. If the approver did not grant approval in an earlier approval step, the request is presented for approval again.

  The configuration parameter takes effect if the **No automatic approval** option is not enabled for the approval step.

  IMPORTANT: If the approver is also an exception approver for compliance rule violations, requests that violate compliance rules will also be automatically approved without being presented for exception approval.

Scenario: Requester is also approver

Approvers can execute requests for themselves. If a requester is determined to be approver for the request, their approval steps are immediately granted approval.

To prevent automatic approval for an approver's requests

- In the Designer, disable the **QER | ITShop | DecisionOnInsert** configuration parameter.

  If a requester is determined to be the approver of an approval step, the request is presented to the requester to be approved.

The **QER | ITShop | DecisionOnInsert** configuration parameter is set by default and takes effect if the **No automatic approval** option is not enabled in the approval step.

If the **QER | ITShop | PersonInsertedNoDecide** configuration parameter is set, the requester does not become an approver and cannot approve the request. Also, the request cannot be decided automatically.

Preventing automatic approval in individual cases

For single approval steps, you can configure exceptions to the general rule in the configuration parameters.

To prevent automatic approvals for particular approval steps

- Enable the **No automatic approval** option in the approval step.

  The **QER | ITShop | DecisionOnInsert**, **QER | ITShop | ReuseDecision**, and **QER | ITShop | AutoDecision** configuration parameters are not considered in this approval step. In each case, requests are to be presented to the approver of this approval step.

Related topics

- Automatically approving requests on page 126
- Properties of an approval step on page 83
- Approving requests from an approver on page 124
- Finding exception approvers on page 118

Approval by peer group analysis

Using peer group analysis, approval for requests can be granted or denied automatically. This is based on the assumption that employees belonging to the same department, for example, require the same products. So, if a company resource has already been assigned to a majority of employees in a department, a new request for this company resource is automatically approved. This helps to accelerate approval processes.

Peer groups contain all employees with the same manager or belonging to the same primary or secondary department as the request's recipient. Configuration parameters specify which employee belong to the peer group. At least one of the following configuration parameters must be set.

- **QER | ITShop | PeerGroupAnalysis | IncludeManager**: Employees that have the same manager as the request's recipient
- **QER | ITShop | PeerGroupAnalysis | IncludePrimaryDepartment**: Employees that belong to the same primary department as the request's recipient
- **QER | ITShop | PeerGroupAnalysis | IncludeSecondaryDepartment**: Employees whose secondary department corresponds to the primary or secondary department of the request's recipient

The proportion of employees of a peer group who must already own the company resource, is set in the **QER | ITShop | PeerGroupAnalysis | ApprovalThreshold** configuration parameter.

You can also specify that employees are not permitted to request products from mismatched functional areas, which means, if the requested product and the primary department of the request recipient are from different functional areas, the request should be denied. To include this check in peer group analysis, set the **QER | ITShop | PeerGroupAnalysis | CheckCrossfunctionalAssignment** configuration parameter.

Requests are automatically approved for fully configured peer group analysis, if both:

- The requested product is not mismatched
- The number of employees in the peer group who already own this product equal or exceeds the given threshold.

If this is not the case, requests are automatically denied. The threshold specifies the ratio of the total number of employees in the peer group to the number of employees in the peer group who already own this product.

To use this functionality, One Identity Manager provides the `QER_PersonWantsOrg_Peer group analysis` process and the `PeergroupAnalysis` event. The process is run using an approval step with the EX approval procedure.

Configuring peer group analysis

To configure peer groups

1. In the Designer, set the **QER | ITShop | PeerGroupAnalysis** configuration parameter.
2. Set at least on of the following subparameters:
    - **QER | ITShop | PeerGroupAnalysis | IncludeManager**: Employees who have the same manager as the request's recipient

- **QER | ITShop | PeerGroupAnalysis | IncludePrimaryDepartment**: Employees who belong to the same primary department as the request's recipient
- **QER | ITShop | PeerGroupAnalysis | IncludeSecondaryDepartment**: Employees whose secondary department corresponds to the primary or secondary department of the request's recipient

Thus, you specify which employees belong to the peer group. You can also set two or all of the configuration parameters.

3. To specify a threshold for the peer group, set the **QER | ITShop | PeerGroupAnalysis | ApprovalThreshold** configuration parameter and specify a value between **0** and **1**.

   The default value is **0.9**. That means, at least 90 percent of the peer group members must already have the requested product in order for the request to be approved.

4. To test whether there is mismatch of functional areas for the requested product, set the **QER | ITShop | PeerGroupAnalysis | CheckCrossfunctionalAssignment** configuration parameter.

   a. Assign the service items and departments to functional areas.

      Only functional areas that are primary assigned service items are taken into account.

      For detailed information about functional areas, see the *One Identity Manager Identity Management Base Module Administration Guide*.

   b. Assign employees to primary departments.

5. In the Manager, create an approval workflow with at least one approval level. For the approval step, enter at least the following data:

   - Single step: Name of the approval step.
   - Approval procedure: **EX**
   - Event: **PeerGroupAnalysis**

   The event starts the `QER_PersonWantsOrg_Peer group analysis` process, which runs the `QER_PeerGroupAnalysis` script.

   The script runs automatic approval and sets the approval step type to **Grant** or **Deny**.

Related topics

- Approvals to be made externally on page 105
- General master data for a service item on page 21

Gathering further information about a request

Approvers are able to gather additional information about a request. This ability does not, however, replace granting or denying approval for a request. There is no additional approval step required in the approval workflow to obtain the information.

Approvers can request information in form of a question from anybody. The request is placed on hold for the period of the inquiry. Once the queried employee has supplied the necessary information and the approver has made an approval decision, the request is taken off hold. The approver can recall a pending inquiry at any time. The request is taken off hold. The approver’s request and the employee's answer are recorded in the approval flow and are therefore available to the approver.

> NOTE: If the approver who made the query is dropped, hold status is revoked. The queried employee must not answer. The request procedure continues.

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

Detailed information about this topic

- Email notification: Notifications with questions on page 164

Appointing other approvers

Once an approval level in the approval workflow has been reached, approvers at this level can appoint another employee to handle the approval. To do this, you have the options described below:

- Rerouting approvals

  The approver appoints another approval level to carry out approvals. To do this, set up a connection to the approval level in the approval workflow to which an approval decision can be rerouted.

- Appointing additional approvers

  The approver appoints another employee to carry out the approval.The other approver must make an approval decision in addition to the known approvers. To do this, enable the **Additional approver possible** option in the approval step.

  The additional approver can reject the approval and return the requests to the original approver. The original approver is informed about this by email. The original approver can appoint another additional approver.

- Delegate approval

  The approver appoints another employee with approval. This employee is added to the current approval step as the approver. This employee then makes the approval decision instead of the approver who made the delegation. To do this, enable the **Approval can be delegated** option in the approval step.

The current approver can reject the approval and return the requests to the original approver. The original approver can withdraw the delegation and delegate a different employee, for example, if the other approver is not available.

Email notifications can be sent to the original approvers and the others.

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

Detailed information about this topic

- Connecting approval levels on page 87
- Editing approval levels on page 82
- Properties of an approval step on page 83

Related topics

- Email notification: Delegating approvals on page 163
- Email notification: Rejecting approvals on page 164
- Email notification: Using additional approvers to approve requests on page 165
- Notifications in the request process on page 157

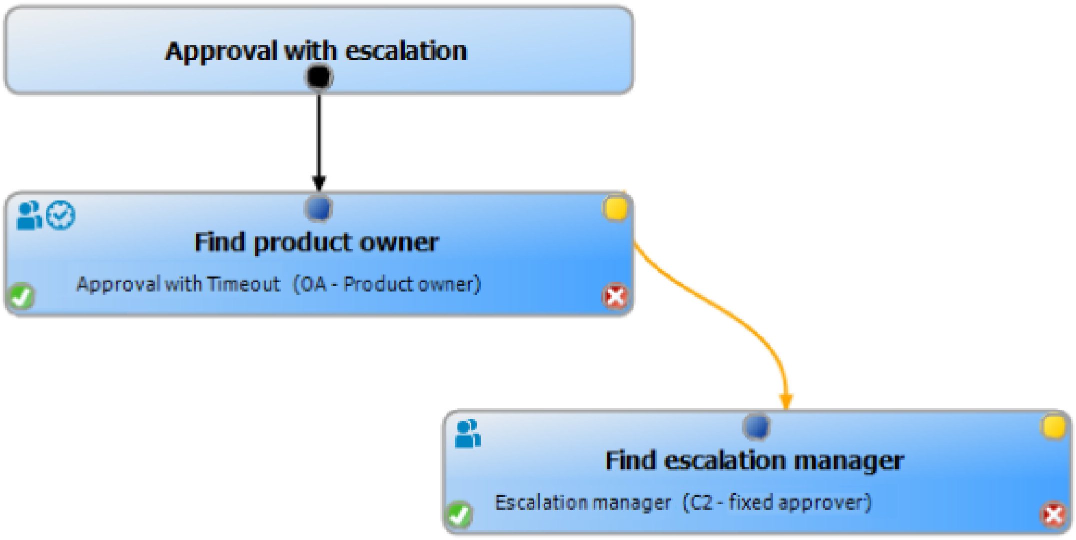
Escalating an approval step

Approval steps can be automatically escalated once the specified timeout is exceeded. The request is presented to another approval body. The request is then further processed in the normal approval workflow.

To configure escalation of an approval step

1. Open the approval workflow in the Workflow Editor.
2. Add an additional approval level with one approval step for escalation.
3. Connect the approval step that is going to be escalated when the time period is exceeded with the new approval step. Use the connection point for escalation to do this.

Figure 9: Example of an approval workflow with escalation



4. Configure the behavior for the approval step to be escalated when it times out.

Table 47: Properties for escalation on timeout

Property	Meaning
TimeOut (working hours)	Number of working hours to elapse after which the approval step is automatically granted or denied approval. The working hours of the respective approver are taken into account when the time is calculated. NOTE: Ensure that a state, county, or both is entered into the employee's master data for determining the correct working hours. If this information is missing, a fallback is used to calculate the working hours. For more detailed information about calculating employees' working hours, see the *One Identity Manager Identity Management Base Module Administration Guide*. If more than one approver was found, the an approval decision for the approval step is not automatically made until the timeout for all approvers has been exceeded. The same applies if an additional approver has been assigned. If an approver delegated approval, the time point for automatic approval is recalculated for the new approver. If this approval is rejected, the time point for automatic approval is recalculated for the original approver. If an approver is queried, the approval decision must be made within the defined timeout anyway. The time point for automatic approval is not recalculated.

Property	Meaning
Timeout behavior	Action that is executed if the timeout expires. • **Escalation**: The request process is escalated. The escalation approval level is called.

In the event of an escalation, email notifications can be sent to the new approvers and requesters.

Related topics

- Email notification: Demanding an approval decision on page 157
- Email notification: Escalating requests on page 163

Approvers cannot be established

You can specify a fallback approver if requests cannot be approved because no approvers are available. A request is then always assigned to the fallback approver for approval no approver can be found in an approval step in the specified approval procedure.

To specify fallback approvers, define application roles and assign these to an approval step. Different approval groups in the approval steps may also require different fallback approvers. Specify different application role for this, to which you can assign employees who can be determined as fallback approvers in the approval process. For more detailed information, see the *One Identity Manager Authorization and Authentication Guide*.

To specify fallback approvers for an approval step

- Enter the following data for the approval step.

Table 48: Approval step properties for fallback approvers

Property	Meaning
Fallback approver	Application role whose members are authorized to approve requests if an approver cannot be determined through the approval procedure. Assign an application from the menu. To create a new application role, click . Enter the application role name and assign a parent application role. For detailed information, see the *One Identity Manager Authorization and Authentication Guide*. NOTE: The number of approvers is not applied to the fallback approvers. The approval step is considered approved the moment as soon as one fallback approver has approved the request.

Request sequence with fallback approvers

1. No approver can be found for an approval step in an approval process. The request is assigned to all members of the fallback approver application role.
2. Once a fallback approver has approved a request, it is presented to the approvers at the next approval level.

   > NOTE: In the approval step, you can specify how many approvers must make a decision on this approval step. This limit is NOT valid for the chief approval team. The approval step is considered to be approved as soon as ONE fallback approver has approved the request.

3. The request is aborted if no fallback approver can be found.

Fallback approvers can make approval decisions on requests for all manual approval steps. Fallback approvals are not permitted for approval steps using the CR, SB, CD, EX, and WC approval procedures or OC and OH approval procedures.

Related topics

- Editing approval levels on page 82
- Selecting responsible approvers on page 90
- Approval by the chief approval team on page 138

Automatic approval on timeout

Requests can be automatically granted or denied approval once a specified time period has expired.

To configure automatic approval if the timeout expires

- Enter the following data for the approval step.

Table 49: Properties for automatic approval on timeout

Property	Meaning
TimeOut (working hours)	Number of working hours to elapse after which the approval step is automatically granted or denied approval. The working hours of the respective approver are taken into account when the time is calculated. NOTE: Ensure that a state, county, or both is entered into the employee's master data for determining the correct working hours. If this information is missing, a fallback is used to calculate the working hours. For more detailed information about calculating employees' working hours, see the *One Identity Manager Identity Management Base Module Administration Guide*. If more than one approver was found, the an approval decision for the approval step is not automatically made until the timeout for all approvers has been exceeded. The same applies if an additional approver has been assigned. If an approver delegated approval, the time point for automatic approval is recalculated for the new approver. If this approval is rejected, the time point for automatic approval is recalculated for the original approver. If an approver is queried, the approval decision must be made within the defined timeout anyway. The time point for automatic approval is not recalculated.
Timeout behavior	Action, which is executed if the timeout expires. • **Approved**: The request is approved in this approval step. The next approval level is called. • **Deny**: The request is denied in this approval step. The approval level for denying is called.

If a request is decided automatically, the requester can be notified by email.

Related topics

- Email notification: Approving or denying request approval on page 160
- Editing approval levels on page 82

Cancel request on timeout

Requests can be automatically aborted once a specified time period has been exceeded. The abort takes place when either a single approval step or the entire approval process has exceeded the timeout.

To configure an abort after the timeout of a single approval step has been exceeded

- Enter the following data for the approval step.

Table 50: Properties of the approval step for abort on timeout

Property	Meaning
TimeOut (working hours)	Number of working hours to elapse after which the approval step is automatically granted or denied approval. The working hours of the respective approver are taken into account when the time is calculated. NOTE: Ensure that a state, county, or both is entered into the employee's master data for determining the correct working hours. If this information is missing, a fallback is used to calculate the working hours. For more detailed information about calculating employees' working hours, see the *One Identity Manager Identity Management Base Module Administration Guide*. If more than one approver was found, the an approval decision for the approval step is not automatically made until the timeout for all approvers has been exceeded. The same applies if an additional approver has been assigned. If an approver delegated approval, the time point for automatic approval is recalculated for the new approver. If this approval is rejected, the time point for automatic approval is recalculated for the original approver. If an approver is queried, the approval decision must be made within the defined timeout anyway. The time point for automatic approval is not recalculated.
Timeout behavior	Action, which is executed if the timeout expires. • **Abort**: The approval step, and therefore the entire approval process for the request, is aborted.

To configure abort on timeout for the entire approval process

- Enter the following data for the approval workflow.

Table 51: Properties of the approval workflow for abort on timeout

Property	Meaning
System abort (days)	Number of days to elapse after which the approval workflow, and therefore the system, automatically ends the entire approval procedure.

If a request is aborted, the requester can be notified by email.

Related topics

- Email notification: Canceling requests on page 163
- Editing approval levels on page 82
- Setting up approval workflows on page 81

Approval by the chief approval team

Sometimes, approval decisions cannot be made for requests because the approver is not available or does not have access to One Identity Manager tools. To complete these requests, you can define a chief approval team whose members are authorized to intervene in the approval process at any time.

The chief approval team is authorized to approve, deny, or abort requests in special cases or to authorize other approvers.

IMPORTANT:

- The four-eye principle can be broken like this because chief approval team members can make approval decisions for requests at any time. Specify, on a custom basis, in which special cases the chief approval team may intervene in the approval process.
- The chief approval team members may always approval their own requests. The settings for the **QER | ITShop | PersonInsertedNoDecide** and **QER | ITShop | PersonOrderedNoDecide** configuration parameters do not apply for the chief approval team.
- In the approval step, you can specify how many approvers must make a decision on this approval step. This limit is not valid for the chief approval team. The approval decision is considered to be made as soon as one member of the chief approval team has decided on the request.

The chief approval team can approve requests for all manual approval steps. The following applies:

- Chief approval team decisions are not permitted for approval steps using the CR, SB, CD, EX, and WC approval procedures or the OC and OH procedures.
- If a member of the chief approval team is identified as a regular approver for an approval step, they can only make an approval decision for this step as a regular approver.
- The chief approval team can also make an approval decision if a regular approver has submitted a query and the request is in hold status.

To add members to the chief approval team

1. In the Manager, select the **IT Shop | Basic configuration data | Chief approval team** category.
2. Select the **Assign employees** task.

   In **Add assignments**, assign the employees who are authorized to approve all requests.

   > TIP: In **Remove assignments**, you can remove the assignment of employees.
   >
   > ***To remove an assignment***
   >
   > - Select the employee and double-click ✓.
3. Save the changes.

Related topics

- Chief approval team on page 182

Approving requests with terms of use

Terms of use that explain conditions of use for a product can be stored for individual service items (for example, software license conditions). When someone requests this product, the requester, and request recipient must accept the terms of use before the request can be finalized.

In order for the request recipient to accept the terms of use, the request must be assigned to the request recipient in the approval process. Set an approval workflow for such requests that contain a BR approval step and enable the **No automatic approval** option for this approval step. One Identity Manager provides a default approval procedure and a **Terms of Use acknowledgment for third-party orders (sample)** default approval policy that you can use for this. Using the default approval workflow as a basis, create your own approval workflow that returns the request to the request recipient and determines the approver after the terms of use have been accepted. Use the BR approval procedure to do this.

To create an approval workflow for requests with terms of use

1. Select the **IT Shop | Basic configuration data | Approval workflows | Predefined** category.
2. In the result list, select the **Terms of Use acknowledgment for third-party orders (sample)** approval workflow and run the **Change master data** task.
3. Select the **Copy workflow** task.
4. Enter a name for the copy and click **OK**.
5. Edit the copy. Modify the approval workflow to suit your requirements.
6. Create an approval policy and assign it to the approval workflow.
7. Assign service items to the approval policy, which are assigned terms of use.

Detailed information about this topic

- Setting up approval workflows on page 81
- Approval policies for requests on page 73
- General master data for a service item on page 21
- Adding to the IT Shop on page 76

Using default approval processes

By default, One Identity Manager supplies approval policies and approval workflows. These are used in the approval processes of the **Identity & Access Lifecycle** shop.

Table 52: Default approval policies and workflows in the shop identity & access lifecycle

Approval policies/ workflow	Description	Shelf | Product
Compliance checking simplified	Compliance checking and exception approval for all products on the shelf that do not have their own approval policy assigned to them. For more information, see Testing requests for rule compliance on page 115.	Identity Lifecycle
Self-service	Assignment requests and delegations are automatically approved by default. For more information, see Standard products for assignment requests and delegation on page 51.	Identity Lifecycle | Delegation
		Identity Lifecycle | Business role

Approval policies/ workflow	Description	Shelf | Product
		entitlement assignment
		Identity Lifecycle | Business role membership
Self-service	Automatic approval for all products on the shelf that do not have their own approval policy assigned to them. For more information, see Self-service on page 95.	Group Lifecycle
Terms of Use acknowledgment for third-party orders (sample)	Copy template for requests with terms of use. For more information, see Approving requests with terms of use on page 139.	
Challenge loss of role member-ship	Limited period assignment requests for role member-ships are automatically granted approval. For more information, see Requests with limited validity period for changed role memberships on page 171.	Identity Lifecycle | Challenge loss of role membership
New manager assignment	Requesting a change of manager must be approved by the new manager. For more information, see Request-ing change of manager for an employee on page 154.	Identity Lifecycle | New manager assignment
Approval of Active Directory group create requests	New Active Directory group requests must be approved by the target system manager. The groups are added in One Identity Manager and published in the target system. For detailed information, see the *One Identity Manager Administration Guide for Connecting to Active Directory*.	Group Lifecycle | New Active Directory security group
		Group Lifecycle | New Active Directory distribution group
Approval of Active Directory group change	Changes to group type and range of Active Directory groups must be approved by the target system manager. For detailed information, see the *One Identity*	Group Lifecycle | Modify

Approval policies/ workflow	**Description**	**Shelf | Product**
requests	*Manager Administration Guide for Connecting to Active Directory*.	Active Directory group
Approval of Active Directory group deletion requests	Deleting an Active Directory group, must be approved by the target system manager. For detailed information, see the *One Identity Manager Administration Guide for Connecting to Active Directory*.	Group Lifecycle | Delete Active Directory group
Approval of SharePoint group create requests	New SharePoint group requests must be approved by the target system manager. The groups are added in One Identity Manager and published in the target system. For detailed information, see the *One Identity Manager Administration Guide for Connecting to SharePoint*.	Group Lifecycle | New SharePoint group
Approval of Active Directory group member-ship requests	Product owners and target system managers can request members for groups in these shelves. For detailed information, see the *One Identity Manager Administration Guide for Connecting to SharePoint*.	Active Directory groups
Approval of Active Directory group member-ship requests II		Active Directory groups
Approval of group member-ship requests		SharePoint groups
Approval of system entitle-ment removal requests	This approval policy can be used to configure automatic deletion of memberships in Active Directory groups.	Approval of system entitlement removal requests
Approval of privileged access requests	Requests for access must be approved by the owner of the privileged object. To make an access request, additional system prerequisites must be met by the Privileged Account Management system. For more detailed information about PAM access requests, see the *One Identity Manager Administration Guide for Privileged Account Governance*.	Privileged access | Password request Privileged access | SSH session request

Approval policies/ workflow	Description	Shelf | Product
		Privileged access | Remote desktop session request Privileged access | Telnet session request

3

Request sequence

Shop customers can request, renew, and unsubscribe products as soon as an IT Shop solution is set up. Use the Web Portal to do this. Furthermore, requests, and cancellations are approved in the Web Portal. You can make an overview of pending and closed requests for yourself. You can also find an overview of pending and closed requests in the Manager

Requests can have a limited time period, which means the requested product assignment is only valid with the validity period.

General request sequence

1. A customer places a request in the Web Portal for:
   a. A product.

      - OR -

   b. Membership of a hierarchical role.

      - OR -

   c. The assignment of a company resource to a hierarchical role.
2. The request goes through the assigned approval process.
3. If the request has been granted approval and the **Valid from** date has been reached:
   a. The product is assigned to the customer. The company resource associated with the product is assigned indirectly to the customer.

      - OR -

   b. The customer becomes a secondary member of the hierarchical role.

      - OR -

   c. The company resource is assigned to the hierarchical role.

   The request contains the **Assigned** status (`PersonWantsOrg.OrderState = 'Assigned'`).

   The product/membership/assignment remains until it is canceled.

Requests and the resulting assignments are displayed in the following table:

Requests	`PersonWantsOrg`

Product assignments	`PersonInITShopOrg`

Company resource assignments	For example,
	`PersonHasQERResource`
	`ADSAccountInADSGroup`

Hierarchical role assignments	For example, `PersonInDepartment`
Hierarchical role assignments	For example, `DepartmentHasADSGroup`

General cancellation sequence

1. A customer cancels a product/membership/assignment in the Web Portal.

   - OR -

   A requested product/requested membership/requested assignment is automatically unsubscribed.
2. The cancellation goes through the assigned approval process.
3. If cancellation was granted approval and the expiry date has been reached:
   a. The product's assignment is removed. The product's assigned to the associated company resource is also removed.

      - OR -

   b. The customer’s membership of the hierarchical role is removed.

      - OR -

   c. The company resource's assignment to the hierarchical role is removed.

   The request contains the **Unsubscribed** status (`PersonWantsOrg.OrderSTate = 'Unsubscribed'`).

If a customer is removed from a shop, existing requests for this are closed. The products are unsubscribed and assignments are removed. If the customer changes to another shop, the product requests can be retained under certain circumstances. If the request is an assignment request, it can also be retained under certain circumstances, even if the requester is no longer a customer in the shop.

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

Related topics

- Examples of request results on page 229
- Requests with limited validity period on page 149
- Relocating a customer or product to another shop on page 152
- Removing customers from a shop on page 58
- Determining the responsible approvers on page 112

The request overview

To obtain an overview of all pending and closed requests

1. In the Manager, select the **IT Shop | Requests | <filter>** category.
2. Select a request procedure in the result list.
3. Select the **Request overview** task.

Displaying request details

To obtain detailed information about a request

1. In the Manager, select the **IT Shop | Requests | <filter>** category.
2. Select a request procedure in the result list.
3. Select the **Request details** task.

This shows you the request data and the status of the request.

Displaying the approval sequence

For pending requests, see the current status of the approval process. The approval sequence is shown as soon as the DBQueue Processor has determined the approvers for the first approval step. In the approval workflow, you can view the approval sequence, the results of each approval step, and the approvers found. If the approval procedure could not find an approver, the request is canceled by the system.

To display the approval sequence of a pending request

1. In the Manager, select the **IT Shop | Requests | Pending requests | <Filter>** category.
2. Select a request procedure in the result list.
3. Select the **Approval sequence** task.

Each approval level of an approval workflow is represented by a special control. The approvers responsible for a particular approval step are shown in a tooltip. Pending attestation questions are also shown in tooltips. These elements are shown in color, the color code reflecting the current status of the approval level.

Table 53: Meaning of the colors in an approval sequence (in order of decreasing importance)

Color	Meaning
Blue	This approval level is currently being processed.
Green	This approval level has been granted approval.
Red	This approval level has been denied approval.
Yellow	This approval level has been deferred due to a question.
Gray	This approval level has not (yet) been reached.

Displaying the approval history

The approval history displays each step of the request process. Here you can follow all the approvals in the approval process in a chronological sequence. The approval history is displayed for both pending and closed requests.

To view the approval history for a request

1. In the Manager, select the **IT Shop | Requests | <filter>** category.
2. Select a request procedure in the result list.
3. Select the **Approval history** task.

These elements are shown in color, the color code reflecting the status of the approval steps.

Table 54: Meaning of colors in the approval history

Color	Meaning
Yellow	Request triggered.
Green	Approver has granted approval.
Red	Approver has denied approval. Request has been escalated. Approver has recalled the approval decision.
Gray	Product has been canceled. Request is aborted. Request has been assigned to an additional approver. Additional attestor has withdrawn approval decision. Approval has been delegated New attestor has withdrawn the delegation.

Color	Meaning
	Request has been transferred to another shop. Request recipient has been changed. Request has been converted into a direct assignment.
Purple	Request renewed.
Orange	Approver has a query. The query has been answered. Query was aborted due to change of approver.
Blue	Approver has rerouted approval. The approval step was reset automatically.

Requesting products more than once

The IT Shop distinguishes between single or multiple requestable products. Single request products are, for example, software, system roles, or Active Directory groups. These products cannot be requested if they have already been be requested for the same time period.

Furthermore, an employee may need several of one type of company resources, for example, consumables. You can find company resources such as these mapped in One Identity Manager as **Multi-request resource** or **Multi requestable/unsubscribable resources**.

Request sequence of multi-request resources

1. A customer requests a multi-request resource in the Web Portal.
2. The request goes through the appropriate approval process and is approved.

   The request is only saved in the `PersonWantsOrg` table. No entry is created in the `PersonInITShopOrg` table.
3. The resource can be canceled immediately. The request contains the **Unsubscribed** status (`PersonWantsOrg.OrderState = 'Unsubscribed'`).

   The resource cannot be canceled by the customer.

Request sequence of multi-requestable/unsubscribable resources

1. A customer requests a multi-requestable/unsubscribable resource in the Web Portal.
2. The request goes through the appropriate approval process and is approved.

   The request is only saved in the `PersonWantsOrg` table. No entry is created in the `PersonInITShopOrg` table.

3. The request contains the **Assigned** status (`PersonWantsOrg.OrderState = 'Assigned'`).

   The resource can be unsubscribed by means of the Web Portal.

TIP: A customer-specific implementation of a process with the `PersonWantsOrg` root object for the `OrderGranted` result can be made in order to start a specified action when a multi-request resource is approved. For more detailed information about defining processes, see *One Identity Manager Configuration Guide*.

Related topics

- Multi-request resources on page 17
- Examples of request results on page 229

Requests with limited validity period

Customers keep their requested products on the shelf until they themselves unsubscribe from them. Sometimes, however, products are only required for a certain length of time and can be canceled automatically after this time. Products that are intended to have a limited shelf life need to be labeled with the validity period. For more information, see Products for requests with time restrictions on page 39.

When a product with a limited request period is requested, One Identity Manager calculates the date and time at which the product is automatically unsubscribed (**Valid until**/expiry date of the request) from the current date and validity period specified in the service item. This deadline can be adjusted when the request is made.

As soon as a request is approved by all approvers, the expiration date is recalculated from the actual date and the validity period. This ensures that the validity period is valid from the day of assignment.

A **Valid from** date can also be entered at the time of request. This specifies the date that an assignment starts to apply. If this date is given, the expiry date is calculated from the **Valid from** date and the validity period. If the validity period has already expired when approval is granted, the request can no longer be approved. The request is canceled and an error message is displayed.

Cancellations can include a validity period, which means a deadline for the cancellation is set for unlimited requests. Use this method to change the expiry date for requests with a validity period. Once the cancellation has been granted approval, the cancellation's validity period is taken as the new expiry date of the request. The request cannot be extended beyond the validity period.

The request recipient receives a message before reaching the expiry date and has the possibility to extend the period. For more information, see Sequence for limited requests on page 160. The request is aborted once the expiry date has been reached.

The customer has the option to renew a request. If the customer uses this option, the extension (as in the original request) needs to approved through an approval process. If the extension is denied, the original request runs out at the given date. You can also limit renewals in the same way.

A limited request might look like the following a sequence:

Service item	Validity period: 90 days
Requested on: 1/2/2017	Valid until: 4/1/2017 11:59 PM
Approved on: 1/5/2017	Valid until: 4/5/2017 11:59 PM
Renewed until: 3/31/2017	Renewal valid until: 4/30/2017 12:00 PM
Approved on: 4/2/2017	Valid until: 4/30/2017 12:00 PM
Canceled on: 4/10/2017	Unsubscribed as from: 4/14/2017 11:59 PM
Approved on: 4/11/2017	Valid until: 4/11/2017 11:59 PM

DBQueue Processor checks whether the request's expiry date has passed using a scheduled One Identity Manager task, which compares it against current UTC time. If the expiry date has passed, the request is aborted; the resulting assignments removed.

NOTE: Ensure that times in the One Identity Manager tools, for example, the Web Portal, are in the user's local time.

If a customer has requested a product with a limited validity period, the validity period must be tested for validity in subsequent requests for this product for the same customer. If the validity period is not in effect, the request is not permitted. By default, new requests are permitted if they fall in a time period that is not covered by another pending request. However, the validity periods of different requests may not overlap. You can define the desired behavior for the validity period over configuration parameters. For more information, see Checking request validity periods on page 150.

Checking request validity periods

If a customer has requested a product with a limited validity period, the validity period must be tested for validity in subsequent requests for this product for the same customer. If the validity period is not in effect, the request is not permitted. By default, new requests are permitted if they fall in a time period that is not covered by another pending request. However, the validity periods of different requests may not overlap. You can define the desired behavior for the validity period over configuration parameters. The configuration parameters are set by default. In this check, all requests of the same product for the same request recipient are taken into account even if the product came from different shelves.

To define differing behavior

- In the Designer, enable the desired option for the **QER | ITShop | GapBehavior | GapDefinition** and **QER | ITShop | GapBehavior | GapFitting** configuration parameters.

Table 55: Effect of the QER | ITShop | GapBehavior | GapDefinition configuration parameter

Option	Description
0	Only pending requests are taken into account by the check. (default)
1	Only approved requests are taken into account by the check.
2	Only assigned requests are taken into account by the check.

Table 56: Effect of the QER | ITShop | GapBehavior | GapFitting configuration parameter

Option	Description
0	Validity periods can overlap. (default) A new request is accepted if its validity period fits into at least one free time slot between two existing requests.
1	Validity periods cannot overlap. A new request is accepted if its validity period fits exactly into a free time slot between two existing requests.
2	The validity period is not checked. A request is accepted even if there is already a request for the same validity period.

If the configuration parameters are disabled, One Identity Manager behaves as in option **0**.

Figure 10: Example of possible validity period for GapDefinition = 0 and GapFitting = 0

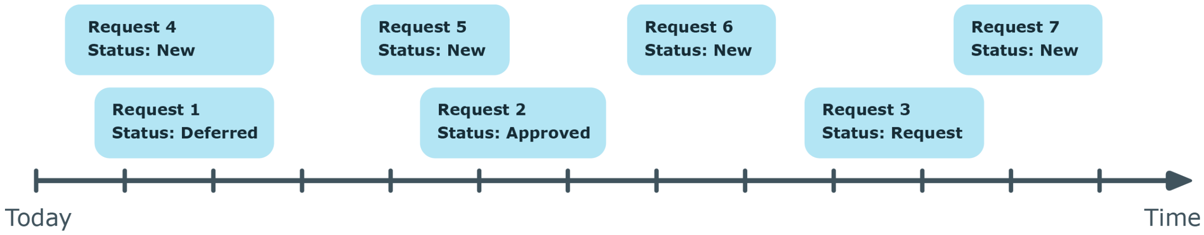
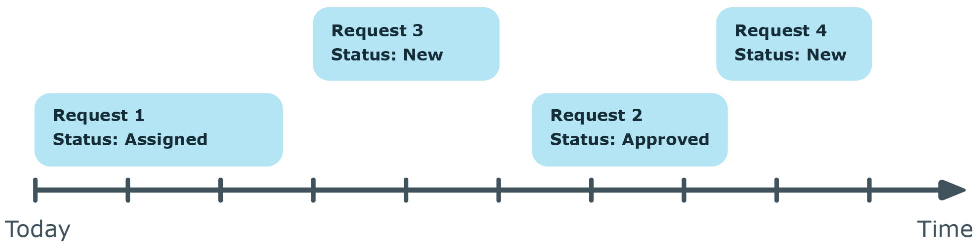


Figure 11: Example of possible validity period for GapDefinition = 1 and GapFitting = 1



Related topics

- Request statuses on page 228

Relocating a customer or product to another shop

If a customer requests a product from a shop or shopping center and then changes to another at a later date, the product request is closed and the product is canceled. The same applies if a requested product is moved to another shelf.

You can label product service items with **Retain service item assignment on relocation** to retain their requests when they relocate. All pending or approved requests in the shop are transferred to any shop in which the employee is a customer and that contains the requested products. In connection with this, pending requests are reset, which means the requests have to go through the approval process from the beginning again.

Detailed information about this topic

- Product request on customer or product relocation on page 40

Related topics

- Removing customers from a shop on page 58

Changing approval workflows of pending requests

When approval workflows are changed, a decision must be made as to whether these changes should be applied to pending requests. Configuration parameters are used to define the desired procedure.

Scenario: Another approval workflow was stored with the approval policy

If changes have been made to the approval, renewal, or cancellation workflow in an approval policy, any pending approval procedures are continued by default with the original workflow. The newly stored workflow is only used in new requests. You can configure different behavior.

To specify how to handle pending requests

- In the Designer, enable the **QER | ITShop | OnWorkflowAssign** configuration parameter and select one of the following values.
  - **CONTINUE**: Ongoing approval processes are continued with the originally applicable workflow. The newly stored workflow is only used in new requests.

    This behavior also applies if the configuration parameter is not set.
  - **RESET**: In ongoing approval processes, all approval decisions already taken are reset. The approval processes are restarted with the newly stored workflow.
  - **ABORT**: Ongoing approval processes are aborted. All pending requests are closed. The customer must request, renew, or cancel the product again, if required.

A working copy of the originally applicable workflow is saved. The working copy is retained as long as it is used in ongoing approval processes. All unused working copies are regularly deleted using the **Maintenance approval workflows** schedule.

If the assigned renewal or cancelation workflow is deleted, any ongoing approval processes are aborted.

Scenario: A change was made to an approval workflow in use

If changes have been made to an approval workflow that is being used in pending requests, any pending approval processes are continued by default with the original workflow. The changes to the approval workflow are only implemented for new requests. You can configure different behavior.

To specify how to handle pending requests

- In the Designer, enable the **QER | ITShop | OnWorkflowUpdate** configuration parameter and select one of the following values.
  - **CONTINUE**: Ongoing approval processes are continued with the originally applicable approval workflow. The changes to the approval workflow are only implemented for new requests.

    This behavior also applies if the configuration parameter is not set.
  - **RESET**: In ongoing approval processes, all approval decisions already taken are reset. The approval processes are restarted with the changed approval workflow.
  - **ABORT**: Ongoing approval processes are aborted. All pending requests are closed. The customer must request, renew, or cancel the product again, if required.

A working copy of the approval workflow that contains the original version is saved. This working copy is retained as long as it is used in ongoing approval processes. All unused working copies are regularly deleted using the **Maintenance approval workflows** schedule.

Related topics

- Determining the responsible approvers on page 112

Requests for employees

In the Web Portal default installation, approvers can request and cancel products for other users. Approvers can only request products for users of shops they manage and where the user is an customer. Furthermore, department managers and their deputies may edit the data for employees belonging to their department.

The responsibilities are evaluated through the following database view (View).

`QER_VEditEmployee`	This view displays the department manager, their deputies, and employees whose data can be edited.

Requesting change of manager for an employee

Managers can edit master data for their employees in the Web Portal. In the same context, it is possible to define a new manager for an employee. To do this, the previous manager requests assignment of another manager. If the other manager agrees to the assignment, they are assigned to the employee as manager.

Prerequisites

The following objects are made available in the One Identity Manager database by default:

Table 57: Default objects for the change of manager

Objects	Description
New manager assignment multi-request resource	Is used to request the other manager in the IT Shop. The product is canceled the moment the new manager has been assigned. The **New manager assignment** service item is assigned.
New manager assignment service item	Product that is ordered when another manager is assigned. The **New manager assignment** approval policy is assigned.
Identity & Access	The service item is assigned by default to the **Identity**

Objects	Description
Lifecycle | Identity Lifecycle IT Shop structure	**Lifecycle** shelf in the **Identity & Access Lifecycle** shop.
New manager assignment approval policy	This specifies the approval workflow by which the change of manager is approved. It is assigned to the approval workflow, **New manager assignment**.
New manager assignment approval workflow	This determines the other manager as an approver. If this is denied, the request is returned to the previous manager.
`VI_ESS_PersonWantsOrg_Set_New_Person.Manager` process	Allocates the other manager to the employee as manager as soon as the change of manager was approved and the validity period of the request is reached.

Procedure for changing managers

1. The previous manager edits the master data of the employee the other manager is going to take on. They select an employee as manager and specify a date from which the changes take effect.

   Table 58: Changes that are requested

Property	Description
New manager	Employee to be assigned as a new manager for the employee.
Effective date	The date on which the change takes effect.
Changes to be run after approval is granted	Changes that should be run after approval has been granted and the new manager has been assigned, for example, deleting user accounts or removing memberships in system entitlements. The previous manager can decide which of the changes listed should be run.

2. A request with the following properties is triggered.

   Table 59: Properties of the manager change request

Property	Description
Requester	Previous manager.
Recipient	Employee.

Property	Description
Additional request data	New manager.
Approver	New manager.
Valid from	The date on which the change takes effect.
Additional data	Additional changes to be run.

3. The request is assigned for approval to the new manager, who can also specify what other changes should be made after the manager has been replaced.
   a. If the manager denies approval, the request is returned to the previous manager.

      This manager can select another manager and approve the request. The request is assigned to this other manager for approval.

      The previous manager can deny request approval. The change of manager is closed. The employee’s manager is not changed.
   b. If the new manager grants approval to the request, they are assigned as manager to the employee from the validity date of the request. All selected additional changes are also run on the validity date.
4. Product is unsubscribed. The request is closed.

For more detailed information about assigning a new manager, see the *One Identity Manager Web Portal User Guide*.

Canceling requests

Request recipients, requesters, and the members of the chief approval team can cancel requests that have not already be approved in the Web Portal. The approval process is canceled immediately. The request is given the **Canceled** status.

For more detailed information about canceling processes in the Web Portal, see the *One Identity Manager Web Portal User Guide*.

To cancel a request in the Manager

1. In the Manager, select the **IT Shop | Requests | Pending requests | <filter> | <request>** category.
2. Select a request procedure in the result list.
3. Click **Cancel request**.
4. Confirm the security prompt with **Yes**.
5. Click **OK**.

Notifications in the request process

In an request process, various email notifications can be sent to requesters and approvers. The notification procedure uses mail templates to create notifications. The mail text in a mail template is defined in several languages. This ensures that the language of the recipient is taken into account when the email is generated. Mail templates are supplied in the default installation with which you can configure the notification procedure.

Messages are not sent to the chief approval team by default. Fallback approvers are only notified if not enough approvers could be found for an approval step.

To use notification in the request process

1. Ensure that the email notification system is configured in One Identity Manager. For more detailed information, see the *One Identity Manager Installation Guide*.
2. In the Designer, set the **QER | ITShop | DefaultSenderAddress** configuration parameter and enter the sender address used to send 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*.
5. Configure the notification procedure.

Related topics

- Custom mail templates for notifications on page 207

Demanding an approval decision

When a customer requests a product, the approver is notified that new approvals are pending.

Prerequisite

- The **QER | ITShop | MailTemplateIdents | RequestApproverByCollection** configuration parameter is not set.

To set up the notification procedure

- On the **Mail templates** tab of the approval step, enter the following data:

  Mail template request: IT Shop Request - approval required

  > TIP: To allow approval by email, select the **IT Shop Request - approval required (by email)** mail template.

NOTE: You can schedule demands for approval to send a general notification if there are requests pending. This replaces single demands for approval at each approval step.

Related topics

- Email notification: Scheduled demand for approval on page 159
- Approval by mail on page 167
- Editing approval steps on page 83

Reminding approvers

If an approver has not made a decision by the time the reminder timeout expires, notification can be sent by email as a reminder. The approvers work time applies to the time calculation.

Prerequisite

- The **QER | ITShop | MailTemplateIdents | RequestApproverByCollection** configuration parameter is not set.

To set up the notification procedure

- Enter the following data for the approval step.

Table 60: Properties of the approval step for notification

Property	Meaning
Reminder interval (hours)	Number of working hours to elapse after which the approver is notified by mail that there are still pending requests for approval. NOTE: Ensure that a state, county, or both is entered into the employee's master data for determining the correct working hours. If this information is missing, a fallback is used to calculate the working hours. For more detailed information about calculating employees' working hours, see the *One Identity Manager Identity Management Base Module Administration Guide*. If more than one approver was found, each approver will be notified. The same applies if an additional approver has been assigned. If an approver delegated the approval, the time point for reminding the delegation recipient is recalculated. The delegation recipient and all the other approvers are notified. The original approver is not notified. If an approver has made an inquiry, the time point for reminding the queried employee is recalculated. As long as the inquiry has not been answered, only this employee is notified.
Mail template reminder	Select the **IT Shop Request - Remind approver** mail template. TIP: To allow approval by email, select the **IT Shop Request - remind approver (by email)** mail template.

NOTE: You can schedule demands for approval to send a general notification if there are requests pending. This replaces single demands for approval at each approval step.

Related topics

- Email notification: Scheduled demand for approval on page 159
- Approval by mail on page 167
- Editing approval steps on page 83

Scheduled demand for approval

Approvers can be regularly notified of requests that are pending. These regular notifications replace the individual prompts and approval reminders that are configured in the approval step.

To send regular notifications about pending requests

1. Enable the **QER | ITShop | MailTemplateIdents | RequestApproverByCollection** configuration parameter in the Designer.

   By default, a notification is sent with the **IT Shop request - pending requests for approver** mail template.

   TIP: To use something other than the default mail template for these notifications, change the value of the configuration parameter.
2. In the Designer, configure and enable the **Inform approver about pending requests** schedule.

   For detailed information, see *One Identity Manager Operational Guide*.

Sequence for limited requests

A recipient keeps a product on the shelf up to a specific point in time when they unsubscribe the products again. Sometimes, however, products are only required for a certain length of time and can be canceled automatically. The recipient is notified by email before the expiry date is reached and has the option to renew the request.

To set up the notification procedure

1. In the Designer, set the **QER | ITShop | ValidityWarning** configuration parameter and enter the warning period (in days) for expiring requests.
2. In the Designer, configure and activate the **Reminder for IT Shop requests that expire soon** schedule.
3. Enter the following data for the approval policy:
    - **Mail template expired**: Select the mail template to be used for the email notification. The default installation provides the **IT Shop request - product expires** and **IT Shop request - expired** mail templates.
4. Save the changes.

Related topics

- Requests with limited validity period on page 149
- Approval policies for requests on page 73

Approving or denying request approval

When a request is granted approval or denied, the request recipient is notified by email. Notification may occur after approval or denial of a single approval step or once the entire approval process is complete. Requests can be automatically granted or denied approval once a specified time period has expired. The recipient is notified in the same way in this case.

To set up the notification procedure

- If notification should be sent immediately after an approval decision is made for a single approval step, enter the following data on the **Mail templates** tab of the approval step.
  - **Mail template approved**: IT Shop request - approval granted for approval step
  - **Mail template denied**: IT Shop request - approval not granted for approval step
- Enter the following data in the approval policy when notification should immediately follow the approval decision of the entire approval process:
  - **Mail template approved**: IT Shop request - approval granted
  - **Mail template denied**: IT Shop request - approval not granted

Related topics

- Approval policies for requests on page 73
- Editing approval steps on page 83

Notifying delegates

A delegator can, if required, receive notifications if the recipient of the delegation has made an approval decision in the IT Shop. Notification is sent once an employee has been determined as an approver due to delegation and has made an approval decision for the request.

To send notification when the employee who was delegated an approval approves or denies the request

- In the Designer, set the **QER | ITShop | Delegation | MailTemplateIdents | InformDelegatorAboutDecisionITShop** configuration parameter.

  By default, a notification is sent with the **Delegation - inform delegator about decided request** mail template.

TIP: To use custom mail templates for emails of this type, change the value of the configuration parameter.

Delegations are taken into account in the following default approval procedures.

Table 61: Delegation relevant default approval procedures

Delegation of	Approval procedure
Department responsibilities	D0, D1, D2, DM, DP, MS
Cost center responsibilities	P0, P1, P2, PM, PP, MS
Location responsibilities	MS
Business role responsibilities	OM, MS
Employee responsibilities	CM
IT Shop structure responsibilities	H0, H1, H2
Memberships in business roles	OR
Memberships in application roles	DI, DR, ID, IL, IO, IP, OA, OC, OH, PI, PR, RD, RL, RO, RP, TO

Example

Jon Blogs is responsible for the R1 business role. He delegates his responsibility for the business role to Clara Harris. Clara Harris is herself responsible for R2 business role.

A member of the R1 business role requests a product in the IT Shop. Jon Bloggs is established as an approver through the **OM - Manager of a specific role** approval process. The request is assigned to Clara Harris for approval through delegation. Jon Blogs is notified as soon as Clara Harris has made her approval decision.

A member of the R2 business role requests a product in the IT Shop. Clara Harris is determined as the approver through the **OM - Manager of a specific role** approval workflow. No notification is sent because Clara Harris does not make the approval decision due to delegation.

Bulk delegation

You have the option to delegate all your responsibilities to one person in the Web Portal. If you have a lot of responsibilities, it is possible that not all the delegations are carried out. A delegator can send a notification to themselves if an error occurs.

Detailed information about this topic

- Bulk delegation notifications on page 167

Related topics

- Default approval procedures on page 91
- Using additional approvers to approve requests on page 165

Canceling requests

Requests can be automatically aborted for various reasons, for example, when a specified time period has expired or if no approver can be found. The request recipient is notified.

To set up the notification procedure

- In the approval policy, on the **Mail templates** tab, enter the following data.

  Mail template aborted: IT Shop request - Aborted

Related topics

- Editing approval steps on page 83

Escalating requests

Requests can be escalated if a specified time period has expired. If a request is escalated, the requester can be notified by email.

To set up the notification procedure

- On the **Mail templates** tab of the approval step, enter the following data:

  Mail template escalation: IT Shop request - Escalation

Related topics

- Editing approval steps on page 83

Delegating approvals

If, in an approval step, other approvers can be authorized to make the approval decision, the additional approvers can be prompted to approve by email. The same applies if the approval can be delegated.

To set up the notification procedure

- On the **Mail templates** tab of the approval step, enter the following data:

  Mail template delegation: IT Shop Purchase order - Delegated/additional approval

  TIP: To enable approval by email, select the **IT ShopRequest - delegated/additional approval (by email)** mail template.

Related topics

- Approval by mail on page 167
- Appointing other approvers on page 131
- Editing approval steps on page 83

Rejecting approvals

The original approver must be notified if an additional approver or employee to whom an approval has been delegated refuses the approval.

To set up the notification procedure

- On the **Mail templates** tab of the approval step, enter the following data:

  Mail template rejection: IT Shop Purchase order - Reject approval

  TIP: If you allow approval by email, select the mail template **IT Shop request - reject approval (by mail)**.

Related topics

- Approval by mail on page 167
- Editing approval steps on page 83

Notifications with questions

Employees can be notified when a question about a request is asked. Similarly, the approvers can also be notified as soon as the question is answered.

To send a notification when an approver asks a question

- In the Designer, enable the **QER | ITShop | MailTemplateIdents | QueryFromApprover** configuration parameter.

  A notification is sent by default with the **IT Shop Request - question** mail template.

To send a notification to the approver when the queried employee answers a question

- In the Designer, set the **QER | ITShop | MailTemplateIdents | AnswerToApprover** configuration parameter.

  A notification is sent by default with the **IT Shop Request - answer** mail template.

TIP: To use custom mail templates for emails of this type, change the value of the configuration parameter.

Using additional approvers to approve requests

The original approver can be notified when an additional approver or an employee who has been delegated an approval has granted or denied the request. This mail is send the moment the approval step has been decided.

To send a notification when the additional approver approves or denies the request

- In the Designer, set the **QER | ITShop | MailTemplateIdents | InformAddingPerson** configuration parameter.

  A notification is sent by default with the **IT Shop request - approval of added step** mail template.

To send notification when the employee who was delegated an approval approves or denies the request

- In the Designer, set the **QER | ITShop | MailTemplateIdents | InformDelegatingPerson** configuration parameter.

  A notification is sent by default with the **IT Shop request - approval of delegated step** mail template.

TIP: To use custom mail templates for emails of this type, change the value of the configuration parameter.

Unsubscribing approved requests

Request recipients can be notified if a request is unsubscribed by another employee. The email is sent immediately after approval has been granted for unsubscribing.

To set up the notification procedure

- Enter the following data for the approval policy:

  Mail template canceled: IT Shop request - Canceled

Related topics

- Approval policies for requests on page 73

Renewing approved requests

Request recipients can be notified when a request has been renewed. The email notification is sent immediately after approval for the renewal has been granted.

To set up the notification procedure

- Enter the following data for the approval policy:

  Mail template renewed: IT Shop request - Renewed

Related topics

- Approval policies for requests on page 73

Product change notifications

Employees can be notified when a product is replaced by another product on a fixed date. The request recipient is automatically notified by email once notification procedures are in place and the **Change product** task is run.

TIP:

To use different mail template than the default for this notification

1. Open the `VI_ESS_PersonWantsOrg Send Mail Product Expires Soon` process in the Designer.
2. Change the process properties in the pre-script for generating the `UID_RichMail`.
3. Select **Database | Save to database** and click **Save**.

Detailed information about this topic

- Notifications in the request process on page 157

Default mail templates

One Identity Manager supplies mail templates by default. These mail templates are available in English and German. If you require the mail body in other languages, you can add mail definitions for these languages to the default mail template.

To edit a default mail template

- In the Manager, select the **IT Shop | Basic configuration data | Mail templates | Predefined** category.

Related topics

- Custom mail templates for notifications on page 207

Bulk delegation notifications

You have the option to delegate all your responsibilities to one person in the Web Portal. If you have a lot of responsibilities, it is possible that not all the delegations are carried out. A delegator can send a notification to themselves if an error occurs.

To send a notification if bulk delegation fails

- In the Designer, set configuration parameter **QER | ITShop | MailTemplateIdents | InformRequestorAboutMassDelegationErrors**.

  By default, a notification using the **Delegation - mass delegation errors occurred** mail template is sent.

TIP: To use something other than the default mail template for these notifications, change the value of the configuration parameter.

Related topics

- Bulk delegation errors on page 219

Approval by mail

To provide approvers who are temporarily unable to access One Identity Manager tools with the option of making approval decisions on requests, you can set up approvals by email. In this process, approvers are notified by email when a request attestation case is pending their approval. Approvers can use the relevant links in the email to make approval decisions without having to connect to the Web Portal. This generates an email that contains the approval decision and in which approvers can state the reasons for their approval decision. This email is sent to a central mailbox. One Identity Manager checks this mailbox regularly, evaluates the incoming emails and updates the status of the request procedures correspondingly.

IMPORTANT: An approval cannot be sent by email if multi-factor authentication is configured for the requested product. Approval mails for such requests produce an error message.

Prerequisites

- If you use a Microsoft Exchange mailbox, configure the Microsoft Exchange with:
  - Microsoft Exchange Client Access Server version 2007, Service Pack 1 or higher
  - Microsoft Exchange Web Service .NET API Version 1.2.1, 32-bit
- If you use an Exchange Online mailbox, register an application in your Azure Active Directory tenant in the Microsoft Azure Management Portal. For example, One Identity Manager <Approval by mail>.

  For detailed information about how to register an application, see https://docs.microsoft.com/en-us/exchange/client-developer/exchange-web-services/how-to-authenticate-an-ews-application-by-using-oauth#register-your-application.
- The One Identity Manager Service user account used to log into Microsoft Exchange or Exchange Online requires full access to the mailbox given in the **QER | ITShop | MailApproval | Inbox** configuration parameter.
- The **QER | ITShop | MailTemplateIdents | RequestApproverByCollection** configuration parameter is not set.

To set up approval by email

1. In the Designer, set the **QER | ITShop | MailApproval | Inbox** configuration parameter and enter the mailbox to which the approval mails are to be sent.
2. Set up mailbox access.
   - If you use a Microsoft Exchange mailbox:
     - By default, One Identity Manager uses the One Identity Manager Service user account to log in to the Microsoft Exchange Server and access the mailbox.

       - OR -
     - You enter a separate user account for logging in to theMicrosoft Exchange Server for mailbox access.
       - In the Designer, set the **QER | ITShop | MailApproval | Account** configuration parameter and enter the user account's name.
       - In the Designer, set the **QER | ITShop | MailApproval | Domain** configuration parameter and enter the user account's domain.
       - In the Designer, set the **QER | ITShop | MailApproval | Password** configuration parameter and enter the user account's password.
   - If you use an Exchange Online mailbox:

- In the Designer, set the **QER | ITShop | MailApproval | AppId** configuration parameter and enter the application ID that was generated when the application was registered in the Azure Active Directory tenant.
- In the Designer, set the **QER | ITShop | MailApproval | Domain** configuration parameter and enter the domain for logging into Azure Active Directory.
- In the Designer, set the **QER | ITShop | MailApproval | Password** configuration parameter and enter the client secret (application password) for the application.

3. In the Designer, set the **QER | ITShop | MailTemplateIdents | ITShopApproval** configuration parameter.

   The mail template used to create the approval decision mail is stored with this configuration parameter. You can use the default mail template or add a custom mail template.

   TIP: In this case, also change the `VI_MailApproval_ProcessMail` script.

4. Assign the following mail templates to the approval steps.

   Table 62: Mail templates for approval by mail

Property	Mail template
Mail template request	IT Shop request - approval required (by mail)
Mail template reminder	IT Shop request - remind approver (by mail)
Mail template delegation	IT Shop request - delegated/additional approval (by mail)
Mail template rejection	IT Shop request - reject approval (by mail)

5. In the Designer, configure and enable the **Processes IT Shop mail approvals** schedule.

   Based on this schedule, One Identity Manager regularly checks the mailbox for new approval mails. The mailbox is checked every 15 minutes. You can change how frequently it checks, by altering the interval in the schedule as required.

To clean up a mail box

- In the Designer, set the **QER | ITShop | MailApproval | DeleteMode** configuration parameter and select one of the following values.
  - **HardDelete**: The processed email is immediately deleted.
  - **MoveToDeletedItems**: The processed email is moved to the **Deleted objects** mailbox folder.
  - **SoftDelete**: The processed email is moved to the Active Directory recycling bin and can be restored if necessary.

NOTE: If you use the **MoveToDeletedItems** or **SoftDelete** cleanup method, you should empty the **Deleted objects** folder and the Active Directory recycling bin on a regular basis.

Related topics

- Editing approval emails on page 170
- Custom mail templates for notifications on page 207
- Demanding an approval decision on page 157
- Reminding approvers on page 158
- Delegating approvals on page 163
- Rejecting approvals on page 164
- Preparing the IT Shop for multi-factor authentication on page 49

Editing approval emails

The **Processes IT Shop mail approvals** schedule starts the `VI_ITShop_Process Approval Inbox` process. This process runs the `VI_MailApproval_ProcessInBox` script, which searches the mailbox for new approval decision mails and updates the request procedures in the One Identity Manager database. The contents of the approval decision mail are processed at the same time.

NOTE: The validity of the email certificate is checked with the `VID_ValidateCertificate` script. You can customize this script to suit your security requirements. Take into account that this script is also used for approval decisions for IT Shop requests by email.

If an self-signed root certification authority is used, the user account under which the One Identity Manager Service is running, must trust the root certificate.

TIP: The `VI_MailApproval_ProcessInBox` script finds the Exchange Web Service URL that uses AutoDiscover through the given mailbox as default. This assumes that the AutoDiscover service is running.

If this is not possible, enter the URL in the QER | ITShop | MailApproval | ExchangeURI configuration parameter.

Approval decision mails are processed with the `VI_MailApproval_ProcessMail` script. The script finds the relevant approval, sets the **Approved** option if approval is granted, and stores the reason for the approval decision with the request procedures. The approver is found through the sender address. Then the approval decision mail is removed from the mailbox depending on the selected cleanup method.

NOTE: If you use a custom mail template for the approval decision mail, check the script and modify it as required. Take into account that this script is also used for attestations by email.

Approval by Starling 2FA app

Approvers that are registered for Starling Two-Factor Authentication, can also use the Starling 2FA app for approvals. To do this, in the Designer, set the **QER | Person | Starling | UseApprovalAnywhere** configuration parameter. For detailed information, see the *One Identity Manager Authorization and Authentication Guide*.

Requests with limited validity period for changed role memberships

If an employee changes their primary department (business role, cost center, or location), they lose all company resources and system entitlements inherited through it. However, it may be necessary for the employee to retain these company resources and system entitlements for a certain period. Use temporary requests to retain the state of the employee's current memberships. Inherited assignments are not removed until after the validity period for this request has expired. The employee can renew the request with the validity period.

Prerequisites

- Employee master data is modified by import.
- The import sets the session variable `FullSync=TRUE`.

To configure automatic requests for removal of role memberships

1. In the Designer, set the **QER | ITShop | ChallengeRoleRemoval** configuration parameter.
2. In the Designer, set the **QER | ITShop | ChallengeRoleRemoval | DayOfValidity** configuration parameter and enter a validity period for the request.
3. In the Designer, set the configuration parameters under **QER | ITShop | ChallengeRoleRemoval** for roles whose primary memberships need to remain intact when modified.
4. Commit the changes to the database.

NOTE: The configuration parameters are set by default. The validity period is set to seven days.

If employee master data is modified by importing, One Identity Manager checks if a primary role (for example `Person.UID_Department`) was modified or deleted on saving. If this is the case, `VI_CreateRequestForLostRoleMembership` is executed. The script create a temporary assignment request for this role, which is granted approval automatically. Thus, the employee remains a members of the role and retains their company resources and system entitlements. The request is automatically canceled when the validity period expires.

The request can be renewed during the validity period. The request renewal must be approved by the role manager. The request becomes permanent if approval is granted. Role membership stays the same until the assignment is canceled.

TIP: The **QER | ITShop | ChallengeRoleRemoval | ITShopOrg** configuration parameter specifies which product nodes to use for a limited validity period request of modified role memberships. The **Challenge loss of role membership** product is available by default in the **Identity & Access Lifecycle | Identity Lifecycle** shelf. You can also add this product to your own IT Shop solution.

To use the "Challenge loss of role membership" product in your own IT Shop

1. Assign the **Challenge loss of role membership** assignment resource to one of your own shelves.
2. In the Designer, edit the value of the **QER | ITShop | ChallengeRoleRemoval | ITShopOrg** configuration parameter.
    - Enter the full name or the UID of the new product node.

Related topics

- Configuration parameters for the IT Shop on page 220

Requests from permanently inactive employees

By default, permanently disabled employees remain members in all the customer nodes. This ensures that all pending request and resulting assignments are retained. One Identity Manager can be configured such that employees are automatically removed from all custom nodes once they are permanently disabled. This means that all pending requests are aborted and remaining assignments are removed.

To remove employees from all customer nodes if they are permanently disabled

- In the Designer, set the **QER | ITShop | AutoCloseInactivePerson** configuration parameter.

Deleting requests

To limit request procedures in the One Identity Manager database, you can remove closed request procedures from the database. The request procedure properties are logged in the approval history at the same time. The requests are subsequently deleted. Only closed requests with unexpired retention periods are kept in the database.

If the request to be deleted still contains dependent requests, the request is only deleted after the dependent requests have been deleted. Dependent requests are requests that are entered into `PersonWantsOrg.UID_PersonWantsOrgParent`.

To delete requests automatically

1. In the Designer, set the **QER | ITShop | DeleteClosed** configuration parameter.
    a. To delete aborted requests, set the **QER | ITShop | DeleteClosed | Aborted** configuration parameter and set the retention period in days.
    b. To delete denied requests, set the **QER | ITShop | DeleteClosed | Dismissed** configuration parameter and set the retention period in days.
    c. To delete canceled requests, set the **QER | ITShop | DeleteClosed | Unsubscribed** configuration parameter and specify its retention period in days.
2. In the Designer, set the **Common | ProcessState | PropertyLog** configuration parameter.

    This activates logging for deleted request procedures and their approval history. For more detailed information about logging data changes tags, see the *One Identity Manager Configuration Guide*.

    INFORMATION: Ensure that the recorded request procedures are archived for audit reasons. For more detailed information about the archiving process, see the *One Identity Manager Data Archiving Administration Guide*.

Closed requests are deleted by the DBQueue Processor once the request's retention period has expired. As the basis for calculating the retention period, the request's cancellation date is used. If this date cannot be given, the time at which the request was last changed, is used. The DBQueue Processor determines the requests to be deleted in the context of daily maintenance tasks. All request procedure properties are logged in the approval history.

Managing an IT Shop

Depending on your company structure, you can use the supplied default shop, **Identity & Access Lifecycle**, and extend it or set up your own IT Shop solution. Set up different IT Shop structures for your custom IT Shop solution. Specify which employees are authorized to make request in the shops.

To set up an IT Shop solution with the help of the IT Shop Wizard.

- In the Manager, select the **My One Identity Manager | IT Shop wizards | Create shop** category.

  The wizard includes the most important configuration stages for setting up an IT Shop. After completing the wizard, there may be other configuration steps necessary.

IT Shop structures such as shopping centers, shops, and shelves are mapped in **IT Shop | IT Shop**. An IT Shop solution is displayed hierarchically.

The following sections describe the procedure for manually setting up an IT Shop.

IT Shop base data

Various base data is required to construct an IT Shop:

- Processing status

  Processes statuses pass on the status of single approval steps. You can set the processing status for each approval step in the approval workflow depending on whether the approval decision was negative or positive. Depending on the result of the approval decision, the appropriate processing status is set for the request.

  For more information, see Processing status on page 176.

- Standard reasons

  Standard reasons are predefined reasons that can be selected in the Web Portal when making approval decisions.

  For more information, see Standard reason for requests on page 177.

- Approval policies

  One Identity Manager uses approval policies to determine the approver for each request process.

  For more information, see Approval policies for requests on page 73.

- Approval workflows

  Approval workflows define all the necessary steps for making approval decisions for request processes.

  For more information, see Approval workflows for requests on page 77.

- Approval procedure

  Approval procedures are used to find the approvers required for an approval step.

  For more information, see Setting up approval procedures on page 107.

- Mail templates

  Mail templates are used to send email messages to requesters and approvers.

  For more information, see Custom mail templates for notifications on page 207.

- Role classes

  Use role classes to specify which company resources can be requested through the IT Shop. At the same time, you decide which company resources may be assigned as products to shelves and IT Shop templates.

  For more information, see Role classes for the IT Shop on page 178.

- Role types

  Role types are used to group roles into a role class. Within the IT Shop, role types can e used to group shop and to restrict the effective approval policies for a shelf.

  For more information, see Role types for the IT Shop on page 179.

- Business Partners

  In One Identity Manager, you can enter the data for external businesses that could be act as manufacturers, suppliers, or partners. You assign a manufacturer to a service item.

  For more information, see Business partners on page 180.

- Functional areas

  To analyze rule checks for different areas of your company in the context of identity audit, you can set up functional areas. Functional areas can be assigned to service items.

  For more information, see Functional areas on page 181.

- Service categories

  Service categories are used to group service items and make them available in the Web Portal.

  For more information, see Entering service categories on page 33.

- Tags

Product owners are able to add tags to their products. These tags can be used as search criteria by requests in the Web Portal.

For more information, see Entering tags on page 43.

- Request properties group

  When products are requested in the Web Portal, product-specific request properties can be queried dynamically. These request properties are displayed in the Web Portal depending on the configuration, requester, or approver. Request properties are saved as additional information in the shopping cart and in the request procedure.

  For more information, see Entering product-specific properties on page 37.

- Chief approval team

  There is a default application role in One Identity Manager for the chief approval team. Assign employees to this application role, who are authorized to approve, deny, abort requests, or to authorize other approvers in special cases.

  For more information, see Chief approval team on page 182.

- Product owners

  A default application role for product owners is available in One Identity Manager. Assign the employees to this application role, who are authorized to approve requests and edit the master data of service items or service categories.

  For more information, see Product owners on page 183.

- Attestors

  A default application role for attestors is available in One Identity Manager. Assign the employees to this application role, who are authorized to attest IT Shop structures.

  For more information, see Attestors on page 184.

Processing status

Processes statuses pass on the status of single approval steps. You can set the processing status for each approval step in the approval workflow depending on whether the approval decision was negative or positive. Depending on the result of the approval decision, the appropriate processing status is set for the request.

To edit processing statuses

1. In the Manager, select the **IT Shop | Basic configuration data | Processing status** category.
2. In the result list, select a processing status and run the **Change master data** task.

   \- OR -

   Click in the result list.
3. Edit the processing status's master data.
4. Save the changes.

Enter the following properties for a processing status.

Table 63: General master data for a processing status

Property	Description
Processing status	Name of the processing status.
Success	The processing status marks the success of the processing step.
Closed	The processing status marks whether processing is complete.
Sort order	Order in which processing status can be set.
Description	Text field for additional explanation.

Related topics

- Properties of an approval step on page 83

Standard reason for requests

For requests or the approval of requests, you can specify reasons in the Web Portal that explain the request sequence and the individual approval decisions. You can freely formulate this text. You also have the option to predefine reasons. The approvers can select a suitable text from these standard reasons in the Web Portal and store it with the request.

Standard reasons are displayed in the approval history and the request details.

To edit standard reasons

1. Select the **IT Shop | Basic configuration data | Standard reasons** category.
2. Select a standard reason in the result list and run the **Change master data** task.

   - OR -

   Click in the result list.
3. Edit the master data for a standard reason.
4. Save the changes.

Enter the following properties for the standard reason.

Table 64: General master data for a standard reason

Property	Description
Standard reason	Reason text as displayed in the Web Portal and in the approval history.

Property	Description
Description	Text field for additional explanation.
Automatic Approval	Specifies whether the reason text is only used for automatic approvals by One Identity Manager. This standard reason cannot be selected by manual approvals in the Web Portal. Do not set the option if the you want to select the standard reason in the Web Portal.
Additional text required	Specifies whether an additional reason should be entered in free text for the approval.
Usage type	Usage type of standard reason. Assign one or more usage types to allow filtering of the standard reasons in the Web Portal.

Predefined standard reasons for requests

One Identity Manager provides predefined standard reasons. These standard reasons are entered into the request in the case of automatic approval by One Identity Manager.

To display predefined standard reasons

- In the Manager, select the **IT Shop | Basic configuration data | Standard reasons | Predefined**.

Role classes for the IT Shop

Role classes form the basis for mapping IT Shop structures in One Identity Manager. The following role classes are available by default in One Identity Manager:

- IT Shop structure
- IT Shop template (if the **QER | ITShop | Templates** configuration parameter is set)

Use role classes to specify which company resources can be requested through the IT Shop. At the same time, you decide which company resources may be assigned as products to shelves and IT Shop templates.

The following options define which company resources may be assigned to IT Shop structures and IT Shop templates:

- Assignments allowed

  This option specifies whether the assignment of the relevant company resources is permitted in general.
- Direct assignments allowed

This option specifies whether the relevant company resources can be directly assigned.

NOTE: Company resources are always assigned directly to shelves and IT Shop templates. Therefore, always enable and disable both options.

To configure assignment to IT Shop structures and IT Shop templates

1. In the Manager, select the **IT Shop | Basic configuration data | Role classes** category.
2. In the result list, select the role class.
3. Select the **Configure role assignments** task.
4. In the **Role assignments** column, select a company resource.

   Enable the **Assignments permitted** option, to specify whether an assignment is generally allowed.

   Enable the **Direct assignment permitted** options, to specify whether a direct assignment is allowed.

   Disable the options if the assignment is not allowed.

   INFORMATION: You can only disable the options if there are no assignments of the respective objects to IT Shop structures or IT Shop templates.
5. Save the changes.

Role types for the IT Shop

Create role types in order to classify roles. You can use role types to limit the approval policies in effect for shelves. To do this, assign role types to shelves and approval policies.

You can also assign role types to shops if you want to apply further criteria to distinguish between shops. Role types for shops do not, however, influence how the approval policies in effect are determined.

To edit a role type

1. In the Manager, select the **IT Shop | Basic configuration data | Role types**.
2. In the result list, select the role type and run the **Change master data** task.

   - OR -

   Click in the result list.
3. Enter a name and detailed description for the role type.
4. Save the changes.

Related topics

- Determining the effective approval policies on page 89

Business partners

In One Identity Manager, you can enter the data for external businesses that could be act as manufacturers, suppliers, or partners. You assign a manufacturer to a service item.

To edit business partners

1. In the Manager, set the **IT Shop | Basic configuration data | Business partners**.
2. In the result list, select a business partner and run the **Change master data** task.

   - OR -

   Click in the result list.
3. Edit the business partner's master data.
4. Save the changes.

Enter the following data for a company.

Table 65: General master data for a company

Property	Description
Company	Short description of the company for the views in One Identity Manager tools.
Name	Full company name.
Surname prefix	Additional company name.
Short name	Company's short name.
Contact	Contact person for the company.
Partner	Specifies whether this is a partner company.
Customer number	Customer number at the partner company.
Supplier	Specifies whether this is a supplier.
Customer number	Customers number at supplier.
Leasing partner	Specifies whether this is a leasing provider or rental firm.
Manufacturer	Specifies whether this is a manufacturer.
Remarks	Text field for additional explanation.

Table 66: Company address

Property	Description
Street	Street or road.
Building	Building
Zip code	Zip code.
City	City.
State	State.
Country	Country.
Phone	Company's telephone number.
Fax	Company's fax number.
Email address	Company's email address.
Website	Company's website. Click the **Browse** button to display the web page in the default web browser.

Functional areas

To analyze rule checks for different areas of your company in the context of identity audit, you can set up functional areas. Functional areas can be assigned to hierarchical roles and service items. You can enter criteria that provide information about risks from rule violations for functional areas and hierarchical roles. To do this, you specify how many rule violations are permitted in a functional area or a role. You can enter separate assessment criteria for each role, such as a risk index or transparency index.

Example for using functional areas are:

To assess the risk of rule violations for service items. Proceed as follows:

1. Set up functional areas.
2. Assign service items to the functional areas.
3. Specify the number of rule violations allowed for the functional area.
4. Assign compliance rules required for the analysis to the functional area.
5. Use the One Identity Manager report function to create a report that prepares the result of rule checking for the functional area by any criteria.

To edit functional areas

1. In the Manager, select the **IT Shop | Basic configuration data | Functional areas** category.
2. In the result list, select a function area and run the **Change master data** task.

   - OR -

   Click in the result list.
3. Edit the function area master data.
4. Save the changes.

Enter the following data for a functional area.

Table 67: Functional area properties

Property	Description
Functional area	Description of the functional area
Parent Functional area	Parent functional area in a hierarchy. Select a parent functional area from the list in order to organize your functional areas hierarchically.
Max. number of rule violations	List of rule violation valid for this functional area. This value can be evaluated during the rule check. NOTE:This input field is available if theCompliance Rules Module exists.
Description	Text field for additional explanation.

Chief approval team

Sometimes, approval decisions cannot be made for requests because the approver is not available or does not have access to One Identity Manager tools. To complete these requests, you can define a chief approval team whose members are authorized to intervene in the approval process at any time.

There is a default application role in One Identity Manager for the chief approval team. Assign this application role to all employees who are authorized to approve, deny, abort requests in special cases, or to authorize other approvers. For detailed information about application roles, see the *One Identity Manager Authorization and Authentication Guide*.

Table 68: Default application role for chief approval team

User	Tasks
Chief approval	Chief approvers must be assigned to the **Request & Fulfillment	IT Shop	Chief approval team** application role.

User	Tasks
team	Users with this application role: • Approve through requests. • Assign requests to other approvers.

To add members to the chief approval team

1. In the Manager, select the **IT Shop | Basic configuration data | Chief approval team** category.
2. Select the **Assign employees** task.

   In **Add assignments**, assign the employees who are authorized to approve all requests.

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

   To remove an assignment

   - Select the employee and double-click ✅.
3. Save the changes.

Detailed information about this topic

- Approval by the chief approval team on page 138

Product owners

Employees who are approvers in approval processes for requesting service items can be assigned to these service items. To do this, assign a service item or a service category to an application for **Product owners**. Assign this application role to employees who are authorized to approve requests in the IT Shop and to edit service item or service category data.

A default application role for product owners is available in One Identity Manager. You may create other application roles as required.

Table 69: Default application roles for product owners

User	Tasks
Product owners	Product owners must be assigned to the **Request & Fulfillment | IT Shop | Product owners** application role or a child application role. Users with this application role: • Approve through requests. • Edit service items and service categories under their management.

To add employees to the default application role for product owners

1. In the Manager, select the **IT Shop | Basic configuration data | Product owners** category.
2. Select the **Assign employees** task.

   In the **Add assignments** pane, add employees.

   TIP: In the **Remove assignments** pane, you can remove employee assignments.

   To remove an assignment

   - Select the employee and double-click .
3. Save the changes.

To add another application role for product owners

1. In the Manager, select the **IT Shop | Basic configuration data | Product owners** category.
2. Click in the result list.
3. Enter the application role's name and assign the **Request & Fulfillment | IT Shop | Product owners** application role or a child application role.
4. Save the changes.
5. Assign employees to the application role.

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

Related topics

- Deleting unused application roles for product owners on page 71

Attestors

Installed modules:	Attestation Module

In One Identity Manager, you can assign employees, who are brought in as attestors to attest these objects, to IT Shop structures (shelves, shops, shopping centers, service categories, and shelf templates). To do this, assign the IT Shop structures to application roles for attestors. Assign these application roles to employees who are authorized to attest these objects. For detailed information about attestation, see the *One Identity Manager Attestation Administration Guide*.

A default application role for attestors is available in One Identity Manager. You may create other application roles as required. For detailed information about application roles, see the *One Identity Manager Authorization and Authentication Guide*.

Table 70: Default application roles for attestors

User	Tasks
Attestors for IT Shop	Attestors must be assigned to the **Request & Fulfillment | IT Shop | Attestors** application role. Users with this application role: • Attest correct assignment of company resource to IT Shop structures for which they are responsible. • Can view master data for these IT Shop structures but not edit them. NOTE: This application role is available if the module Attestation Module is installed.

To add employees to default application roles for attestors

1. In the Manager, select the **IT Shop | Basic configuration data | Attestors** category.
2. Select the **Assign employees** task.

   In the **Add assignments** pane, add employees.

   TIP: In the **Remove assignments** pane, you can remove employee assignments.

   To remove an assignment

   - Select the employee and double-click ✅.
3. Save the changes.

To add another application role for attestors

1. In the Manager, select the **IT Shop | Basic configuration data | Attestors** category.
2. Click ➕ in the result list.
3. Enter the application role's name and assign the **Request & Fulfillment | IT Shop | Attestors** application role or a child application role.
4. Save the changes.
5. Assign employees to the application role.

Related topics

- General master data for a service item on page 21
- Service category master data on page 33
- General master data for IT Shop structures on page 187
- General master data for a shelf template on page 201

Setting up IT Shop structures

Depending on the company structure, you can optionally define shopping centers for your IT Shop solution where several shops can be bought together under one roof. Always add the shopping center to the top level of the IT Shop. Shopping centers may not be hierarchical.

Each shop contains a number of shelves that the customer can request products from. You can add a shop to the top level of the IT Shop or under a shopping center. Shops may not be hierarchical.

There are various products available for request on shelves. Shelves are set up under each shop.

> IMPORTANT:If a shop contains a large number of customers, the calculations in the IT Shop can cause a heavy load on the DBQueue Processor and therefore on the database server, as well.
>
> Structure the IT Shop so that no more than 30,000 customers can make requests in each shop. If necessary, set up your own shopping center with several shops and customer nodes.

Detailed information about this topic

- Adding IT Shop structures on page 186
- Additional tasks for IT Shop structures on page 189
- Deleting IT Shop structures on page 195

Adding IT Shop structures

To set up a shopping center, a shop or a shelf

1. In the Manager, select the **IT Shop | IT Shop** category.
2. Click in the result list.
3. Edit the shopping center, shop, or shelf's master data.
4. Save the changes.

Detailed information about this topic

- General master data for IT Shop structures on page 187
- Custom master data for IT Shop structures on page 189

General master data for IT Shop structures

On the **General** tab, enter the following master data for a shopping center, shop, or a shelf.

Table 71: General master data for an IT Shop structure

Property	Description
IT Shop node	IT Shop structure name.
Internal name	Internal IT Shop structure name.
IT Shop information	The structure of the IT Shop is governed by this data The IT Shop structure is regulated by this data. In the menu, select **Shopping center**, **Shop**, or **Shelf**. The menu is only displayed when you insert a new IT Shop structure.
Role type	Role types for classifying shops and shelves. In the menu, select a role type. • Shopping center: N/A • Shop: You can use role types to classify shops further. The role type for shops does not influence how the approval policies in effect are determined. • Shelf: You can use role types to limit the approval policies in effect.
Shelf template	Template to automatically fill shelves. • Shopping center: Select a shopping center template from the menu. A shopping center template can not be assigned until the shopping center has been saved in the database. • Shop: N/A • Shelf: For shelves created by automatic filling of the shop, the reference to the shelf template used is entered. Shelf templates are only assigned automatically.
Parent IT Shop node	Parent IT Shop nodes in the IT Shop hierarchy. • Shopping center: Leave this empty. Shopping centers always form the root node of an IT Shop. • Shop: If the shop is at the top level of an IT Shop, this field stays empty. If the shop is in a shopping center, select the shopping center from the menu. You can use this input field to add shops to shopping centers later.

Property	Description
	• Shelf: In the menu, select the shop to add the shelf to. After saving the rule, the shop cannot be changed again.
Full name	Full name of the IT Shop structure.
Location	Location of the IT Shop structure. You can use this input when creating approval policies for making requests from this shopping center/shop/shelf.
Department	Department the IT Shop structure is in. You can use this input when creating approval policies for making requests from this shopping center/shop/shelf.
Cost center	Cost enter of the IT Shop structure. You can use this input when creating approval policies for making requests from this shopping center/shop/shelf.
Owner	The employee responsible for the IT Shop structure. You can use this input when creating approval policies for making requests from this shopping center/shop/shelf.
Deputy manager	The owner's deputy. You can use this input when creating approval policies for making requests from this shopping center/shop/shelf.
Attestors	Applications role whose members are authorized to approve attestation cases for this IT Shop structure. To create a new application role, click . Enter the application role name and assign a parent application role. NOTE:This property is available if the Attestation Module is installed.
Description	Text field for additional explanation.
Certification status	Certification status of the IT Shop structure. You can select the following certification statuses: • **New**: The IT Shop structure was newly added to the One Identity Manager database. • **Certified**: The IT Shop structure's master data was granted approval by the manager. • **Denied**: The IT Shop structure's master data was denied approval by the manager.

Detailed information about this topic

- Role types for the IT Shop on page 179
- Templates for automatically filling the IT Shop on page 197
- Attestors on page 184

Related topics

- Determining the effective approval policies on page 89

Custom master data for IT Shop structures

Additional company-specific information. Use the Designer to customize display names, formats, and templates for the input fields.

Additional tasks for IT Shop structures

After you have entered the master data, you can run the following tasks.

The IT Shop structure overview

To obtain an overview of a shopping center

1. In the Manager, select the **IT Shop | IT Shop** category
2. Select the shopping center template in the result list.
3. Select the **Shopping center overview** task.

To obtain an overview of a shop

1. In the Manager, select the **IT Shop | IT Shop** or the **IT Shop | IT Shop | <shopping center>** category.
2. Select the shop in the result list.
3. Select the **Shop overview** task.

To obtain an overview of a shelf

1. In the Manager, select the **IT Shop | IT Shop | <shop>** or the **IT Shop | IT Shop | <shopping center> | <shop>** category.
2. Select the shelf in the result list.
3. Select the **Shelf overview** task.

Assigning approval policies

You can assign approval policies to a shopping center, shops, and shelves. These are applied to all request from this IT Shop structure if a child IT Shop structure or the requested service items are not assigned to approval policies. The approval policy that takes effect on the IT Shop structure is shown in the overview.

To assign an IT Shop structure to an approval policy.

1. In the Manager, select the **IT Shop | IT Shop** or the **IT Shop | IT Shop | <IT Shop Structure>** category.
2. Select the IT Shop structure in the result list.
3. Select the **Assign approval policies** task.

   In the **Add assignments** pane, assign the approval policies.

   > TIP: In the **Remove assignments** pane, you can remove approval policy assignments.
   >
   > ***To remove an assignment***
   >
   > - Select the approval policy and double-click .
4. Save the changes.

Related topics

- Approval processes for IT Shop requests on page 73

Assigning requestable products to shelves

Assign a shelf those company resources that the shop customers are permitted to request as products. These company resources are added as product nodes below the shelf. You can only select those company resources that are labeled with the **IT Shop** option and to which a service item is assigned.

To assign company resources, select one of the tasks in the task view. The tasks are only shown if the **Assignments permitted** and **Direct assignment permitted** options are enabled for the **IT Shop structure** role class.

To assign company resources as products to a shelf

1. In the Manager, select the **IT Shop | IT Shop | <shop>** or the **IT Shop | IT Shop | <shopping center> | <shop>** category.
2. Select the shelf in the result list.
3. Select the **Assign <company resource>** task.

   In the **Add assignments** pane, assign company resources..

   > TIP: In the **Remove assignments** pane, you can remove company assignments.
   >
   > ***To remove an assignment***
   >
   > - Select the company resource and double-click .
4. Save the changes.

Related topics

- Preparing products for requesting on page 19
- Assigning and removing products on page 45
- Role classes for the IT Shop on page 178

Setting up a customer node

Set up only one customer node for each shop to facilitate customer administration. Add the employees to this customer node who are permitted to request products from this shop.

> IMPORTANT:If a shop contains a large number of customers, the calculations in the IT Shop can cause a heavy load on the DBQueue Processor and therefore on the database server, as well.
>
> Ensure that no more than 30,000 employees are members in a customer node. If necessary, set up your own shopping center with several shops and customer nodes.

Adding customer nodes

To set up a customer node

1. In the Manager, select the **IT Shop | IT Shop | <shop>** or the **IT Shop | IT Shop | <shopping center> | <shop>** category.
2. Click in the result list.
3. Edit the customer node's master data.
4. Save the changes.

General master data for customer nodes

Enter the following master data for a customer node:

Table 72: General master data for a customer node

Property	Description
IT Shop node	IT Shop structure name.
Internal name	Internal IT Shop structure name.

Property	Description
IT Shop information	Labels the IT Shop structure as customer node. In the menu, select **Customers**. The menu is only displayed when you insert a new IT Shop structure.
Role type	Not relevant
Shelf template	N/A.
Parent IT Shop node	Parent IT Shop nodes in the IT Shop hierarchy. Select the shop to which the customer node will be added. Only one customer node is allowed per shop.
Full name	Full identifier of the customer node.
Location	N/A.
Department	N/A.
Cost center	N/A.
Owner	N/A.
Deputy manager	N/A.
Attestors	N/A.
Description	Text field for additional explanation.
Dynamic roles not allowed	Specifies whether a dynamic role can be created for the customer node.

Related topics

- Assigning employees through dynamic roles on page 193

Custom master data for customer nodes

Additional company-specific information. Use the Designer to customize display names, formats, and templates for the input fields.

Additional tasks for customer nodes

After you have entered the master data, you can run the following tasks.

The entitled customers overview

To obtain an overview of a customer node

1. In the Manager, select the **IT Shop | IT Shop | <shop> | Customers** or **IT Shop | IT Shop | <shopping center> | <shop> | Customers** category.
2. Select the **Entitled customers overview** task.

Assigning employees directly

Add an employee who is authorized to make requests for the shop to the customer node. You have two possible ways of doing this. Employees can be assigned to a customer node either directly or through a dynamic role.

> IMPORTANT:If a shop contains a large number of customers, the calculations in the IT Shop can cause a heavy load on the DBQueue Processor and therefore on the database server, as well.
>
> Never assign more than 30,000 employees to a customer node.

To assign employees directly to a custom node

1. In the Manager, select the **IT Shop | IT Shop | <shop> | Customers** or the **IT Shop | IT Shop | <shopping center> | <shop> | Customers** category.
2. Select the **Assign employees** task.

   In the **Add assignments** pane, assign the employees authorized to make requests.

   > TIP: In the **Remove assignments** pane, you can remove assigned employees.
   >
   > ***To remove an assignment***
   >
   > - Select the employee and double-click .
3. Save the changes.

If an employee is removed from a customer node, all pending requests for this employee are aborted.

Related topics

- Assigning employees through dynamic roles on page 193

Assigning employees through dynamic roles

Add an employee who is authorized to make requests for the shop to the customer node. You have two possible ways of doing this. Employees can be assigned to a customer node either directly or through a dynamic role.

NOTE: **Create dynamic role** is only available for customer nodes that do not have **Dynamic roles not allowed** set.

IMPORTANT:If a shop contains a large number of customers, the calculations in the IT Shop can cause a heavy load on the DBQueue Processor and therefore on the database server, as well.

Formulate the condition for the dynamic role so that no more than 30,000 employees are found.

To create a dynamic role

1. In the Manager, select the **IT Shop | IT Shop | <shop> | Customers** or the **IT Shop | IT Shop | <shopping center> | <shop> | Customers** category.
2. Select the **Create dynamic role** task.
3. Enter the required master data.
4. Save the changes.

To edit a dynamic role

1. In the Manager, select the **IT Shop | IT Shop | <shop> | Customers** or the **IT Shop | IT Shop | <shopping center> | <shop> | Customers** category.
2. Select the **Entitled customers overview** task.
3. Select the **Dynamic roles** form element and click on the dynamic role.
4. Select the **Change master data** task and edit the dynamic role's master data.
5. Save the changes.

For more information about dynamic roles, see the *One Identity Manager Identity Management Base Module Administration Guide*. The following features apply to dynamic roles for customer nodes:

Table 73: Properties of a customer node dynamic role

Property	Description
IT Shop node	This data is initialized with selected customer nodes. If the employee objects meet the dynamic role conditions, they are added to this customer node.
Object class	Employee
Dynamic role	The dynamic role name is made up of the object class and the full name of the IT Shop node by default.
Calculation schedule	Schedule for calculating dynamic roles. Employees with request permissions for the shop are determined regularly at the times specified in the schedule. In the standard installation of One Identity Manager, the **Dynamic roles check** schedule is already defined. All dynamic role memberships are checked using this schedule and recalculation operations are sent to the

Property	Description
	DBQueue Processor if necessary. Use the Designer to customize schedules or set up new ones to meet your requirements. For more detailed information, see the *One Identity Manager Operational Guide*.

To delete a dynamic role

1. In the Manager, select the **IT Shop | IT Shop | <shop> | Customers** or the **IT Shop | IT Shop | <shopping center> | <shop> | Customers** category.
2. Select the **Entitled customers overview** task.
3. Select the **Dynamic roles** form element and click on the dynamic role.
4. In the Manager's toolbar, click .
5. Confirm the security prompt with **Yes**.

Related topics

- Assigning employees directly on page 193

Deleting IT Shop structures

In order to delete IT Shop structures, you have to remove all the child IT Shop structures. This applies to manually added IT Shop structures in the same way as it does for shelves and products created from shelf templates.

Deleting customer nodes

To delete a customer node

1. In the Manager, select the **IT Shop | IT Shop | <shop>** or the **IT Shop | IT Shop | <shopping center> | <shop>** category.
2. Select the customer node in the result list.
3. Remove all assigned employees.
    - If the customer node was filled using a dynamic role, delete the dynamic role first.
4. Click in the result list.
5. Confirm the security prompt with **Yes**.

Detailed information about this topic

- Additional tasks for customer nodes on page 192

Deleting shelves

If a shelf is going to be completely dissolved, you need to remove all the product assignments from the shelf first.

To delete a shelf

1. In the Manager, select the **IT Shop | IT Shop | <shop>** or the **IT Shop | IT Shop | <shopping center> | <shop>** category.
2. Select the shelf in the result list.
3. Remove all product assignments to the shelf.

   The next time the DBQueue Processor runs, all pending requests for the products are closed and approved requests are canceled. Then you can delete the shelf.
4. Click in the result list.
5. Confirm the security prompt with **Yes**.

To delete a shelf that resulted from a special shelf template

1. Cancel approved requests from this shelf.
2. Cancel pending request.
3. Remove shelf template assignments to the shop.

NOTE: Shelves that have been created from a global shelf template or a shopping center template cannot be deleted.

Detailed information about this topic

- Removing products from shelves on page 47
- Assigning shelf templates to shops and shopping center templates on page 204

Deleting shops

If you want to delete a shop, delete the customer node and existing shelves beforehand.

To delete a shop

1. In the Manager, select the **IT Shop | IT Shop** or the **IT Shop | IT Shop | <shopping center>** category.
2. Select the shop in the result list.
3. Delete the customer node.
4. Delete all shelves.
5. Click in the result list.
6. Confirm the security prompt with **Yes**.

Detailed information about this topic

- Deleting customer nodes on page 195
- Deleting shelves on page 196

Deleting shopping centers

If you want to delete a shopping center, delete all shops first.

To delete a shopping center

1. Select the **IT Shop | IT Shop** category.
2. Select the shopping center template in the result list.
3. Delete all shops.
4. Click in the result list.
5. Confirm the security prompt with **Yes**.

Detailed information about this topic

- Deleting shops on page 196

Templates for automatically filling the IT Shop

You can create templates for setting up shelves automatically. Use templates when you want to set up shelves in several shops or shopping centers with the same products.

Table 74: Templates overview

Template	Description
Global shelf templates	A global shelf template is automatically distributed to all shops within the IT Shop solution. A corresponding shelf with products is added to each shop. If a new shop is created within the IT Shop solution, the global shelf template is immediately applied to the shop. NOTE: Global shelf templates are not distributed to default shops.
Special shelf templates	A special shelf template is manually assigned to one or more shops. A corresponding shelf with products is added in these shops. A special template can be distributed additionally to shopping center templates.
Shopping	A shopping center template references one or more shopping centers. You

Template	Description
center templates	can only assign shopping center template to shopping center. Once you assign a special shelf template to a shopping center template, a corresponding shelf is added to all the shops in the shopping center.

In order to simplify understanding, these templates are given the umbrella term **shelf templates** in the following.

To use shelf templates

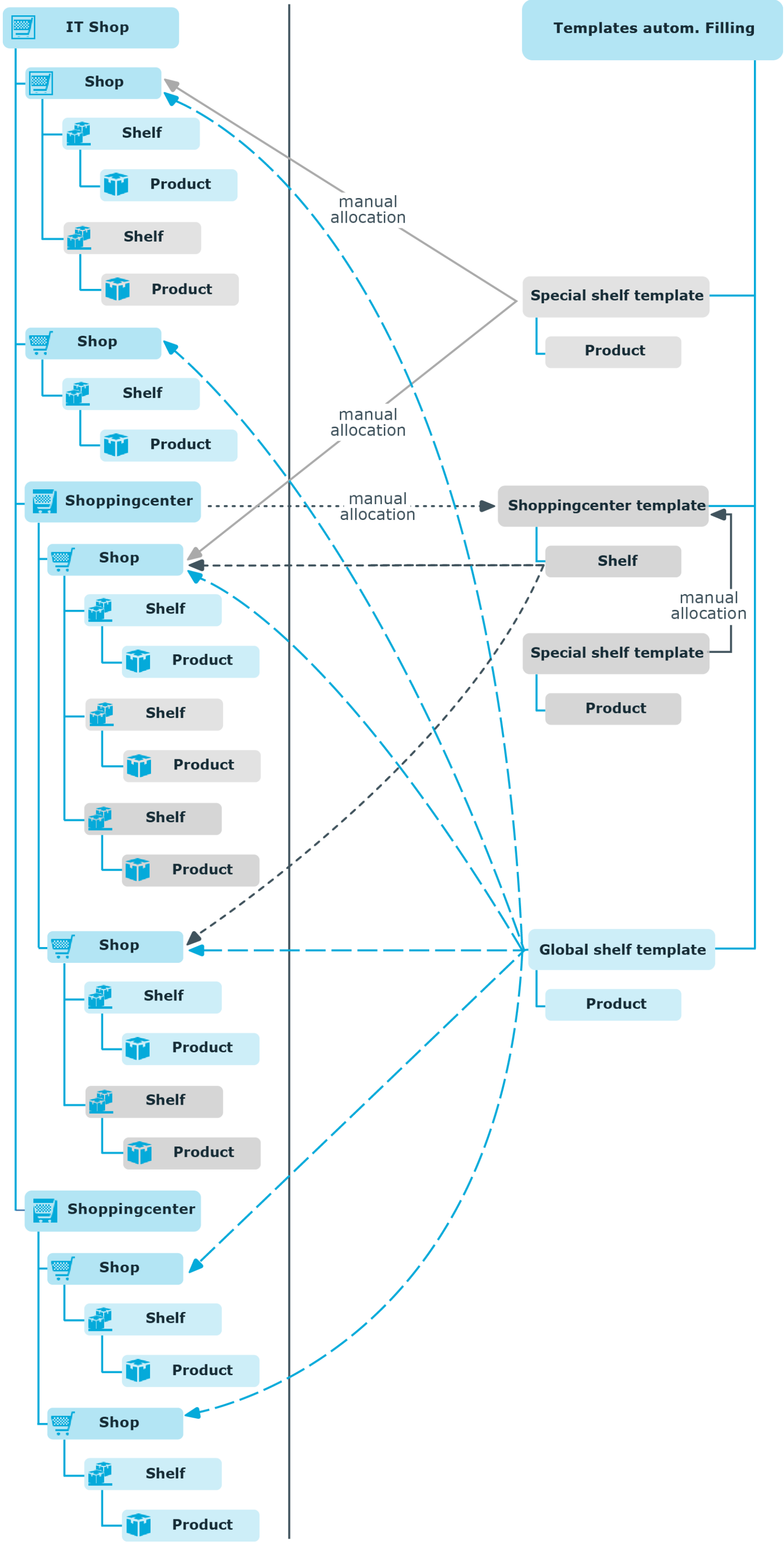
- In the Designer, set the **QER | ITShop | Templates** configuration parameter.

The following is valid for all shelf templates:

- If a template is modified, the changes are passed on to all shelves created from this shelf template.
- If a shelf template is deleted, all the shelves that originated from it are deleted from the shop. Outstanding requests are completed.
- Shelf templates can only be deleted when their assigned products and approval policies have been removed.

The following diagram illustrates the shelf templates that can be set up, their assignments, and the resulting IT Shop solution.

Figure 12: Assigning shelf templates



Using shelf templates in an IT Shop solution

To create different shelf templates and implements in an IT Shop solution, do the following:

Global shelf templates

1. Create a global shelf template.
2. Assign products and approval policies to global shelf template.

The global shelf template is automatically reproduced in all shops in IT Shop. The shelves that created are linked to the global shelf template from which they originate. The products are transferred from the template to the shelf that is created from the template.

NOTE: Global shelf templates are not distributed to default shops.

Special shelf template

1. Create a special shelf template.
2. Assign products and approval policies to the special shelf template.
3. Assign the special shelf template to one or more shops.

The special shelf template is automatically copied to all shops in the IT Shop. The shelves that created are linked to the special shelf template from which they originate. The products are transferred from the template to the shelf that is created from the template.

Shopping center template

1. Create a shopping center template.
2. Create a special shelf template.
3. Assign products and approval policies to the special shelf template.
4. Assign the special shelf template to the shop center template.
5. Assign the shopping center template to the desired shopping centers.

The special shelf template is automatically copied to the shopping center template. Subsequently, the shelf created form the shopping center template is distributed to all the shops in the shopping center. The shelves that are created obtain a link to the shelf that they originated from.

Detailed information about this topic

- Editing shelf templates on page 201
- Additional tasks for shelf templates on page 202
- Assigning shelf templates to shops and shopping center templates on page 204
- General master data for IT Shop structures on page 187

Editing shelf templates

To edit a shelf template

1. In the Manager, select the **IT Shop | Shelf templates** category.
2. In the result list, select a mail template in and run the **Change master data** task.

   - OR -

   Click in the result list.
3. Edit the shelf template's master data.
4. Save the changes.

General master data for a shelf template

Enter the following properties for a shelf template.

Table 75: General master data for a shelf template

Property	Description
IT Shop node	Identifier of the IT Shop structure for creating the shelf template.
Internal name	Internal name of the shelf template.
IT Shop information	Type of shelf template. In the menu, select **Shopping center template**, **Global shelf template**, or **Shelf template**.
Role type	Role types for classifying shops and shelves. In the menu, select a role type. • Shopping center template: N/A • Global and special templates: You can use role types to limit the approval policies in effect. The role type is applied to the new shelf.
Location	Location of the shelf. You can use this data in approval workflows for determining the approver responsible for requests from the shelves that have been created.
Department	Department the shelf belongs to. You can use this data in approval workflows for determining the approver responsible for requests from the shelves that have been created.
Cost center	Cost center of the shelf. You can use this data in approval workflows for determining the approver responsible for requests from the shelves that have been created.

Property	Description
Owner	Employee responsible for the shelf. You can use this data in approval workflows for determining the approver responsible for requests from the shelves that have been created.
Deputy manager	The owner's deputy. You can use this data in approval workflows for determining the approver responsible for requests from the shelves that have been created.
Attestors	Applications role whose members are authorized to approve attestation cases for this business role. To create a new application role, click . Enter the application role name and assign a parent application role. NOTE:This property is available if the Attestation Module is installed.
Description	Text field for additional explanation.
Certification status	The shelf template's certification status. You can select the following certification statuses: • **New**: The shelf template was newly added to the One Identity Manager database. • **Certified**: A manager granted approval to the shelf template’s master data. • **Denied**: A manager denied approval to the shelf template’s master data.

Detailed information about this topic

- Role types for the IT Shop on page 179
- Attestors on page 184

Related topics

- Determining the effective approval policies on page 89

Custom master data for shelf templates

Additional company-specific information. Use the Designer to customize display names, formats, and templates for the input fields.

Additional tasks for shelf templates

After you have entered the master data, you can run the following tasks.

Assigning approval policies

You can assign approval policies to global and special templates. These approval policies are passed on to every new shelf.

To assign a shelf template to an approval policy

1. In the IT Shop, select the **Manager | Shelf templates** category.
2. Select the rule template in the result list.
3. Select the **Assign approval policies** task.

   In the **Add assignments** pane, assign the approval policies.

   > TIP: In the **Remove assignments** pane, you can remove approval policy assignments.
   >
   > ***To remove an assignment***
   >
   > - Select the approval policy and double-click ✓.
4. Save the changes.

Related topics

- Approval processes for IT Shop requests on page 73

Assigning requestable products to shelf templates

Assign global and special shelf templates to company resources. These company resources are added as product nodes to all the shelves that are created. You can only select those company resources that are labeled with the **IT Shop** option and to which a service item is assigned.

Select one of the tasks in the task view to assign company resources. The tasks are only shown if the **Assignments permitted** and **Direct assignment permitted** options are enabled for the **IT Shop template** role class.

To assign company resources as products to a shelf

1. In the Manager, select the **IT Shop | Shelf templates** category.
2. Select the rule template in the result list.
3. Select the **Assign <company resource>** task.

   In the **Add assignments** pane, assign company resources..

   > TIP: In the **Remove assignments** pane, you can remove company assignments.

To remove an assignment

- Select the company resource and double-click ✅.

4. Save the changes.

Related topics

- Preparing products for requesting on page 19
- Assigning and removing products on page 45
- Role classes for the IT Shop on page 178

Shelf-filling wizard

Use this task to assign special shelf templates to shops and shopping centers. For more information, see Assigning shelf templates to shops and shopping center templates on page 204.

Assigning shelf templates to shops and shopping center templates

Global shelf templates are immediately distributed to all shops. Assign special shelf templates manually to shops and shopping center templates. You also need to assign shopping center templates to the desired shopping center. This assignment takes place in the shopping center.

To assign a special shelf template to shops and shopping center templates

1. Select the **Manager | Shelf templates** category in the IT Shop.
2. Select a shelf template in the result list.
3. Select **Shelf Filling Wizard**.
4. Select **Create/remove shelves**.
5. In the **Shelf template**, select a special shelf template.
6. Enable the shops and shopping center template to which to assign this shelf template.
7. Click **Apply**.

Table 76: Settings in the shelf filling wizard

Property	Description
Create/remove shelves tab	This shows shops and shopping centers to which shelf templates can be assigned and removed again.

Property	Description
Shelf template	This list displays all available special shelf templates. By default, the shelf template list is preset with the name of shelf template from which the wizard is started.
Filter	This limits the number of shops and shopping center templates displayed. All entries that contain strings that are entered in the filter condition are displayed. Uppercase and lowercase are not taken into account. The filter takes effect after the shelf template has been reselected in the **Shelf templates** list. The filter also affects the view on **Assignment by shopping center templates**.
List of Shops and Shopping Center Templates	• To assign a shelf template, check the box next to the desired shop or shopping center template. • Use **Assign all** to assign a template to all shops and shopping center templates. • In order to remove the assignments from all shops, click the **Remove all** button. • You can select several entries at one time (**Ctrl + left mouse button** or **Shift + left mouse button**) and change the assignments using the **Invert selection** button. • Click **Apply** to save the changes.
Assignment by shopping center templates tab	Once the DBQueue Processor has calculated the assignments, the shops in which a shelf was created from a shopping center template, are displayed on this tab. This only provides an overview. You cannot edit the assignments. The shops displayed are limited through the filter.

Related topics

- General master data for IT Shop structures on page 187

Deleting shelf templates

If a shelf template is deleted, the **QER | ITShop | Templates | DeleteRecursive** configuration parameter is taken into account. If the configuration parameter is set, you can delete a shelf template without requiring any further steps. When this shelf template is deleted, the shelves and products connected with this template are also deleted from the shops. Pending requests in these shelves are closed; approved requests are canceled. If the parameter is not set, templates cannot be deleted as long as shelves reference it.

To delete shelf templates recursively

1. In the Designer, set the **QER | ITShop | Templates | DeleteRecursive**.
2. In the IT Shop, select the **Manager | Shelf templates** category.
3. Select a shelf template in the result list.
4. Click in the result list.

   The next time the DBQueue Processor runs, the shelves and products connected with this template are also deleted from the shops. Pending requests from these shelves are closed, approved request are canceled.

If the configuration parameter is not set, proceed as follows to delete the shelf template:

To delete a global shelf template

1. In the IT Shop, select the **Manager | Shelf templates** category.
2. Select the global shelf template in the result list.
3. Remove all assigned products.
4. Save the changes.

   All assignments of these products to shelves are removed when the DBQueue Processor runs the next time. Then, the shelf template can be deleted.
5. Click in the result list.

   All shelves based on this template are deleted when the DBQueue Processor runs the next time.

To delete a special shelf template

1. In the IT Shop, select the **Manager | Shelf templates** category.
2. Select the special shelf template in the result list.
3. Remove all assigned products.
4. Save the changes.

   All assignments of these products to shelves are removed when the DBQueue Processor runs the next time.
5. Remove all assignments of the shelf template to shops and shopping center templates.

   All shelves based on this template are deleted when the DBQueue Processor runs the next time.
6. Click in the result list.

To delete a shopping center template

1. In the IT Shop, select the **Manager | Shelf templates** category.
2. Select the shopping center template in the result list.
3. Delete all shopping center assignments.

All shelves based on this template are deleted when the DBQueue Processor runs the next time.

4. Delete all special shelf template assignments to the shopping center template.
5. Click in the result list.

Detailed information about this topic

- Assigning requestable products to shelf templates on page 203
- Assigning shelf templates to shops and shopping center templates on page 204
- General master data for IT Shop structures on page 187

Custom mail templates for notifications

Mail templates are used to send email messages to requesters and approvers.

A mail template consists of general master data such as target format, importance, or mail notification confidentiality, and one or more mail definitions. Mail text is defined in several languages in the mail template. This ensures that the language of the recipient is taken into account when the email is generated.

In One Identity Manager, there is a Mail Template Editor to simplify writing notifications. You can use the Mail Template Editor to create and edit mail texts in WYSIWYG mode.

Related topics

- Notifications in the request process on page 157

Creating and modifying IT Shop mail templates

To edit mail templates

1. In the Manager, select the **IT Shop | Basic configuration data | Mail templates** category.

   The result list shows all the mail templates that can be used for IT Shop requests.

2. Select a mail template in the result list and run the **Change master data** task.

   - OR -

   Click in the result list.

   This opens the mail template editor.

3. Edit the mail template.
4. Save the changes.

Detailed information about this topic

- General properties of mail templates on page 208
- Creating and editing mail definitions on page 209

General properties of mail templates

The following general properties are displayed for a mail template.

Table 77: Mail template properties

Property	Meaning
Mail template	Name of the mail template. This name will be used to display the mail templates in the administration tools and in the Web Portal. Translate the given text using the button.
Base object	Mail template base object. A base object only needs to be entered if the mail definition properties of the base object are referenced. Use the `PersonWantsOrg` or `PWOHelperPWO` base object for notifications in the IT Shop.
Report (parameter set)	Report, made available through the mail template.
Description	Mail template description. Translate the given text using the button.
Target format	Format in which to generate email notification. Permitted values are: • **HTML**: The email notification is formatted in HTML. Text formats, for example, different fonts, colored fonts, or other text formatting, can be included in HTML format. • **TXT**: The email notification is formatted as text. Text format does not support bold, italics, or colored font, or other text formatting. Images displayed directly in the message are not supported.
Design type	Design in which to generate the email notification. Permitted values are: • **Mail template**: The generated email notification contains the mail body in accordance with the mail definition. • **Report**: The generated email notification contains the report specified under **Report (parameter set)** as its mail body. • **Mail template, report in attachment**: The generated email notific-

Property	Meaning
	ation contains the mail body in accordance with the mail definition. The report specified under **Report (parameter set)** is attached to the notification as a PDF file.
Importance	Importance for the email notification. Permitted values are **Low**, **Normal**, and **High**.
Confidentiality	Confidentiality for the email notification. Permitted values are **Normal**, **Personal**, **Private**, and **Confidential**.
Can unsubscribe	Specifies whether the recipient can unsubscribe email notification. If this option is set, the emails can be unsubscribed through the Web Portal.
Deactivated	Specifies whether this mail template is disabled.
Mail definition	Unique name for the mail definition.
Language	Language that applies to the mail template. The recipient's language preferences are taken into account when an email notification is generated.
Subject	Subject of the email message.
Mail body	Content of the email message.

Creating and editing mail definitions

Mail texts can be defined in these different languages in a mail template. This ensures that the language of the recipient is taken into account when the email is generated.

To create a new mail definition

1. Open the mail template in the Mail Template Editor.
2. Click the button next to the **Mail definition** list.
3. In the result list, select the language for the mail definition in the **Language** menu.

   All active languages are shown. To use another language, in the Designer, enable the corresponding countries. For more detailed information, see the *One Identity Manager Configuration Guide*.
4. Enter the subject in **Subject**.
5. Edit the mail text in the **Mail definition** view with the help of the Mail Text Editor.
6. Save the changes.

To edit an existing mail definition

1. Open the mail template in the Mail Template Editor.
2. Select the language in **Mail definition**.

3. Edit the mail subject line and the body text.
4. Save the changes.

Using base object properties

In the subject line and body text of a mail definition, you can use all properties of the object entered under **Base object**. You can also use the object properties that are referenced by foreign key relation.

To access properties use dollar notation. For more detailed information, see the *One Identity Manager Configuration Guide*.

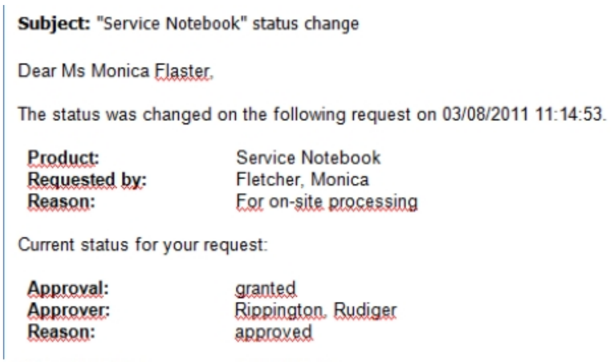
Example

An IT Shop requester should receive email notification about the status of the request.

Table 78: Email notification properties

Property	Value
Base object	PersonWantsOrg
Subject	"$DisplayOrg[D]$" status change
Mail body	Dear $FK(UID_PersonOrdered).Salutation[D]$ $FK(UID_ PersonOrdered).FirstName$ $FK(UID_PersonOrdered).LastName$, The status was changed on the following request on $DateHead:Date$. Requested by: $DisplayPersonInserted$ Requested by: $DisplayPersonInserted$ Reason: $OrderReason$ Current status of your request: Approval: granted Approver: $DisplayPersonHead[D]$ Reason: $ReasonHead[D]$

The generated email notification could look like the following, for example, once it has been formatted.



Subject: "Service Notebook" status change

Dear Ms Monica Flaster,

The status was changed on the following request on 03/08/2011 11:14:53.

Product:	Service Notebook
Requested by:	Fletcher, Monica
Reason:	For on-site processing

Current status for your request:

Approval:	granted
Approver:	Rippington, Rudiger
Reason:	approved

Use of hyperlinks to the Web Portal

You can add hyperlinks to the Web Portal in the mail text of a mail definition. If the recipient clicks on the hyperlink in the email, the Web Portal opens on that web page and further actions can be carried out. In the default version, this method is implemented for IT Shop requests.

Prerequisites for using this method

- The **QER | WebPortal | BaseURL** configuration parameter is enabled and contains the URL path to the Web Portal. You edit the configuration parameter in the Designer.

  ```
  http://<server name>/<application>
  ```

  with:

  ```
  <server name> = name of server
  <application> = path to the Web Portal installation directory
  ```

To add a hyperlink to the Web Portal in the mail text

1. Click the position in the mail text of the mail definition where you want to insert a hyperlink.
2. Open the **Hyperlink** context menu and enter the following information.
   - **Display text**: Enter a caption for the hyperlink.
   - **Link to**: Select the **File or website** option.
   - **Address**: Enter the address of the page in the Web Portal that you want to open.

     NOTE: One Identity Manager provides a number of default functions that you can use to create hyperlinks in the Web Portal.
3. To accept the input, click **OK**.

Default functions for creating hyperlinks

Several default functions are available to help you create hyperlinks. You can use the functions directly when you add a hyperlink in the mail body of a mail definition or in processes

Direct function input

You can reference a function when you add a hyperlink in the **Address** field of the **Hyperlink** context menu.

```
$Script(<Function>)$
```

Example:

```
$Script(VI_BuildITShopLink_Show_for_Requester)$
```

Default functions for IT Shop requests

The `VI_BuildITShopLinks` script contains a collection of default functions for composing hyperlinks to directly grant or deny approval of IT Shop requests from email notifications.

Table 79: Functions of the `VI_BuildITShopLinks` script

Function	Usage
VI_BuildITShopLink_ Show_for_Approver	Opens the overview page for request approval in the Web Portal.
VI_BuildITShopLink_ Show_for_Requester	Opens the overview page for requests in the Web Portal.
VI_BuildITShopLink_ Approve	Approves a request and opens the approvals page in the Web Portal.
VI_BuildITShopLink_ Deny	Denies a request and opens the approvals page in the Web Portal.
VI_BuildITShopLink_ AnswerQuestion	Opens the page for answering a question in the Web Portal.
VI_BuildITShopLink_ Reject	Opens the page with denied requests in the Web Portal.
VI_ BuildAttestationLink_ Pending	Opens the page with pending requests in the Web Portal.
VI_BuildITShopLink_ Unsubscribe	Creates the link for canceling email notification. This function is used in processes for unsubscribing email notifications.

Customize email signatures

Configure the email signature for mail templates using the following configuration parameter. Edit the configuration parameters in the Designer.

Table 80: Configuration parameters for email signatures

Configuration parameter	Description
Common | MailNotification | Signature	Data for the signature in email automatically generated from mail templates.
Common | MailNotification | Signature | Caption	Signature under the salutation.
Common | MailNotification | Signature | Company	Company name.
Common | MailNotification | Signature | Link	Link to the company's website.
Common | MailNotification | Signature | LinkDisplay	Display text for the link to the company's website.

`VI_GetRichMailSignature` combines the components of an email signature according to the configuration parameters for use in mail templates.

Copying IT Shop mail templates

To copy a mail template

1. In the Manager, select the **IT Shop | Basic configuration data | Mail templates** category.

   The result list shows all the mail templates that can be used for IT Shop requests.
2. Select the mail template that you want to copy in the result list and run the **Change master data** task.
3. Select the **Copy mail template** task.
4. Enter the name of the new mail template in the **Name of copy** field.
5. Click **OK**.

Displaying IT Shop mail template previews

To display a mail template preview

1. In the Manager, select the **IT Shop | Basic configuration data | Mail templates** category.

   The result list shows all the mail templates that can be used for IT Shop requests.
2. Select a mail template in the result list and run the **Change master data** task.
3. Select the **Preview** task.
4. Select the base object.
5. Click **OK**.

Deleting IT Shop mail templates

To delete a mail template

1. In the Manager, select the **IT Shop | Basic configuration data | Mail templates** category.

   The result list shows all the mail templates that can be used for IT Shop requests.
2. Select the template in the result list.
3. Click in the result list.
4. Confirm the security prompt with **Yes**.

Custom notification processes

Set up customized processes to send more email notifications within a request. For detailed information, see the One Identity Manager Configuration Guide.

You can use following events for generating processes.

Table 81: `PWOHelperPWO` object events

Event	Triggered by
DecisionRequired	Creating a new request.
Remind	Sequence of reminder intervals.

Request templates

If you want to request products in the Web Portal, select the products you want from a service catalog and place them in the cart. The products remain in the cart until you send the request. You can save all the products in your cart or just individual ones in a request template so that you can reuse the products in the cart for future requests. You can add or delete products to request templates at anytime.

To use a request template

- In the Designer, set the **QER | ITShop | ShoppingCartPattern** configuration parameter.

You can create request templates in the Web Portal and in the Manager. In the following you will learn how to set up request templates with the Manager. For more information about how to set up request templates in the Web Portal, see the *One Identity Manager Web Portal User Guide*.

Creating and modifying request templates

To edit a request template

1. In the Manager, select the **IT Shop | Request templates** category.
2. In the result list, select a request template and run the **Change master data** task.

   - OR -

   Click in the result list.
3. Edit the request template's master data.
4. Save the changes.

Detailed information about this topic

- General master data for a request template on page 215
- Cart items on page 216

General master data for a request template

Enter the following properties on the **General** tab.

Table 82: General master data for a request template

Property	Description
Request template	Name of the request template.
Name	Any additional name for the request template.
Short name	Short name for the request template.
Voucher number	A combination of any characters to uniquely identify the request template. If you leave this field empty, One Identity Manager automatically allocates a number when you save.
Owner	Owner of the request template. The employee that created the template is automatically entered as the owner. This value can be changed at any time.
Description	Text field for additional explanation.
Public template	Specifies whether the request template is available to all One Identity Manager users.
Shared	Specifies whether the request template is can be used by all One Identity Manager users. This option can only be changed in the Manager through the user with the **Request & Fulfillment | IT Shop | Administrators** application role. If **Public template** is not set on a shared template, **Shared** is also disabled.

Request templates can be automatically share once **Public template** has been set.

To automatically share request templates

- In the Designer, set the **QER | ITShop | ShoppingCartPattern | AutoQualified** configuration parameter.

Cart items

Use **Cart items** to assign the product.

To add a new request item to the request template

- Click .

  The data fields for entering properties are shown.

Table 83: Cart items

Property	Description
product	Products that can be requested with this request template. All service items are shown in the menu, whose products are assigned to at least one shelf in the IT Shop. • To add other products to the request template, click . • To delete a cart item, click .
Quantity	Number of products to request. You need to customize your Web Portal in order to use these values. For detailed information, see *One Identity Manager Web Designer Reference Guide*.
Additional request data	Additional information is required for the request.

Deleting request templates

To delete a request template

1. In the Manager, select the **IT Shop | Request templates** category.
2. Select a request template in the result list.
3. Click in the result list.

NOTE: Every owner can delete his own request templates in the Web Portal. One Identity Manager users with the **Request & Fulfillment | IT Shop | Administrators** application role can delete the request templates of all owners.

Resolving errors in the IT Shop

Timeout on saving requests

If new requests are saved in bulk in the database a timeout may occur, after importing data, for example.

Probable reason

By default, the approvers responsible are determined during saving. This delays the saving process. No more actions can take place in One Identity Manager until all requests are saved and, therefore, all approvers have been found. Depending on the system configuration, this may cause a timeout to occur when large amounts of data are being processed.

Solution

- In the Designer, disable the **QER | ITShop | DecisionOnInsert** configuration parameter.

Effect

- The requests are saved and a calculation task for determining approvers is queued in the DBQueue. Approvers responsible are determined outside the save process.
- If the requester is also the approver, the approval step is not automatically granted approval. Approvers must explicitly approve their own requests. For more information, see Automatically approving requests on page 126.
- Automatic approval decisions are also met if necessary, but are delayed. This affects requests with self-service, for example.

Bulk delegation errors

You have the option to delegate all your responsibilities to one person in the Web Portal. If you have a lot of responsibilities, it is possible that not all the delegations are carried out. A delegator can send a notification to themselves if an error occurs.

Probable reason

An error occurred processing delegations. `VI_ITShop_Person Mass Delegate` was aborted, although only a portion of the delegations has been applied.

Solution

1. Configure the notification procedure.
2. Run all remaining delegations again in the Web Portal.

Related topics

- Bulk delegation notifications on page 167

Process monitoring for requests

For more detailed information about process monitoring in One Identity Manager, see the *One Identity Manager Configuration Guide*.

To configure process monitoring for requests

1. In the Designer, check whether the **Common | ProcessState** configuration parameter is set. If not, set the configuration parameter.

   If this configuration parameter is set, a process monitoring entry (`DialogProcess` table) is created when the request is created.
2. In the Designer, check the **Common | ProcessState | UseGenProcIDFromPWO** configuration parameter.

   If this configuration parameter is set, the GenProcID of an IT Shop request is retained for the entirety of the approval process.

   If the configuration parameter is not set, a new GenProcID is used for each approval decision.

Appendix A

Configuration parameters for the IT Shop

Additional configuration parameters for the IT Shop are available in One Identity Manager. The following table contains a summary of all applicable configuration parameters for the IT Shop.

Table 84: Overview of configuration parameters

Configuration parameter	Description
QER | ITShop	Preprocessor relevant configuration parameter to control the component parts for the IT Shop. If the parameter is set, the IT Shop components are available. Changes to this parameter require the database to be recompiled.
QER | ITShop | AutoCloseInactivePerson	This configuration parameter defines whether employees are removed from all customer nodes when they are permanently disabled.
QER | ITShop | AutoDecision	This configuration parameter controls automatic approval of IT Shop requests over several approval levels.
QER | ITShop | ChallengeRoleRemoval	General configuration parameter for dealing with role assignments that are modified by data import. Removal of role memberships can be challenged with the help of temporary requests.
QER | ITShop | ChallengeRoleRemoval | DaysOfValidity	This configuration parameter contains the validity period (in days) of temporary requests for challenged role memberships.
QER | ITShop | ChallengeRoleRemoval | Department	Temporary requests of department memberships are supported.
QER | ITShop | ChallengeRoleRemoval | Department | Primary	Temporary membership of the previous department is requested if changes are made to the primary membership in departments.

Configuration parameter	Description
QER | ITShop | ChallengeRoleRemoval | ITShopOrg	This configuration parameter contains the product node that is assigned to the requested assignment resource.
QER | ITShop | ChallengeRoleRemoval | Locality	Temporary requests of location memberships are supported.
QER | ITShop | ChallengeRoleRemoval | Locality | Primary	Temporary membership of the previous location is requested if changes are made to the primary membership in locations.
QER | ITShop | ChallengeRoleRemoval | Org	Temporary requests of business role member-ships are supported.
QER | ITShop | ChallengeRoleRemoval | Org | Primary	Temporary membership of the previous business role is requested if changes are made to the primary membership in business roles.
QER | ITShop | ChallengeRoleRemoval | ProfitCenter	Temporary requests of cost center memberships are supported.
QER | ITShop | ChallengeRoleRemoval | ProfitCenter | Primary	Temporary membership of the previous cost center is requested if changes are made to the primary membership in cost centers.
QER | ITShop | DecisionOnInsert	This configuration parameter controls approval of a request the moment is it added.
QER | ITShop | DefaultSenderAddress	This configuration parameter contains the sender email address for automatically generated messages within the IT Shop.
QER | ITShop | Delegation	Preprocessor relevant configuration parameter for controlling model components for delegation and role membership. Changes to the parameter require recompiling the database. If the parameter is set, delegation components are available.
QER | ITShop | DeleteClosed	This configuration parameter specifies whether closed requests are deleted.
QER | ITShop | DeleteClosed | Aborted	This configuration parameter specifies the maximum retention time (in days) of aborted requests.
QER | ITShop | DeleteClosed | Dismissed	This configuration parameter specifies the maximum retention time (in days) of denied requests.
QER | ITShop | DeleteClosed |	This configuration parameter specifies the

Configuration parameter	Description
Unsubscribed	maximum retention time (in days) of canceled requests.
QER | ITShop | GapBehavior	Defines behavior when checking the validity period of new requests.
QER | ITShop | GapBehavior | GapDefinition	This configuration parameter specifies which requests are checked.
QER | ITShop | GapBehavior | GapFitting	This configuration parameter specifies whether validity periods of two or more pending requests can overlap.
QER | ITShop | GroupAutoPublish	Preprocessor relevant configuration parameter for automatically adding groups to the IT Shop. This configuration parameter specifies whether all Active Directory and SharePoint target system groups are automatically added to the IT Shop. Changes to this parameter require the database to be recompiled.
QER | ITShop | LimitOfNodeCheck	Maximum number of product nodes that can be generated or deleted by a DBQueue Processor run. Once this number is exceeded, a task for generating the rest of the nodes is queued in the DBQueue.
QER | ITShop | MailApproval | Inbox	Microsoft Exchange mailbox used for "Approval by mail" processes.
QER | ITShop | MailApproval | Account	Name of user account for authentication of "Approval by mail" mailbox.
QER | ITShop | MailApproval | DeleteMode	Specifies the way emails are deleted from the inbox.
QER | ITShop | MailApproval | Domain	Domain of user account for authentication of "Approval by mail" mailbox.
QER | ITShop | MailApproval | ExchangeURI	Specifies the Exchange Web Service URL. AutoDiscover mode is used to find the URL if it is not given.
QER | ITShop | MailApproval | Password	Password of user account for authentication of "Approval by mail" mailbox.
QER | ITShop | MailTemplateIdents | AnswerToApprover	This mail template is used to send a notification with an answer to a question from an approver.
QER | ITShop | MailTemplateIdents | InformAddingPerson	This mail template is used to notify approvers that an approval decision has been made for the

Configuration parameter	Description
	step they added.
QER | ITShop | MailTemplateIdents | InformDelegatingPerson	This mail template is used to notify approvers that an approval decision has been made for the step they delegated.
QER | ITShop | MailTemplateIdents | ITShopApproval	Mail template used for requests made through "Approval by mail".
QER | ITShop | MailTemplateIdents | QueryFromApprover	This mail template is used to send a notification with a question from an approver to an employee.
QER | ITShop | MailTemplateIdents | RequestApproverByCollection	This mail template is used for generating an email when there are pending requests for an approver. If this configuration parameter is not set, a "Mail template demand" or "Mail template reminder" for single approval steps can be entered to send an email for each request. If this configuration parameter is set, single mails are not sent.
QER | ITShop | OnWorkflowAssign	This configuration parameter specifies how pending orders are handled when an approval, change, or cancellation workflow is reassigned to the approval policy.
QER | ITShop | OnWorkflowUpdate	This configuration parameter specifies how pending orders are handled when the approval workflow is changed.
QER | ITShop | PeerGroupAnalysis	This configuration parameter allows automatic approval of requests by peer group analysis.
QER | ITShop | PeerGroupAnalysis | ApprovalThreshold	This configuration parameter defines a threshold for peer group analysis between 0 and 1. The default value is 0.9.
QER | ITShop | PeerGroupAnalysis | CheckCrossfunctionalAssignment	This configuration parameter specifies whether functional areas should be take into account in peer group analysis. If the parameter is set, the request is only approved if the request's recipient and the requested product belong to the same functional area.
QER | ITShop | PeerGroupAnalysis | IncludeManager	This configuration parameter specifies whether employees can be added to the peer group who have the same manager as the request's recipient.

Configuration parameter	Description
QER | ITShop | PeerGroupAnalysis | IncludePrimaryDepartment	This configuration parameter determines whether employees who are primary members of the primary department of the request's recipient are included in the peer group.
QER | ITShop | PeerGroupAnalysis | IncludeSecondaryDepartment	This configuration parameter determines whether employees who are a secondary members of the primary or secondary department of the request's recipient are included in the peer group.
QER | ITShop | PersonInsertedNoDecide	This configuration parameter specifies whether the employee that triggered the request may approve it.
QER | ITShop | PersonOrderedNoDecide	This configuration parameter specifies whether the employee for whom the request was triggered, may approve it.
QER | ITShop | PersonInsertedNoDecideCompliance	This configuration parameter specifies whether the employee who initiated the request can issue exception if compliance rules are violated by the request.
QER | ITShop | PersonOrderedNoDecideCompliance	This configuration parameter specifies whether the employee for whom the request was initiated can issue exception if compliance rules are violated by the request.
QER | ITShop | ReducedApproverCalculation	This configuration parameter specifies, which approval steps are recalculated if the IT Shop approver must be recalculated.
QER | ITShop | ReplaceAssignmentRequestOnLeaveCU	If an employee leaves a customer node, all assigned requests are canceled and assignment requests are converted to direct assignments. If this parameter is set, then assignment requests can be transferred to the manager or central approver group, and to the UID_PersonFallback if necessary. (Note: These employees must have approval authorization for this assignment).
QER | ITShop | ReplaceAssignmentRequestOnLeaveCU | UID_PersonFallback	UID_Person is an employee who is set as the fallback if no other request recipient can be found for an assignment request. This employee must be a customer in all shops in which assignments can be requested.

Configuration parameter	Description
QER | ITShop | ReuseDecision	This configuration parameter specifies if approval granted by one approver to all approval steps of an approval process is transferred. If the parameter is set, the current step is approved if an approval step is reached in the approval process for which an employee with approval authorization has already granted approval. If the parameter is not set, the approver must separately approve each step for which they have approval authorization. If approval has not been granted, it is not transferred.
QER | ITShop | ShoppingCartPattern	This configuration parameter specifies whether request templates can be used in the IT Shop.
QER | ITShop | ShoppingCartPattern | AutoQualified	This configuration parameter specifies whether public request templates are automatically labeled as "shared" or whether they have to be manually shared by a manager.
QER | ITShop | ShowClosedAssignmentOrders	This configuration parameter specifies whether the manager of an organization or business role can view completed assignment requests for their organization or business role. If this parameter is not set, the manager can only view open assignment requests for their organization or business role.
QER | ITShop | Templates	Preprocessor relevant configuration parameter for controlling the database model components for the Shelf Filling Wizard. Changes to the parameter require recompiling the database. Shelf templates can be used. Changes to this parameter require the database to be recompiled.
QER | ITShop | Templates | DeleteRecursive	This configuration parameter specifies whether the recursive deletion is allowed from shelf templates. This configuration parameter is disabled by default.
QER | ComplianceCheck | DisableSelfExceptionGranting	Excludes rule violators from becoming exception approvers. If this parameter is set, no one can approve their own rule violations.
QER | ComplianceCheck | EnableITSettingsForRule	IT Shop properties for the compliance rule are visible and can be edited.

Configuration parameter	Description
QER | Person | Defender	This configuration parameter specifies whether classic Starling Two-Factor Authentication integration is supported.
QER | Person | Starling	This configuration parameter specifies whether One Identity Starling Cloud is supported. Initiate your subscription within your One Identity on-prem product and join your on-prem solutions to our One Identity Starling Cloud platform. Giving your organization immediate access to a number of cloud-delivered microservices, which expand the capabilities of your One Identity on-prem solutions. We will continuously make available new products and features to our Starling Cloud platform. For a free trial of our One Identity Starling offerings and to get the latest product feature updates, visit cloud.oneidentity.com.
QER | Person | Starling | UseApprovalAnywhere	This configuration parameter defines whether requests can be approved by Starling 2FA app.
QER | WebPortal	General configuration parameter for Web Portal settings.
QER | WebPortal | BaseURL	Web Portal URL. This address is used in mail templates to add hyperlinks to the Web Portal.
QER | WebPortal | DisplayName	This configuration parameter contains the display name of the Web Portal. This name is used in mail templates.
QER | WebPortal | PasswordResetURL	Password Reset Portal URL. This address is used to navigate within the Web Portal.
QER | WebPortal | PersonChangeWorkdesk	This configuration parameter specifies whether Web Portal users can change their default workdesk. If the configuration parameter is set, users can relocate their workdesk through the Web Portal.
QER | WebPortal | ShowProductImages	This configuration parameter specifies whether pictures of products are displayed in the Web Portal.

Some general configuration parameters are also relevant for the IT Shop.

Table 85: Additional configuration parameters

Configuration parameter	Description
Common | MailNotification | Signature	Data for the signature in email automatically generated from mail templates.
Common | MailNotification | Signature | Caption	Signature under the salutation.
Common | MailNotification | Signature | Company	Company name.
Common | MailNotification | Signature | Link	Link to company website.
Common | MailNotification | Signature | LinkDisplay	Display text for the link to the company's website.
Common | ProcessState	If this configuration parameter is set, a process monitoring entry (`DialogProcess` table) is created when the request is created.
Common | ProcessState | PropertyLog	When this configuration parameter is set, changes to individual values are logged and shown in the process view.
Common | ProcessState | UseGenProcIDFromPWO	If this configuration parameter is set, the GenProcID of an IT Shop request is retained for the entirety of the approval process. If the configuration parameter is not set, a new GenProcID is used for each approval decision.

Appendix B

Request statuses

The following table gives an overview of all statuses a request can have.

Table 86: Request statuses

Status	Description
New	A product was requested. The request was added in the database.
Request	The request is currently in the approval process. An approval decision has not yet been reached.
Approved	The approval process is complete. The request is granted approval.
Pending	The request is granted approval. A valid from date was given in the request. This date has not been reached yet.
Assigned	The request was granted approval and assigned.
Renewal	The request with limited validity was assigned. A renewal has been applied for and is in the approval process. An approval decision has not yet been reached.
Canceled	This product was canceled. The cancellation is currently in the approval process. An approval decision has not yet been reached.
Unsubscribed	The approval process is complete. The cancellation was granted approval.
Denied	The approval process is complete. The request was denied.
Aborted	The request was aborted by a user or for technical reasons.

Pending requests	Requests with the status request, renewal, canceled.
Approved requests	Requests with the status approved, pending, assigned, renewal, canceled.
Assigned requests	Requests with the status assigned, renewal, canceled.
Closed requests	Requested with the status canceled, denied, aborted.

Examples of request results

Request results differ depending on whether a simple or multiple request resource or an assignment is requested. The following figures illustrate the differences.

Figure 13: Request for a single request resource

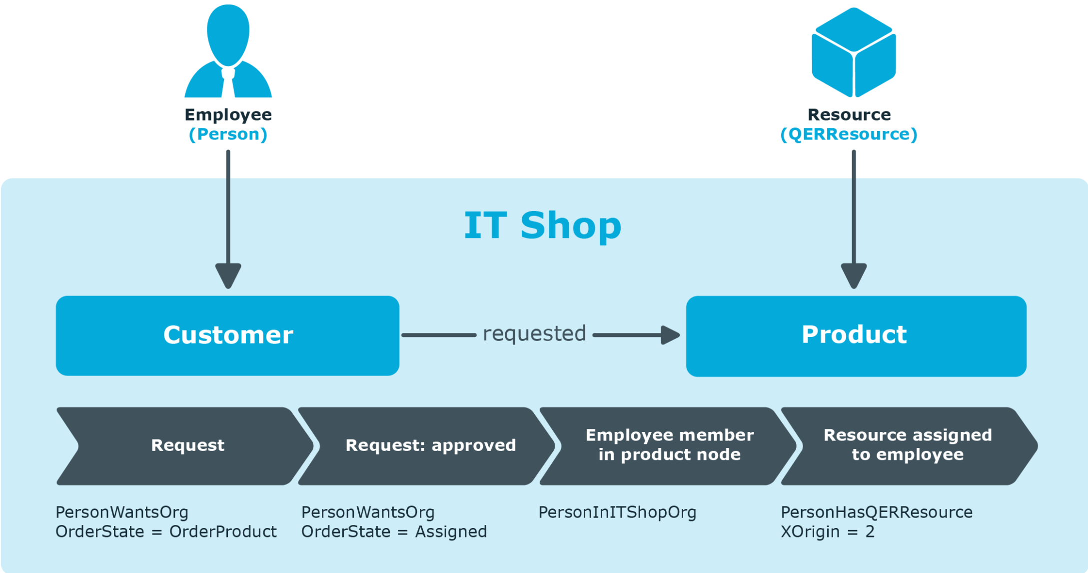


Figure 14: Request for a multi-request resource

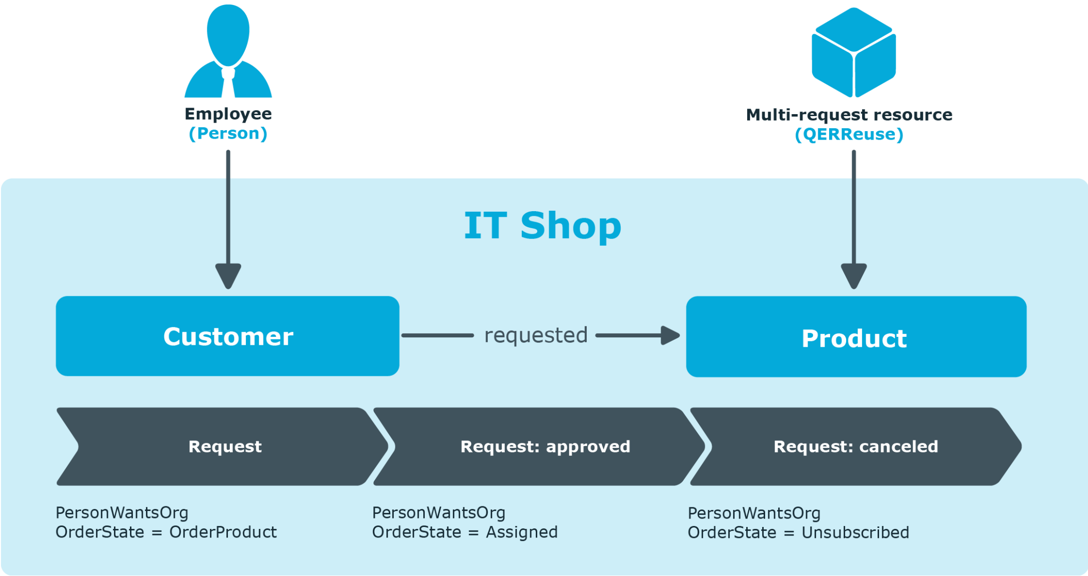


Figure 15: Request for a requestable/unsubscribable resource

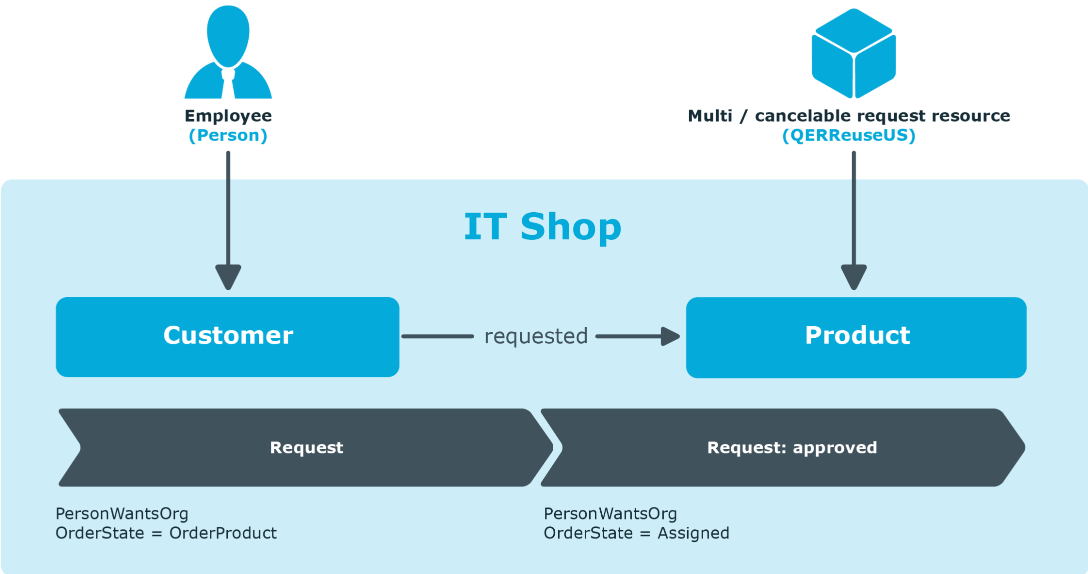


Figure 16: Request for a department membership

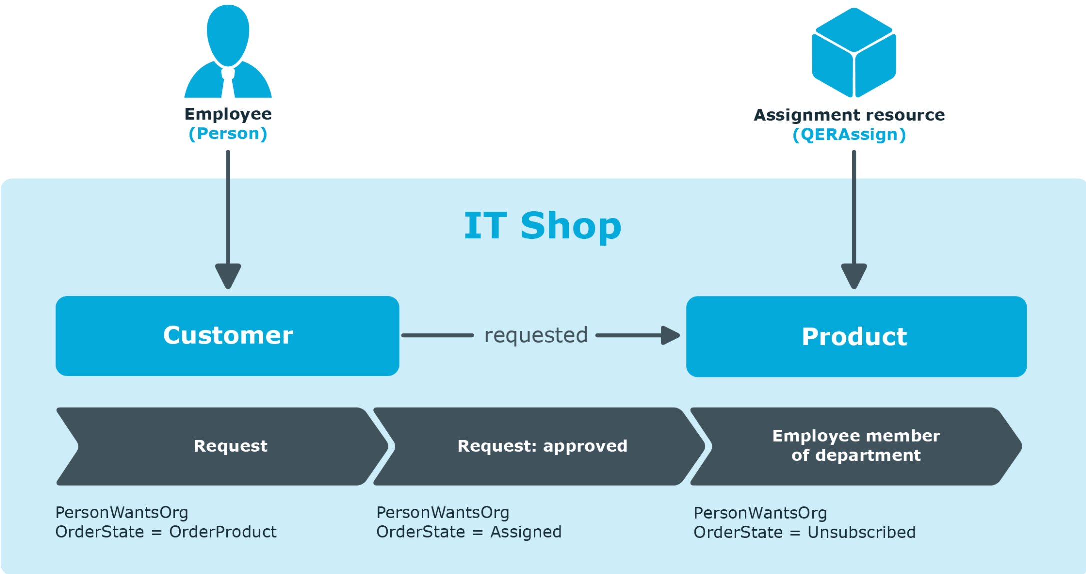
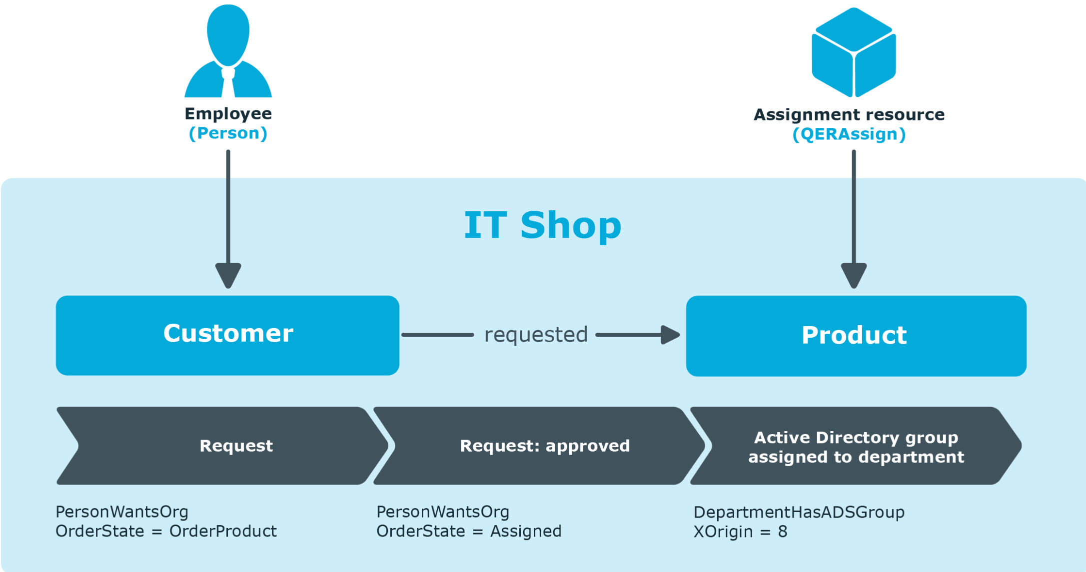


Figure 17: Request for assignment of an Active Directory group to a department



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

Index

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