



One Identity Manager 8.1.1

Attestation Administration Guide

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### Legend

-  **WARNING:** A WARNING icon indicates a potential for property damage, personal injury, or death.
-  **CAUTION:** A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.
-  **IMPORTANT, NOTE, TIP, MOBILE, or VIDEO:** An information icon indicates supporting information.

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## Attestation and recertification

Managers or others responsible for compliance can use the One Identity Manager attestation functionality to certify correctness of access permissions, authorizations, requests or exception approvals either scheduled or on demand. "Recertification" is the term generally used to describe regular certification of permissions. One Identity Manager uses the same workflows for recertification and attestation.

Attestation policies are defined in the One Identity Manager, which you use to carry out attestations. Attestation policies specify which objects are attested when, how often and by whom. Once an attestation is performed, One Identity Manager creates attestation cases, which contain all the necessary information about the attestation objects and the attestor responsible. The attestor checks the attestation objects. They verify the correctness of the data and initiate any changes that need to be made if the data conflicts with internal rules.

Attestation cases record the entire attestation sequence. Each attestation step in the attestation case can be audit-proof reconstructed. Attestations are run regularly using scheduled tasks. You can also trigger single attestations manually.

Attestation is complete when the attestation case has been granted or denied approval. You specify how to deal with granted or denied attestations on a company basis.

- TIP:** One Identity Manager provides various default attestation procedures for different data situations and default attestation procedures. If you use these default attestation procedures, you can configure how you deal with denied attestations. For more information, see [Default attestation and withdrawal of entitlements](#) on page 114.

### **To use attestation functionality**

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

## One Identity Manager users for attestation

The following users are used for attestation.



**Table 1: User**

<b>User</b>	<b>Tasks</b>
Administrators for attestation cases	<p>Administrators are assigned to <b>Identity &amp; Access Governance   Attestation   Administrators</b>.</p> <p>Users with this application role:</p> <ul style="list-style-type: none"> <li>• Define attestation procedures and attestation policies.</li> <li>• Create approval policies and approval workflows.</li> <li>• Specify which approval procedure to use to find attestors.</li> <li>• Set up attestation case notifications.</li> <li>• Configure attestation schedules.</li> <li>• Enter mitigating controls.</li> <li>• Create and edit risk index functions.</li> <li>• Monitor attestation cases.</li> </ul>
One Identity Manager administrators	<ul style="list-style-type: none"> <li>• Create customized permissions groups for application roles for role-based login to administration tools in Designer as required.</li> <li>• Create system users and permissions groups for non-role-based login to administration tools in Designer as required.</li> <li>• Enable or disable additional configuration parameters in Designer as required.</li> <li>• Create custom processes in Designer as required.</li> <li>• Create and configures schedules as required.</li> <li>• Create and configure password policies as required.</li> </ul>
Attestors	<ul style="list-style-type: none"> <li>• Check attestation objects in the Web Portal.</li> <li>• Confirm data correctness.</li> <li>• Initiate changes if data conflicts with internal rules.</li> </ul> <p>Attestors in charge are determined through approval procedures.</p>
Compliance and security officer	<p>Compliance and security officers must be assigned to <b>Identity &amp; Access Governance   Compliance &amp; Security Officer</b>.</p> <p>Users with this application role:</p> <ul style="list-style-type: none"> <li>• View all compliance relevant information and other analysis in the Web Portal. This includes attestation policies, company policies and policy violations, compliance rules, and rule violations and risk index functions.</li> <li>• Edit attestation polices.</li> </ul>
Auditors	<p>Auditors are assigned to the application role <b>Identity &amp; Access</b></p>

User	Tasks
	<p><b>Governance   Auditors.</b></p> <p>Users with this application role:</p> <ul style="list-style-type: none"> <li>• See the Web Portal all the relevant data for an audit.</li> </ul>
Chief approval team	<p>The chief approver must be assigned to <b>Identity &amp; Access Governance   Attestation   Chief approval team.</b></p> <p>Users with this application role:</p> <ul style="list-style-type: none"> <li>• Approve using attestation cases.</li> <li>• Assign attestation cases to other attestors.</li> </ul>

## Attestation base data


The attestation framework and the objects to be attested are specified in the attestation policy. You require certain base data to define attestation policies.

Attestation types:	<a href="#">Attestation types</a> on page 10
Approval policies:	<a href="#">Approval policies for attestations</a> on page 43
Approval workflows:	<a href="#">Approval workflow for attestations</a> on page 46
Approval procedures:	<a href="#">Setting up approval procedures</a> on page 73
Attestation procedures:	<a href="#">Attestation procedure</a> on page 12
Schedules:	<a href="#">Schedules</a> on page 17
Compliance frameworks:	<a href="#">Compliance frameworks</a> on page 22
Mail templates:	<a href="#">Custom mail templates for notifications</a> on page 35
Chief approval team:	<a href="#">Chief approval team</a> on page 23
Standard reasons:	<a href="#">Standard reasons for attestation</a> on page 24

## Attestation types

Attestation types are used to group attestation procedures. These make it easier to assign a matching attestation procedure to the attestation policies.

### ***To edit attestation types***

1. Select **Attestation | Basic configuration data | Attestation types**.
2. Select an attestation type in the result list and run **Change master data**.  
– OR –  
Click  in the result list.
3. Edit the attestation type master data.
4. Save the changes.

## **Default attestation types**

You cannot edit default attestation types and their attestation procedure assignments.

The One Identity Manager supplies attestation types, by default. These attestation types are assigned to default attestation procedures. They are necessary for setting up attestation policies in the Web Portal.

### ***To display default attestation types***

- In Manager, select the category **Attestation | Basic configuration data | Attestation types | Predefined**.

For detailed information about using default attestation types, see the *One Identity Manager Web Portal User Guide*.

## **Additional tasks for attestation types**

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

### **Overview of the attestation type**

You can see the most important information about an attestation type on the overview form.

### ***To obtain an overview of an attestation type***

1. In Manager, select the category **Attestation | Basic configuration data | Attestation types**.
2. Select the attestation type in the result list.
3. Select **Attestation type overview** in the task view.

## Assigning attestation procedures

Use this task to assign the selected attestation type to all the attestation procedures that should be included in the group.

### *To assign attestation procedures to attestation types*

1. In Manager, select the category **Attestation | Basic configuration data | Attestation types**.
2. Select the attestation type in the result list.
3. Select **Assign attestation procedure** in the task view.

Assign the attestation procedures in **Add assignments**.

**TIP:** you can remove the assignment of attestation procedures in **Remove assignments**.

#### *To remove an assignment*


- Select the attestation procedure and double click .

4. Save the changes.

## Attestation procedure

Attestation procedures specify the attestation base object. They define which attestation object properties are to be attested. Attestation object data can be provided in list or report form.


### *To edit an attestation procedure*


1. In Manager, select the category **Attestation | Basic configuration data | Attestation procedures**.
2. Select an attestation procedure in the result list and run **Change master data**.  
- OR -  
Click  in the result list.
3. Edit the attestation procedure master data.
4. Save the changes.

## General master data for an attestation procedure

Enter the following properties for an attestation procedure.

**Table 2: General master data for an attestation procedure**

Property	Description
Attestation procedure	Any name for the attestation procedure.
Attestation type	Criteria for grouping attestation procedures. Attestation types make it easier to assign a matching attestation procedure to the attestation policies.
Description	Spare text box for additional explanation.
Report	Report for the attestor containing all the necessary information about the attestation objects.  Predefined reports are supplied in a menu. If you do not want to assign a report, you can specify additional information about the attestation objects in the boxes <b>Property 1-4 (template)</b> .
Table	Database table in which the attestation objects are to be found (= attestation base object). All tables, which fulfill the following conditions, are available: <ul style="list-style-type: none"> <li>a. The table contains a XObjectKey column.</li> <li>b. The table type is <b>Table, View, ReadOnly</b> or <b>Proxy</b>.</li> <li>c. The usage type is <b>User data, Materialized data</b> or <b>Read only data</b>.</li> <li>d. It is not the basetree table. It is not an assignment table referencing basetree.</li> <li>e. Table belongs to the application data model.</li> <li>f. Table is not disabled.</li> </ul> <p>For detailed information about table types and usage types, see the <i>One Identity Manager Configuration Guide</i>.</p>
Preprocessor condition	Specifies the preprocessor configuration parameters on which the attestation procedure depends. Attestation procedures, which are disabled through a preprocessor condition, are not displayed in the One Identity Manager.
Grouping column 1-3 (template)	A value template for formatting the value used to group and filter pending attestation cases in the Web Portal.  Enter a value template in \$ notation. This template can access the base object properties and the properties of all objects connected through foreign keys.
Grouping column 1-3	Column headers for <b>Grouping column 1-3 (template)</b> . The columns are multi-language. To enter a translation, click  .
Property 1-4	Templates for formulating a value that supplies additional information

Property	Description
(template)	<p>about the attestation object. Use these fields to show additional information about the attestation object in the Web Portal.</p> <p>Enter a value template in \$ notation. This template can access the base object properties and the properties of all objects connected through foreign keys.</p>
Property 1-4	<p>Column headers for <b>Property 1-4 (template)</b>. The columns are multi-language. To enter a translation, click .</p>
Risk index template	<p>Template for formulating the value for the attestation case's risk index.</p> <p>Enter a value template in \$ notation. This template can access the base object properties and the properties of all objects connected through foreign keys.</p>
Related object 1-3 (template)	<p>Template for formulating an object key for an object related to the attestation base object.</p> <p>Enter a value template in \$ notation. This template can access the base object properties and the properties of all objects connected through foreign keys.</p> <p>Define the display value for this object in <b>Grouping column 1-3 (template)</b>.</p>

## Example

You want to attest Active Directory Group memberships. Group the attestation cases by user account display value, Active Directory group display value and the display value of associated employees. The Active Directory group's canonical name should be displayed with every group membership in Web Portal. The attestation case's risk index can be determined from the group membership's risk index. The object key for the object relation can be found from the Active Directory user account. The information required about the attestation objects will be summarized in a report. To do this, enter the following data on the master data form.

**Table 3: Example of an attestation case definition**

Property	Value
Table	Database table ADSAccountInADSGroupTotal
Report	<report name>
Grouping column 1	\$UID_ADSSAccount[d]\$
Grouping column 2	\$UID_ADSSGroup[d]\$
Grouping column 3	\$FK(UID_ADSSAccount).UID_Person[d]\$
Property 1 (template)	\$FK(UID_ADSSGroup).CanonicalName\$

Property	Value
Risk index template	\$RiskIndexCalculated\$
Object relation 1	\$FK(UID_ADSAccount).XObjectKey\$

### Detailed information about this topic

- [Attestation types](#) on page 10
- [Defining reports for attestation](#) on page 15

## Defining reports for attestation

Define attestation reports with the Report Editor. Note the following when you define a report for attestation:

- The base table for the report must be identical to the one for the attestation procedure.
- Enter **Attestation** as the report category. This ensures that the report is displayed in the **Report** menu of the attestation procedure.
- In order to create a report for each attestation object with the information relating exactly to the attestation object, define a `ObjectKeyBase` parameter for the attestation object in the report. Use the parameters in the data source definition for the report in **Condition** text box.

Example: `XObjectKey = @ObjectKeyBase`

### Default reports

One Identity Manager supplies some default reports for attestation. These are used in the default attestation procedures, amongst others. Default report are given the prefix **VI\_**.

- **TIP:** Default reports cannot be changed. If you want to customize a default report, create a copy and edit it according to your requirements. Then assign the copy to the attestation procedure.

## Default attestation procedures

One Identity Manager provides a default approval procedure for default attestation of new users and recertification of all employees stored in the One Identity Manager database. Moreover, default approval procedures are supplied through which the different roles, user accounts, and system entitlements mapped in the Unified Namespace can be attested. Using these default approval policies you can create attestation procedures easily in the Web Portal.

### ***To display default attestation procedures***

- In Manager, select the category **Attestation | Basic configuration data | Attestation procedures | Predefined**.

For detailed information about using default attestation procedures, see the *One Identity Manager Web Portal User Guide*.

### **Related topics**

- [User attestation and recertification](#) on page 123
- [Default attestation and withdrawal of entitlements](#) on page 114

## **Additional tasks for attestation procedures**

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

### **Overview of the attestation procedure**

You can see the most important information about an attestation procedure on the overview form.

#### ***To obtain an overview of an attestation procedure***

1. In Manager, select the category **Attestation | Basic configuration data | Attestation procedures**.
2. Select the attestation procedure in the result list.
3. Select **Attestation procedure overview** in the task view.

### **Assigning Approval Policies**

Use this task to assign the selected attestation procedure to the approval policies that should be used in this attestation procedure. All approval policies permitted for the attestation base object are listed.

#### ***To assign approval policies to attestation procedures***

1. In Manager, select the category **Attestation | Basic configuration data | Attestation procedures**.
2. Select the attestation procedure in the result list.
3. Select **Assign approval policies** in the task view.



Assign the approval policies in **Add assignments**.

**TIP:** In **Remove assignments**, you can remove the assignment of approval policies.

**To remove an assignment**

- Select the approval policy and double-click .

4. Save the changes.

Which approval policies are permitted depends on the approval procedures in use. Approval procedures dictate to which tables an approval procedure can be assigned.

## Related topics

- [Specifying permitted approval procedures for tables](#) on page 77

## Creating a copy

You can make copies of attestation procedures and those copies allow you to modify default attestation procedures.

### **To copy an attestation procedure**

1. In Manager, select the category **Attestation | Basic configuration data | Attestation procedures**.
2. Select the attestation procedure in the result list.
3. Select **Create copy** in the task view.
4. Confirm the security prompt with **Yes**.
5. Decide whether the condition types should be copied for the attestation wizard in the Web Portal as well.

Condition types are required if attestation policies are created and edited with the attestation wizard in the Web Portal. For detailed information, see *One Identity Manager Web Portal User Guide*.

6. Edit the attestation procedure copy and save the changes.

The attestation procedure copy is displayed on the master data form with the name **<Name of original attestation procedure> (copy)**. You can rename and edit this attestation policy.


## Schedules

Use schedules to automate attestation. These specify when and how often attestation cases are created. One Identity Manager supplies several default schedules for attestation.

## To edit schedules





1. In Manager, select the category **Attestation | Basic configuration data | Schedules**.

The result list shows all schedules configured for attestation policies (table AttestationPolicy).

2. Select a schedule in the result list and run the task **Change master data**.  
- OR -  
Click  in the result list.
3. Edit the schedule's master data.
4. Save the changes.

Enter the following properties for a schedule.

**Table 4: Schedule properties**

Property	Meaning
Name	Schedule ID. Translate the given text using the  button.
Description	Detailed description of the schedule. Translate the given text using the  button.
Table	Table whose data can be used by the schedule. Schedules for the attestation must refer to the AttestationPolicy table.
Enabled	Specifies whether the schedule is enabled or not.  <b>NOTE:</b> Only active schedules are run.
Time zones	Unique identifier for the time zone that is used for running the schedule. Choose between <b>Universal Time Code</b> or one of the time zones in the menu.  <b>NOTE:</b> When you add a new schedule, the time zone is preset to that of the client from which you started the Manager.
Start (date)	The day on which the schedule should be run for the first time.
Validity period	Period within which the schedule is run. <ul style="list-style-type: none"><li>• If the schedule will be run for an unlimited period, select the option <b>Unlimited duration</b>.</li><li>• To set a validity period, select the option <b>Limited duration</b> and enter the day the schedule will be run for the last time in <b>End (date)</b>.</li></ul>
Occurs	Interval in which the task is run. Permitted interval types are <b>Every minute, Hourly, Daily, Weekly, Monthly</b> and <b>Yearly</b> .

Property	Meaning
	<p>For the <b>Weekly</b> interval type, specify the precise weekday. For the <b>Monthly</b> interval type, specify the day of the month (1st to 31st day of the month). For the <b>Yearly</b> interval type, specify the day of the year (1st to 366th day of the year).</p> <p><b>i</b> <b>NOTE:</b> If the schedule is not going to be run until next month because the interval type is <b>Monthly</b> with sub interval <b>29, 30</b> or <b>31</b>, the last day of the current month is used.</p> <p>Example:</p> <p>A schedule that is run on the 31st day of each month is run on 30th April. In February, the schedule is run on the 28th (or 29th in leap year).</p> <p>Schedules with the interval type <b>Yearly</b> with sub interval <b>366</b> are only run in leap year.</p>
Start time	<p>Fixed start type for the <b>Daily, Weekly, Monthly</b> and <b>Yearly</b> interval types. Enter the time in local format for the chosen time zone.</p> <p>For the interval types <b>Every minute</b> and <b>Hourly</b>, the start time is calculated from the rate of occurrence and the interval type.</p>
Repeat every	<p>Rate of occurrence for running the schedule within the selected time interval. For the <b>Weekly</b> interval type, select at least one weekday.</p>
Last planned run/Next planned run	<p>Execution time calculated by the DBQueue Processor. Execution times are recalculated whilst the schedule is running. The time of the next run is calculated from the interval type, rate of occurrence and the start time.</p> <p><b>i</b> <b>NOTE:</b> The One Identity Manager provides the start information in the time zone of the client where the program was started. Changes due to daylight saving are taken into account.</p>

## Default schedules

One Identity Manager supplies the following attestation schedules by default:

**Table 5: Default attestation schedules**

Schedule	Description
Half-Yearly	
Monthly	
Quarterly	Default schedules for any attestation.
Weekly (Monday)	
Yearly	
Deactivated	
Daily	Default schedules for any attestation. This schedule is assigned to the <b>New user certification</b> attestation policy by default.

### Related topics

- [Preparing for recertification](#) on page 135
- [Scheduled attestations](#) on page 131

## Additional tasks for schedules

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

### Schedule overview

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

#### **To obtain an overview of a schedule**

1. In Manager, select the category **Attestation | Basic configuration data | Schedules**.
2. Select the schedule in the result list.
3. Select **Schedule overview**.

## Assigning attestation policies

Use this task to assign attestation policies to the selected schedule, which will runs them. If you double-click on one of the attestation policies you assign it to the current schedule.

### *To assign attestation policies to a schedule*

1. In Manager, select the category **Attestation | Basic configuration data | Schedules**.
2. Select the schedule in the result list.
3. Select **Assign attestation polices** in the task view.
4. In **Add assignments**, double-click the attestation policies that are to be assigned.
5. Save the changes.

### *To change an assignment*

1. In Manager, select the category **Attestation | Basic configuration data | Schedules**.
2. Select the schedule in the result list.
3. Select **Assign attestation polices** in the task view.
4. Select **Show objects already assigned to other objects** in the assignment form context menu.

This shows attestation policies that are already assigned in other schedules.

5. Double-click on one of these attestation policies in **Add assignments**.  
The attestation policy is assigned to the currently selected schedule.
6. Save the changes.

**i** **NOTE:** Assignments cannot be removed. Attestation policies must be assigned a schedule, it is compulsory.

## Starting schedules immediately

**i** **NOTE:** If a schedule is started, it starts attestation for all active attestation policies assigned with the schedule.

### *To start a schedule immediately*

1. In Manager, select the category **Attestation | Basic configuration data | Schedules**.
2. Select the schedule in the result list.
3. Select **Start immediately** from the task view.

A message appears confirming that the schedule was started.

# Compliance frameworks

Compliance frameworks are used for classifying attestation policies, compliance rules and company policies according to regulatory requirements.

Compliance frameworks can be organized hierarchically. To do this, assign a parent framework to the compliance frameworks.

## **To edit compliance frameworks**

1. In Manager, select the category **Attestation | Basic configuration data | Compliance Frameworks**.
2. Select a Compliance Framework in the result list and run **Change master data**.  
- OR -  
Click **New** in the result list toolbar.
3. Edit the compliance framework master data.
4. Save the changes.

Enter the following properties for compliance frameworks.

**Table 6: Compliance framework properties**

<b>Property</b>	<b>Description</b>
Compliance framework	Name of the compliance framework.
Parent framework	Parent compliance framework in the framework hierarchy. Select an existing compliance framework in the menu to organize compliance frameworks hierarchically.
Manager/supervisor	Application role whose members are allowed to edit all attestation policies assigned to this compliance framework
Description	Spare text box for additional explanation.

## Additional tasks for compliance frameworks

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

## Compliance framework overview

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

### To obtain an overview of a compliance framework

1. In Manager, select the category **Attestation | Basic configuration data | Compliance Frameworks**.
2. Select the compliance framework from the result list.
3. Select **Compliance framework overview**.

## Assigning attestation policies

Use this task to assign attestation policies to the selected compliance framework.

### To assign attestation policies to a compliance framework

1. In Manager, select the category **Attestation | Basic configuration data | Compliance Frameworks**.
2. Select the compliance framework from the result list.
3. Select **Assign attestation policies** in the task view.

Assign the attestation policies in **Add assignments**.

**TIP:** In **Remove assignments**, you can remove the assignment of attestation policies.

#### To remove an assignment

- Select the approval policy and double-click .

4. Save the changes.

## Chief approval team

Sometimes, approval decisions cannot be made for attestation cases because an attestor is not available or does not have access to One Identity Manager tools. To complete these attestations, 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 attestations in special cases or to authorize other attestors. For detailed information about application roles, see the *One Identity Manager Authorization and Authentication Guide*.

**Table 7: Default application role for chief approval team**

User	Tasks
Chief approval team	The chief approver must be assigned to <b>Identity &amp; Access Governance   Attestation   Chief approval team</b> . Users with this application role:

## User

## Tasks

- Approve using attestation cases.
- Assign attestation cases to other attestors.


### **To add members to the chief approval team**

1. In Manager, select the category **Attestation | Basic configuration data | Chief approval team**.
2. Select **Assign employees** in the task view.

In **Add assignments**, assign the employees who are authorized to approve all attestations.

**TIP:** In the **Remove assignments** area, 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**


- [Attestation through chief approval team](#) on page 90

## **Standard reasons for attestation**

For attestations, you can specify reasons in the Web Portal that explain the individual approval decisions. You can freely formulate this text. You also have the option to predefine reasons. The attestors can select a suitable text from these standard reasons in the Web Portal and store it with the attestation case.

Standard reasons are displayed in the attestation history.

### **To edit standard reasons**

1. Select **Attestation | Basic configuration data | Standard reasons**.
2. Select a standard reason in the result list and run **Change master data**.  
- 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 8: General master data for a standard reason**

<b>Property</b>	<b>Description</b>
Standard reason	Reason text as displayed in the Web Portal and in the attestation history
Description	Spare text box for additional explanation.
Automatic Approval	Specifies whether the reason text is only used for automatic approvals by the 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 attestation
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

One Identity Manager provides predefined standard reasons. These standard reasons are entered into the attestation case in the case of automatic approval by One Identity Manager.


### *To display predefined standard reasons*

- In Manager, select the **Attestation | Basic configuration data | Standard reasons | Predefined** category.

## Attestation policies

Attestation policies specify the concrete conditions for attestation. Use the master data form to enter the attestation procedure, approval policy and the schedule. You can use a WHERE clause to limit the attestation objects.

### *To edit attestation polices*

1. In the Manager, select **Attestation | Attestation policies**.
2. Select an attestation policy in the result list and run **Change master data**.  
- OR -  
Click  in the result list.

3. Edit the master data for the attestation policy.
4. Save the changes.

## General master data for attestation policies

Enter the following data for attestation policies.

**Table 9: General master data for attestation policies**

Property	Description
Attestation policy	Name of the attestation policy.
Attestation procedure	Attestation procedure used for attesting. Attestation procedures are displayed in a menu grouped by attestation type.
Approval policies	Approval policy for determining the attestor for the attestation objects.
Owner	Creator of the attestation policy. The name of the user logged into One Identity Manager is entered here by default. This can be changed.
Time required (days)	Number of days within which a decision must be made over the attestation. Enter <b>0</b> if you do not want to specify a particular processing period.  One Identity Manager does not stipulate which actions are carried out if processing times out. Define your own custom actions or evaluations to deal with this situation.
Description	Spare text box for additional explanation.
Risk index	Specifies the risk for the company if attestation for this attestation policy is denied. Use the slider to enter a value between <b>0</b> and <b>1</b> . <ul style="list-style-type: none"> <li>• <b>0</b>: No risk</li> <li>• <b>1</b>: The denied attestation is a problem.</li> </ul> <p>This input field is only visible if the configuration parameter <b>QER   CalculateRiskIndex</b> is activated.</p>
Risk index (reduced)	Show the risk index taking mitigating controls into account. The risk index for an attestation policy is reduced by the <b>Significance reduction</b> value for all assigned mitigating controls.  This input field is only visible if the configuration parameter <b>QER   CalculateRiskIndex</b> is activated. The value is calculated by the One Identity Manager and cannot be edited.
Calculation schedule	Schedule for running attestation. Attestation cases are started automatically at the times specified by the schedule.

Property	Description
Deactivated	<p>Specifies whether the attestation policy is disabled or not.</p> <p>Attestation cases cannot be added to disabled attestation policies and, therefore, no attestation is done. Disabled attestation policies can be deleted.</p> <p>Completed attestation cases can be deleted once the attestation policy is disabled.</p>
Close obsolete tasks automatically	<p>Specifies whether pending attestation cases are aborted if new ones are added.</p> <p>If attestation is started and this option is set, new attestation cases are created according to the condition. All pending, obsolete attestation cases for newly determined attestation objects of this attestation policy are aborted. Attestation cases for attestation objects that are not recalculated, remain intact.</p>
Obsolete tasks limit	<p>Specifies the maximum number of closed attestation cases for each attestation object that should remain in the database when closed attestation cases are deleted.</p> <ul style="list-style-type: none"> <li>• <b>0</b>: No attestation cases are deleted.</li> <li>• <b>&gt; 0</b>: The given number of closed attestation cases for each attestation object to remain in the database.</li> </ul>
Reason for decision	Reason which is given if the option <b>Close obsolete tasks automatically</b> is set and pending attestation cases are automatically closed.
Output format	<p>Format in which the report is generated.</p> <p>This menu is only visible if the <b>QER   Attestation   AllowAllReportTypes</b> configuration parameter is set. If the configuration parameter is not set, the default PDF format is used because it is the only format that is version compatible.</p>
Edit connection...	Starts the WHERE clause wizard. Use this wizard to create a condition to determine the attestation objects from the database table specified in the attestation procedure.
Condition	<p>Data query for finding attestation objects.</p> <p>This option is only available if the task <b>Show condition</b> has been run beforehand.</p>
Attestation with multi-factor authentication	Attestation of this attestation policy requires multi-factor authentication.

**NOTE:** You can only edit attestation policies in the Web Portal that were created in the Web Portal. You will see a corresponding message on the master data form as to whether the attestation policy was created in the Web Portal.

If you want to edit attestation policies like this, create a copy in the Manager.

For detailed information about editing attestation policies in the Web Portal, see the *One Identity Manager Web Portal User Guide*.

## Detailed information about this topic

- [Showing or hiding conditions](#) on page 33
- [Schedules](#) on page 17
- [Disabling attestation policies](#) on page 34
- [Mitigating controls](#) on page 138
- [Setting up multi-factor authentication for attestation](#) on page 81
- [Creating a copy](#) on page 33

## Related topics

- [Deleting attestation cases](#) on page 98
- [Deleting attestation policies](#) on page 34

# Risk assessment

You can use One Identity Manager to evaluate the risk of attestation cases. To do this, enter a risk index for the attestation policy. The risk index specifies the risk involved for the company in connection with the data to be attested. The risk index is given as a number in the range 0 .. 1. By doing this you specify whether data to be attested is considered not to be a risk (risk index = 0) or whether every denied attestation poses a problem (risk index = 1).

The risk that attestations will be denied approval can be reduced by using the appropriate mitigating controls. Enter these controls as mitigating controls in One Identity Manager. You reduce the risk by the value entered as the significance reduction on the mitigating control. This value is used to calculate the reduced risk index for the attestation policy.

You can create several reports with the Report Editor to evaluate attestation cases depending on the risk index. For more detailed information, see the *One Identity Manager Configuration Guide*.

Risk assessments can be carried out when the **QER | CalculateRiskIndex** configuration parameter is enabled. For more detailed information, see the *One Identity Manager Risk Assessment Administration Guide*.

## Detailed information about this topic

- [Mitigating controls](#) on page 138

# Default attestation policies

One Identity Manager provides default attestation policies for default attestation of new users and recertification of all employees stored in the One Identity Manager database. In addition to this, default attestation policies are provided through which various roles, memberships in roles, and system entitlements can be attested.

### **To display default attestation policies**

- In the Manager, select **Attestation | Attestation policies | Predefined**.

You can customize the following properties for default attestation policies:

- Approval policies (if several approval policies can be assigned)
- Owner
- Processing time
- Risk index
- Calculation schedule
- Deactivated
- Close obsolete tasks automatically
- Obsolete tasks limit
- Reason for decision

**TIP:** If you want to limit the number of attestation objects for default attestation policies, create a copy of the default attestation policy. You can edit the condition in the copy.

**NOTE:** You can edit attestation policies, whose condition is stored as a definition (XML), in the Web Portal. The definition (XML) cannot be edited in the Manager. For detailed information, see *One Identity Manager Web Portal User Guide*.

## Additional tasks for attestation policies

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

## The attestation policy overview

You can see the most important information about an attestation policy on the overview form.

### *To obtain an overview of an attestation policy*

1. In the Manager, select **Attestation | Attestation policies**.
2. Select the attestation policy in the result list.
3. Select **Attestation policy overview** in the task view.

## Assigning approvers

Use this task to assign employees that can be determined as approvers in an attestation case to the selected attestation policy.


### *To assign approvers to an attestation policy*

1. In the Manager, select **Attestation | Attestation policies**.
2. Select the attestation policy in the result list.
3. Select **Assign approver** from the task list.

Assign the approvers in **Add assignments**.

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

#### *To remove an assignment*

- Select the approver and double click .
4. Save the changes.

### Detailed information about this topic

- [Selecting attestors](#) on page 57

## Assigning compliance frameworks

Use this task to specify which compliance frameworks are relevant for the selected attestation policy. Compliance frameworks are used for classifying attestation policies, compliance rules and company policies according to regulatory requirements.

### *To assign compliance frameworks to an attestation policy*

1. In the Manager, select **Attestation | Attestation policies**.
2. Select the attestation policy in the result list.

3. Select **Assign compliance frameworks** from the task list.

Assign the compliance frameworks in **Add assignments**.

**TIP:** In **Remove assignments**, you can remove the assignment of compliance frameworks.

**To remove an assignment**

- Select the compliance framework and double-click .

4. Save the changes.

## Mitigating controls

Mitigating controls describe controls that are implemented if an attestation rule was violated. The attestation can be approved after the next attestation run, once controls have been applied.

**To edit mitigating controls**

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

**Detailed information about this topic**

- [Mitigating controls](#) on page 138
- [Assigning mitigating controls](#) on page 31
- [Creating mitigating controls](#) on page 32

## Assigning mitigating controls

Specify which mitigating controls apply to the selected attestation policy.

**To assign mitigating controls to an attestation policy**

1. In the Manager, select **Attestation | Attestation policies**.
2. Select the attestation policy in the result list.
3. Select **Assign mitigating controls** from the task list.

In **Add assignments**, assign the mitigating controls.

**TIP:** In **Remove assignments**, you can remove the assignment of mitigating controls.

**To remove an assignment**

- Select the mitigating control and double-click .

4. Save the changes.

## Creating mitigating controls

### *To create a mitigating control for attestation policies*

1. In the Manager, select **Attestation | Attestation policies**.
2. Select an attestation policy in the result list.
3. Select **Assign mitigating controls** from the task list.
4. Select **Create mitigating controls**.
5. Enter the master data for the mitigating control.
6. Save the changes.
7. Select **Assign attestation policies** in the task view.
8. In **Add assignments**, double-click the attestation policies that are to be assigned.
9. Save the changes.

### Detailed information about this topic

- [Mitigating controls](#) on page 138

## Running attestation for single objects

Use this task to start attestations independently from a schedule. If you run the task, a separate window is opened. Select the objects to be attested now from a list of all attestation objects. The selection is one-off.

The **Close obsolete tasks automatically** option is not taken into account for the selected attestation objects.

### *To start attestation for the selected objects*

1. In the Manager, select **Attestation | Attestation policies**.
2. Select the attestation policy in the result list. Select **Change master data**.
3. Select **Run attestation cases for single objects...**  
This opens a separate window.
4. In the **Attestation** column, select every object for which attestation is to be run.
5. Click **Run**.  
Attestation cases are generated for the selected attestation objects. As soon as DBQueue Processor has processed the task, you will see the newly created attestation cases in the navigation view under **Attestation runs | <attestation policy> | Attestation runs | <year> | <month> | <day> | Pending attestations**.
6. Click **Close**.



## Showing or hiding conditions

The condition for finding attestation objects can be viewed and edited in the Where Clause Wizard. The SQL query for this condition can be displayed on the master data form.

### *To show the condition for finding attestation objects on the master data form*

1. In the Manager, select **Attestation | Attestation policies**.
2. Select the attestation policy in the result list and run **Change master data**.
3. Select the task **Show condition** in the task view.

This displays the **Condition** text box on the master data form. The condition is written like a database query Where clause. You can edit it directly.

### *To hide the condition for finding attestation objects*

1. In the Manager, select **Attestation | Attestation policies**.
2. Select the attestation policy in the result list and run **Change master data**.
3. Select **Hide condition** in the task view.

The input field **Condition** is no longer displayed on the master data form.

## Creating a copy

You can make copies of attestation policies and use them to modify default attestation policies, for example.

### *To copy an attestation policy*

1. In the Manager, select **Attestation | Attestation policies**.
2. Select the attestation policy in the result list.
3. Select **Create copy** in the task view.
4. Confirm the security prompt with **Yes**.

The attestation policy copy is displayed on the master data form with the name **Copy of <Name of original attestation policy>**. You can edit this attestation policy.

## Showing selected objects

### *To show a list of attestations found*

1. In the Manager, select **Attestation | Attestation policies**.
2. Select the attestation policy in the result list and run **Change master data**.
3. Select **Show selected objects** in the task view.

An additional **Result** tab is shown on the master data form. This displays a list of attestation objects found through the condition.

## Deleting attestation policies

**IMPORTANT:** Do not delete attestation policies, for audit reasons.

Attestation policies may still be removed from the One Identity Manager database under specific conditions. Ensure that the attestation policy is archived when deleted.

For detailed information about data archiving, see the *One Identity Manager Configuration Guide*.

### Prerequisite

- The attestation policy is disabled.

### To delete an attestation policy

1. In the Manager, select **Attestation | Attestation policies | Disabled policies**.
2. Select the attestation policy in the result list and run **Change master data**.
3. Select **Delete attestation policy** in the task view.
4. Confirm the security prompt with **Yes**.

The attestation policy is deleted. All associated attestation cases, approval workflows and the attestation history are deleted.

### Related topics

- [Disabling attestation policies](#) on page 34

## Disabling attestation policies

Attestations are run when the schedule assigned to an attestation policy is enabled. You can disabled attestation policies to prevent attestation cases being created for individual attestation policies.

**TIP:** Numerous default attestation policies are supplied with One Identity Manager. Check which of the default attestation policies are relevant for your data situation when you set up your database. Disable all unnecessary attestation policies.

### To disable an attestation policy

1. In the Manager, select **Attestation | Attestation policies**.
2. Select the attestation policy in the result list and run **Change master data**.

3. Set **Disabled**.
4. Save the changes.


## Custom mail templates for notifications

A mail template consists of general master data such as target format, important 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.

There is a One Identity Manager in the Mail Template Editor to simplify writing notifications. You can use Mail Template Editor to create and edit mail texts in WYSIWYG mode.

## Creating and editing attestation mail templates

### *To edit mail templates*

1. In Manager, select the category **Attestation | Basic configuration data | Mail templates**.  
This shows all the mail templates that can be used for attestation cases in the result list.
2. Select a mail template in the result list and run **Change master data**.  
- 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 a mail template](#) on page 35
- [Creating and editing a mail definition](#) on page 37

## General properties of a mail template

The following general properties are displayed for a mail template:

**Table 10: Mail template properties**


<b>Property</b>	<b>Meaning</b>
Mail template	Name of the mail template. This name will be used to display the mail templates in the administration tools and in 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 base object <code>AttestationCase</code> or <code>AttestationHelper</code> for notifications about attestation.
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: <ul style="list-style-type: none"> <li>• <b>HTML:</b> 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.</li> <li>• <b>TXT:</b> 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.</li> </ul>
Design type	Design in which to generate the email notification. Permitted values are: <ul style="list-style-type: none"> <li>• <b>Mail template:</b> The generated email notification contains the mail body in accordance with the mail definition.</li> <li>• <b>Report:</b> The generated email notification contains the report specified under <b>Report (parameter set)</b> as its mail body.</li> <li>• <b>Mail template, report in attachment:</b> The generated email notification contains the mail body in accordance with the mail definition. The report specified under <b>Report (parameter set)</b> is attached to the notification as a PDF file.</li> </ul>
Importance	Importance for the email notification. Permitted values are <b>Low</b> , <b>Normal</b> , and <b>High</b> .
Confidentiality	Confidentiality for the email notification. Permitted values are <b>Normal</b> , <b>Personal</b> , <b>Private</b> , and <b>Confidential</b> .
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.

Property	Meaning
Language	Language which 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 a mail definition

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 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 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 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 attester should receive email notification of new attestations.

**Table 11: Email notification properties**

Property	Value
Base object	AttestationHelper
Subject	New attestations
Mail body	Dear \$FK(UID_PersonHead).Salutation[D]\$ \$FK(UID_PersonHead).LastName\$, There are new attestations pending for the attestation policy "\$FK(UID_AttestationCase).UID_AttestationPolicy[D]\$". Created: \$FK(UID_AttestationCase).PolicyProcessed:Date\$ You can see this request in the "One Identity Manager Self Service Portal". Best regards

## Use of Hyperlinks in the Web Portal

You can add hyperlinks to Web Portal in the mail text of a mail definition. If the recipient clicks on the hyperlink in the email, the Web Portal is opened on that web page and further actions can be carried out. In the default version, this method is implemented in attestations.

### **Prerequisites for using this method**

- The **QER | WebPortal | BaseURL** configuration parameter is enabled and contains the URL path to Web Portal. You edit the configuration parameter in Designer.

`http://<server name>/<application>`

with:

`<server name>` = name of server

`<application>` = path to the Web Portal installation directory

### **To add a hyperlink to 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, which you can use to create hyperlinks in 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:

`$Script(VI_BuildAttestationLink_Approve)$`

### Default Functions for Requests

The script `VI_BuildAttestationLinks` contains a collection of default functions for composing hyperlinks to directly grant or deny approval of requests from email notifications.

**Table 12: Functions of the `VI_BuildAttestationLinks` script**

Function	Usage
<code>VI_BuildAttestationLink_Show</code>	Opens the attestation page in the Web Portal.
<code>VI_BuildAttestationLink_Approve</code>	Approves an attestation and opens the attestation page in the Web Portal.
<code>VI_BuildAttestationLink_Deny</code>	Denies an attestation and opens the attestation page in the Web Portal.
<code>VI_BuildAttestationLink_AnswerQuestion</code>	Opens the page for answering a question in the Web Portal.
<code>VI_BuildAttestationLink_Pending</code>	Opens the page with pending attestations in the Web Portal.

## Customizing email signatures

Configure the email signature for mail templates using the following configuration parameter. Edit the configuration parameters in the Designer.

**Table 13: 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 mail templates for attestation

### *To copy a mail template*

1. In Manager, select the category **Attestation | Basic configuration data | Mail templates**.  
This shows all the mail templates that can be used for attestation cases in the result list.
2. Select the mail template that you want to copy in the result list and run **Change master data**.
3. Select **Copy mail template**.
4. Enter the name of the new mail template in **Name of copy**.
5. Click **OK**.



# Displaying attestation mail templates previews

## *To display a mail template preview*

1. In Manager, select the category **Attestation | Basic configuration data | Mail templates**.

This shows all the mail templates that can be used for attestation cases in the result list.


2. Select a mail template in the result list and run **Change master data**.
3. Select **Preview**.
4. Select the base object.
5. Click **OK**.

# Deleting mail templates for attestation

## *To delete a mail template*

1. In Manager, select the category **Attestation | Basic configuration data | Mail templates**.

This shows all the mail templates that can be used for attestation cases in the result list.

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 an attestation case. You can use following events for generating processes.

**Table 14: Events for the AttestationHelper object**

<b>Event</b>	<b>Triggered by</b>
DecisionRequired	New attestation case created Move to the next approval level
Remind	Reminder interval expired

**Table 15: Events for the AttestationCase object**

<b>Event</b>	<b>Triggered by</b>
Granted	Approval granted for an approval step.
Dismissed	Approval denied for an approval step.
OrderGranted	Approval granted for an entire approval procedure.
FinalDismissed	Approval denied for an entire approval procedure.
QueryToPerson	Making a query
AnswerFromPerson	Answering a query
RecallQuery	Recalling a query
Escalate	Attestation case escalated.
Aborted	Attestation case aborted.
Canceled	Obsolete attestation case aborted.

For detailed information about creating processes, see the *One Identity Manager Configuration Guide*.

## Approval processes for attestation cases

All attestation procedures are subject to a defined approval process. During this approval process, authorized employees grant or deny approval for attestation objects. 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 the approval workflows to apply to the attestation cases in the approval policies. Use approval workflows to find out, which employees in which order, can grant or deny attestation. An approval workflow can contain several approval levels and several approval steps. A special approval procedure is used to determine the attestors in each approval step.


### Detailed information about this topic

- [Approval policies for attestations](#) on page 43
- [Approval workflow for attestations](#) on page 46
- [Editing approval levels](#) on page 50
- [Default approval procedures](#) on page 58

## Approval policies for attestations

One Identity Manager uses approval policies to determine the attestor for each attestation case.

### *To edit an approval policy*


1. Select **Attestation | Basic configuration data | Approval policies**.
2. Select an approval policy in the result list and run **Change master data**.  
- 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 16: General master data for approval policies**

Property	Description
Approval policies	Approval step name.
Approval workflow	Workflow for finding attestors. Select any approval workflow from the menu or click  to set up a new approval workflow.
Mail templates	Mail template used to create email notifications for granting, denying, extending, unsubscribing, or canceling an attestation or for giving notice of its expiry.
Description	Spare text box for additional explanation.

### Detailed information about this topic

- [Setting up approval workflows](#) on page 49
- [Notifications in the attestation process](#) on page 99

## Default approval policies

One Identity Manager provides a default approval policy for default attestation of new users and recertification of all employees stored in the One Identity Manager database. Moreover, default approval policies are supplied through which different roles and system entitlements mapped in the Unified Namespace can be attested. You can use default approval policies for creating attestation policies in the Web Portal.

### To edit default approval policies

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

For detailed information about using default approval policies, see the *One Identity Manager Web Portal User Guide*.

## Related topics

- [User attestation and recertification](#) on page 123
- [Default attestation and withdrawal of entitlements](#) on page 114

# Additional tasks for approval policies

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

## Editing approval workflows

Here, you can edit the approval workflow assigned to the approval policy.

### *To edit the assigned approval workflow*

1. Select **Attestation | Basic configuration data | Approval policies**.
2. Select the approval policy in the result list.
3. Select **1. Editing approval workflows**.

This opens the Workflow Editor.

### Detailed information about this topic

- [Working with the workflow editor](#) on page 46

## 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 Manager, select the category **Attestation | Basic configuration data | Approval policies**.
2. Select the approval policy in the result list.
3. Select **Validity check**.

# Approval workflow for attestations

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

Use the workflow editor to create and edit approval workflows.

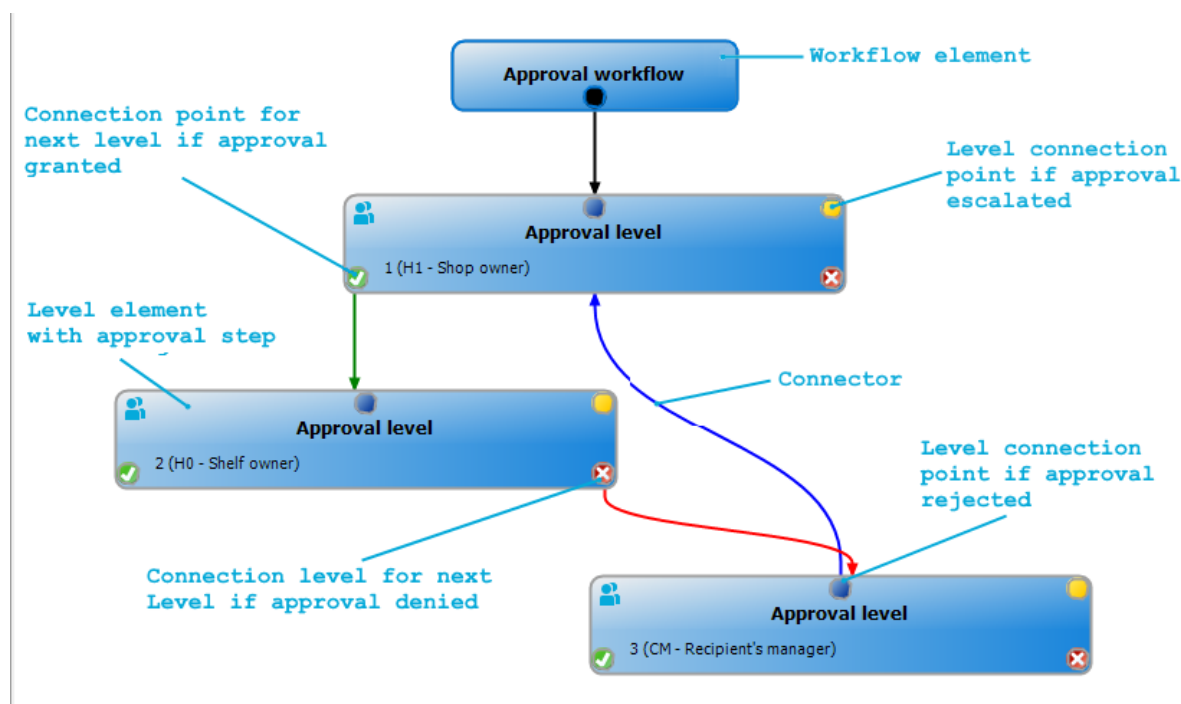
## ***To edit an approval workflow***

1. In Manager, select the category **Attestation | Basic configuration data | Approval workflows**.
2. Select the approval workflow in the result list and run **Change master data**.  
- 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 1: 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 methods 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 17: Entries in the toolbox**

Control	Method	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.
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 <b>Approved</b> connector for the selected approval level is deleted.

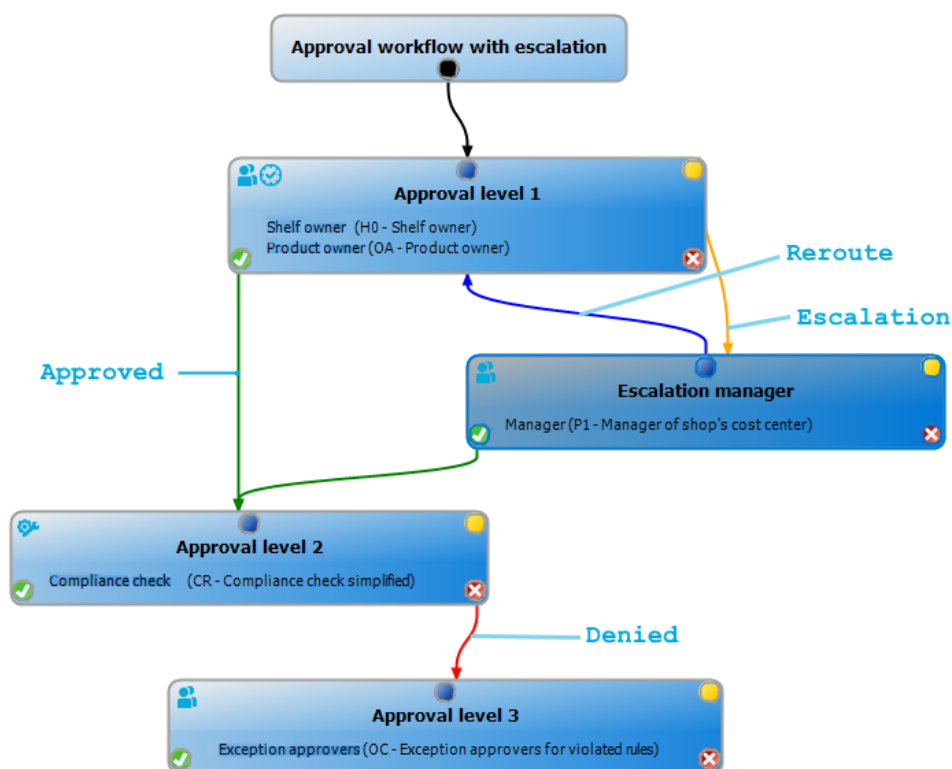
Control	Method	Meaning
	Remove negative	The <b>Deny</b> connector for the selected approval level is deleted.
	Remove reroute	The <b>Reroute</b> connector for the selected approval level is deleted.
	Remove escalation	The <b>Escalate</b> connector for the selected approval level is deleted.

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

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

Individual elements are linked to each other with a connector. Activate the connection points with the mouse. The mouse 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 2: Approval workflow connectors**





**Table 18: 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 another approval level to by-pass 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 **Toolbox | Assignments**. 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 19: 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 attestation 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 **Toolbox | Workflow | Edit**.
3. Edit the workflow properties.
4. Click **OK**.

**Table 20: Approval workflow properties**

<b>Property</b>	<b>Meaning</b>
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 attestation procedure.
Description	Spare text box for additional explanation.

### **Detailed information about this topic**

- [Aborting an attestation case on timeout](#) on page 89

## **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 **Toolbox | Approval levels | Add**.  
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 **Toolbox | Approval levels | Edit**.

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 attestors of an approval level can make a decision about an attestation case in parallel rather than sequentially. The attestation case cannot be presented to the attestors at the next approval level until all approval steps in one approval level have been completed in the attestation procedure.

### ***To add more approval steps to an approval level***

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

### **Related topics**

- [Properties of an approval step](#) on page 51
- [Editing approval steps](#)

## **Editing approval steps**

### ***To edit approval level properties***

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



### **Detailed information about this topic**

- [Properties of an approval step](#) on page 51

## **Properties of an approval step**

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

**Table 21: General properties of an approval step**

Property	Meaning
Single step	Approval step name.
Approval procedure	Procedure to use for determining the attestors
Role	Hierarchical role from which the attestors are to be determined using the default approval procedures OM and OR
Fallback approver	<p>Application role whose members are authorized to approve attestation cases if an attestor cannot be determined through the approval procedure. Assign an application from the menu.</p> <p>To create a new application role, click . Enter the application role name and assign a parent application role. For detailed information, see the <i>One Identity Manager Authorization and Authentication Guide</i>.</p> <p> <b>NOTE:</b> 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.</p>
Condition	Condition for calculating approval with approval procedures CD, EX or WC.
Number of approvers	<p>Number of attestors required to approve an attestation case. Use this number to further restrict the maximum number of approvers of the implemented approval procedure.</p> <p>If there are several people allocated as approvers, then this number specifies how many people from this group have to approve an attestation case. A request can only be passed up to next level afterwards.</p> <p>If not enough attestors 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 attestation case.</p> <p>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 <b>-1</b>. This overrides the maximum number of attestors defined in the approval procedure.</p> <p>The number of approvers defined in an approval step is not taken into account in the approval procedures CD, EX or WC.</p>
Description	Spare text box for additional explanation.
Approval reason	Reason entered in the attestation case if approval is automatically granted. This field is only shown for the approval procedures CD, EX and WC.
Reject reason	Reason entered in the attestation case and the attestation history, if approval is automatically denied. This field is only shown for the approval procedures CD, EX and WC.

Property	Meaning
Reminder interval (hours)	<p>Number of working hours to elapse after which the attestor is notified by mail that there are still pending attestation cases for attestation.</p> <p>The reminder interval is set to 30 minutes, by default. To change this interval, modify the <b>Checks reminder interval and timeout of attestation cases</b> schedule.</p> <p><b>NOTE:</b> Ensure that a state and/or county 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 employees' calculating working hours, see the <i>One Identity Manager Identity Management Base Module Administration Guide</i>.</p> <p>If more than one attestor was found, each attestor will be notified. The same applies if an additional attestor has been assigned.</p> <p>If an attestor delegated the approval, the time point for reminding the delegation recipient is recalculated. The delegation recipient and all the other attestors are notified. The original attestor is not notified.</p> <p>If an attestor 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.</p>
TimeOut (working hours)	<p>Number of working hours to elapse after which the approval step is automatically granted or denied approval.</p> <p>The timeout is check every 30 minutes, by default. To change this interval, modify the <b>Checks reminder interval and timeout of attestation cases</b> schedule.</p> <p>The working hours of the respective approver are taken into account when the time is calculated.</p> <p><b>NOTE:</b> Ensure that a state and/or county 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 employees' calculating working hours, see the <i>One Identity Manager Identity Management Base Module Administration Guide</i>.</p> <p>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.</p> <p>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.</p>

Property	Meaning
	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	<p>Action, which is executed if the timeout expires.</p> <ul style="list-style-type: none"> <li>• <b>Approved:</b> The attestation case is approved in this approval step. The next approval level is called.</li> <li>• <b>Deny:</b> The attestation case is denied in this approval step. The approval level for denying is called.</li> <li>• <b>Escalation:</b> The attestation case is escalated. The escalation approval level is called.</li> <li>• <b>Abort:</b> the approval step and, therefore, the attestation case, are canceled.</li> </ul>
Additional approver possible	<p>Specifies whether a current attestor is allowed to instruct another employee as an attestor. This additional attestor has parallel authorization to make approvals for the current attestation case. The attestation case is not passed on to the next approval level until both attestors have made a decision.</p> <p>This option can only be set for approval levels with a single, manual approval step.</p>
Approval can be delegated	<p>Specifies whether a current attestor can delegate the attestation to another person. This employee is added to the current approval step as the attestor. This employee then makes the approval decision instead of the attestor who made the delegation.</p> <p>This option can only be set for approval levels with a single, manual approval step.</p>
Approval by affected employee	<p>Specifies whether the employee who is affected by the approval decision can also approve it. If this option is set, employees to be attested can attest themselves.</p> <p>If this option is not set, use the <b>QER   Attestation   PersonToAttestNoDecide</b> configuration parameter to define whether the employees to be attested can attest themselves.</p>
Do not show in approval history	<p>Specifies whether or not the approval step should be displayed in the attestation history. For example, this behavior can be applied to approval steps with the <b>CD - calculated approval</b> procedure, which are used only for branching in the approval workflow. It makes it easier to follow the attestation history.</p>

## Detailed information about this topic

- [Notifications in the attestation process](#) on page 99
- [Reminding attestors](#) on page 101
- [Escalating an attestation case](#) on page 84

- [Automatic approval on timeout](#) on page 87
- [Aborting an attestation case on timeout](#) on page 89
- [Finding attestors using a specified role](#) on page 68
- [Calculated approval](#) on page 70
- [Approvals to be made externally](#) on page 71
- [Waiting for further approval](#) on page 72
- [Prevent attestation by employee awaiting attestation](#) on page 82

## Related topics

- [Selecting attestors](#) on page 57
- [Attestors cannot be established](#) on page 86
- [Attestation through chief approval team](#) on page 90

## 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 22: 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	<p>Link to another approval level to by-pass the current approval.</p> <p>Attestors can pass the approval decision through another approval level, 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.</p> <p>It is not possible to reroute approval steps with the approval procedures EX, CD, SB or WC.</p>
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 attestation case is considered approved if the approval decision was to grant approval. If approval is not

granted, the attestation case is considered to be finally denied. The attestation procedure 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 Manager, select the category **Attestation | Basic configuration data | Approval workflows**.
2. Select the approval workflow in the result list.
3. Select **Approval workflow overview**.

### Copying approval workflows

For example, you can copy default approval workflows in order to customize them.

#### *To copy an approval workflow*


1. In Manager, select the category **Attestation | Basic configuration data | Approval workflows**.
2. Select an approval workflow in the result list and run **Change master data**.
3. Select **Copy workflow**.
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 Manager, select the category **Attestation | Basic configuration data | Approval workflows**.
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 56
- [General master data for approval policies](#) on page 44

## **Default approval workflows**

One Identity Manager provides a default approval workflow for default attestation of new users and recertification of all employees stored in the One Identity Manager database. Moreover, default approval workflows are supplied through which different roles and system entitlements mapped in the Unified Namespace can be attested. You can use default approval policies for creating attestation policies in the Web Portal.

### ***To edit default approval workflows***

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

For detailed information about using default approval workflows, see the *One Identity Manager Web Portal User Guide*.

### **Related topics**

- [User attestation and recertification](#) on page 123
- [Default attestation and withdrawal of entitlements](#) on page 114

## **Selecting attestors**

One Identity Manager can make approvals automatically in an attestation procedure or through attestors. An attestor is an employee or a group of employees who can grant or

deny an attestation case within an attestation procedure. It takes several approval procedures to grant or deny approval. You specify in the approval step which approval procedure should be used.

If there are several people are determined as approvers by an approval procedure, the number given in the approval step specifies how many people must approve the step. A request can only be passed up to next level afterwards. The attestation procedure 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 approver 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

### To display default approval procedures

- Select the **Attestation | Basic configuration data | Approval procedures | Predefined** category.

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

**Table 23: Approval procedures for attestation**

Procedure Name	Attestors
AA - Attestor for the role to attest	<p>Attestor of the organization (department, cost center, location), business role, or IT Shop if assignments of system entitlements or system roles to roles are attested.</p> <ul style="list-style-type: none"> <li>• Attestors for departments, cost centers and locations must be assigned to the application role <b>Identity Management   Organizations   Attestors</b>.</li> <li>• Attestors for business roles must be assigned to the application role <b>Identity Management   Business roles   Attestors</b>.</li> <li>• Attestors for requests must be assigned to the <b>Request &amp; Fulfillment   IT Shop   Attestors</b> application role.</li> </ul> <p>For more information, see <a href="#">Finding attestors using attestation objects</a> on page 63.</p>
AD - Attestor of recipient's department	<p>Attestor of the department to which the attestation object is primarily assigned.</p> <ul style="list-style-type: none"> <li>• Attestors for departments must be assigned to the <b>Identity</b></li> </ul>

Procedure Name	Attestors
	<p><b>Management   Organizations   Attestors</b> application role.</p> <p>For more information, see <a href="#">Finding attestors using the role of the employee to be attested</a> on page 63.</p>
AL - Attestor for recipient's location	<p>Attestor of the location to which the attestation object is primarily assigned.</p> <ul style="list-style-type: none"> <li>Attestors for locations must be assigned to the <b>Identity Management   Organizations   Attestors</b> application role.</li> </ul> <p>For more information, see <a href="#">Finding attestors using the role of the employee to be attested</a> on page 63.</p>
AM - Manager of account's person	<p>Manager of the employee connected to the user account that is to be attested</p> <p>For more information, see <a href="#">Determining attestors from persons responsible for the attestation objects</a> on page 66.</p>
AN - Attestor for the system entitlement to attest	<p>Attestor of the system entitlement or system role if assignments of system entitlements or system roles to roles are attested. Attestors are determined through the assigned service item.</p> <ul style="list-style-type: none"> <li>Attestors must be assigned to the <b>Request &amp; Fulfillment   IT Shop   Attestors</b> application role.</li> </ul> <p>For more information, see <a href="#">Finding attestors using attestation objects</a> on page 63.</p>
AO - Attestor for recipient's primary role	<p>Attestor of the business role to which the attestation object is primarily assigned.</p> <p>Attestors for business roles must be assigned to the application role <b>Identity Management   Business roles   Attestors</b>.</p> <p>For more information, see <a href="#">Finding attestors using the role of the employee to be attested</a> on page 63.</p>
AP - Attestor for recipient's cost center	<p>Attestor of the cost center to which the attestation object is primarily assigned.</p> <ul style="list-style-type: none"> <li>Attestors for cost centers must be assigned to the application role <b>Identity Management   Organizations   Attestors</b>.</li> </ul> <p>For more information, see <a href="#">Finding attestors using the role of the employee to be attested</a> on page 63.</p>
AR - Attestor for attestation	<p>Attestor for the compliance rule to be attested.</p>

Procedure Name	Attestors
compliance rule	<ul style="list-style-type: none"> <li>Attestors must be assigned to the <b>Identity &amp; Access Governance   Identity Audit   Attestors</b> application role.</li> </ul> <p>For more information, see <a href="#">Finding attestors using attestation objects</a> on page 63.</p>
AS - Approver for attestation policy	<p>All employees assigned to the attestation policy as approver.</p> <p>For more information, see <a href="#">Finding attestors using the attestation policy</a> on page 63.</p>
AT - Attestor for the organization to be attested	<p>Attestor of the organization (department, cost center, location), business role, or IT Shop to be attested.</p> <ul style="list-style-type: none"> <li>Attestors for departments, cost centers and locations must be assigned to the application role <b>Identity Management   Organizations   Attestors</b>.</li> <li>Attestors for business roles must be assigned to the application role <b>Identity Management   Business roles   Attestors</b>.</li> <li>Attestors for requests must be assigned to the <b>Request &amp; Fulfillment   IT Shop   Attestors</b> application role.</li> </ul> <p>For more information, see <a href="#">Finding attestors using attestation objects</a> on page 63.</p>
AY - Attestor for the company policy to be attested	<p>Attestor of the company policy to be attested.</p> <ul style="list-style-type: none"> <li>Attestors must be assigned to the <b>Identity &amp; Access Governance   Company policies   Attestors</b> application role.</li> </ul> <p>For more information, see <a href="#">Finding attestors using attestation objects</a> on page 63.</p>
CD - Calculated approval	<p>-</p> <p>For more information, see <a href="#">Calculated approval</a> on page 70.</p>
CM - Recipient's manager	<p>Manager of the employee to be attested.</p> <p>For more information, see <a href="#">Finding attestors from attestation object managers</a> on page 65.</p>
DM - Manager of recipient's department	<p>Department manager/deputy if employees of secondary memberships are attested in departments.</p> <p>For more information, see <a href="#">Finding attestors from attestation object managers</a> on page 65.</p>
ED - Department	<p>Employee's department manager whose system entitlements are</p>

<b>Procedure Name</b>	<b>Attestors</b>
manager for permission attestation	to be attested. For more information, see <a href="#">Determining attestors from persons responsible for the attestation objects</a> on page 66.
EM - Employee manager for permission attestation	Employee's manager whose system entitlements are to be attested. For more information, see <a href="#">Determining attestors from persons responsible for the attestation objects</a> on page 66.
EN - Target system manager of the permission for attestation	Target system manager of the system entitlements to be attested. For more information, see <a href="#">Determining attestors from persons responsible for the attestation objects</a> on page 66.
EO - Product owner of the system entitlement to be attested	Product owner whose system entitlements or system roles are to be attested. For more information, see <a href="#">Determining attestors from persons responsible for the attestation objects</a> on page 66.
EX - Approvals to be made externally	- For more information, see <a href="#">Approvals to be made externally</a> on page 71.
LM - Manager of recipient's location	Location manager/deputy if employees of secondary memberships are attested in locations. For more information, see <a href="#">Finding attestors from attestation object managers</a> on page 65.
MD - Department manager of account's person	Manager of the main department of the employee who is connected to the user account to be attested For more information, see <a href="#">Determining attestors from persons responsible for the attestation objects</a> on page 66.
MO - Role owner	Business role manager/deputy if employees of secondary memberships are attested in roles. For more information, see <a href="#">Finding attestors from attestation object managers</a> on page 65.
OA - product owner	All members of the assigned application role if service items, system entitlements or system roles are attested. For more information, see <a href="#">Defining product owners as attestors</a> on page 68.
OM - Manager of a specific role	Manager of the role selected in the approval workflow. For more information, see <a href="#">Finding attestors using a specified role</a> on page 68.

<b>Procedure Name</b>	<b>Attestors</b>
OP - Owner of a privileged object	All employees that can be determined as owners of the privileged request. For more information, see <a href="#">Determining owners of a privileged object as attestors</a> on page 69.
OR - Members of a certain role	All employees that are assigned to a secondary business role. For more information, see <a href="#">Finding attestors using a specified role</a> on page 68.
PA - Secondary owner of Active Directory group	All employees to be found through the additional owner of the requested Active Directory group. For more information, see <a href="#">Finding attestors from additional Active Directory group owners</a> on page 69.
PM - Manager of recipient's cost center	Cost center manager/deputy if secondary memberships in cost centers are attested. For more information, see <a href="#">Finding attestors from attestation object managers</a> on page 65.
PO - Proposed owner	Proposed owner of the attestation object For more information, see <a href="#">Determining attestors from owners of the attestation objects</a> on page 69.
RE - Manager of system roles to be attested	System role manager to be attested. For more information, see <a href="#">Finding attestors from attestation object managers</a> on page 65.
RM - Role manager for attesting memberships	Manager of role to be attested if secondary memberships in roles are attested. For more information, see <a href="#">Finding attestors from attestation object managers</a> on page 65.
RR - Role manager for attesting roles	Manager of role to be attested. For more information, see <a href="#">Finding attestors from attestation object managers</a> on page 65.
SO - Target system manager of the permission for attestation	Target system manager of system entitlement or user account to be attested. For more information, see <a href="#">Determining attestors from persons responsible for the attestation objects</a> on page 66.
WC - Waiting for further approval	- For more information, see <a href="#">Waiting for further approval</a> on page 72.

## Finding attestors using the attestation policy

Use the AS approval procedure if you want to fix attestors for any object to an attestation policy. This approval procedure finds all employees that are assigned to the attestation procedure as approvers.

Use this procedure to allow any objects to be attested by any of the specified employees. These employees must be assigned to the attestation policy as approvers. The attestor can also be entered when you create attestation policies in the Web Portal. For detailed information, see *One Identity Manager Web Portal User Guide*.

### Related topics

- [Assigning approvers](#) on page 30

## Finding attestors using the role of the employee to be attested

Installed modules: Business Roles Module (for approval procedure AO).

If you want to attest company resource assignments to employees or their requests, use the AD, AL, AO, or AP approval procedures. The attestors found are members of the **Attestor** application role.

Attestation objects are employees (table: Person) or request recipients (table: PersonWantsOrg). These approval procedures determine the role (department, location, business role, cost center) for each attestation object to which the attestation object is primarily assigned. If the primarily assigned role is not directly assigned an attestor, the approval procedure finds the the attestator's parents roles. If still no attestor can be determined, the attestation case is presented to the attestor of the associated role class for approval.

**NOTE:** When attestors are found using the AO approval procedure and when "bottom-up" inheritance is defined for business roles, note the following:

- If there is no attestor given for the primary business role, attestors are taken from the child business role.

### Related topics

- [Default approval procedures](#) on page 58

## Finding attestors using attestation objects

Use the AR, AY or AT approval procedures if you want to attest the validity of compliance rules, rule violations, company policies, policy violations, or of departments, locations,

cost centers, or business roles. The AT procedure is also suitable for attesting assignments to IT Shop structures (shops, shopping centers or shelves). Use the AA or AN approval procedures to attest system entitlement or system role assignments to departments, locations, cost centers, business roles or IT Shop structures. The attestors found are members of the **Attestor** application role.

	<b>Attestation base objects</b>	<b>Available in Module</b>
AR	Rules (ComplianceRule) Rule violations (PersonInNonCompliance)	Compliance Rules Module
AY	Company policies (QERPolicy) Policy violations (QERPolicyHasObject)	Company Policies Module
AT	Departments (Department) IT Shop Structures (ITShopOrg) Locations (Locality) Business roles (Org) Cost centers (ProfitCenter) IT Shop Templates (ITShopSrc)	
AA, AN	System entitlement or target system group assignments to roles (<BaseTree>HasUNSGroupB, <BaseTree>HasADSGroup, <BaseTree>HasEBSResp, ...) System role assignments to roles (<BaseTree>HasESet)	Target System Base Module

These approval procedures determine the attestors to which the attestation object is assigned. The AA approval procedure finds the attestor using the role (departments, locations, business roles, cost centers) or IT Shop structures (IT Shop templates). The AN approval procedure finds the attestor using the service item assigned to the system entitlement or target system group.

Furthermore, the following also applies to the AT and AA approval procedures: If an attestor is not directly assigned to the attestation object, the approval procedure finds the attestor of the parent roles/IT Shop structures. If still no attestor can be determined, the attestation case is presented to the attestor of the associated role class for approval.

- NOTE:** If the attestation base object is a business role or a business role assignment and bottom-up inheritance is defined for the associated role classes, the following applies:
- If there is no attestor assigned to the attestation object, the approval procedure finds attestors from the attestors of subordinate roles.

## Related topics

- [Default approval procedures](#) on page 58



## Finding attestors from attestation object managers

If you want to have employees, user accounts, roles, system roles, role memberships, assignments of system roles or entitlements for employees, roles or IT Shop structures attested through their managers, use the CM, DM, LM, MO, RM, RR, or RE approval procedures.

Approval procedure	Attestation base objects	Available in Module
CM	Employees (Person) Employees: memberships in roles and organizations (PersonInBaseTree)	
DM	Employees (Person) Employees: department memberships (PersonInDepartment)	
LM	Employees (Person) Employees: location memberships (PersonInLocality)	
MO	Employees (Person) Employees: business role memberships (PersonInOrg)	Business Roles Module
PM	Employees (Person) Employees: cost center memberships (PersonInProfitCenter)	
RE	System roles (ESet) Employees: system role assignments (PersonHasESet) Departments: system role assignments (DepartmentHasESet) Business roles: system role assignments (OrgHasESet) IT Shop structures: system role assignments (ITShopOrgHasESet) IT Shop templates: system role assignments (ITShopSrcOrgHasESet) Cost centers: system role assignments (ProfitCenterHasESet) Locations: system role assignments (LocalityHasESet)	System Roles Module
RM	Employees: department memberships (PersonInDepartment) Employees: IT Shop structure memberships (PersonInITShopOrg) Employees: location memberships (PersonInLocality)	

Approval procedure	Attestation base objects	Available in Module
	Employees: business role memberships (PersonInOrg) Employees: cost center memberships (PersonInProfitCenter)	
RR	Departments (Department) IT Shop Structures (ITShopOrg) Locations (Locality) Business roles (Org) Cost centers (ProfitCenter) IT Shop Templates (ITShopSrc) All system entitlement or system role assignments to roles; for example <b>Roles and organizations: Active Directory group assignments</b> (BaseTreeHasADSGroup) or <b>Locations: EBS entitlement assignments</b> (LocalityHasEBSResp)	

These approval procedures find the manager associated with every attestation object. In the RE approval procedure, the system role manager is determined as attestor; in the RM and RR approval procedures, the role/IT Shop structure manager is determined. The approval procedures CM, DM, LM, MO and PM find the department manager and deputy manager of the role in which the attesting employee is a member.

## Determining attestors from persons responsible for the attestation objects

If you want to attest system entitlements and the user accounts assigned to them, use the ED, EM, EN, EO, or SO approval policies. Use the approval procedures AM, MD or SO to attest user accounts.

Attestation objects are user accounts or system entitlements and the user accounts assigned to them as well as system roles that have system entitlements or system roles assigned to them. The approval procedures determine the following attestors:

Attestation base objects	Attestors	Available in Module
AM User accounts (UNSAccount)	Employee's department manager to whom the user account is connected.	Target System Base Module

	<b>Attestation base objects</b>	<b>Attestors</b>	<b>Available in Module</b>
ED	User accounts: system entitlement assignments (UNSAccountInUNSGroup)	Employee's department manager (and deputy manager) to whom the user account is connected. The primary department assigned in this case.	Target System Base Module
EM	User accounts: system entitlement assignments (UNSAccountInUNSGroup)	Employee's department manager to whom the user account is connected.	Target System Base Module
EN	User accounts: system entitlement assignments (UNSAccountInUNSGroup) System entitlements (UNSGroup)	Target system manager of the target system area to which the system entitlement belongs.	Target System Base Module
EO	System roles: assignments (ESetHasEntitlement)  All user account assignments to system entitlements; for example <b>User accounts: system entitlement assignments</b> (UNSAccountInUNSGroup) or <b>SAP user accounts: assignments to roles</b> (SAPUserInSAPRole)  All system entitlement or system role assignments to roles; for example <b>Roles and organizations: Active Directory group assignments</b> (BaseTreeHasADSGroup) or <b>Locations: EBS entitlement assignments</b> (LocalityHasEBSResp)	Product owner of the service item to which the system entitlement or system role is assigned.	Target System Base Module or System Roles Module
MD	User accounts (UNSAccount)	Employee's department manager (and deputy manager) to whom the user account is connected. The primary department assigned in this case.	Target System Base Module
SO	User accounts: system entitlement assignments (UNSAccountInUNSGroup) User accounts (UNSAccount)	Target system manager for the target system to which the system entitlement or user account	Target System Base Module

Attestation base objects	Attestors	Available in Module
System entitlements: assignments to system entitlements (UNSGroupInUNSGroup)	belongs.	

## Finding attestors using a specified role

If the attestors for any object are specified in a certain role, use the approval procedure OR or OM. You can allow any objects to be attested by employees from any role using these approval procedures. In the approval step, specify the role by means of which the attestors are to be determined. The approval procedures determine the following attestors:

Selectable Roles	Attestors
OM Departments (Department) Cost centers (ProfitCenter) Locations (Locality) Business roles (Org)	Manager and deputy manager of the role specified in the approval step.
OR Departments (Department) Cost centers (ProfitCenter) Locations (Locality) Business roles (Org) Application roles (AERole)	All secondary members of the role specified in the approval step.

## Defining product owners as attestors

Use the approval procedure OA to determine whether product owners can be attestors. The following objects can be attested with this procedure:

- Service items
- System entitlements
- System entitlement assignments to user accounts or system entitlements
- System role assignments to employees

Prerequisites:

- A service item must be assigned to the system entitlements and system roles.
- An application role for product owners must be assigned to the service item.

All employees who are assigned this application role are determined as attestors.

## Determining owners of a privileged object as attestors

Installed modules: Privileged Account Governance Module

Use the approval procedure OP if you want to allow privileged objects in a Privileged Account Management system, for example PAM assets or PAM directory accounts, to be attested by their owners. The owners attest the possible user accord to these privileged objects. The owners of the privileged objects must have the **Privileged Account Governance | Asset and account owners** application role or a child application role.

## Finding attestors from additional Active Directory group owners

Installed modules: Active Roles Module

If the Active Directory group is attested, the attestor can be determined through additional owners of this Active Directory group. Use the PA approval procedure for this purpose. This finds all employees 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 the PA approval procedure if the configuration parameter **TargetSystem | ADS | ARS\_SSM** is enabled. The column **Additional owners** is only available in this case.

## Determining attestors from owners of the attestation objects

When you assign new owners to devices or system entitlements in the Web Portal, the new owner should agree with this assignment. An attestation with the approval procedure PO is carried out for this purpose.

## Calculated approval

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

If you want to make attestation dependent on specific conditions, use the CD approval procedure. This procedure does not determine an attestor. One Identity Manager makes the decision depending on the condition that is formulated in the approval step.

You can use the procedure for any attestation base objects. You create a condition in the approval step. If the condition returns a result, the approval step is approved through the One Identity Manager. If the condition does not return a result, the approval step is denied by the One Identity Manager. If there are no further approval steps, the approval procedure is either finally granted or denied.

### **To enter a condition for the CD approval procedure**

1. Edit the approval step properties.  
For more information, see [Editing approval levels](#) on page 50.
2. In the **Condition** input field, enter a valid WHERE clause for database queries. You can enter the SQL query directly or with a wizard. In the condition, you reference the actual attestation case using the variable @UID\_AttestationCase.

### **Example of a simple approval workflow with the CD approval procedure:**

External employees should be attestation by their managers. If no manager is assigned, the members of a designated application role must attest the employees.

You can find all external employees, who have managers assigned to them by using the approval procedure CD and the following condition.

EXISTS

```
(SELECT 1 FROM
    (SELECT xobjectkey FROM Person WHERE (IsExternal = 1)
    AND (EXISTS
    (SELECT 1 FROM
        (SELECT UID_Person FROM Person WHERE 1 = 1) as X
        WHERE X.UID_Person = Person.UID_PersonHead) )) as X
WHERE X.xobjectkey = AttestationCase.ObjectKeyBase)
```

If the condition is fulfilled, the external employee's manager can attest the employee. To do this, add an approval step in the positive approval path with the CM approval procedure.

If the condition is not fulfilled, the employee is attested by the member of a designated application role. To do this, add an approval step in the negative approval path with the OR approval procedure and assign the application role.

## Approvals to be made externally

Use external approvals (approval procedure EX) if an attestation needs to be approved as soon as a defined event from outside One Identity Manager takes place. You can also use this procedure to allow any number of objects to be attested by employees who do not have access to One Identity Manager.

Specify an event in the approval step that triggers an external approval. The event triggers a process that initiates the external approval for the attestation case 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:
  - Trigger an external approval
  - Analyze the results of the external approval
  - Grant or deny approval in the subsequent external approval step in One Identity Manager
2. Define an event, which 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 has to be changed. Use the process task `CallMethod` with the `MakeDecision` method for this. Pass the following parameters to the process task:

MethodName: Value = "MakeDecision"

ObjectType: Value = "AttestationCase"

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\_AttestationCase = '& \$UID\_AttestationCase\$ &'"

Use these parameters to specify which attestation case is to be approved by external approval (WhereClause). Parameter Param1 specifies the attestor. Attestor is always the **sa** system user. Parameter Param2 is passed to approval. If the attestation was granted, the value **True** must be transferred. If the attestation was denied, the value **False** must be transferred. Use parameter Param3 to pass a reason text from 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 compliance rules should be checked and attested by an external assessor. The attestation object data should be made available as a PDF on an external share. The assessor should save the result of the attestation in a text file on the external share. Use this approval procedure to make external approvals and define:

- A "P1" process that saves a PDF report with data about the attestation object data and the attestation procedure on an external share
- An "E1" event that starts the "P1" process

In the approval step, enter "E1" in the **Event** field, and enter P1 in the process as the trigger for the external decision.

- A process "P2" process that checks the share for new text files, evaluates the content, and calls the One Identity Manager `CallMethod` task the method `MakeDecision` method
- An "E2" event that starts the "P2" process
- A schedule that starts the events "E2" on a regular basis

For detailed information about creating processes, see the *One Identity Manager Configuration Guide*. For detailed information about setting up schedules, see the *One Identity Manager Operational Guide*.

## Detailed information about this topic

- [Properties of an approval step](#) on page 51

## Waiting for further approval

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

If you want to ensure that a specific data state exists in One Identity Manager before an attestation case is finally approved, then use the WC approval procedure. Use a condition to specify which prerequisites have to be fulfilled so that attestation can take place. The condition is evaluated as a function call, which must accept the attestation case UID as a parameter (`AttestationCase.UID_AttestationCase`). You use this UID to reference the attestation object. The function must define three return values as integer values. One of the following actions is carried out depending on the function's return value:

**Table 24: 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.



<b>Return value</b>	<b>Action</b>
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 attestation.
2. Create an approval step with the approval procedure WC. Enter the function call in **Condition**.  
Syntax: `dbo.<function name>`
3. Specify an approval step in the case of success. Use the approval procedure with which One Identity Manager can determine the attestors.
4. Specify an approval step in the case of failure.

## **Setting up approval procedures**

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

### ***To set up an approval procedure***

1. In Manager, select the category **Attestation | Basic configuration data | Approval procedures**.
2. Select an approval procedure in the result list and run **Change master data**.  
- OR -  
Click  in the result list.
3. Edit the approval procedure master data.
4. Save the changes.

### ***To edit the condition***

1. In Manager, select the category **Attestation | Basic configuration data | Approval procedures**.
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 74
- [Queries for finding attestors](#) on page 74

## General master data for an approval procedure

Enter the following master data for an approval procedure.

**Table 25: 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 attestors.
Max. number approvers	Maximum number of attestors 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 51

## Queries for finding attestors

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

### **To edit the condition**

1. In Manager, select the category **Attestation | Basic configuration data | Approval procedures**.
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 26: Query properties**

<b>Property</b>	<b>Description</b>
Approver selection	Query identifier which determines the attestors
Query	<p>Database query for determining the attestors</p> <p>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 attestation case is presented for approval. If the query fails to return a result, the attestation procedure is aborted.</p> <p>A query contains exactly one select statement. To combine several select statements, create several queries.</p> <p>If a DBQueue Processor task is assigned, you cannot enter a query to determine attestors.</p>

You can, for example, determine predefined attestors with the query (example 1). The attestor can also be found dynamically depending on the attestation case to approve. To do

this, within the database query, use the @UID\_AttestationCase variable to access the attestation case (example 2).

### Example 1

The attestation cases should be approved by a specific attestor.

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

### Example 2

All active compliance rules should be attested by the respective rule supervisor.

```
Query: select pia.UID_Person, null as UID_PWORulerOrigin from AttestationCase ac
       join ComplianceRule cr on cr.XObjectKey = ac.ObjectKeyBase and
       cr.IsWorkingCopy = '0'
       join PersonInBaseTree pia on pia.UID_Org = cr.UID_OrgResponsible and
       pia.XOrigin > 0
       where ac.UID_AttestationCase = @UID_AttestationCase
```

## Taking delegation into account

To include delegation when determining attestors, 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 attestation decision, determine the attestors 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 an attestation case and thus allow the Web Portal to show if the attestor 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 table function dbo.QER\_FGIPWORulerOrigin to do this.

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

Modified query from example 2:

```
select pia.UID_Person, dbo.QER_FGIPWORulerOrigin(pia.XObjectKey) as UID_
PWORulerOrigin from AttestationCase ac
       join ComplianceRule cr on cr.XObjectKey = ac.ObjectKeyBase and
```

```
cr.IsWorkingCopy = '0'  
join PersonInBaseTree pia on pia.UID_Org = cr.UID_OrgResponsible and  
pia.XOrigin > 0  
where ac.UID_AttestationCase = @UID_AttestationCase
```

## Additional tasks for approval procedures

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

### Overview of the approval procedure

#### *To obtain an overview of an approval procedure*

1. In Manager, select the category **Attestation | Basic configuration data | Approval procedures**.
2. Select an approval procedure from the result list.
3. Select **Approval procedure overview** in the task view.

### Specifying permitted approval procedures for tables

You can only assign selected approval policies to attestation procedures. The approval policies permitted depend on the approval procedures applied in the approval policies and on the table that forms the attestation base object for an attestation procedure. You must specify which tables are permitted for use with custom approval procedures.


#### *To specify the tables that permit this approval procedure*

1. In Manager, select the category **Attestation | Basic configuration data | Approval procedures**.
2. Select an approval procedure from the result list.
3. Select the **Assign tables** task.

In **Add assignments**, assign the tables to which the approval procedure can be assigned.

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

#### *To remove an assignment*

- Select the table and double-click .
4. Save the changes.

You can see which tables allow an approval procedure on the approval procedure overview form.

## Related topics

- [Assigning Approval Policies](#) on page 16
- [Overview of the approval procedure](#) on page 77

## Copying an approval procedure


For example, you can copy default approval procedures in order to customize them.

### *To copy an approval procedure*

1. In Manager, select the category **Attestation | Basic configuration data | Approval procedures**.
2. Select an approval procedure in the result list. Select **Change master data**.
3. Select **Create copy** in the task view.
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. Check on the approval procedure overview form 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 Manager, select **Attestation | Basic configuration data | Approval procedures**.
3. Select an approval procedure from the result list.
4. Click .
5. Confirm the security prompt with **Yes**.

## Related topics

- [Overview of the approval procedure](#) on page 77

# Determining the responsible attestors

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

- 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, attestation policy approver 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 employee to be attested.
- An employee authorized as an approver is deactivated.

Once an employee's responsibilities have changed in One Identity Manager, a task for recalculating the attestors is queued in the DBQueue. All approval steps of the pending attestation cases are also recalculated by default. Approval steps that have already been approved remain approved, even if their attestor has changed. Recalculating attestors 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 attestors are to be recalculated.

### *To configure recalculation of the attestors*

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

**Table 27: Options for recalculating attestors**

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

Option	Description
	<p>are recalculated. Once an approval level has been approved, the attestors are determined for the next approval level.</p> <p>Advantage: The number of approval levels to calculate is lower. Calculating the attestors may be faster.</p> <p><b>TIP:</b> Use this option if performance problems occur in your environment in connection with the recalculation of attestors.</p> <p>Disadvantage: The originally calculated attestors 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.</p>
NoRecalc	<p>No recalculation of attestors. The previous attestors remain authorized to approve the current approval level. Once an approval level has been approved, the attestors are determined for the next approval level.</p> <p>Advantage: The number of approval levels to calculate is lower. Calculating the attestors may be faster.</p> <p><b>TIP:</b> Use this option if performance problems occur in your environment in connection with the recalculation of attestors, even though the <b>CurrentLevel</b> option is used..</p> <p>Disadvantage: The originally calculated attestors 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.</p> <p>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.</p>

**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 attestation, assign members to the chief approval team. These members can access pending attestation cases at any time.

**Detailed information about this topic**

- [Properties of an approval step](#) on page 51
- [Chief approval team](#) on page 23



## Related topics

- [Modifying approval workflows for pending attestation cases](#) on page 96

# Setting up multi-factor authentication for attestation

You can set up additional authentication for particularly security critical attestations, which requires every attestor to enter a security code for attesting. Define which attestation policies require this authentication in your attestation policies.

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

### **To be able to use multi-factor authentication**

1. Set up multi-factor authentication as described in the *One Identity Manager Authorization and Authentication Guide*.
2. In Manager, select the attestation policies for which the multi-factor authentication will be used.
3. Enable the **Approval by multi-factor authentication** option.

Multi-factor authentication cannot be used for default attestation policies.

Once the **Approval by multi-factor authentication** option is set on an attestation policy, a security code is requested in each approval step of the approval process. This means that every employee who is determined to be an attestor for this attestation policy, must have a Starling 2FA token.

**IMPORTANT:** An attestation cannot be sent by email if multi-factor authentication is configured for the attestation policy. Attestation emails for such attestations produce an error message.

For detailed information about multi-factor authentication, see the *One Identity Manager Web Portal User Guide*.

## Related topics

- [General master data for attestation policies](#) on page 26
- [Attestation by mail](#) on page 110

# Prevent attestation by employee awaiting attestation

The attestation object can also be determined as the attestor in an attestation case. which means the employees to be attested can attest themselves. To prevent this, set the configuration parameter **QER | Attestation | PersonToAttestNoDecide**.

## **i** NOTE:

- Changing the configuration parameter only affects new attestation cases. Attestors are not recalculated for existing attestation cases.
- The configuration parameter setting also applies for fallback approvers; it does not apply to the chief approval team.
- If the **Approval by affected employee** option is set on an approval step, this configuration parameter has no effect.

### ***To prevent employees from attesting themselves***

- In Designer, set the **QER | Attestation | PersonToAttestNoDecide** configuration parameter.

This configuration parameter affects all attestation cases in which employees included in the attestation object or in object relations, are attestors at the same time. the following employees are removed from the group of attestors.

- Employees included in `AttestationCase.ObjectKeyBase`
- Employees included in `AttestationCase.UID_ObjectKey1`, `ObjectKey2` or `ObjectKey3`
- Employees' main identities
- All subidentities of these main identities

If the configuration parameter is not set or if **Approval by affected employee** is enabled for the approval step, these employees can attest themselves.

### **Related topics**

[Properties of an approval step](#) on page 51

## Managing attestation cases

During attestation, you may find it necessary to assign someone else as default attestor responsible for the attestation because, for example, the actual attestor is absent. You may require additional information about an attestation object. The One Identity Manager offers different possibilities to intervene in an open attestation case.

## Getting more information

An attestor has the option to gather more information about an attestation case. This ability does not, however, replace the granting or denying approval of an attestation case. There is no additional approval step required in the approval workflow to obtain the information.

Attestors can request information from any employee. The attestation case is put on hold while the query is pending. Once the employee requested has supplied the required information and the attestors have made a decision on the approval step, hold status is revoked. Attestors can recall a pending query at any time. The request is taken off hold. The query and answer are logged in the approval sequence and made available to the attestors.

**NOTE:** Hold status is revoked if the attestor who asked a question is removed as an approver. The queried employee must not answer. Attestation process will proceed.

Email notification to the employees involved can be sent using unanswered inquiries.

For detailed information about queries, see the *One Identity Manager Web Portal User Guide*

### Detailed information about this topic

- Email notification: [Notifications with questions](#) on page 108

## Appointing other attestors

Once an approval level in the approval workflow has been reached, the attestors at this level can appoint another employee to handle the approval. To do this, you have the options described below.

- Rerouting approvals

The attestor appoints another approval level to carry out attestations. 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 attestors

The attestor appoints another employee to carry out the attestation. The other attestor must make an approval decision in addition to the known attestors. To do this, enable the option **Additional approver possible** in the approval step.

The additional attestor can reject the approval and return the attestation case to the original attestor. The original attestor is informed about this by email. The original attestor can appoint another additional attestor.

- Delegate approval

The attestor appoints another employee with the attestation. This employee is added to the current approval step as the attestor. This employee then makes the approval

decision instead of the attester who made the delegation. To do this, enable the option **Approval can be delegated** in the approval step.

The current attester can reject the approval and return the attestation case to the original attester. The original attester can withdraw the delegation and delegate a different employee, for example, if the other attester is not available.

Email notifications can be sent to the original attestors and the others.

### Detailed information about this topic

- [Connecting approval levels](#) on page 55
- [Editing approval levels](#) on page 50
- [Properties of an approval step](#) on page 51

### Related topics

- Email notification: [Delegating attestations](#) on page 107
- Email notification: [Rejecting approvals](#) on page 107
- Email notification: [Notifications from additional attestors](#) on page 108

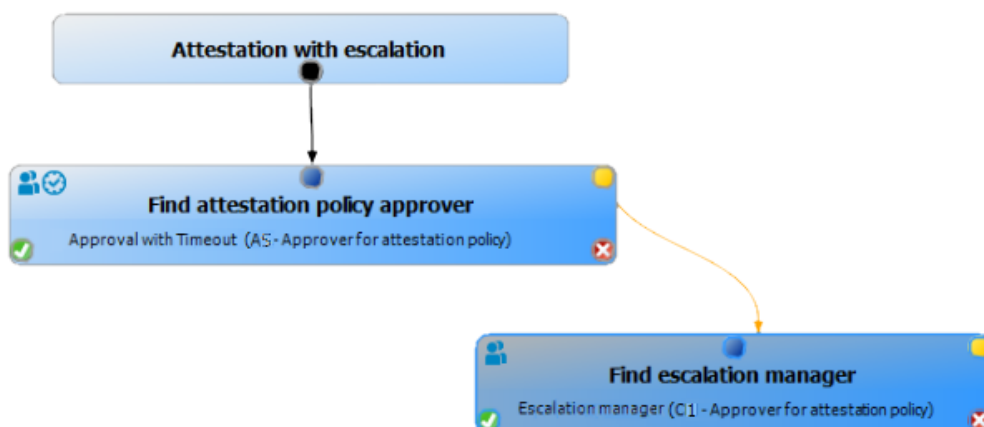
## Escalating an attestation case

Approval steps can be automatically escalated once the specified timeout is exceeded. The attestation case is presented again to another approval body. The attestation case can subsequently be processed again 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 3: Example of an Approval Workflow with Escalation**



4. Configure the behavior for the approval step to be escalated when it times out.

**Table 28: Properties for escalation on timeout**

Property	Meaning
TimeOut (working hours)	<p>Number of working hours to elapse after which the approval step is automatically granted or denied approval.</p> <p>The timeout is check every 30 minutes, by default. To change this interval, modify the <b>Checks reminder interval and timeout of attestation cases</b> schedule.</p> <p>The working hours of the respective approver are taken into account when the time is calculated.</p> <p><b>NOTE:</b> Ensure that a state and/or county 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 employees' calculating working hours, see the <i>One Identity Manager Identity Management Base Module Administration Guide</i>.</p> <p>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.</p> <p>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.</p> <p>If an approver is queried, the approval decision must be made within</p>

Property	Meaning
	the defined timeout anyway. The time point for automatic approval is not recalculated.
Timeout behavior	Action, which is executed if the timeout expires. <ul style="list-style-type: none"> <li>• <b>Escalation:</b> The attestation case is escalated. The escalation approval level is called.</li> </ul>

In the event of an escalation, email notifications can be sent to the new approvers and other employees.

### Related topics

- Email notification: [Demanding attestation](#)
- Email notification: [Escalation of attestation cases](#) on page 106

## Attestors cannot be established



You can specify a fallback approver if attestation cases cannot be approved because no attestors are available. An attestation case is then always assigned to the fallback approver for attestation if no attestor 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 attestation 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 29: Approval step properties for fallback approvers**

Property	Meaning
Fallback approver	<p>Application role whose members are authorized to approve attestation cases if an attestor cannot be determined through the approval procedure. Assign an application from the menu.</p> <p>To create a new application role, click . Enter the application role name and assign a parent application role. For detailed information, see the <i>One Identity Manager Authorization and Authentication Guide</i>.</p> <p> <b>NOTE:</b> 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.</p>

## Attestation sequence with fallback approvers

1. No attestor can be found for an approval step in an approval process. The attestation is assigned to all members of the fallback approver application role.
2. Once a fallback approver has approved an attestation case, it is presented to the attestors at the next approval level.

 **NOTE:** You can specify in the approval step how many attestors are required for approval in this 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 attestation.

3. The attestation case is aborted if no fallback approver can be found.

Fallback approvers can make approval decisions on attestation cases for all manual approval steps. Fallback approvals are not permitted for approval steps using the CD, EX and WC approval procedures.

## Related topics

- [Editing approval levels](#) on page 50
- [Selecting attestors](#) on page 57
- [Attestation through chief approval team](#) on page 90

# Automatic approval on timeout

Attestation cases can be automatically granted or denied approval once a specified time period has been exceeded.

## To configure automatic approval if the timeout expires

- Enter the following data for the approval step.

**Table 30: Properties for automatic approval on timeout**

Property	Meaning
TimeOut (working hours)	<p>Number of working hours to elapse after which the approval step is automatically granted or denied approval.</p> <p>The timeout is check every 30 minutes, by default. To change this interval, modify the <b>Checks reminder interval and timeout of attestation cases</b> schedule.</p> <p>The working hours of the respective approver are taken into account when the time is calculated.</p> <p><b>NOTE:</b> Ensure that a state and/or county 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 employees' calculating working hours, see the <i>One Identity Manager Identity Management Base Module Administration Guide</i>.</p> <p>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.</p> <p>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.</p> <p>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.</p>
Timeout behavior	<p>Action, which is executed if the timeout expires.</p> <ul style="list-style-type: none"><li>• <b>Approved:</b> The attestation case is approved in this approval step. The next approval level is called.</li><li>• <b>Deny:</b> The attestation case is denied in this approval step. The approval level for denying is called.</li></ul>

When the approval decision for an attestation case is made automatically, other people can be notified by email.

## Related topics

- Email notification: [Granting or denying attestation cases](#) on page 103
- [Editing approval levels](#) on page 50



# Aborting an attestation case on timeout

Attestation cases 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 31: Properties of the approval step for abort on timeout**

Property	Meaning
TimeOut (working hours)	<p>Number of working hours to elapse after which the approval step is automatically granted or denied approval.</p> <p>The timeout is check every 30 minutes, by default. To change this interval, modify the <b>Checks reminder interval and timeout of attestation cases</b> schedule.</p> <p>The working hours of the respective approver are taken into account when the time is calculated.</p> <p><b>i</b> <b>NOTE:</b> Ensure that a state and/or county 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 employees' calculating working hours, see the <i>One Identity Manager Identity Management Base Module Administration Guide</i>.</p> <p>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.</p> <p>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.</p> <p>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.</p>
Timeout behavior	<p>Action, which is executed if the timeout expires.</p> <ul style="list-style-type: none"><li>• <b>Abort:</b> the approval step and, therefore, the attestation case, are canceled.</li></ul>

### To configure abort on timeout for the entire approval process

- Enter the following data for the approval workflow.

**Table 32: 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 attestation procedure.

When an attestation case is aborted, other people can be notified by email.

### Related topics

- Email notification: [Aborting attestation cases](#)
- [Editing approval levels](#) on page 50
- [Setting up approval workflows](#) on page 49

## Attestation through chief approval team

Sometimes, approval decisions cannot be made for attestation cases because an attestor is not available or does not have access to One Identity Manager tools. To complete these attestations, 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 attestations in special cases or to appoint other attestors.

#### **IMPORTANT:**

- The four-eye principle can be broken like this because chief approval team members can make approval decisions for attestation cases 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 is authorized to attest its own members. The configuration parameter setting **QER | Attestation | PersonToAttestNoDecide** does not apply to the chief approval team.
- In the approval step, you can specify how many attestors 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 attestation.

The chief approval team can approve attestations for all manual approval steps. Following applies:

- Chief approval team decisions are not permitted for approval steps using the CD, EX and WC approval procedures.
- If a member of the chief approval team is also named as a regular attestor for an approval step, he or she can only make an approval decision for this step as a regular attestor.
- The chief approval team can also make an approval decision if a regular attestor has submitted a query and the attestation is in hold status.

### **To add members to the chief approval team**

1. In Manager, select the category **Attestation | Basic configuration data | Chief approval team**.
2. Select **Assign employees** in the task view.

In **Add assignments**, assign the employees who are authorized to approve all attestations.

**TIP:** In the **Remove assignments** area, 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 23

## Attestation sequence

Once attestation is automatically or manually started, One Identity Manager creates an attestation case for each attestation object. Attestation cases record the entire attestation sequence. Each attestation step in the attestation case can be audit-proof reconstructed.

You can view the attestation cases in the navigation view under the **Attestation runs | <attestation policy>** menu item. This is where you can monitor the status of the attestation cases. Attestation cases that were not yet subject to approval are grouped under **Pending attestations**. You can see the attestation cases that have been closed by attestors or One Identity Manager grouped under **Completed attestations**.

**NOTE:** Attestation cases are edited in the Web Portal. For detailed information, see *One Identity Manager Web Portal User Guide*.

Attestation is complete when the attestation case has been granted or denied approval. You specify how to deal with granted or denied attestations on a company basis.

**TIP:** One Identity Manager provides various default attestation procedures for different data situations and default attestation procedures. If you use these default attestation procedures, you can configure how you deal with denied attestations.

For more information, see [Default attestation and withdrawal of entitlements](#) on page 114.

## Starting attestation

There are two ways for you to add attestation cases in the One Identity Manager. You can trigger attestation through a scheduled task or start selected objects individually.

### **Prerequisite**

- The attestation policy for this attestation is set.

### **To start attestation using a scheduled task**

1. In the Manager, select **Attestation | Attestation policies**.
2. Select the attestation policy in the result list and run **Change master data**.

3. Enable the schedule entered in **Calculation schedule**.
  - a. In the navigation view, select **Basic configuration data | Schedules**.
  - b. Select the schedule in the result list and run **Change master data**.
  - c. Set **Enabled**.
  - d. Save the changes.

### **To start attestation for the selected objects**

1. In the Manager, select **Attestation | Attestation policies**.
2. Select the attestation policy in the result list. Select **Change master data**.
3. Select **Run attestation cases for single objects...**  
This opens a separate window.
4. In the **Attestation** column, select every object for which attestation is to be run.
5. Click **Run**.

Attestation cases are generated for the selected attestation objects. As soon as DBQueue Processor has processed the task, you will see the newly created attestation cases in the navigation view under **Attestation runs | <attestation policy> | Attestation runs | <year> | <month> | <day> | Pending attestations**.

6. Click **Close**.

**i** **NOTE:** Under certain circumstances, old, closed attestation cases are deleted from the One Identity Manager database when new attestation cases are added.

For more detailed information about configuring schedules, see the *One Identity Manager Operational Guide*.

### **Detailed information about this topic**

- [General master data for attestation policies](#) on page 26
- [Schedules](#) on page 17

### **Related topics**

- [Running attestation for single objects](#) on page 32
- [Determining the responsible attestors](#) on page 79
- [Deleting attestation cases](#) on page 98

## **Additional tasks for attestation cases**

Once you have started attestation for an attestation policy, you can monitor the attestation case in One Identity Manager. The task view contains different forms with which you can

run the following tasks.

## Attestation case overview

The overview form supplies you with the most important information about an attestation case. Here you can see the time by which an attestation case will be processed, depending on the processing time. One Identity Manager does not stipulate which actions are carried out if processing times out. Define your own custom actions or evaluations to deal with this situation.

### **To obtain an overview of an attestation case**

1. In Manager, select the category **Attestation | Attestation runs | <attestation policy> | Attestation runs | <year> | <month> | <day>**.
2. Select **Pending attestations** or **Completed attestations**.
3. Select an attestation case from the result list.
4. Select **Attestation case overview**.

## Approval sequence

For pending attestation cases, see the current status of the approval process. The approval sequence is shown as soon as the DBQueue Processor has determined the attestors for the first approval step. In the approval workflow, you can view the approval sequence, the results of each approval step, and the attestors found. If the approval procedure could not find an attestor, the attestation case is canceled by the system.

### **To display the approval sequence of a pending attestation case**

1. In Manager, select **Attestation | Attestation runs | <attestation policy> | Attestation runs | <year> | <month> | <day> | Pending attestations**.
2. Select an attestation case from the result list.
3. Select **Approval sequence**.

Each approval level of an approval workflow is represented by a special control. The attestors responsible for a particular approval step are shown in a tooltip. Pending attestation questions are also shown in tooltips. These elements are colored. The color code reflects the current status of the approval level.

**Table 33: Meaning of the colors in an approval sequence (in order of decreasing importance)**

<b>Color</b>	<b>Meaning</b>
Blue	This approval level is currently being processed.

Color	Meaning
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.

## Attestation history

The attestation history displays each step of an attestation case. Here you can follow all the approvals in the approval process in a chronological sequence. The attestation history is displayed for pending and closed attestations.

### *To display an attestation case in the attestation history*

1. In Manager, select the category **Attestation | Attestation runs | <attestation policy> | Attestation runs | <year> | <month> | <day>**.
2. Select **Pending attestations** or **Completed attestations**.
3. Select an attestation case from the result list.
4. Select the **Attestation history** report.

These elements are colored. The color code reflects the status of the approval steps.

**Table 34: Meaning of colors in the attestation history**

Color	Meaning
Yellow	Attestation case set up.
Green	Attestor has approved.
Red	Attestor has denied. Attestation has been escalated. Approver has recalled the approval decision
Gray	Attestation has been aborted. Case has been assigned to an extra attestor. Additional attestor has withdrawn approval decision. Approval has been delegated New attestor has withdrawn the delegation.
Orange	Attestor has a question. The query has been answered

Color	Meaning
	Query was aborted due to change of approver
Blue	Approver has rerouted approval The approval step was reset automatically.

## Modifying approval workflows for pending attestation cases

When approval workflows are changed, a decision must be made as to whether these changes should be applied to pending attestation cases. Configuration parameters are used to define the desired procedure.

### Scenario: Another approval workflow was stored with the approval policy

The newly stored workflow is only used in new requests. If changes have been made to the approval 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 attestation cases. You can configure different behavior.

#### To specify how to handle pending attestation cases

- In Designer, enable the configuration parameter **QER | Attestation | OnWorkflowAssign** 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 attestation cases.  
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. The attestation cases are run through the approval process again.
  - **ABORT:** Ongoing approval processes are aborted. All pending attestation cases are closed. The next automatic or manual start of the attestation uses the new approval workflow.

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.

### 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 attestation cases, any pending approval processes are continued by default with the



original workflow. The changes to the approval workflow are only implemented for new attestation cases. You can configure different behavior.

### **To specify how to handle pending attestation cases**

- In Designer, enable the configuration parameter **QER | Attestation | OnWorkflowUpdate** 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 attestation cases.  
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. The attestation cases are run through the approval process again.
  - **ABORT**: Ongoing approval processes are aborted. All pending attestation cases are closed. The next automatic or manual start of the attestation uses the changed approval workflow.

A working copy of the approval workflow is saved, which contains the original version. 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 attestors](#) on page 79

## **Closing attestation cases for deactivated employees**

Pending attestation cases must still be processed even if they have permanently deactivated in the meantime. This is not required very often because the affected employee may have, for example, left the company. In this case, you can use the option to close an employee's pending attestation cases automatically, if the employee is permanently disabled.

### **To close attestation cases automatically**

- In Designer, set the configuration parameter **QER | Attestation | AutoCloseInactivePerson**.

The configuration parameter only applies if the employee to be attested is deactivated after the attestation case was created.

The configuration parameter does not apply if the employee is temporarily deactivated.

- TIP:** Write a corresponding condition for finding the attestation object on the attestation policies to prevent attestation cases being created for deactivated employees. For more information, see [General master data for attestation policies](#) on page 26.

## Deleting attestation cases

The AttestationCase table expands very quickly when attestation is performed regularly. To limit the number of attestation cases in the One Identity Manager database, you can delete obsolete, closed attestation cases from the database. The attestation case properties are logged and then the attestation cases are deleted. The same number of attestation cases remain in the database as are specified in the attestation policy. For more detailed information about logging data changes tags, see the One Identity Manager Configuration Guide.

- NOTE:** Ensure that the logged request procedures are archived for audit reasons. For more detailed information about the archiving process, see the One Identity Manager Data Archiving Administration Guide.

### Prerequisites

- The **Common | ProcessState | PropertyLog** configuration parameter is enabled.
- The attestation policy is enabled.

### To delete attestation cases automatically

1. Set the Log changes when deleting option on at least three columns in the **AttestationCase** table.
  - a. In Designer, select **Database schema | Tables | AttestationCase**.
  - b. Select **Show table definition** in the task view.  
Opens the Schema Editor.
  - c. Select a column in the Schema Editor.
  - d. In the edit view of the schema editor, select the **More** tab.
  - e. Set the option **Log changes when deleting**.
  - f. Repeat steps (c) to (e) for all columns that are to be recorded on deletion. There must be at least three.
  - g. Click on **Commit to database** and save the changes.  
The changes take effect as soon as the DBQueue Processor has performed the calculation tasks.
2. Set the Log changes when deleting option on at least three columns in the **AttestationHistory** table.

- a. In Designer, select **Database schema | Tables | AttestationHistory**.
  - b. Repeat the steps 1(b) to 1(h) for the AttestationHistory table.
3. Enter the number of obsolete cases in the attestation policies.
- a. In the Manager, select **Attestation | Attestation policies**.
  - b. Select the attestation policy in the result list whose attestation cases should be deleted.
  - c. Select **Change master data**.
  - d. In the **Obsolete tasks limit** field, enter a value **greater than 0**.
  - e. Save the changes.

**TIP:** If you want to prevent attestation cases being deleted for certain attestation policies, enter the value **0** for the obsolete task limit for these attestation policies.

Attestation cases are deleted once

- A new attestation is started for an attestation policy.  
- OR -
- An attestation policy is disabled.

One Identity Manager tests how many closed attestation cases exists in the database for each attestation object of this attestation policy. If the number is more than the number of obsolete attestation cases:

- The attestation case properties and their approval sequence are recorded  
All columns are recorded, which are marked for logging on deletion.
- The attestation cases are deleted  
The same number of attestation cases remain in the database as are specified in the obsolete tasks limit.

**NOTE:** Closed attestation cases are also deleted in the case of disabled attestation policies if the configuration parameter **Common | ProcessState | PropertyLog** is not set. In this case, the deleted attestation cases are not logged.

## Related topics

- [General master data for attestation policies](#) on page 26

# Notifications in the attestation process

In an attestation process, various email notifications can be sent to attestors and other employees. 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. Enable the **QER | Attestation | DefaultSenderAddress** configuration parameter in Designer 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 35

## **Demanding attestation**

When a new attestation case is made, the attestor is notified by mail. Demands for attestation can be configured separately for each approval step.

### **Prerequisite**

- The configuration parameter **QER | Attestation | MailTemplateIdents | RequestApproverByCollection** is disabled.

### **To set up the notification procedure**

- On the **Mail templates** tab of the approval step, enter the following data:

**Mail template request:** Attestation - approval required

**TIP:** To allow approval by email, select the **Attestation - approval required (by email)** mail template.

**NOTE:** You can schedule demands for attestation to send a general notification if there are attestations pending. This replaces single demands for attestation at each approval step.

## Related topics

- Email notification: [Scheduling attestation demands](#) on page 103
- [Attestation by mail](#) on page 110
- [Editing approval steps](#) on page 51

## Reminding attestors

If an attestor has not made a decision by the time the reminder timeout expires, notification can be sent by email as a reminder. The attestors work time applies to the time calculation.

### **Prerequisite**

- The configuration parameter **QER | Attestation | MailTemplateIdents | RequestApproverByCollection** is disabled.

## To set up the notification procedure

- Enter the following data for the approval step.

**Table 35: Properties of the approval step for notification**

Property	Meaning
Reminder interval (hours)	<p>Number of working hours to elapse after which the attestor is notified by mail that there are still pending attestation cases for attestation.</p> <p>The reminder interval is set to 30 minutes, by default. To change this interval, modify the <b>Checks reminder interval and timeout of attestation cases</b> schedule.</p> <p><b>i</b> <b>NOTE:</b> Ensure that a state and/or county 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 employees' calculating working hours, see the <i>One Identity Manager Identity Management Base Module Administration Guide</i>.</p> <p>If more than one attestor was found, each attestor will be notified. The same applies if an additional attestor has been assigned.</p> <p>If an attestor delegated the approval, the time point for reminding the delegation recipient is recalculated. The delegation recipient and all the other attestors are notified. The original attestor is not notified.</p> <p>If an attestor 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.</p>
Mail template reminder	<p>Select the <b>Attestation - Remind approver</b> mail template.</p> <p><b>i</b> <b>TIP:</b> To allow approval by email, select the <b>Attestation - remind approver (by email)</b> mail template.</p>

- i** **NOTE:** You can schedule demands for attestation to send a general notification if there are attestations pending. This replaces single demands for attestation at each approval step.

## Related topics

- Email notification: [Scheduling attestation demands](#) on page 103
- [Attestation by mail](#) on page 110
- [Editing approval steps](#) on page 51

# Scheduling attestation demands

Attestors can be regularly notified of attestation cases that are pending. These regular notifications replace the individual prompts and attestation reminders that are configured in the approval step.

## *To send regular notifications about pending attestations*

1. Enable the **QER | Attestation | MailTemplateIds | RequestApproverByCollection** configuration parameter in Designer.

By default, a notification is sent with the **Attestation - 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 Designer, configure and enable the **Inform approver about pending attestations** schedule.

For detailed information, see *One Identity Manager Operational Guide*.

# Reminding attestors about attestation objects

The hierarchical role manager and those responsible for system entitlements or system roles can view all pending attestation cases for this object in the Web Portal. If necessary, they can send reminders to attestors of selected attestation objects.

## *To send notification about a specific attestation object*

- In Designer, set the configuration parameter **QER | Attestation | MailTemplateIds | RemindApproverByObject**.

By default, notification is sent using the **Attestation - remind approver of all open object attestations** template.

**TIP:** To use something other than the default mail template for these notifications, change the value of the configuration parameter.

To send notifications use the Web Portal. For detailed information, see *One Identity Manager Web Portal User Guide*.

# Granting or denying attestation cases

When an attestation case is granted approval or denied it, other employees receive notification. Notification may occur after approval or denial of a single approval step or

once the entire approval process is complete. You can specify the recipient of the notification as required by the company.

Attestation cases can be automatically granted or denied approval once a specified time period has been exceeded. Notification is sent in the same way in this case.

### **To set up the notification procedure**

1. Create custom mail templates for sending notification if attestation cases have been granted or denied approval.
2. Create company specific processes for notifications.
3. 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.

**Table 36: Properties of the approval step for notification**

<b>Property</b>	<b>Meaning</b>
Mail template approved	Mail template to be used for email notification when an approval step is approved.
Mail template denied	Mail template to be used for email notification when an approval step is denied.

- OR -

If notification should be sent after the entire approval procedure is complete, enter the following data in the approval policy.

**Table 37: Properties of an approval policy for notifications**

<b>Property</b>	<b>Meaning</b>
Mail template approved	Mail template to be used for email notifications when an attestation case is approved.
Mail template denied	Mail template to be used for email notifications when an attestation case is denied.

### **Detailed information about this topic**

- [Custom mail templates for notifications](#) on page 35
- [Custom notification processes](#) on page 41
- [Editing approval steps](#) on page 51
- [Approval policies for attestations](#) on page 43



# Notifying delegates

If required, a delegator can receive notifications if the recipient of the delegation has made an approval decision in an attestation case. A notification is sent once an employee has been determined as an attestor due to delegation and has made an approval decision for the attestation case.

## ***To send a notification when the employee who was delegated an approval approves or denies the attestation.***

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

By default, a notification is sent with the **Delegation - inform delegator about decided attestation** mail template.

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

Delegations are taken into account in the following default approval procedures.

**Table 38: Delegation relevant default approval procedures**

<b>Delegation of</b>	<b>Approval procedure</b>
Department responsibilities	DM, ED
Cost center responsibilities	PM
Location responsibilities	LM
Business role responsibilities	MO, OM, RM, RR
Employee responsibilities	CM, EM
Memberships in business roles	OR
Memberships in application roles	AA, AD, AL, AN, AO, AP, AR, AS, AT, AY, EN, EO, OA, SO

### **Example**

Jon Blogs is responsible for the business role R1. He delegates his responsibility for the business role to Clara Harris. Clara Harris is herself responsible for business role R2.

A member of business role R1 is to be attested. Jon Bloggs is established as an attestor through the **OM - Manager of a specific role** approval process. The attestation case is assigned to Clara Harris for approval through delegation. Jon

Blogs is notified as soon as Clara Harris has made her approval decision for the attestation case.

A member of business role R2 is to be attested. Clara Harris is established as an attestor through the **OM - Manager of a specific role** approval process. No notification is sent because Clara Harris does not make the approval decision due to delegation.

For more detailed information about delegating responsibilities, see the *One Identity Manager IT Shop Administration Guide*.

## Related topics

- [Default approval procedures](#) on page 58
- [Notifications from additional attestors](#) on page 108

## Aborting attestation cases

Email notifications can be sent to other employees when an attestation case is aborted. You can specify the recipient of the notification as required by the company.

### *To set up the notification procedure*

1. Create custom mail templates for sending notification if attestation cases have been aborted.
2. Create company specific processes for notifications.
3. Enter the following data for the approval policy:

**Mail template aborted:** Mail template to be used for email notifications when an attestation case is aborted.

### Detailed information about this topic

- [Custom mail templates for notifications](#) on page 35
- [Custom notification processes](#) on page 41

## Escalation of attestation cases

Email notifications can be sent to the attestation policy's owner when an attestation case is escalated.

### ***To set up the notification procedure***

1. On the **Mail templates** tab of the approval step, enter the following data:  
**Mail template escalation:** Attestation - Escalation
2. Assign an owner to the attestation policies.

### **Related topics**

- [Escalating an attestation case](#) on page 84
- [General master data for attestation policies](#) on page 26
- [Editing approval steps](#) on page 51

## **Delegating attestations**

If, in an approval step, other attestors can be authorized to make the approval decision, the additional attestors can be prompted to approve by email. The same applies if the attestation 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:** Attestation - Delegated/additional approval

**TIP:** To enable approval by e-mail, select the **Attestation - delegated/additional approval (by email)** mail template.

### **Related topics**

- [Attestation by mail](#) on page 110
- [Appointing other attestors](#) on page 83
- [Editing approval steps](#) on page 51

## **Rejecting approvals**

The original attestor must be notified if an additional attestor or employee to whom an attestation has been delegated refuses the approval decision.

### ***To set up the notification procedure***

- On the **Mail templates** tab of the approval step, enter the following data:  
**Mail template rejection:** Attestation - Reject approval

**TIP:** If you allow approval by email, select the mail template **Attestation - reject approval (by mail)**.

## Related topics

- [Attestation by mail](#) on page 110
- [Appointing other attestors](#) on page 83
- [Editing approval steps](#) on page 51

## Notifications with questions

Employees can be notified when a question about an attestation is asked. Similarly, the attestors can also be notified as soon as the question is answered.

### *To send a notification when an attestor asks a question*

- In Designer, enable the **QER | Attestation | MailTemplateIdents | QueryFromApprover** configuration parameter.  
A notification is sent by default with the **Attestation - question** mail template.

### *To send a notification to the attestor when the queried employee answers a question*

- In Designer, set the **QER | Attestation | MailTemplateIdents | AnswerToApprover** configuration parameter.  
A notification is sent by default with the **Attestation - answer** mail template.

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

## Notifications from additional attestors

The original attestor can be notified when an additional attestor or an employee who has been delegated an attestation has granted or denied the attestation. This mail is sent the moment the approval step has been decided.

### *To send a notification when the additional attestor approves or rejects the attestation*

- In Designer, enable the **QER | Attestation | MailTemplateIdents | InformAddingPerson** configuration parameter.  
A notification is sent by default with the **attestation - approval of added step** mail template.

**To send a notification when the employee who was delegated an approval approves or denies the attestation.**

- In Designer, enable the **QER | Attestation | MailTemplateIdents | InformDelegatingPerson** configuration parameter.

A notification is sent by default with the **attestation - approval of delegated step** mail template.

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

## Link for verifying new external users

If a new user logs in to the Web Portal or new external employees need to be certified, they receive an email containing a link to the Password Reset Portal. Using the link, employees verify their contact email address, set a password and password questions.

**To send notification with a verification link**

- In the Designer, set the **QER | Attestation | MailTemplateIdents | NewExternalUserVerification** configuration parameter.

By default, notification is sent using the **Attestation - new external user verification link** mail template.

**TIP:** To use something other than the default mail template for these notifications, change the value of the configuration parameter.

### Detailed information about this topic

- [User attestation and recertification](#) on page 123
- [Self-registration of new users in the Web Portal](#) on page 126
- [Adding new employees using a manager or employee administrator](#) on page 128

## 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 Manager, select the **Attestation | Basic configuration data | Mail templates | Predefined** category.

## Related topics

- [Custom mail templates for notifications](#) on page 35

# Attestation by mail

To provide attestors who are temporarily unable to access One Identity Manager tools with the option of making attestation case decisions, you can set up attestation by email. In this process, attestors are notified by email when an attestation case is pending their approval. Approvers can use the 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 attestors can state the reasons for their approval decision. This email is sent to a central Microsoft Exchange mailbox. The One Identity Manager checks this mailbox regularly, evaluates the incoming emails and updates the status of the attestation cases correspondingly.

- !** **IMPORTANT:** An attestation cannot be sent by email if multi-factor authentication is configured for the attestation policy. Attestation emails for such attestations produce an error message.

## Prerequisites

1. The Microsoft Exchange environment is configured 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
2. The user account used by One Identity Manager Service to register with the Microsoft Exchange environment requires full access to the mailbox given in the configuration parameter **QER | Attestation | MailApproval | Inbox**.
3. The configuration parameter **QER | Attestation | MailTemplateIdents | RequestApproverByCollection** is disabled.

## To set up attestation by email

1. In Designer, enable the configuration parameter **QER | Attestation | MailApproval | Inbox** and enter the mailbox to which the approval mails are to be sent.
2. Set up mailbox access.
  - a. 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 -
  - b. You enter a separate user account for logging in to the Microsoft Exchange Server for mailbox access. Enabled the following configuration parameters to do this.

**Table 39: Configuration parameters for logging in to Microsoft Exchange Server**

Configuration parameter	Meaning
QER   Attestation   MailApproval   Account	Name of the user account.
QER   Attestation   MailApproval   Domain	User account's user account.
QER   Attestation   MailApproval   Password	Password of the user account.

- In Designer, enable the configuration parameter **QER | Attestation | MailTemplateIdents | ITShopApproval**.

The mail template used to create the attestation mail is stored with this configuration parameter. You can use the default mail template or add a custom mail template.

**TIP:** To use a company-specific mail template for attestation mails, change the value of the configuration parameter. In this case, also change the VI\_MailApproval\_ProcessMail script.

- Assign the following mail templates to the approval steps:

**Table 40: Mail templates for approval by mail**

Property	Mail template
Mail template request	Attestation - approval required (by mail)
Mail template reminder	Attestation - remind approver (by mail)
Mail template delegation	Attestation - delegated/additional approval (by mail)
Mail template rejection	Attestation - reject approval (by mail)

- In Designer, configure and enable the schedule **Processes attestation mail approvals**.

Based on this schedule, One Identity Manager regularly checks the mailbox for new attestation mails. Based on this schedule, the regularly checks the mailbox 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 Designer, enable the configuration parameter **QER | Attestation | MailApproval | DeleteMode** and select one of the following values.

**Table 41: Mailbox cleanup**

Value	Method
HardDelete	The processed e-mail is immediately deleted.
MoveToDeletedItems	The processed email is moved to the <b>Deleted objects</b> 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

- [Processing attestation mails](#) on page 112
- [Custom mail templates for notifications](#) on page 35
- [Demanding attestation](#) on page 100
- [Reminding attestors](#) on page 101
- [Delegating attestations](#) on page 107
- [Rejecting approvals](#) on page 107
- [Setting up multi-factor authentication for attestation](#) on page 81

## Processing attestation mails

The schedule **Processes attestation mail approvals** starts the process VI\_Attestation\_Process Approval Inbox. This process runs the VI\_MailApproval\_ProcessInBox script, which searches the mailbox for new attestation mails and updates the attestation cases in the One Identity Manager database. The contents of the attestation mail are processed at the same time.

**NOTE:** The validity of the email certificate is checked with the script VID\_ValidateCertificate. You can customize this script to suit your security requirements. Take into account that this script is also used for attestations 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:** VI\_MailApproval\_ProcessInBox finds the Exchange Web Service URL which 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 configuration parameter QER\Attestation\MailApproval\ExchangeURI.



Attestation mails are processed with the `VI_MailApproval_ProcessMail` script. The script finds the relevant approval decision, sets the **Approved** option if approval is granted, and stores the reason for the approval decision with the attestation cases. The attestor is found through the sender address. Then the attestation mail is removed from the mailbox depending on the selected cleanup method.

**NOTE:** If you use a custom mail template for the attestation mail, check the script and modify it as required. Take into account that this script is also used for approval decisions for IT Shop requests by email.

## Default attestation and withdrawal of entitlements

One Identity Manager provide various default attestation procedures for different data situations and default attestation procedures.

Data situations for default attestations:

- System entitlements owned by an employee
- System entitlements assigned to system entitlements
- System entitlements assigned to hierarchical roles
- System roles assigned to an employee
- Company resources assigned to system roles
- System roles assigned to hierarchical roles
- Business and application role memberships
- Employee master data for a new One Identity Manager user
- Employee master data for an existing One Identity Manager user

The attestation polices required for attesting employee master data are also supplied by default. You can also use the default supplied attestation policies without modifying them. The prerequisites and the attestation sequence for employee data are described in [User attestation and recertification](#).

You can set up attestation policies easily in Web Portal using default attestation procedures for other data situations. You can also use the default attestation policies supplied without customizing them. Furthermore, you can configure how to deal with denied attestations that are based on these default attestation procedures. If your specific data situation allows, denied entitlements can be removed by the One Identity Manager following the attestation.

### ***To remove denied permissions automatically***

1. In Designer, set the configuration parameter **QER | Attestation | AutoRemovalScope** and the configuration subparameters.
2. If the entitlements were obtained through IT Shop, specify whether these requests should be unsubscribed or canceled. To do this, enable the configuration parameter

**QER | Attestation | AutoRemovalScope | PWOMethodName** and select a value.

- **Abort:** Requests are aborted. In this case, they do not go through a cancelation workflow. The requested entitlements are withdrawn without additional checks.
- **Unsubscribe:** Requests are unsubscribed. They go through the cancelation workflow defined in the approval policies. Withdrawal of the entitlement can thus be subjected to an additional check.

If the cancelation is denied, the entitlement is not withdrawn even though the attestation has been denied.

If the configuration parameter is not set, the requests are aborted.

**IMPORTANT:** If role memberships or system roles are removed from an employee they lose the unapproved entitlement. They also lose all other company resources inherited through this role. These may be other system entitlements or account definitions. If necessary, system entitlements are removed and company resources are deleted from the employee.

Check whether your data situation allows automatic withdrawal of entitlements before you enable configuration parameters under **QER | Attestation | AutoRemovalScope**.

Automatic removal of entitlements is triggered by an additional approval step with the EX approval procedure in the default approval workflows.

Attestation sequence with subsequence withdrawal of denied entitlements:

1. Attestation is carried out using a default attestation procedure.
2. The attester denies attestation. The approval step is not granted approval and approval is passed on the next approval level with the EX approval procedure.
3. The approval step triggers the event AUTOREMOVE. This runs the process VI\_Attestation\_AttestationCase\_AutoRemoveMembership.
4. The process runs the script VI\_AttestationCase\_RemoveMembership. This removes the affected entitlement depending on which configuration parameters are set.
5. The script sets the approval step status to **Denied**. This means the entire attestation case is finally denied.
6. Tasks to recalculate inheritance are entered in the DBQueue.

## Detailed information about this topic

- [System entitlements attestation](#) on page 116
- [System role attestation](#) on page 118
- [Application role attestation](#) on page 121
- [Business role attestation](#) on page 121

# System entitlements attestation

Installed modules: Target System Base Module

When you use the **System entitlement memberships attestation** default attestation policy or have set up attestation policies with the **System entitlement memberships attestation** default attestation procedure, you can configure automatic removal of system entitlements through the **QER | Attestation | AutoRemovalScope | GroupMembership** configuration parameter. After attestation approval has been denied, One Identity Manager checks which type of assignment was used for the user account to become a member in the system entitlement.

**Table 42: Effect of configuration parameters when attestation denied**

Configuration parameter	Effect when set
QER   Attestation   AutoRemovalScope   GroupMembership   RemoveDirect	Direct membership of the user account in the system entitlement, is removed.
QER   Attestation   AutoRemovalScope   GroupMembership   RemovePrimaryRole	If membership in the system entitlement was inherited through a primary role, the role is withdrawn from the employee. This removes all indirect assignments obtained by the employee through this role.
QER   Attestation   AutoRemovalScope   GroupMembership   RemoveRequestedRole	If membership of the system entitlement was inherited through a requested role, the role request is canceled or unsubscribed. This removes all indirect assignments obtained by the employee through this role. Set the desired behavior in the <b>QER   Attestation   AutoRemovalScope   PWOMethodName</b> configuration parameter. For more information, see <a href="#">Default attestation and withdrawal of entitlements</a> on page 114.
QER   Attestation   AutoRemovalScope   GroupMembership   RemoveDelegatedRole	If membership in the system entitlement was inherited through a delegated role, delegation of this role is canceled or unsubscribed. This removes all indirect assignments obtained by the employee through this role. Set the desired behavior in the <b>QER   Attestation   AutoRemovalScope   PWOMethodName</b> configuration parameter. For more information, see <a href="#">Default attestation and withdrawal of entitlements</a> on page 114.
QER   Attestation	If membership of the system entitlement was requested

Configuration parameter	Effect when set
AutoRemovalScope   GroupMembership   RemoveRequested	through the IT Shop, the request is canceled or unsubscribed. Set the desired behavior in the <b>QER   Attestation   AutoRemovalScope   PWOMethodName</b> configuration parameter. For more information, see <a href="#">Default attestation and withdrawal of entitlements</a> on page 114.
QER   Attestation   AutoRemovalScope   GroupMembership   RemoveSystemRole	System roles incorporating the system entitlements are withdrawn from the employee.  This removes all indirect assignments obtained by the employee through this system role.  This configuration parameter is only available if the System Roles Module is installed.
QER   Attestation   AutoRemovalScope   GroupMembership   RemoveDirectRole	The system entitlement assignment to hierarchical roles is removed and  therefore removes the system entitlement assignment to all user accounts whose associated employees inherit assignments from these roles.  <b>i</b> <b>IMPORTANT:</b> Employees whose attestation has been approved can lose the system entitlement through this. Check the side-effects of this configuration parameter in your situation before you set it.

When you use the **Attestation of assignments to system entitlements** default attestation policy or have set up attestation policies with the **Attestation of assignments to system entitlements** default attestation procedure, you can configure automatic removal of system entitlements through the **QER | Attestation | AutoRemovalScope | UNSGroupInUNSGroup** configuration parameter.

**Table 43: Effect of configuration parameters when attestation denied**

Configuration parameter	Effect when set
QER   Attestation   AutoRemovalScope   UNSGroupInUNSGroup   RemoveDirect	Assignment of the system entitlement to a system entitlement is removed.

You can configure automatic withdrawal of system entitlement assignments to hierarchical roles, if you use the following default attestation policies or procedures:

- Attestation of system entitlement assignments to department
- Attestation of system entitlement assignments to cost centers
- Attestation of system entitlement assignments to locations
- Attestation of system entitlement assignments to business roles

Enabled the following configuration parameters to do this.

**Table 44: Effect of configuration parameters when attestation denied**

Configuration parameter	Effect when set
QER   Attestation   AutoRemovalScope   DepartmentHasUNSGroup   RemoveDirect	The assignment of the system entitlement to a department is removed and therefore the system entitlement is removed from all employees that inherit assignments from this department.
QER   Attestation   AutoRemovalScope   ProfitCenterHasUNSGroup   RemoveDirect	The assignment of the system entitlement to a cost center is removed and therefore the system entitlement is removed from all employees that inherit assignments from this cost center.
QER   Attestation   AutoRemovalScope   LocalityHasUNSGroup   RemoveDirect	The assignment of the system entitlement to a location is removed and therefore the system entitlement is removed from all employees that inherit assignments from this location.
QER   Attestation   AutoRemovalScope   OrgHasUNSGroup   RemoveDirect	The assignment of a system entitlement to a business role is removed and therefore the system entitlement is removed from all employees that inherit assignments from this business role.

## System role attestation

Installed modules: System Roles Module

If you use the **System role membership attestation** default attestation policy or have set up attestation policies with the **System entitlement memberships attestation** default attestation procedure, you can configure automatic removal of system roles through the **QER | Attestation | AutoRemovalScope | ESetAssignment** configuration parameter. After attestation approval has been denied, One Identity Manager checks which type of assignment was used for the user account to become a member in the system role.

**Table 45: Effect of configuration parameters when attestation denied**

Configuration parameter	Effect when set
QER   Attestation   AutoRemovalScope	Direct membership in the system role is removed. This removes all indirect assignments obtained by the

Configuration parameter	Effect when set
ESetAssignment   RemoveDirect	employee through this system role.
QER   Attestation   AutoRemovalScope   ESetAssignment   RemovePrimaryRole	<p>If the system role was inherited through a primary role, the role is withdrawn.</p> <p>This removes all indirect assignments obtained by the employee through this role.</p>
QER   Attestation   AutoRemovalScope   ESetAssignment   RemoveRequestedRole	<p>If the system role was inherited through a requested role, the role request is canceled or unsubscribed.</p> <p>This removes all indirect assignments obtained by the employee through this role.</p> <p>Set the desired behavior in the <b>QER   Attestation   AutoRemovalScope   PWOMethodName</b> configuration parameter. For more information, see <a href="#">Default attestation and withdrawal of entitlements</a> on page 114.</p>
QER   Attestation   AutoRemovalScope   ESetAssignment   RemoveDelegatedRole	<p>If the system role was inherited through a delegated role, the delegation of this role is canceled or unsubscribed.</p> <p>This removes all indirect assignments obtained by the employee through this role.</p> <p>Set the desired behavior in the <b>QER   Attestation   AutoRemovalScope   PWOMethodName</b> configuration parameter. For more information, see <a href="#">Default attestation and withdrawal of entitlements</a> on page 114.</p>
QER   Attestation   AutoRemovalScope   ESetAssignment   RemoveRequested	<p>If the system role was requested through the IT Shop, the request is canceled or unsubscribed.</p> <p>This removes all indirect assignments obtained by the employee through this system role.</p> <p>Set the desired behavior in the <b>QER   Attestation   AutoRemovalScope   PWOMethodName</b> configuration parameter. For more information, see <a href="#">Default attestation and withdrawal of entitlements</a> on page 114.</p>
QER   Attestation   AutoRemovalScope   ESetAssignment   RemoveDirectRole	<p>The system role assignment to hierarchical roles is removed.</p> <p>This removes the system role assignment to all employees, which inherits assignments from these roles.</p> <p><b>IMPORTANT:</b> Employees whose attestation has been approved can lose the system role through this. Check the side-effects of this configuration parameter in your situation before you set it.</p>

If you use the **System role entitlement assignment attestation** default attestation policy or have set up attestation policies with the **System role entitlement assignment attestation** default attestation procedure, you can configure automatic removal of the assignments through the **QER | Attestation | AutoRemovalScope | ESetHasEntitlement** configuration parameter.

**Table 46: Effect of configuration parameters when attestation denied**

Configuration parameter	Effect when set
QER   Attestation   AutoRemovalScope   ESetHasEntitlement   RemoveDirect	Assignment of the company resource to a system role is removed.

You can configure automatic withdrawal of system role assignments to hierarchical roles, if you use the following default attestation policies or procedures:

- Department system role assignment attestation
- Cost center system role assignment attestation
- Location system role assignment attestation
- Business role system role assignment attestation

Enabled the following configuration parameters to do this.

**Table 47: Effect of configuration parameters when attestation denied**

Configuration parameter	Effect when set
QER   Attestation   AutoRemovalScope   DepartmentHasESet   RemoveDirect	The assignment of the system role to a department is removed and therefore the system role is removed from all employees that inherit assignments from this department.
QER   Attestation   AutoRemovalScope   ProfitCenterHasESet   RemoveDirect	The assignment of the system role to a cost center is removed and therefore the system role is removed from all employees that inherit assignments from this cost center.
QER   Attestation   AutoRemovalScope   LocalityHasESet   RemoveDirect	The assignment of the system role to a location is removed and therefore the system role is removed from all employees that inherit assignments from this location.
QER   Attestation   AutoRemovalScope   OrgHasESet   RemoveDirect	The assignment of the system role to a business role is removed and therefore the system role is removed from all employees that inherit assignments from this business role.



# Application role attestation

When you use the **Application role membership attestation** default attestation policy or have set up attestation policies with the **Application role membership attestation** default attestation procedure, you can configure automatic removal of application roles through the **QER | Attestation | AutoRemovalScope | AERoleMembership** configuration parameter. After attestation approval has been denied, One Identity Manager checks which type of assignment was used for the user account to become a member in the application role.

**Table 48: Effect of configuration parameters when attestation denied**

Configuration parameter	Effect when set
QER   Attestation   AutoRemovalScope   AERoleMembership   RemoveDirectRole	<p>The employee's secondary membership is removed from the application role.</p> <p>This removes all indirect assignments obtained by the employee through this application role. Membership in dynamic roles is not removed in this process.</p>
QER   Attestation   AutoRemovalScope   AERoleMembership   RemoveRequestedRole	<p>If the employee requested the application role through the IT Shop, the request is canceled or unsubscribed.</p> <p>This removes all indirect assignments obtained by the employee through this application role.</p> <p>Set the desired behavior in the <b>QER   Attestation   AutoRemovalScope   PWOMethodName</b> configuration parameter. For more information, see <a href="#">Default attestation and withdrawal of entitlements</a> on page 114.</p>
QER   Attestation   AutoRemovalScope   AERoleMembership   RemoveDelegatedRole	<p>If the application role was delegated to the employee, delegation is canceled or unsubscribed.</p> <p>This removes all indirect assignments obtained by the employee through this application role.</p> <p>Set the desired behavior in the <b>QER   Attestation   AutoRemovalScope   PWOMethodName</b> configuration parameter. For more information, see <a href="#">Default attestation and withdrawal of entitlements</a> on page 114.</p>

## Business role attestation

Installed modules: Business Roles Module

When you use the **Business role membership attestation** default attestation policy and have set up attestation policies with the **Business role membership attestation** default attestation procedure, you can configure automatic removal of business roles through the configuration parameter **QER | Attestation | AutoRemovalScope | RoleMembership**. After attestation approval has been denied, One Identity Manager checks which type of assignment was used for the user account to become a member in the business role.

**Table 49: Effect of configuration parameters when attestation denied**

<b>Configuration parameter</b>	<b>Effect when set</b>
QER   Attestation   AutoRemovalScope   RoleMembership   RemoveDirectRole	<p>The employee's secondary membership in the business role is removed.</p> <p>This removes all indirect assignments obtained by the employee through this business role. Membership in dynamic roles is not removed by this.</p>
QER   Attestation   AutoRemovalScope   RoleMembership   RemoveRequestedRole	<p>If the employee requested the business role through the IT Shop, the request is canceled or unsubscribed.</p> <p>This removes all indirect assignments obtained by the employee through this business role.</p> <p>Set the desired behavior in the <b>QER   Attestation   AutoRemovalScope   PWOMethodName</b> configuration parameter. For more information, see <a href="#">Default attestation and withdrawal of entitlements</a> on page 114.</p>
QER   Attestation   AutoRemovalScope   RoleMembership   RemoveDelegatedRole	<p>If the business role was delegated to the employee, delegation is canceled or unsubscribed.</p> <p>This removes all indirect assignments obtained by the employee through this business role.</p> <p>Set the desired behavior in the <b>QER   Attestation   AutoRemovalScope   PWOMethodName</b> configuration parameter. For more information, see <a href="#">Default attestation and withdrawal of entitlements</a> on page 114.</p>

## User attestation and recertification

Use the One Identity Manager attestation functionality to regularly check and authorize employees' master data, target system entitlements and assignments. In addition, One Identity Manager provides default procedures for managers to quickly attest and certify the master data of newly added One Identity Manager users in the One Identity Manager database. This functionality can be used, for example, if external employees, such as contract workers, should be provided with temporary access to the One Identity Manager. The sequence is different for internal and external employees.

Regular recertification can be run through scheduled tasks.

In the context of an attestation, a manager can check and update the master data for the user to be certified, if necessary. Use the Web Portal for attestation.

### Detailed information about this topic

- [Configuring user attestation and recertification](#) on page 124
- [Attesting new users](#) on page 125
- [Recertifying existing users](#) on page 134

## One Identity Manager users for attesting and recertifying users

The following user are involved in attestation and recertification of employees.

**Table 50: Users**

User	Tasks
Employee administrators	<p>Employee administrators must be assigned to the application role <b>Identity Management   Employees  Administrators</b>.</p> <p>Users with this application role:</p> <ul style="list-style-type: none"> <li>• Can edit master data for all employees</li> </ul>

User	Tasks
	<ul style="list-style-type: none"> <li>• Can assign a manager.</li> <li>• Can assign company resources to employees.</li> <li>• Check and authorize employee master data.</li> <li>• Create and edit risk index functions.</li> <li>• Edit password policies for employee passwords</li> <li>• Delete employee's security keys (Webauthn)</li> </ul>
Manager	<ul style="list-style-type: none"> <li>• Check employee master data of the user to be certified.</li> <li>• Update employee master data as required.</li> <li>• Assign another manager if required.</li> <li>• Attests the master data.</li> </ul>
Attestors for external users	<p>Attestors for external users must be assigned to the application role <b>Identity &amp; Access Governance   Attestation   Attestors for external users</b>.</p> <p>Users with this application role:</p> <ul style="list-style-type: none"> <li>• Attests new, external employees.</li> </ul>
Administrators for attestation cases	<p>Administrators must be assigned to the <b>Identity &amp; Access Governance   Attestation   Administrators</b> application role.</p> <p>Users with this application role:</p> <ul style="list-style-type: none"> <li>• Modify the attestation policies if necessary.</li> <li>• Create more schedules if required.</li> </ul>
Web Portal users	<ul style="list-style-type: none"> <li>• Log on to the Web Portal and enter their master data,</li> </ul>

## Configuring user attestation and recertification

### *To use the attestation and recertification function for new internal users*

1. In Designer, set the configuration parameter **QER | Attestation | UserApproval**.
2. Assign at least one employee to the **Identity Management | Employees | Administrators** application role.

All employees with this application role can assign a manager to the employee being attested during the attestation process.

## ***To use the attestation and recertification function for new external users***

1. In the Designer, set the following configuration parameters:
  - **QER | Attestation | ApproveNewExternalUsers**: Select the value **1**.
  - **QER | WebPortal | PasswordResetURL**: Enter the URL for the Password Reset Portal.
  - **QER | Attestation | MailTemplateIdents | NewExternalUserVerification**: Mail template sending verification links.
  - **QER | Attestation | NewExternalUserTimeoutInHours**: For new external users, specify the duration of the verification link in hours.

The default is 4 hours. If logging in to the Password Reset Portal fails because the timeout has expired, the user can ask for a new verification link to be sent. To change the duration of the verification link, change the value in the configuration parameter.
  - **QER | Attestation | NewExternalUserFinalTimeoutInHours**: Specify the duration in hours, within which self-registration must be successfully completed.

If the user does not complete registration with 24 hours, the attestation case quits. To register anyway, the user must log in again to the Web Portal from the beginning. To change the checkout duration of registration, change the value of the configuration parameter.
2. Assign at least one employee to the **Identity & Access Governance | Attestation | Attestor for external users** application role.

### **Detailed information about this topic**

- [Self-registration of new users in the Web Portal](#) on page 126
- [Adding new employees using a manager or employee administrator](#) on page 128
- [Importing new employee master data](#) on page 130
- [The recertification sequence](#) on page 135
- [Link for verifying new external users](#) on page 109

## **Attesting new users**

Attestation of new users is divided into three use cases by One Identity Manager:

1. Registration of new external users logging in to the Web Portal.
2. Adding new employees in the Manager or using a manager in the Web Portal.
3. Adding a new employee by importing employee master data.

The result of attestation is the same in all three cases.

- Certified, enabled employees that can access all entitlements assigned to them in One Identity Manager and the connected target systems.

Company resources are inherited. Account definitions are assigned to internal employees.

- OR -

- Denied and permanently deactivated employees.

Disable employees cannot log onto One Identity Manager tools. Company resources are not inherited. Account definitions are not automatically assigned. User accounts associated with the employee are also locked or deleted. You can customize the behavior to meet your requirements.

## Self-registration of new users in the Web Portal

Users who are not yet registered have the option to register themselves to use the Web Portal. These users can log in to the Web Portal once a manager has attested the user's master data and the set the user's password. This adds an external employee to the One Identity Manager database.

Attestation sequence:

1. The user logs in to the Web Portal for the first time and enters the required properties.

A new employee object is added to the One Identity Manager database with properties:

**Table 51: Properties of a newly added employee**

Property	Value
Certification status	New
External	Set
Contact email address	Email address to send the verification link to.
Permanently disabled	Set
No inheritance	Set

2. Attestation is started automatically.

Attestation policy used: **New user certification**

**NOTE:** The attestation only starts automatically if the **QER | Attestation | UserApproval** configuration parameter is set. Otherwise the new user remains disabled permanently until a manager changes the employee master data manually.

3. Attestors are found.

Effective approval policy: **Certification of users**

4. If the **QER | Attestation | ApproveNewExternalUsers** configuration parameter is set and the value is **1**, attestation of members of the **Identity & Access Governance | Attestation | Attestors for external users** is submitted.
  - a. If an attestor for external users denies the attestation, the attestation case is closed. The employee object's properties are updated in the database.

**Table 52: Properties of an external employee with denied attestation**

Property	Value	Explanation
Certification status	Denied	
External	Set	
Permanently disabled	Set	The user cannot log in to the Web Portal.
No inheritance	Set	Company resources are not inherited.

- b. If an attestor for external users approves attestation, an email with a verification link is sent to the new user.

**NOTE:** If the **QER | Attestation | ApproveNewExternalUsers** configuration parameter is not set or the value is **0**, an email with a verification link is sent immediately to the new user.

5. Once the user has followed the link and a password and a password question have been set, the attestation case is approved. The employee object's properties are updated in the database.

**Table 53: Properties of an external employee with approved attestation**

Property	Value	Explanation
Certification status	Certified	
External	Set	
Permanently disabled	Not set	The user can log on to Web Portal.
No inheritance	Not set	Company resources are inherited.

The default is 4 hours. If logging in to the Password Reset Portal fails because the timeout has expired, the user can ask for a new verification link to be sent.

If the user does not complete registration with 24 hours, the attestation case quits. To register anyway, the user must log in again to the Web Portal from the beginning.

## Related topics

- [Configuring user attestation and recertification](#) on page 124

# Adding new employees using a manager or employee administrator

You can also attest new users if new employees are added in the Manager or if a manager in the Web Portal adds a new employees. Specify the required behavior with the configuration parameter **QER | Attestation | UserApproval | InitialApprovalState**. This configuration parameter has the default value **0**. This gives each new employee the certification status **Certified**. Automatic attestation is not carried out.

### To automatically attest new users

- In Designer, enable the **QER | Attestation | UserApproval | InitialApprovalState** configuration parameter and set the value to **1**.

All employees added to the database from this point on are given the certification status **New**. This means automatic attestation of these employees is carried out.

The sequence is different for internal and external employees.

Attestation sequence:

1. Enter the new user's master data and assign a manager to them.

For detailed information about adding employees, see the *One Identity Manager Identity Management Base Module Administration Guide* and the *One Identity Manager Web Portal User Guide*.

The certification status corresponds to the value of the configuration parameter **QER | Attestation | UserApproval | InitialApprovalState**. If the configuration parameter has the value **1**, certification status is set to **New**.

By default, the employee is active and can log in immediately to One Identity Manager.

- If new users are not allowed to log in to One Identity Manager until their master data has been attested, run the task **Disable employee permanently**.

2. Once the employee master data has been saved, attestation starts.

Attestation policy used: **New user certification**

3. Attestors are found.

Effective approval policy: **Certification of users**

4. If the **External** option is set for the employee:

Attestation takes place as described in the [Self-registration of new users in the Web Portal](#) section, steps 4 to 5.



5. If the **External** option is set for the employee:
  - a. One Identity Manager checks whether you have assigned a manager to the employee.
    - If you have assigned a manager to the employee, the case is immediately passed on to them for approval.
    - If you have not assigned a manager to the employee, the case is assigned to the employee administrators for approval.
  - b. An employee administrator checks your master data and also assigns a manager to you.
    - The employee administrator assigns a manager and approves attestation. The attestation case is assigned to the manager for approval.
    - If the employee administrator does not assign a manager and approves attestation, the attestation case is closed. The employee object's properties are updated in the database.

**Table 54: Properties of an employee with approved attestation**

Property	Value	Explanation
Certification status	Certified	
External	Not set	
Disabled permanently	Not set	
No inheritance	Not set	Company resources are inherited.

- If an employee administrator denies attestation approval, the attestation case is closed. Your employee properties are updated in the database.

**Table 55: Properties of an employee with rejected attestation**

Property	Value	Explanation
Certification status	Rejected	
External	Not set	
Permanently disabled	Set	
No inheritance	Set	Company resources are not inherited. User accounts are not created automatically.

- c. The manager can deny attestation approval if he is not the manager in charge of the employee.

- The manager can assign another person as manager. The attestation case is immediately assigned to this manager.
  - If the manager does not know who your manager is, approval is returned to the employee administrators. These can
    - Assign another manager
    - Not assign another manager and grant attestation approval
    - Deny attestation approval
- d. If the manager approves attestation, the attestation case is closed. Your employee properties are updated in the database.

**Table 56: Properties of an employee with approved attestation**

Property	Value	Explanation
Certification status	Certified	
External	Not set	
Disabled permanently	Not set	
No inheritance	Not set	Company resources are inherited.

**NOTE:** Only employee administrators can ultimately deny attestation approval. If a manager denies attestation, the case is returned to the employee administrators for approval in any case.

## Related topics

- [Configuring user attestation and recertification](#) on page 124

# Importing new employee master data

You can request attestation of new employees if the master data is imported from other systems into the One Identity Manager database. To ensure that new employees are automatically attested, you must set the employee's certification status to **New** (`Person.ApprovalState = '1'`). There are two possible ways to do this:

1. The configuration parameter **QER | Attestation | UserApproval | InitialApprovalState** is evaluated for certification status. If the configuration parameter has the value **1**, certification status is set to **New**.

Prerequisite: The import does not alter the `Person.ApprovalState` property.

**NOTE:** The configuration parameter **QER | Attestation | UserApproval | InitialApprovalState** has the value **0** by default. This gives each new employee the certification status **Certified**. Automatic attestation is not carried out.

If you want to attest new employees immediately, change the value of the configuration parameter to **1**.

2. The import sets the property `Person.ApprovalState` explicitly.
  - The import sets `ApprovalState='1'` (**New**).  
Employees are automatically attested by their manager.
  - The import sets `ApprovalState='0'` (**Certified**).  
Imported employee master data has already been authorized. It should not be attested again.
  - The import sets `ApprovalState='3'` (**Denied**).  
The employee is disabled permanently and is not attested.

Attestation of new users is triggered when:

- the configuration parameter **QER | Attestation | UserApproval** is enabled
- new employee master data was imported into the One Identity Manager database
- the certification status for new employees is set to **New**
- No **Import data source** is stored with the employee.

If the **External** option is not set for an employee, attestation takes place as described in the [Adding new employees using a manager or employee administrator](#) section, step 5.

If the **External** option is set for the employee, attestation takes place as described in the [Self-registration of new users in the Web Portal](#) section, steps 4 to 5.

The **New user certification** attestation policy is run.

## Related topics

- [Configuring user attestation and recertification](#) on page 124

## Scheduled attestations

Users are also attested when the certification status for an employee is set to **New** at a later date (manually or through import). The schedule **Daily** is assigned to the **New user certification** attestation policy for this purpose. Attestation of new users is started when the time set in the schedule is reached. This process determines all employees with the certification status **New** and for whom no attestation cases are pending.

You can assign a custom schedule to the attestation policy if required.

## Detailed information about this topic

- [Schedules](#) on page 17

# Limiting attestation objects for certification

**IMPORTANT:** In order to customize the default **New user certification** attestation policy, you must make changes to One Identity Manager objects. Always use a custom copy of the respective object to make changes.

It may be necessary to limit attestation of new users to a certain group of employees, for example, if only employees in a specific departments should be attested. To do this, you can extend the condition attached to the attestation policy. Create a custom attestation policy for this.

The following objects must be changed so that attestation of new users can be carried out with this attestation policy. Always create a copy of the respective object to do this.

- Attestation policy **New user certification**
- Process VI\_Attestation\_Person\_new\_AttestationCase\_for\_Certification
- Process VI\_Attestation\_AttestationCase\_Person\_Approval\_Granted
- Process VI\_Attestation\_AttestationCase\_Person\_Approval\_Dismissed

**IMPORTANT:** In order for attestation to run correctly in the Web Portal, the default **Certification of users** attestation procedure and the default **Certification of users** approval policy must be assigned to the attestation policy.

The default attestation procedure, the default approval policy, and the default **Certification of users** approval workflow must not be changed.

## To customize default attestation of new users

1. Copy the **Certification of users** attestation policy and customize it.

**Table 57: Attestation policy properties**

Property	Value
Attestation procedure	Certification of users
Approval policies	Certification of users
Editing conditions	Copy the default condition without modification so that the correct attestation object is selected.  To limit the number of attestation objects, you can add additional partial conditions to the database query.

2. In Designer, create a copy of the VI\_Attestation\_Person\_new\_AttestationCase\_for\_Certification process from the Person base object and customize the copy.

**Table 58: Process properties with changes**

Process step	Parameter	Change
Create attestation instance	WhereClause	Replace the UID of the <b>New user certification</b> attestation policy with the UID of the new attestation policy.

3. In the Designer, copy the process VI\_Attestation\_AttestationCase\_Person\_Approval\_Granted process of the AttestationCase base object and customize the copy.

**Table 59: Process properties with changes**

Process property	Change
Pre-script for generating condition	Replace the UID of the <b>New user certification</b> attestation policy with the UID of the new attestation policy.

4. In Designer, copy the VI\_Attestation\_AttestationCase\_Person\_Approval\_Dismissed process of the AttestationCase base object and customize the copy.

**Table 60: Process properties with changes**

<b>Process property</b>	<b>Change</b>
Pre-script for generating	Replace the UID of the <b>New user certification</b> attestation policy with the UID of the new attestation policy.
Generating condition	

For detailed information about editing processes, see the *One Identity Manager Configuration Guide*.

### Detailed information about this topic

- [General master data for attestation policies](#) on page 26
- [Creating a copy](#) on page 33

## Recertifying existing users

**IMPORTANT:** Access to connected target systems may possibly be denied to One Identity Manager users as a result of recertification. You can configure this behavior to meet your company's requirements. Read the following section thoroughly before you use the recertification function.

One Identity Manager provides an attestation policy for performing cyclical attestation of existing users allowing companies to regularly test and authorize employee master data stored in the One Identity Manager database. Cyclical attestation is triggered through a scheduled task. This resets the certification status for all employees stored in the database. One Identity Manager uses the same procedure for this as for attesting new users. The case is referred to as recertification.

### Result of recertification

- Certified, enabled employees that can access all entitlements assigned to them in One Identity Manager and the connected target systems.  
Company resources are inherited. Account definitions are assigned to internal employees.  
- OR -
- Denied and permanently deactivated employees.  
Disable employees cannot log onto One Identity Manager tools. Company resources are not inherited. Account definitions are not automatically assigned. User accounts associated with the employee are also locked or deleted. You can customize the behavior to meet your requirements.

# Preparing for recertification

## *To set up regular user attestation*

1. In the Designer, set the required configuration parameters.
2. Create a schedule and assign it to the **User recertification** attestation policy. By doing this, you replace the schedule assigned by default.
  - Enable the schedule.

## Detailed information about this topic

- [Configuring user attestation and recertification](#) on page 124

## Related topics

- [General master data for attestation policies](#) on page 26
- [Schedules](#) on page 17

# The recertification sequence

One Identity Manager uses the same method for recertification as for certification of new users. User recertification is triggered when:

- the configuration parameter **QER | Attestation | UserApproval** is enabled
- no **Import data source** is stored with the employee or the **Import data source** is not **E-Business Suite** and
- the execution time in the schedule stored for the **User recertification** attestation policy has been reached.

Internal employees are attested by their manager. If an employee is not assigned a manager, the employee administrator assigns an initial manager for them. Only employee administrators can ultimately deny recertification. If a manager denies recertification, the case is returned to the employee administrators for approval in any case.

External employees are attested by members of the **Identity & Access Governance | Attestation | Attestors for external users** application role.

If the **External** option is not set for an employee, attestation takes place as described in the [Adding new employees using a manager or employee administrator](#) section, step 5.

If the **External** option is set for the employee, attestation takes place as described in the [Self-registration of new users in the Web Portal](#) section, steps 4 to 5.

The attestors are determined using the **Certification of users** approval policy.

# Limiting attestation objects for recertification

**IMPORTANT:** In order to customize the default attestation policy **User recertification**, you must make changes to One Identity Manager objects. Always use a custom copy of the relevant object to make these changes.

All employees saved in the database are recertified using the **User recertification** attestation policy supplied in the One Identity Manager. It may be necessary to limit recertification of new users to a certain group of employees, for example, if only employees in a specific departments should be attested. To do this, you can extend the condition attached to the attestation policy. Create a custom attestation policy for this.

The following objects must be changed so that recertification of users can be carried out with this attestation policy. Always create a copy of the respective object to do this.

- **User recertification** attestation policy
- Process VI\_Attestation\_AttestationCase\_Person\_Approval\_Granted
- Process VI\_Attestation\_AttestationCase\_Person\_Approval\_Dismissed

**IMPORTANT:** In order for recertification to run correctly in the Web Portal, the default **Certification of users** attestation procedure and the default **Certification of users** approval policy must be assigned to the attestation policy.

The default attestation procedure, the default approval policy, and the default **Certification of users** approval workflow must not be changed.

## To customize default recertification of users

1. Copy the **User recertification** attestation policy and customize it.

**Table 61: Attestation policy properties**

Property	Value
Attestation procedure	Certification of users
Approval policies	Certification of users
Editing conditions	Copy the default condition without modification so that the correct attestation object is selected.  To limit the number of attestation objects, you can add additional partial conditions to the database query.

2. In the Designer, copy the process VI\_Attestation\_AttestationCase\_Person\_Approval\_Granted process of the AttestationCase base object and customize the copy.



**Table 62: Process properties with changes**

<b>Process property</b>	<b>Change</b>
Pre-script for generating	Replace the UID of the <b>User recertification</b> attestation policy with the UID of the new attestation policy.
Generating condition	

3. In Designer, copy the VI\_Attestation\_AttestationCase\_Person\_Approval\_Dismissed process of the AttestationCase base object and customize the copy.

**Table 63: Process properties with changes**

<b>Process property</b>	<b>Change</b>
Pre-script for generating	Replace the UID of the <b>User recertification</b> attestation policy with the UID of the new attestation policy.
Generating condition	

For detailed information about editing processes, see the *One Identity Manager Configuration Guide*.

### Detailed information about this topic

- [General master data for attestation policies](#) on page 26
- [Creating a copy](#) on page 33

## Mitigating controls

Violation of regulatory requirements can harbor different risks for companies. To evaluate these risks, you can apply risk indexes to attestation policies. These risk indexes provide information about the risk involved for the company if this particular policy is violated. Once the risks have been identified and evaluated, mitigating controls can be implemented.

Mitigating controls are independent on One Identity Manager's functionality. They are not monitored through One Identity Manager.

Mitigating controls describe controls that are implemented if an attestation rule was violated. The attestation can be approved after the next attestation run, once controls have been applied.


### **To edit mitigating controls**

- In Designer, set the configuration parameter **QER | CalculateRiskIndex** and compile the database.

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

## General master data for mitigating controls

### **To edit mitigating controls**

1. In Manager, select **Risk index functions | Mitigating controls**.
2. Select a mitigating control in the result list and run **Change master data**.  
- OR -  
Click  in the result list.
3. Edit the mitigating control master data.
4. Save the changes.

Enter the following master data for mitigating controls.

**Table 64: General master data for a mitigating control**

<b>Property</b>	<b>Description</b>
Measure	Unique identifier for the mitigating control.
Significance reduction	When the mitigating control is implemented, this value is used to reduce the risk of denied attestation cases. Enter a number between 0 and 1.
Description	Detailed description of the mitigating control.
Functional area	Functional area in which the mitigating control may be applied.
Department	Department in which the mitigating control may be applied.

## Additional tasks for mitigating controls

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

### Mitigating controls overview

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

#### ***To obtain an overview of a mitigating control***

1. In Manager, select **Risk index functions | Mitigating controls**.
2. Select the mitigating control in the result list.
3. Select **Mitigating control overview**.

### Assigning attestation policies

Use this task to specify for which attestation policies the mitigating control is valid.

#### ***To assign attestation policies to mitigating controls***

1. In Manager, select **Risk index functions | Mitigating control**.
2. Select the mitigating control in the result list.
3. Select **Assign attestation polices** in the task view.

Assign the attestation policies in **Add assignments**.

**TIP:** In **Remove assignments**, you can remove the assignment of attestation policies.

**To remove an assignment**

- Select the approval policy and double-click .

4. Save the changes.

## Calculating mitigation

The significance reduction of a mitigating control supplies the value by which the risk index of an attestation policy is reduced when the control is implemented. One Identity Manager calculates a reduced risk index based on the risk index and the significance reduction. One Identity Manager supplies default functions for calculating reduced risk indexes. These functions cannot be edited with One Identity Manager tools.

The reduced risk index is calculated from the company policy and the significance reduced sum of all assigned mitigating controls.

$\text{Risk index (reduced)} = \text{Risk index} - \text{sum significance reductions}$

If the significance reduction sum is greater than the risk index, the reduced risk index is set to **0**.

## Appendix: Configuration parameters for attestation

The following configuration parameters are additionally available in One Identity Manager after the module has been installed. Some general configuration parameters are relevant for attestation. The following table contains a summary of all applicable configuration parameters for attestation.

**Table 65: Overview of configuration parameters**

Configuration parameter	Description
QER   Attestation	Preprocessor relevant configuration parameter for controlling the model parts for attestation. Changes to the parameter require recompiling the database.  If the parameter is enabled you can use the attestation function.
QER   Attestation   AllowAllReportTypes	This configuration parameter specifies whether all report formats are permitted for attestation policies. By default, only PDF is allowed because it is the only audit secure format.
QER   Attestation   ApproveNewExternalUsers	This configuration parameter specifies whether new external users must be attested before they are enabled.
QER   Attestation   AutoCloseInactivePerson	If this configuration parameter is set, pending attestation cases for an employee are closed, when this employee is permanently deactivated.
QER   Attestation   AutoRemovalScope	General configuration parameter for defining automatic withdrawal of memberships/assignments if attestation approval is not granted.
QER   Attestation	Determines default behavior for automatic

<b>Configuration parameter</b>	<b>Description</b>
AutoRemovalScope   AERoleMembership	removal of application role memberships if attestation approval is not granted.
QER   Attestation   AutoRemovalScope   AERoleMembership   RemoveDelegatedRole	If this configuration parameter is set, it ends the application role delegation if attestation approval is not granted.
QER   Attestation   AutoRemovalScope   AERoleMembership   RemoveDirectRole	If this configuration parameter is set, the employee's membership of the application role is removed when attestation approval is not granted.
QER   Attestation   AutoRemovalScope   AERoleMembership   RemoveRequestedRole	If this configuration parameter is set, the request for membership of the application role is aborted if attestation approval is not granted.
QER   Attestation   AutoRemovalScope   DepartmentHasESet	Determines default behavior for automatic removal of system role assignments to departments if attestation approval has been denied.
QER   Attestation   AutoRemovalScope   DepartmentHasESet   RemoveDirect	If this configuration parameter is set, system role to department assignments are removed if attestation approval is not granted.
QER   Attestation   AutoRemovalScope   DepartmentHasUNSGroup	Determines default behavior for automatic removal of system entitlement assignments to departments if attestation approval has been denied.
QER   Attestation   AutoRemovalScope   DepartmentHasUNSGroup   RemoveDirect	If this configuration parameter is set, system entitlement to department assignments are removed if attestation approval is not granted.
QER   Attestation   AutoRemovalScope   ESetAssignment	Determines default behavior for automatic removal of system role memberships if attestation approval is not granted.
QER   Attestation   AutoRemovalScope   ESetAssignment   RemoveDelegatedRole	If this configuration parameter is set, it ends the role delegation through which the employee obtained the system role if attestation approval is not granted.  This removes all indirect assignments obtained by the employee through this role.
QER   Attestation   AutoRemovalScope   ESetAssignment   RemoveDirect	If this configuration parameter is set, the direct user account membership in the system role will be removed if attestation approval is not

Configuration parameter	Description
	<p>granted.</p> <p>This removes all indirect assignments obtained by the employee through the system role.</p>
QER   Attestation   AutoRemovalScope   ESetAssignment   RemoveDirectRole	<p>If this configuration parameter is set, the system role assignment to roles (organizations and business roles) is removed if attestation approval is not granted. This removes the system entitlement assignment to all user accounts whose associated employees are members of these roles.</p> <p><b>IMPORTANT:</b> Employees whose attestation has been approved can lose the system role through this.</p>
QER   Attestation   AutoRemovalScope   ESetAssignment   RemovePrimaryRole	<p>If this configuration parameter is set, the primary role assignment through which the employee obtained the system role is removed from the employee when attestation approval is not granted.</p> <p>This removes all indirect assignments obtained by the employee through this role.</p>
QER   Attestation   AutoRemovalScope   ESetAssignment   RemoveRequested	<p>If this configuration parameter is set, the requested system role is canceled if attestation approval is not granted.</p> <p>This removes all indirect assignments obtained by the employee through the system role.</p>
QER   Attestation   AutoRemovalScope   ESetAssignment   RemoveRequestedRole	<p>If this configuration parameter is set, the request for the role through which the employee obtained the system role is canceled if attestation approval is not granted.</p> <p>This removes all indirect assignments obtained by the employee through this role.</p>
QER   Attestation   AutoRe- movalScope   ESetHasEntitlement	<p>Determines default behavior for automatic removal of system role assignments after attestation approval has been denied.</p>
QER   Attestation   AutoRe- movalScope   ESetHasEntitlement   RemoveDirect	<p>If this configuration parameter is set, company resource assignments to system roles are removed when attestation approval is denied.</p>
QER   Attestation   AutoRemovalScope	<p>Determines default behavior for automatic removing of united namespace system entitle-</p>

Configuration parameter	Description
GroupMembership	ments if attestation approval is not granted.
QER   Attestation   AutoRemovalScope   GroupMembership   RemoveDelegatedRole	<p>If this configuration parameter is set, it ends the role delegation through which the employee obtained the system entitlement if attestation approval is not granted.</p> <p>This removes all indirect assignments obtained by the employee through this role.</p>
QER   Attestation   AutoRemovalScope   GroupMembership   RemoveDirect	<p>If this configuration parameter is set, the direct user account membership in the system entitlement will be removed if attestation approval is not granted.</p>
QER   Attestation   AutoRemovalScope   GroupMembership   RemoveDirectRole	<p>If this configuration parameter is set, the system entitlement assignment to roles (organizations and business roles) is removed if attestation approval is not granted. This removes the system entitlement assignment to all user accounts whose associated employees are members of these roles.</p> <p><b>i</b> <b>IMPORTANT:</b> Employees whose attestation has been approved can lose the system entitlement through this.</p>
QER   Attestation   AutoRemovalScope   GroupMembership   RemovePrimaryRole	<p>If this configuration parameter is set, the primary role assignment through which the employee obtained the system entitlement is removed from the employee when attestation approval is not granted.</p> <p>This removes all indirect assignments obtained by the employee through this role.</p>
QER   Attestation   AutoRemovalScope   GroupMembership   RemoveRequested	<p>If this configuration parameter is set, the requested system entitlement is canceled if attestation approval is not granted.</p>
QER   Attestation   AutoRemovalScope   GroupMembership   RemoveRequestedRole	<p>If this configuration parameter is set, the request for the role through which the employee obtained the system entitlement is canceled when attestation approval is not granted.</p> <p>This removes all indirect assignments obtained by the employee through this role.</p>
QER   Attestation	<p>If this configuration parameter is set, the system</p>



Configuration parameter	Description
AutoRemovalScope   GroupMembership   RemoveSystemRole	<p>role assignment through which the employee obtained the system entitlement is removed from the employee when attestation approval is not granted.</p> <p>This removes all indirect assignments obtained by the employee through this system role.</p> <p><b>i</b> <b>NOTE:</b> This configuration parameter is only available if the System Roles Module is installed.</p>
QER   Attestation   AutoRemovalScope   LocalityHasESet	Determines default behavior for automatic removal of system role assignments to locations if attestation approval has been denied.
QER   Attestation   AutoRemovalScope   LocalityHasESet   RemoveDirect	If this configuration parameter is set, system role to location assignments are removed if attestation approval is not granted.
QER   Attestation   AutoRemovalScope   LocalityHasUNSGroup	Determines default behavior for automatic removal of system entitlement assignments to locations if attestation approval has been denied.
QER   Attestation   AutoRemovalScope   LocalityHasUNSGroup   RemoveDirect	If this configuration parameter is set, system entitlement to location assignments are removed if attestation approval is not granted.
QER   Attestation   AutoRemovalScope   OrgHasESet	Determines default behavior for automatic removal of system role assignments to business roles if attestation approval has been denied.
QER   Attestation   AutoRemovalScope   OrgHasESet   RemoveDirect	If this configuration parameter is set, system role to business role assignments are removed if attestation approval is not granted.
QER   Attestation   AutoRemovalScope   OrgHasUNSGroup	Determines default behavior for automatic removal of system entitlement assignments to business roles if attestation approval has been denied.
QER   Attestation   AutoRemovalScope   OrgHasUNSGroup   RemoveDirect	If this configuration parameter is set, system entitlement to business role assignments are removed if attestation approval is not granted.
QER   Attestation   AutoRemovalScope   ProfitCenterHasESet	Determines default behavior for automatic removal of system role assignments to system roles if attestation approval has been denied.
QER   Attestation   AutoRe-	If this configuration parameter is set, system

Configuration parameter	Description
movalScope   ProfitCenterHasESet   RemoveDirect	role to cost center assignments are removed if attestation approval is not granted.
QER   Attestation   AutoRemovalScope   ProfitCenterHasUNSGroup	Determines default behavior for automatic removal of system entitlement assignments to system roles if attestation approval has been denied.
QER   Attestation   AutoRemovalScope   ProfitCenterHasUNSGroup   RemoveDirect	If this configuration parameter is set, system entitlement to cost center assignments are removed if attestation approval is not granted.
QER   Attestation   AutoRemovalScope   PWOMethodName	Method to be executed on requests if the requested assignment is to be deleted when attestation approval is not granted.  The requests can be unsubscribed ( <b>Unsubscribe</b> ) or aborted ( <b>Abort</b> ). If the configuration parameter is not set, the requests are aborted by default.
QER   Attestation   AutoRemovalScope   RoleMembership	Determines default behavior for automatic removal of business role memberships if attestation approval is not granted.
QER   Attestation   AutoRemovalScope   RoleMembership   RemoveDelegatedRole	If this configuration parameter is set, it ends the business role delegation if attestation approval is not granted.  This removes all indirect assignments the employee obtained through this business role.
QER   Attestation   AutoRemovalScope   RoleMembership   RemoveDirectRole	If this configuration parameter is set, the employee secondary membership in the business role will be removed if attestation approval is not granted.  This removes all indirect assignments the employee obtained through this business role.
QER   Attestation   AutoRemovalScope   RoleMembership   RemoveRequestedRole	If this configuration parameter is set, the request for membership of the business role is canceled if attestation approval is not granted.  This removes all indirect assignments the employee obtained through this business role.
QER   Attestation   AutoRemovalScope   UNSGroupInUNSGroup	Specifies the default behavior for removing assignments from system entitlements to system entitlement is attestation approval is not granted.

Configuration parameter	Description
QER   Attestation   AutoRemovalScope   UNSGroupInUNSGroup   RemoveDirect	If this configuration parameter is set, the system entitlement assignment to a system entitlement is removed when attestation approval is not granted.
QER   Attestation   DefaultSenderAddress	This configuration parameter contains the sender email address for messages automatically generated for attestation.
QER   Attestation   MailApproval   Account	Name of the user account for authenticating the mailbox used for attestation by mail.
QER   Attestation   MailApproval   DeleteMode	Specifies the way emails are deleted from the inbox.
QER   Attestation   MailApproval   Domain	Domain of the user account for authenticating the mailbox used for attestation by mail.
QER   Attestation   MailApproval   ExchangeURI	Specifies the Microsoft Exchange Web Service URL. AutoDiscover mode is used to find the URL if it is not given.
QER   Attestation   MailApproval   Inbox	Microsoft Exchange mailbox. Approval mails for attestation by mail are sent to this mailbox.
QER   Attestation   MailApproval   Password	User account password for authenticating the mailbox used for attestation by mail.
QER   Attestation   MailTemplateIds   AnswerToApprover	This mail template is used to send a notification with an answer to a question from an approver.
QER   Attestation   MailTemplateIds   AttestationApproval	Mail template used for attestation by mail.
QER   Attestation   MailTemplateIds   InformAddingPerson	This mail template is used to notify approvers that an approval decision has been made for the step they added.
QER   Attestation   MailTemplateIds   InformDelegatingPerson	This mail template is used to notify approvers that an approval decision has been made for the step they delegated.
QER   Attestation   MailTemplateIds   NewExternalUserVerification	Mail template for sending a message with a verification link to a new external user.
QER   Attestation   MailTemplateIds   QueryFromApprover	This mail template is used to send a notification with a question from an approver to an employee.

Configuration parameter	Description
QER   Attestation   MailTemplateIds   RequestApproverByCollection	This mail template is used for generating an email when there are pending attestation for an approver. If this configuration parameter is not set, a <b>Mail template request</b> or <b>Mail template reminder</b> can be entered for single approval steps. This template is then sent for each individual attestation case. If this configuration parameter is set, single mails are not sent.
QER   Attestation   NewExternalUserFinalTimeoutInHours	Number of hours given for new external users to register (default: 24 hrs).
QER   Attestation   NewExternalUserTimeoutInHours	Number of hours that the access code and verification link for new external users are valid (default: 4 hrs).
QER   Attestation   OnWorkflowAssign	This configuration parameter specifies how pending attestation cases are handled when a new approval workflow is assigned to the approval policy.
QER   Attestation   OnWorkflowUpdate	This configuration parameter specifies how pending attestations are handled when the approval workflow is changed.
QER   Attestation   PersonToAttestNoDecide	This configuration parameter specifies whether employees to be attested are allowed to approve this attestation case. If the parameter is set, an attestation case cannot be approved by employees, which are contained in the attestation object (AttestationCase.ObjectKeyBase) or in the objects identifiers 1-3 (AttestationCase.UID_ObjectKey1, ObjectKey2 or ObjectKey3). If the parameter is not set, these employee are allowed to make approval decisions for this attestation case.
QER   Attestation   ReducedApproverCalculation	This configuration parameter specifies, which approval steps are recalculated if modifications require attestors to be redetermined.
QER   Attestation   UserApproval	Supports attestation procedures for regularly checking and confirming One Identity Manager users through their Manager.
QER   Attestation   UserApproval   InitialApprovalState	Certification status for new employees. If an employee is added with the certification status 1 = new, data attestation by the employee's

Configuration parameter	Description
	manager is started.
QER   CalculateRiskIndex	Preprocessor relevant configuration parameter controlling system components for calculating an employee's risk index. Changes to the parameter require recompiling the database.  If the parameter is enabled, values for the risk index can be entered and calculated.
QER   Employee   Defender	This configuration parameter specifies whether Starling Two-Factor Authentication is supported.
QER   Employee   Defender   ApiEndpoint	This configuration parameter contains the URL of the Starling 2FA API end point used to register new users.
QER   Employee   Defender   ApiKey	This configuration parameter contains your company's subscription key for accessing the Starling Two-Factor Authentication interface.
QER   Person   Defender   DisableForceParameter	This configuration parameter specifies whether Starling 2FA is forced to send the OTP by SMS or phone call if one of these options is selected for multi-factor authentication. If the configuration parameter is set, Starling 2FA can disallow the request and the user must request the OPT through Starling 2FA.
QER   WebPortal   BaseURL	Web Portal URL This address is used in mail templates to add hyperlinks to the Web Portal.
QER   WebPortal   PasswordResetURL	URL for the Password Reset Portal. This address is used to navigate.
Common   MailNotification   DefaultCulture	This configuration parameter contains the default language for email notifications if no language can be determined for the recipient.
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	User account name for authentication on an

<b>Configuration parameter</b>	<b>Description</b>
SMTPAccount	SMTP server.
Common   MailNotification   SMTPDomain	User account domain for authentication on the SMTP server.
Common   MailNotification   SMTPPassword	User account password for authentication on the SMTP server.
Common   MailNotification   SMTPPort	Port for SMTP services on the SMTP server (default: 25).
Common   MailNotification   SMTPRelay	SMTP server for sending notifications.
Common   MailNotification   SMTPUseDefaultCredentials	If this configuration parameter is set, the One Identity Manager Service credentials are used for authentication on the SMTP server. If this configuration parameter is not set, the login data stored in the configuration parameters <b>Common   MailNotification   SMTPDomain</b> and <b>Common   MailNotification   SMTPAccount</b> or <b>Common   MailNotification   SMTPPassword</b> is used.
Common   ProcessState   PropertyLog	When this configuration parameter is set, changes to individual values are logged and shown in the process view.

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

## Contacting us

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

## Technical support resources

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

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. The Support Portal enables you to:

- Submit and manage a Service Request
- View Knowledge Base articles
- Sign up for product notifications
- Download software and technical documentation
- View how-to-videos at [www.YouTube.com/OneIdentity](http://www.YouTube.com/OneIdentity)
- Engage in community discussions
- Chat with support engineers online
- View services to assist you with your product

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