



One Identity Manager 8.0.4

System Roles Administration Guide

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### Legend

-  **WARNING:** A WARNING icon indicates a potential for property damage, personal injury, or death.
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-  **IMPORTANT, NOTE, TIP, MOBILE, or VIDEO:** An information icon indicates supporting information.

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## Managing System Roles

System roles make it easier to assign company resources that are frequently required or rather that are always assigned together. For example, new employees in the finance department should be provided, by default, with certain system entitlements for Active Directory and for SAP R/3. In order to avoid a lot of separate assignments, group these company resources into a package and assign this to the new employee. The packages are referred to as system role in the One Identity Manager.

Using system roles, you can group together arbitrary company resources. You can assign these system roles to employees, workdesks or roles or you can request them through the IT Shop. Employees and workdesks inherit company resources assigned to the system roles. You can structure system roles by assigning other system roles to them.

One Identity Manager components for managing system roles are available if the configuration parameter "QER/ESet" is set.

- Check whether the configuration parameter is set in the Designer. Otherwise, set the configuration parameter and compile the database.

## One Identity Manager Users for Managing System Roles

The following users are used for managing system roles.

**Table 1: Users**

User	Task
Employee responsible for individual company resources	<p>The users are defined using different application roles for administrators and managers.</p> <p>Users with these application roles:</p> <ul style="list-style-type: none"> <li>• Create and edit system roles.</li> <li>• Assign system roles to departments, cost centers, locations, business roles or the IT Shop.</li> </ul>

User	Task
	<ul style="list-style-type: none"> <li>• Assign system roles to employees.</li> <li>• Assign system roles to workdesks.</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 the Designer, as required.</li> <li>• Create system users and permissions groups for non-role based login to administration tools, as required.</li> <li>• Enable or disable additional configuration parameters in the Designer, as required.</li> <li>• Create custom processes in the Designer, as required.</li> <li>• Create and configures schedules, as required.</li> <li>• Create and configure password policies, as required.</li> </ul>

## Basics for Calculating Inheritance

Any number of company resources and other system roles can be assigned to system roles. This mean you can structure system role hierarchically. The assignments are mapped in the table ESetHasEntitlement. The system role hierarchy is mapped through the relation UID\_ESet - Entitlement. This is stored in the table ESetCollection. All the system roles are listed that the given system role inherits from. Each role also inherits from itself.

The following relations apply in the table ESetCollection:

- UID\_ESet is the system role that inherits.
- It inherits from the system role UID\_ESetChild.

The table ESetHasEntitlement contains the direct assignment (X0origin = 1) and all system roles that are assigned to the child system roles (X0origin = 2). The company resources that are assigned to a child system role are not resolved until inheritance for employees, workdesks and hierarchical role is calculated.

### Related Topics

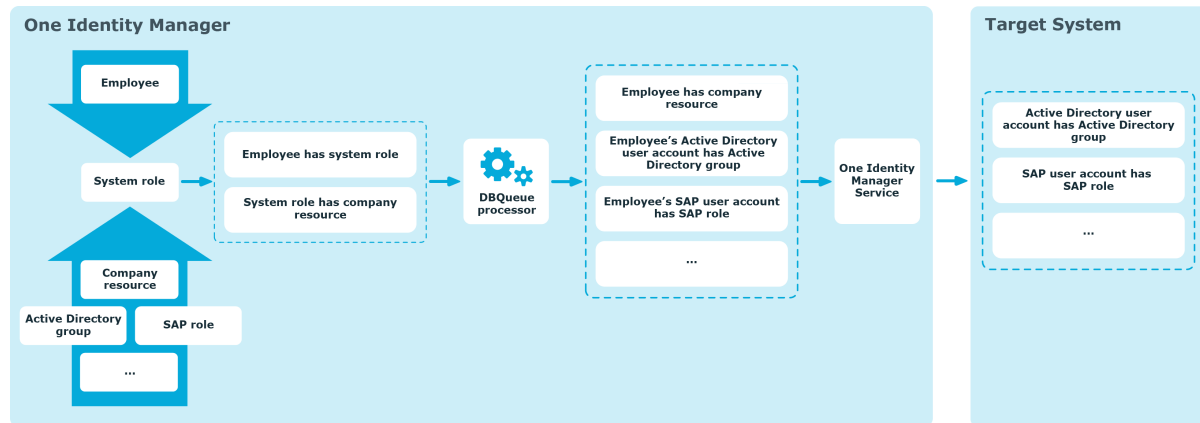
- [Example of a System Role Hierarchy](#) on page 24

## Technical Details of Calculating Inheritance

Objects assigned through inheritance are calculated by the DBQueue Processor. Tasks are added to the DBQueue when assignments relevant to inheritance are made. These tasks are processed by the DBQueue Processor and result in follow-on tasks for the DBQueue or

in processes for process component "HandleObjectComponent" in the Job queue. Resulting assignments of permissions to user accounts in the target system are inserted, modified or deleted during process handling.

**Figure 1: Overview of Inheritance Calculation**



## Details of Inheriting System Roles

System roles can be assigned to employees and workdesks in the following ways:

- Direct assignment
- IT Shop Request
- Hierarchical role inheritance
- Inheritance through dynamic roles

System role assignments are mapped in the table `ESetHasEntitlement`. Assignment of system roles to hierarchical roles are mapped in the table `BaseTreeHasESet`.

Employees can directly obtain system roles. Employees continue to inherit all (including inherited) the system roles belonging to all hierarchical roles of which they are members (table `PersonInBasetree`) as well as system roles of all hierarchical roles that are referenced through foreign key relations (table `Person`, column `UID_BaseTree`). Direct and indirect assignments of system roles to employees are mapped in the table `PersonHasESet`. - This behavior applies in the same way for assignments of system roles to workdesks.

An employee (workdesk, hierarchical role) inherits everything that is assigned to the assigned system role. Child system roles are resolved in this case. Prerequisite is that each company resource can really be inherited.

- The employee must own a user account in this target system in order to inherit a target system entitlement.

For more information about editing role classes, see the One Identity Manager Identity Management Base Module Administration Guide and the One Identity Manager Business Roles Administration Guide.

## Detailed information about this topic

- [Example of Inheritance Routes](#) on page 25

# Effectiveness of System Roles

By assigning system roles to employees, workdesks or hierarchical roles, an employee may obtain company resources, which should not be assigned in this combination. To prevent this, you can declare mutually exclusive system roles. To do this you specify which system role of a pair of system roles, should be take effect if both are assigned. No company resources are inherited by the system role which is not effective.

## Prerequisite

- The configuration parameter "QER\Structures\ExcludeStructures" is set.

It is possible, to assign employees, workdesks and company resources directly, indirectly or by IT Shop request to an excluded system role. This can be done at any time. One Identity Manager subsequently determines whether the assignment takes effect and the company resources are inherited.

### **i** NOTE:

- You cannot define a pair of mutually exclusive system roles. That means, the definition "System role A excludes System role B" AND "System role B excludes System role A" is not permitted.
- You must declare each system role to be excluded from a system role separately. Exclusion definitions cannot be inherited.

The effect of the assignments is mapped in the tables PersonHasESet, BaseTreeHasESet and WorkdeskHasESet through the column XIsInEffect.

- ### **i** NOTE:
- If a company resource assigned to an excluded system role, is assigned directly or indirectly to an employee or workdesk, the exclusion definition does not affect this company resource. The exclusion definition only applies to the system roles.

## Example for the Effectiveness of System Roles

- The system role "Marketing" contains all the applications and permissions for triggering requests.
- The system role "Finance" contains all the applications and permissions for instructing payments.
- The system role "Controlling" contains all the applications and permissions for verifying invoices.

Scenario:



Clara Harris directly assigns the system role "Marketing". She obtains the system role "Finance" and the system role "Controlling" through an IT Shop request. Clara Harris obtains all the system roles without an exclusion definition and therefore the associated permissions.

By using suitable controls, you want to prevent an employee from being able to trigger a request and also pay invoices. That means, the system roles "Finance" and "Marketing" are mutually exclusive. An employee that checks invoices may not be able to make invoice payments as well. That means, the system roles "Finance" and "Controlling" are mutually exclusive.

**Table 2: Specifying Mutually Exclusive System Roles (Table ESetExcludesESet)**

Effective business role	Excluded System Role
Finance	Marketing
Controlling	Finance

**Table 3: Effective Assignments**

Employee	Assigned system role	Effective business role
Ben King	Marketing	Marketing
Jan Bloggs	Marketing, finance	Finance
Clara Harris	Marketing, finance, controlling	Controlling
Jenny Basset	Marketing, Controlling	Marketing, Controlling

Only the system role "Controlling" is in effect for Clara Harris. If the system role "Controlling" is removed from Clara, the "Finance" system role assignment is reinstated.

Jenny Basset retains the system roles "Marketing" and "Controlling" because there is no exclusion defined between the two system roles. That means that the employee is authorized to trigger request and to check invoices. If you want to prevent that as well, define further exclusion for the system role "Controlling".

**Table 4: Excluded System Roles and Effective Assignments**

Employee	Assigned system role	Excluded System Role (UID_ ESetExcluded)	Effective business role
Jenny Basset	Marketing		Controlling
	Controlling	Finance Marketing	

### Detailed information about this topic

- [Effect of Exclusion Definitions](#) on page 27

## Related Topics

- [Excluding System Roles](#) on page 22

# Disabled System Roles

System roles can be disabled to temporarily to prevent, for example, employees and workdesks from inheriting their company resources. If a system role is disabled, the DBQueue Processor recalculates inheritance of its company resources. Existing assignments to employees and workdesks are removed. The disabled system role remains assigned, however, the assignment no longer has any effect (`PersonHasEntitlement.XIsInEffect = 0`). Once the system role is re-enabled, company resource inheritance is recalculated again. The company resources contained in the system role are assigned to employees and workdesks.

You cannot request a disabled system role in the Web Portal but you can assign it directly to employees, workdesks, hierarchical roles, dynamic roles and IT Shop shelves.


## Related Topics

- [General Master Data for System Roles](#) on page 12

## System Role Types


System role types identify the type of company resources that the system role is used to grouped together. You can, for example, define system role types for system roles in which you group different target system groups.

### ***To edit a system role type***

1. Select the category **Entitlements | Basic configuration data | System role types**.
2. Select the system role type in the result list. Select **Change master data** in the task view.  
– OR –  
Click  in the result list toolbar.
3. Enter a name and description for the system role type.
4. Save the changes.

## Editing System Roles

### To edit system roles

1. Select the category **Entitlements | System Roles**.
2. Select the system role in the result list. Select **Change master data** in the task view.  
- OR -  
Click  in the result list toolbar.
3. Edit the system role's master data.
4. Save the changes.

## General Master Data for System Roles

Enter the following data for a system role.

**Table 5: System Role Master Data**

Property	Description
Display Name	Name for displaying the system roles in One Identity Manager tools.
System role	Unique identifier for the system role.
Internal product names	An additional internal name for the system role.
System role type	Specifies the type of company resources, which comprise the system role.
Service item	In order to use a service item within the IT Shop, assign a service item to it or add a new service item. For more information about service items, see

Property	Description
	the One Identity Manager IT Shop Administration Guide.
System role manager	You can assign any employee to be a manager for the system role. This employee can edit system role master data. They can be used as attestors for system role properties.
Share date	<p>Specify a date for enabling the system role. If the date is in the future, the system role is considered to be disabled. If the date is reached, the system role is enabled. Employees inherit company resources that are assigned to the system role.</p> <p>If the share date is exceeded or no date is entered, the system role is handled as an enabled system role. Company resource inheritance can be controlled with the option <b>Disabled</b> in these cases.</p> <p><b>i</b> <b>NOTE:</b> Configure and set the schedule "Share system roles" in the Designer to check the share date. For more information about schedules, see the One Identity Manager Configuration Guide.</p>
Risk index (calculated)	Maximum risk index values for all company resources. This property is only visible if the configuration parameter "QER\CalculateRiskIndex" is set. For more information about calculating risk indexes, see the One Identity Manager Risk Assessment Administration Guide.
Comment	Spare text box for additional explanation.
Remarks	Spare text box for additional explanation.
Description	Spare text box for additional explanation.
Disabled	<p>Specifies whether employees and workdesks inherit the company resources contained in the system role.</p> <p>If this option is set, the system role can be assigned to employees, workdesks, hierarchical roles and IT Shop shelves. However they cannot inherit the company resources contained in the system role. The system role cannot be requested in the Web Portal.</p> <p>If this option is not set, company resources assigned to the system role are inherited. If the option is enabled at a later date, existing assignments are removed.</p>
IT Shop	Specifies whether the system role can be requested through the IT Shop. This system role can be requested by staff through the Web Portal and the request granted by a defined approval procedure. The system role can still be assigned directly to employees and hierarchical roles. For more information about the IT Shop, see the One Identity Manager IT Shop Administration Guide.
Only for use in IT	Specifies whether the system role can only be requested through the IT Shop. This system role can be requested by staff through the Web Portal

Property	Description
Shop	and the request granted by a defined approval procedure. The system role may not assigned directly to hierarchical roles.
Spare fields no. 01.....spare field no. 10	Additional company specific information. Use the Designer to customize display names, formats and templates for the input fields.

### Detailed information about this topic

- [Disabled System Roles](#) on page 10

## Assigning System Roles to Company Resources

Assign the company resources you want to group together into one package, to the system role. When you assign system roles to employees and workdesks, the company resources are inherited by the employees and workdesks.

- ① **NOTE:** Company resources with the option **Only use in IT Shop** can only be assigned to system roles that also have this option set.
- ① **NOTE:** Company resources are defined in the One Identity Manager modules and are not available until the modules are installed.

The following table lists the company resources you can assign to system roles.

**Table 6: Possible Assignments of Company Resources to System Roles**

Company Resource	Available in Module
resources	always
Account definitions	Target System Base Module
Groups of custom target systems	Target System Base Module
Active Directory groups	Active Directory Module
SharePoint Groups	SharePoint Module
SharePoint roles	SharePoint Module
LDAP groups	LDAP Module
Notes groups	IBM Notes Module
SAP groups	SAP R/3 User Management module Module

<b>Company Resource</b>	<b>Available in Module</b>
SAP profiles	SAP R/3 User Management module Module
SAP roles	SAP R/3 User Management module Module
Structural profiles	SAP R/3 Structural Profiles Add-on Module
BI analysis authorizations	SAP R/3 Analysis Authorizations Add-on Module
E-Business Suite entitlements	Oracle E-Business Suite Module
System Roles	System Roles Module
Subscribable reports	Report Subscription Module
Applications	Application Management Module
Azure Active Directory groups	Azure Active Directory Module
Azure Active Directory Administrator Roles	Azure Active Directory Module
G Suite groups	G Suite Module
G Suite products and SKUs	G Suite Module

#### ***To add company resources to a system role***

1. Select the category **Entitlements | System Roles**.
2. Select the system role in the result list.
3. Select the task to assign the corresponding company resource.
4. Assign company resources in **Add assignments**.  
- OR -  
Remove company resource in **Remove assignments**.
5. Save the changes.

## **Assigning System Roles to Workdesks and Employees**

You can assign system roles directly or indirectly to employees or workdesks. In the case of indirect assignment, employees (workdesks) and system roles are grouped into hierarchical roles. The number of system roles is calculated from the position in the hierarchy and the direction of inheritance assigned to an employee (or workdesk).

## Prerequisites for indirect assignment to employees

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

## Prerequisite for indirect assignment to workdesks

- Assignment of workdesks and system roles is permitted for role classes (department, cost center, location or business role).

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

**NOTE:** The company resources are not inherited if the system role is disabled or if the share date is still in the future.

## Detailed information about this topic

- [Assigning System Roles to Departments, Cost Centers and Locations](#) on page 16
- [Assigning System Roles to Business Roles](#) on page 17
- [Adding System Roles to the IT Shop](#) on page 18
- [Assigning System Roles directly to Employees](#) on page 19
- [Assigning System Roles directly to Workdesks](#) on page 20
- [Adding System Roles to System Roles](#) on page 20

## Related Topics

- [Assigning System Roles to Company Resources](#) on page 14
- [Details of Inheriting System Roles](#) on page 7
- One Identity Manager Identity Management Base Module Administration Guide

# Assigning System Roles to Departments, Cost Centers and Locations

Assign the system role to departments, cost centers and locations for it to be assigned to employees and workdesks through these organizations.

## ***To assign a system role to departments, cost centers and locations***

1. Select the category **Entitlements | System Roles**.
2. Select the system role in the result list.
3. Select **Assign organizations**.



4. Assign organizations in **Add assignments**.
  - Assign departments on the **Departments** tab.
  - Assign locations on the **Locations** tab.
  - Assign cost centers on the **Cost center** tab.- OR -

Remove the organizations from **Remove assignments**.
5. Save the changes.

**i** **NOTE:** Set the option **Direct assignments allowed** for role classes so that company resources assigned to the system role are inherited by departments, cost centers and locations. For more information about setting this option, see the One Identity Manager Identity Management Base Module Administration Guide.

## Related Topics

- [Assigning System Roles to Business Roles](#) on page 17
- [Adding System Roles to the IT Shop](#) on page 18
- [Assigning System Roles directly to Employees](#) on page 19
- [Assigning System Roles directly to Workdesks](#) on page 20

# Assigning System Roles to Business Roles

Installed Modules: Business Roles Module

Assign the system role to business roles so that the system role can be assigned to employees and workdesks through business roles.

### ***To assign a system role to business roles***

1. Select the category **Entitlements | System Roles**.
2. Select the system role in the result list.
3. Select **Assign business roles** in the task view.
4. Assign business roles in **Add assignments**.
  - OR -Remove business roles from **Remove assignments**.
5. Save the changes.

**i** **NOTE:** Set the option **Direct assignments allowed** for role classes so that company resources assigned to the system role are inherited by business roles. For more information about setting this option, see the One Identity Manager Business Roles Administration Guide.

## Related Topics

- [Assigning System Roles to Departments, Cost Centers and Locations](#) on page 16
- [Adding System Roles to the IT Shop](#) on page 18
- [Assigning System Roles directly to Employees](#) on page 19
- [Assigning System Roles directly to Workdesks](#) on page 20

# Adding System Roles to the IT Shop

A system role can be requested by shop customers when it is assigned to an IT Shop shelf. There are other prerequisites to take into account so that a system role can be requested.

- The system role must be labeled with the option **IT Shop**.
- The system role must be assigned to a service item.
- The system role must be also labeled with the option **Only use in IT Shop** if the system role can only be assigned to employees using IT Shop requests. Then, the system role may no longer be assigned directly to hierarchical roles.

### ***To add a system role to the IT Shop***

1. Select the category **Entitlements | System Roles**.
2. Select the system role in the result list.
3. Select **Add to IT Shop** in the task view.
4. Assign the system role to IT Shop shelves in **Add assignments**.
5. Save the changes.

### ***To remove a system role from individual IT Shop shelves***

1. Select the category **Entitlements | System Roles**.
2. Select the system role in the result list.
3. Select **Add to IT Shop** in the task view.
4. Remove the system role from the **IT Shop shelves in Remove assignments**.
5. Save the changes.

### ***To remove a system role from all IT Shop shelves***

1. Select the category **Entitlements | System Roles**.
2. Select the system role in the result list.
3. Select **Remove from all shelves (IT Shop)** in the task view.
4. Confirm the security prompt with **Yes**.

5. Click **OK**.

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

### Detailed information about this topic

- One Identity Manager IT Shop Administration Guide

### Related Topics

- [General Master Data for System Roles](#) on page 12
- [Assigning System Roles to Departments, Cost Centers and Locations](#) on page 16
- [Assigning System Roles to Business Roles](#) on page 17
- [Assigning System Roles directly to Employees](#) on page 19
- [Assigning System Roles directly to Workdesks](#) on page 20

## Assigning System Roles directly to Employees

System roles can be assigned directly or indirectly to a employees. Indirect assignment is carried out by allocating the employee and system roles in company structures, like departments, cost centers, locations or business roles.

To react quickly to special requests, you can assign system roles directly to employees. The employees obtain all company resources assigned to the system role.

**NOTE:** The company resources are not inherited if the system role is disabled or if the share date is still in the future.

### *To assign a system role directly to employees*

1. Select the category **Entitlements | System Roles**.
2. Select the system role in the result list.
3. Select **Assign to employees** in the task view.
4. Assign employees in **Add assignments**.  
- OR -  
Remove employees from **Remove assignments**.
5. Save the changes.

## Related Topics

- [Assigning System Roles to Departments, Cost Centers and Locations](#) on page 16
- [Assigning System Roles to Business Roles](#) on page 17
- [Adding System Roles to the IT Shop](#) on page 18
- [Assigning System Roles directly to Workdesks](#) on page 20

# Assigning System Roles directly to Workdesks

System roles can be assigned directly or indirectly to a contact. Indirect assignment is carried out by allocating the workdesk and system roles in company structures, like departments, cost centers, locations or business roles.

To react quickly to special requests, you can assign system roles directly to workdesks. The workdesks obtain all company resources assigned to the system role.

**i** **NOTE:** The company resources are not inherited if the system role is disabled or if the share date is still in the future.

### *To assign a system role directly to workdesks*

1. Select the category **Entitlements | System Roles**.
2. Select the system role in the result list.
3. Select **Assign workdesks** in the task view.
4. Assign workdesks in **Add assignments**.  
- OR -  
Remove workdesks from **Remove assignments**.
5. Save the changes.

## Related Topics

- [Assigning System Roles to Departments, Cost Centers and Locations](#) on page 16
- [Assigning System Roles to Business Roles](#) on page 17
- [Adding System Roles to the IT Shop](#) on page 18
- [Assigning System Roles directly to Employees](#) on page 19

# Adding System Roles to System Roles

Use this task to group different system roles into one package. This enables system roles to be structured from different view points.

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

### ***To assign a system role to system roles***

1. Select the category **Entitlements | System Roles**.
2. Select the system role in the result list.
3. Select **Assign system roles in the task view**.
4. Select the tab **System role contained in** to assign parent system roles.
  - Assign system roles in **Add assignments**.
  - OR -
  - Remove assignments to system roles in **Remove assignments**.
5. Select the tab **System role contains** to assign child system roles.
  - Assign system roles in **Add assignments**.
  - OR -
  - Remove assignments to system roles in **Remove assignments**.
6. Save the changes.

## **Additional Tasks for Managing System Roles**

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

### **System Role Overview**

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

#### ***To obtain an overview of a system role***

1. Select the category **Entitlements | System Roles**.
2. Select the system role in the result list.
3. Select **System role overview** in the task view.

# Assigning Extended Properties

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

## *To specify extended properties for a system role*

1. Select the category **Entitlements | System Roles**.
2. Select the system role in the result list.
3. Select **Assign extended properties** in the task view.
4. Assign extended properties in **Add assignments**.  
- OR -  
Remove extended properties from **Remove assignments**.
5. Save the changes.

## Detailed information about this topic

- One Identity Manager Identity Management Base Module Administration Guide

# Excluding System Roles

Specify, which system role of a pair of system roles, should be take effect if both are assigned. No company resources are inherited by the system role which is not effective.

## *To exclude system roles*

1. Select the category **Entitlements | System Roles**.
2. Select the system role in the result list.
3. Select **Edit conflicting system roles** in the task view.
4. Assign the system roles that are mutually exclusive to the selected system role in **Add assignments**.  
- OR -  
Remove the system roles that no longer mutually exclusive in **Remove assignments**.
5. Save the changes.

## Detailed information about this topic

- [Effectiveness of System Roles](#) on page 8

## Appendix: Configuration Parameters for System Roles

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

**Table 7: Configuration Parameters for the Module**

<b>Configuration parameter</b>	<b>Description</b>
QER\ESet	Preprocessor relevant configuration parameter for controlling the database model components for system roles. If this parameter is set, system components are available. The database has to be recompiled after changes have been made to the parameter.
QER\Structures\ExcludeStructures	Preprocessor relevant configuration parameter for defining the effectiveness of role memberships. If this parameter is set, mutually excluding roles can be defined. The database has to be recompiled after changes have been made to the parameter.

## Appendix: Example of System Role Inheritance

The following example shows how inheritance of company resources through system roles works and what effect exclusion definitions have.

### Example of a System Role Hierarchy

The following tables show how assignments to system roles and the system role hierarchy is mapped in One Identity Manager.

**Table 8: System Roles: Assignments (ESetHasEntitlement)**

System Role (UID_ESet)	Assignment System Role (Entitlement)	Origin (XOrigin)
System role A	System role A1	1
System role A	System role A2	1
System role A	System role A11	2
System role A	System role A12	2
System role A1	System role A11	1
System role A1	System role A12	1
System role A1	System entitlement	1
System role A2	Application	1
System role A11	Active Directory group	1
System role A12	SAP role	1
System role B	Resource	1

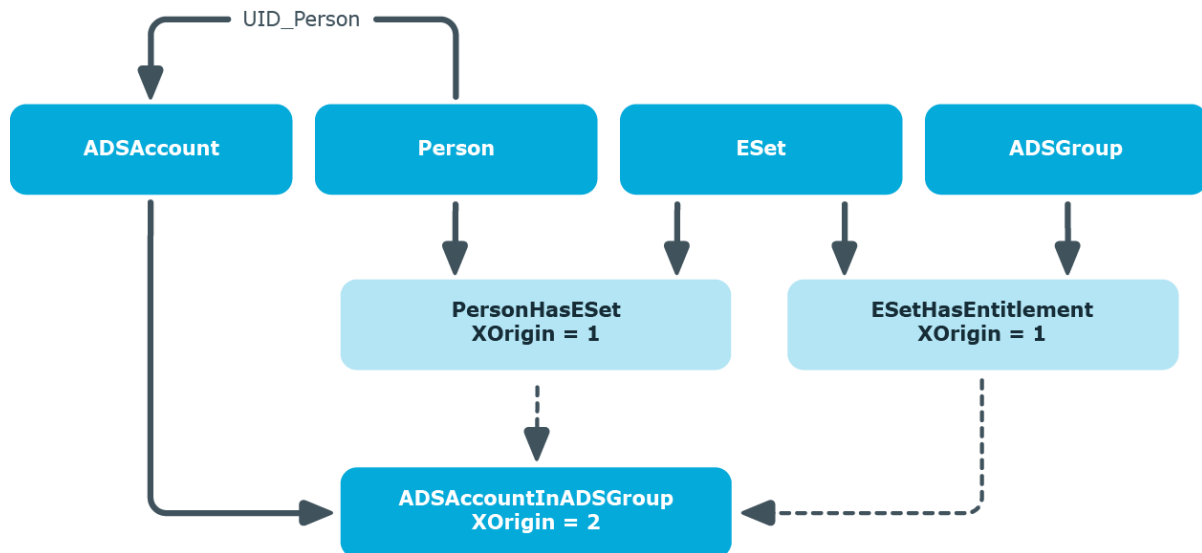


**Table 9: System Role Hierarchy (Table ESetCollection)**

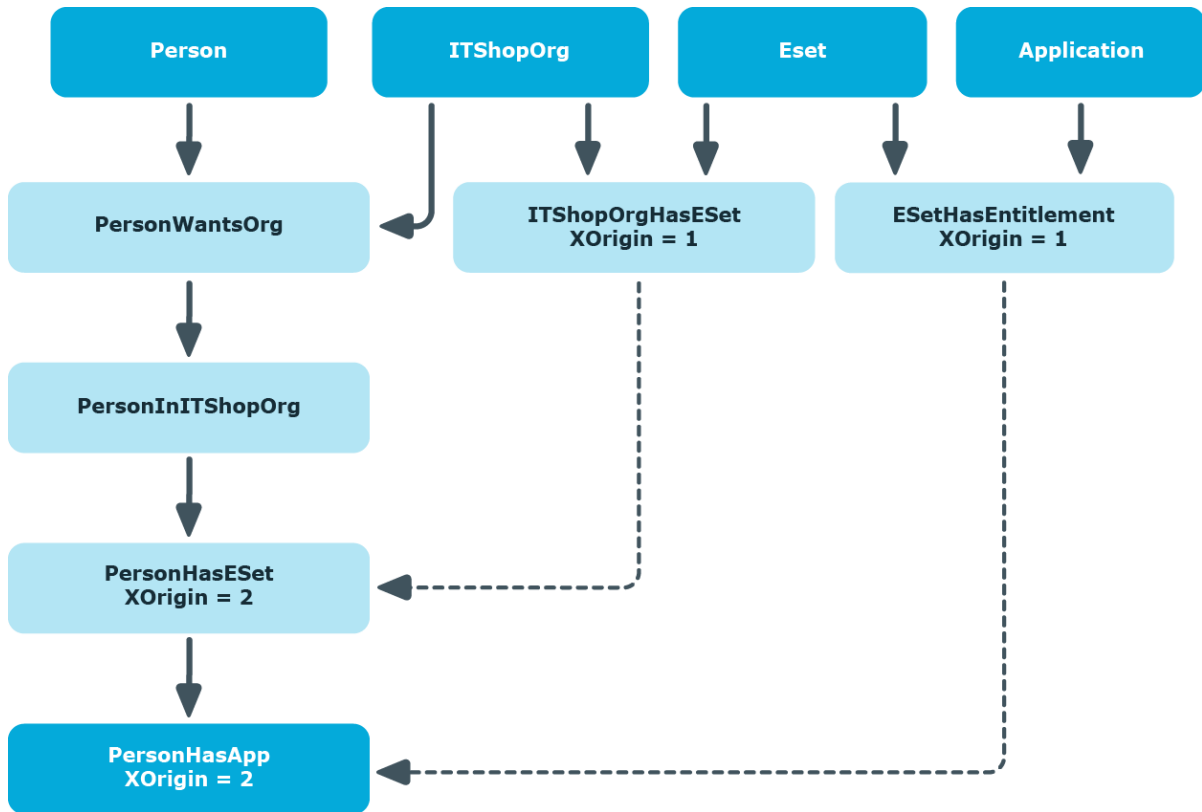
<b>System Role (UID_ESet)</b>	<b>Child System Role (UID_ESetChild)</b>
System role A	System role A
System role A	System role A1
System role A	System role A2
System role A	System role A11
System role A	System role A12
System role A1	System role A1
System role A1	System role A11
System role A1	System role A12
System role A11	System role A11
System role A12	System role A12
System role A2	System role A2
System role B	System role B

## Example of Inheritance Routes

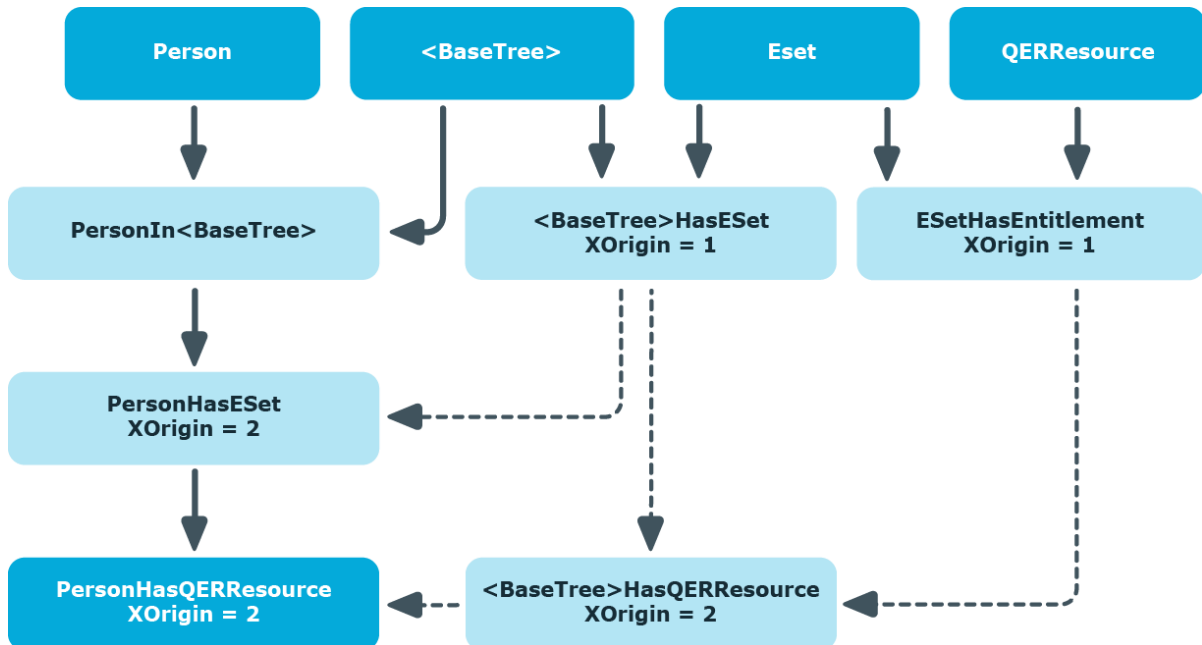
**Figure 2: Inheriting an Active Directory Group through a Directly Assigned System Role**



**Figure 3: Inheriting an Application through an IT Shop Request**



**Figure 4: Inheriting a Resource through an Indirectly Assigned System Role**



# Effect of Exclusion Definitions

The following images show how exclusion excluding a system role affects how inheritance is calculated. Excluded system roles can still be assigned to employees. An option on the column `XIsInEffect` defines whether this assignment applies. Assigning an excluded system role leads to the entry `XIsInEffect = 0`, if the other system role from the exclusion definition is assigned at the same time.

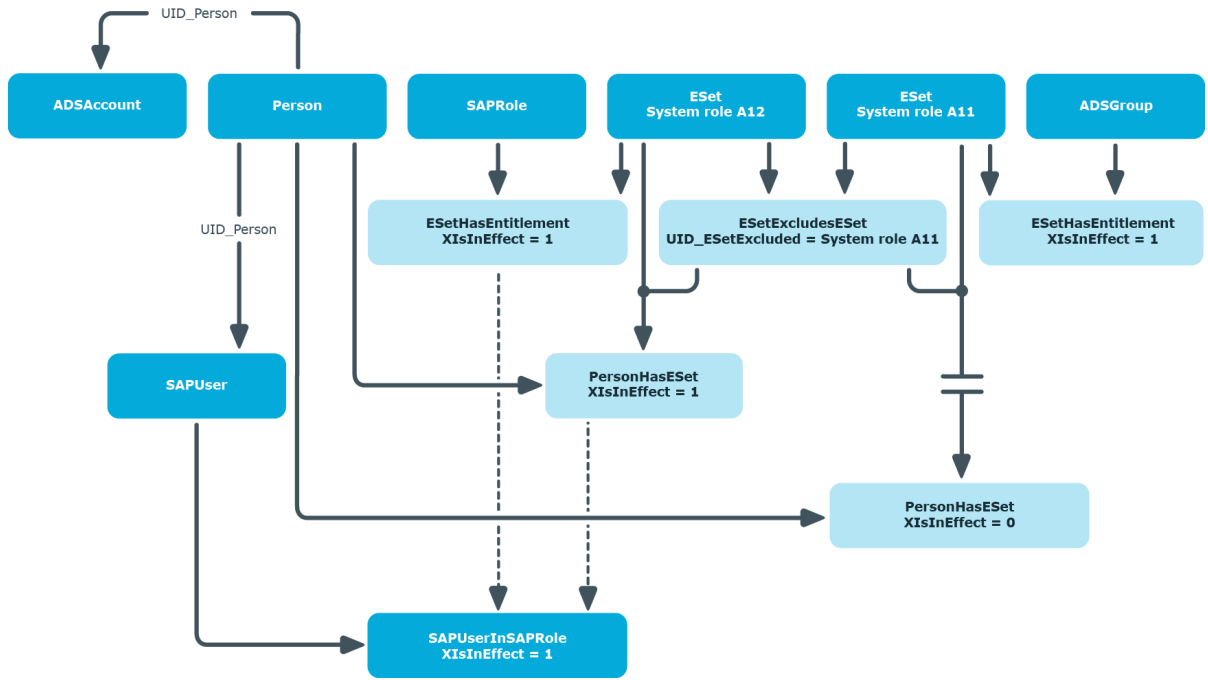
**Table 10: Excluded System Roles (Table `ESetExcludesESet`)**

System role (UID_ESet)	Excluded System Role (UID_ESetExcluded)
System role A12	System role A11
System role B	System role B1
System role B	System role A2

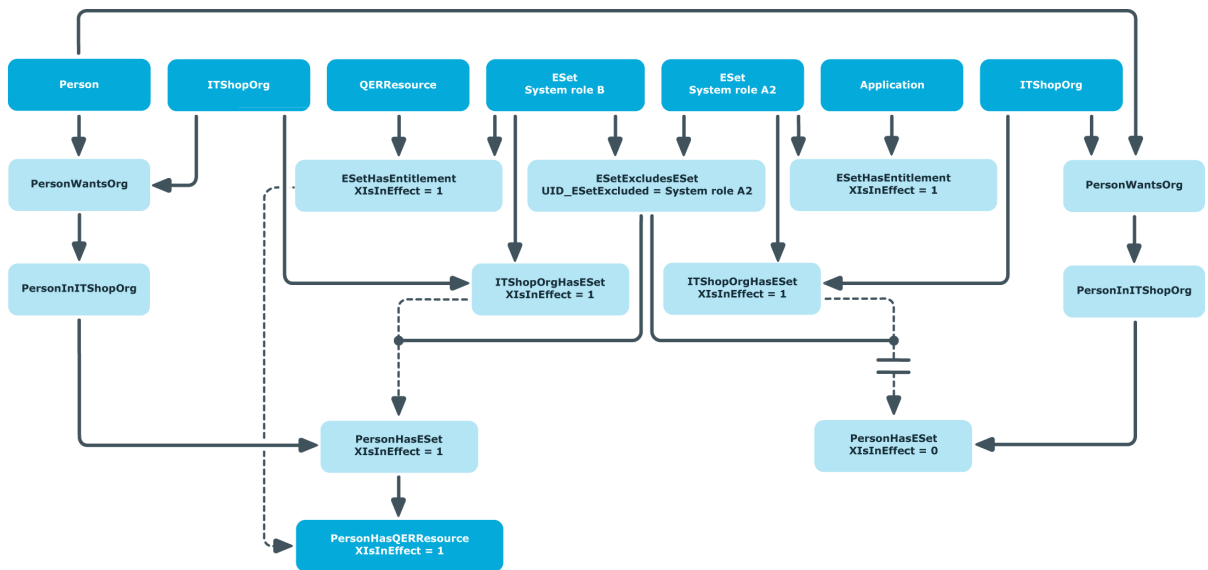
**Table 11: System Roles: Inheritance (Table `ESetHasEntitlement`)**

System role (UID_ESet)	Assignment System Role (Entitlement)	Assignment Applies (XIsInEffect)
System role A	System role A1	1
System role A	System role A2	1
System role A	System role A11	0
System role A	System role A12	1
System role A1	System role A11	0
System role A1	System role A12	1
System role A2	Application	1
System role A11	Active Directory group	1
System role A12	SAP role	1
System role B	Resource R1	1
System role B1	Resource R2	1

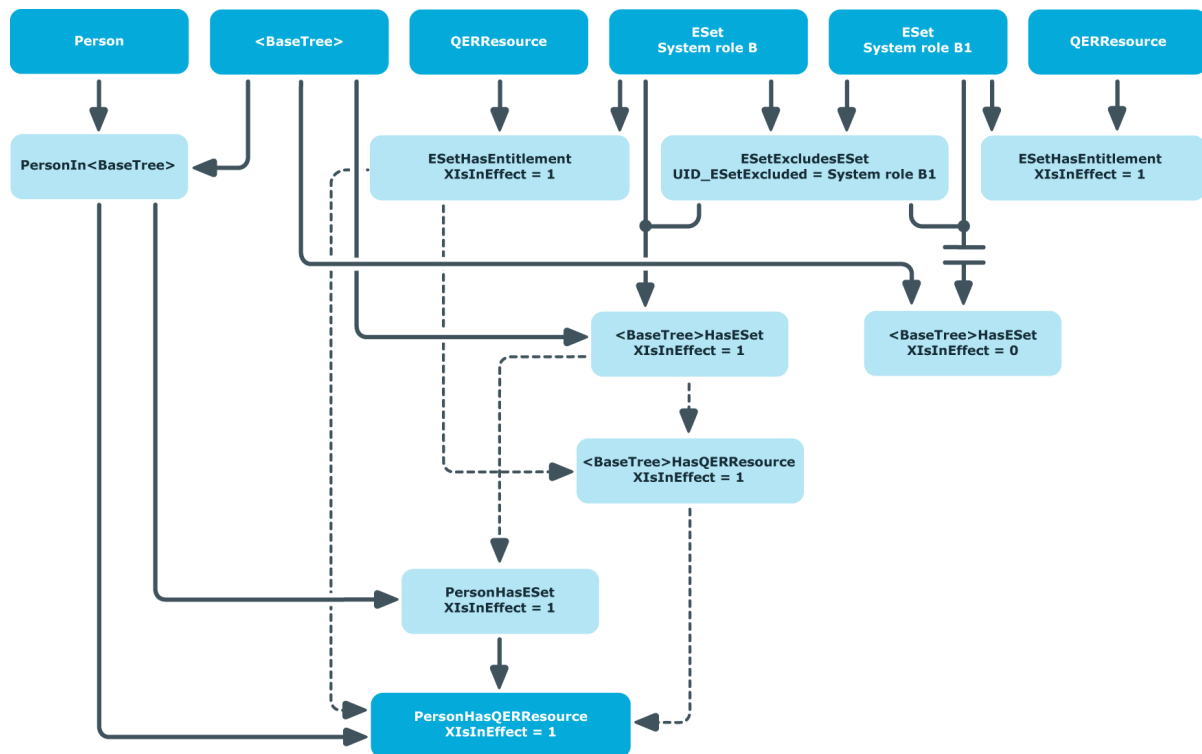
**Figure 5: Inheritance through Directly Assigned System Roles**



**Figure 6: Inheritance through an IT Shop Request**



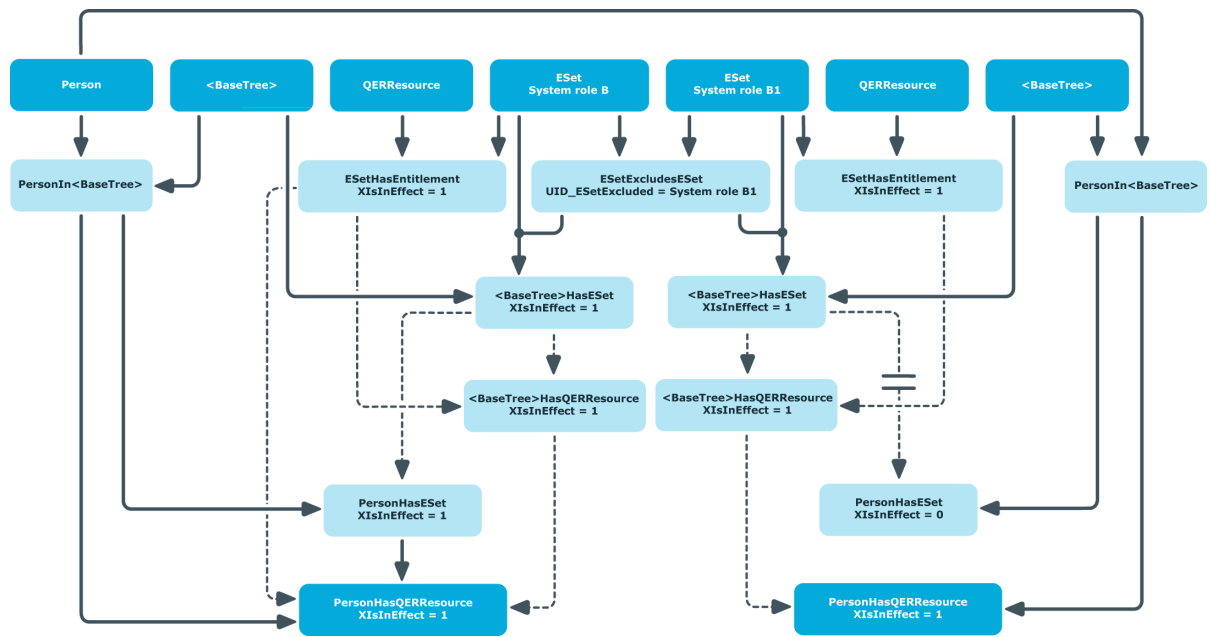
**Figure 7: Inheritance through Indirectly Assigned System Roles**



### Features of inheriting through different hierarchical roles

System roles with effective assignments are resolved when inheritance is calculated for hierarchical roles (`BaseTreeHasESet.XIsInEffect = 1`). If mutually exclusive system roles are assigned to different hierarchical roles, both assignments are effective. This makes the resulting company resource assignments to hierarchical roles also effective. If an employee is a member of both hierarchical roles, the company resources of the excluded system role are inherited by this employee.

**Figure 8: Inheritance through Different Hierarchical Roles**



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- Sign up for product notifications
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- View how-to videos at [www.YouTube.com/OneIdentity](http://www.YouTube.com/OneIdentity)
- Engage in community discussions
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- View services to assist you with your product

## A

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## C

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    pass down 6, 10, 25  
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## D

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## M

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