SAP CPS Security Guide

Version M28.19-36439

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Chapter 1. Managing Roles and Users

SAP CPS features a simplified security model based on built-in Redwood roles. Users and roles from external authentication systems are used to access the user interface, it is not possible to create users or roles inside SAP CPS. Basic privileges can be granted inside the authentication system, via the built-in roles; the process depends on the authentication system you are using. Fine-grained privileges can then be granted in the user interface to custom roles that you previously created in the external authentication system.

This section contains the following topics:

Isolation Users and Objects

With an isolation group, a user is limited to interacting with objects of the same isolation group. Isolation groups are linked to partitions and to the *ProcessServerService.SAP.limit* license key. Every isolation group requires its shared partition. When this license key is set to `0`, you can create as many isolation groups as you want.

Every user has an isolation group. A user with an isolation group can only see users and objects of his enabled isolation group or the `GLOBAL` isolation group, provided he has the required system and/or object privileges. Objects inherit the isolation group of the partition in which they are stored. Regardless of privileges, a user will never be able to see or access an object with a `non-GLOBAL` isolation group if he does not have the same isolation group, enabled for the session, as the object.

This means that, when you log on, you choose your enabled isolation group for the session (if you have more than one) and this isolation group allows you to access objects which have the `GLOBAL` isolation group or the same one as your enabled one.

To create isolation groups, refer to the Assign Isolation Groups section of the documentation.

Partitions

Partitions are used to store objects in the repository and isolate them from one-another together with isolation groups. Partitions are known as shared when they have an isolation group that is null.

If the *ProcessServerService.SAP.limit* license key is set to `0`, the following restrictions are in place:

- one SAP System may be created per partition with one XBP client.

- any partition with a `null` isolation group is read-only.

- only the system can create partitions with a `null` isolation group.

- all monitors from SAP (vi XAL) will be created in the appropriate isolation group.

- SAP batch event will raise events in the isolation group only.

- job control rules will function only for jobs from the defined XBP client, child jobs will be picked up regardless in which client they were created.

- variant management will be limited to the defined XBP client.

- BW restart will be possible, however, it requires the ProcessServerService.SAP.ProcessChainRestart license key

- Mass activities will be possible, however, they require the ProcessServerService.SAP.MassActivities license key

- Redwood transports will be available for mass activities

- SAP Applications API will be available, however, they require the ProcessServerService.SAP.ApplicationsAPI license key

- SAP_AbapRun, SAP_BW_ProcessChainRun and all the other SAP job definitions that run jobs will only allow ABAP reports, variants, and process chains that have been imported into SAP CPS

Managing Users and Roles in External Systems

Users and roles are created in external systems, how you proceed depends on the authentication system you use:

- Security in SAP NetWeaver

See Also

- Managing Users and Roles in SAP CPS

Security in SAP NetWeaver

The scheduler integrates with UME to determine which users have at least one of the following two actions:

- redwood.com/Scheduler.AccessScheduler - access only.

- redwood.com/Scheduler.ManageScheduler - manage the scheduler.

Roles with these actions are managed in UME. The following two sections illustrate how to assign roles and isolation groups to users:

- [Assigning Isolation Groups](#)

- [Assigning Roles](#)

As soon as users with one of the above actions log on for the first time, objects are automatically created. Any role that has any of the above actions, will be created in SAP CPS as soon as a user with that role logs on. The isolation administrator can also add users from UME. Authorizations are synchronized at login-time, so changes will be effective upon the next login.

Coarse-grained permission assignment is managed in UME, by creating a role matching the following role names and assigning it the *redwood.com/Scheduler.AccessScheduler* action.

- `scheduler-administrator` - can perform all actions.

- `scheduler-event-operator` - can raise and clear events.

- `scheduler-job-administrator` - can create/edit/delete event definitions, job definitions, job chains. Can modify jobs.

- `scheduler-user` - has access to SAP CPS only, cannot see any objects.

- `scheduler-viewer` - read only access to all objects.

- `scheduler-isolation-administrator` - can create/edit/delete isolation groups and add users to these.

- `scheduler-screen-reader` - indicates that you are using a screen reader.

Fine-grained permission assignment can be done inside SAP CPS by [assigning permissions](#) to users or custom roles created in UME. It is not possible to change the above roles from within SAP CPS.

See Also

- [Isolation Groups](#)

- [System Privileges](#)

- [Object Privileges](#)

Creating Users in SAP NetWeaver

User objects represent users of the system and can have roles granted to them in order to have privileges to perform actions.

Users are part of the Security section in the navigation bar. The following standard users are provided with SAP CPS:

- *Redwood System* - a user that represents the system.

Users are imported automatically from the SAP User Management Engine (UME) as soon as they log on for the first time and kept in sync with UME at each login. This synchronization only occurs one way, from UME to SAP CPS. Users are created in UME and cannot be created in SAP CPS. They must have the following action assigned to at least one of their roles to get read-only access:

- *redwood.com/Scheduler.AccessScheduler*

Administrator users additionally have the UME role `scheduler-administrator` or the following action assigned to one of their roles:

- *redwood.com/Scheduler.ManageScheduler*

To view all the available users, choose *Security > Users* in the Navigation bar.

You can enable and disable login for a user; when you disable login for a user, the user will be notified at the next login attempt that the user has no access to the system.

Prerequisites

- A user account and password with appropriate privileges for managing users in the SAP NetWeaver system where SAP CPS was installed.

- The URL to the *User Management interface* of the SAP NetWeaver system where SAP CPS was installed.

Procedure

Create a user in SAP NetWeaver UME

1. Connect to the *User Management interface* in SAP NetWeaver where SAP CPS was installed.

2. Choose *Create User* and fill in the data.

3. Add this user to at least one of the roles created during the installation of SAP CPS.

4. Log on with this user in SAP CPS.

Disable a user from logging into SAP CPS

1. Navigate to *Security > Users*.

2. Choose *Disable Login* from the context menu of the user

Values

- *Name* - The name of the user.

- *Description* - The description of the user.

- *Comment* - A comment about the user.

- *Creation Time* - The time the user ID was created.

- *Last Modification time* - The last time the user ID was modified.

Creating Roles in SAP NetWeaver

A role is a set or group of privileges that can be granted to users or other roles. Roles are part of the *Security* section in the navigation bar.

The following standard roles are provided with SAP CPS:

- `scheduler-administrator` - can perform all actions, except manage isolation groups

- `scheduler-event-operator` - can raise events

- `scheduler-job-administrator` - can create/edit/delete event definitions, job definitions, job chains and modify jobs

- `scheduler-user` - has access to SAP CPS only, cannot see any objects

- `scheduler-viewer` - read only access to all objects

- `scheduler-isolation-administrator` - can create/edit/delete isolation groups and add users to these

- `scheduler-screen-reader` - indicates that you are using a screen reader

These are the standard roles, it is not possible to create roles directly in SAP CPS, or edit the standard roles. You create a role with the corresponding name in the UME, assign it the *redwood.com/Scheduler.AccessScheduler* action and grant it to SAP CPS users. Once you grant these roles to users in the UME, the users will get the corresponding SAP CPS roles granted and have the privileges granted to these roles as soon as they log on or the isolation administrator adds them to an isoation group.

The UME also allows you to grant SAP CPS privileges directly to roles via the following actions:

- *redwood.com/Scheduler.AccessScheduler* - read-only access, all roles that you want to use in SAP CPS must have this action assigned.

- *redwood.com/Scheduler.ManageScheduler* - scheduler Administrator (same as `scheduler-administrator` role)

- *redwood.com/Scheduler.ManageSchedulerIsolation* - isolation group administrator (same as `scheduler-isolation-administrator` role); you are not allowed to grant the *redwood.com/Scheduler.ManageScheduler* action to the same role.

SAP strongly recommends you start by creating the above roles in the UME and assign them the *redwood.com/Scheduler.AccessScheduler* action. Once that is done, you grant these roles to users. If the roles do not exactly suit your needs, create custom roles (with names that do not match the above roles) in the UME and assign them the same action; these roles will be editable in SAP CPS and allow you to extend privileges of users.

Granting Privileges

You can grant privileges to custom roles. Custom roles are recognizable by the name (it is not allowed to be one of the above) as well as the description and comment fields, which contain *Created automatically on first login*.

Some privileges are not dependent on a partition or isolation group, these are known as global Privileges.

You grant specific privileges to roles for each object type; available privileges are dependent on the object. These privileges are known as system privileges and are granted via the role object. There are two levels at which you can grant system privileges, *Access* and *Admin*. Privileges granted with the *Admin* level allow the grantee to grant the privileges to other users.

You can also grant privileges for specific objects on object-level to users or roles, these are known as object privileges and are granted via the *Security* tab on the object.

The following topics in the Security Guide and Administration Guide provide more information on privileges and how you grant them:

- System Privileges

- Object Privileges

- [Granting and Revoking System Privileges](#)

- [Granting or Revoking Object Privileges](#)

Prerequisites

- The URL to the NetWeaver UME. Usually http://<host>:<port>/useradmin

- An account with sufficient privileges to create a role and add members to the role.

- The username and password of a user you add to the role.

- A Scheduler Manager user account for SAP CPS

Procedure

Creating a role to map to a SAP CPS role

1. Connect to the *UME* in SAP NetWeaver where SAP CPS was installed.

2. Choose *Role* in the drop-down box for *Search Criteria*.

3. Choose *Create Role* and enter a name of one of the SAP CPS roles into the *Unique Name* field.

4. Choose the *Assigned Actions* tab.

5. Search for scheduler and choose the action name *redwood.com/Scheduler.AccessScheduler*, choose *Add* and *Save*.

6. Log out of the *UME*.

Creating a custom role to manage isolation groups in the UME

1. Connect to the *UME* in SAP NetWeaver where SAP CPS was installed.

2. Choose *Role* in the drop-down box for *Search Criteria*.

3. Choose *Create Role* and enter a role name in the *Unique Name* field, SAP recommends to prefix the role name with scheduler as it will be easier to distinguish the role fro other roles in the UME .

4. Choose the *Assigned Actions* tab.

5. Search for scheduler and choose the action names *AccessScheduler* and *ManageSchedulerIsolation*.

6. Choose *Add* and *Save*.

7. Log out of the *UME*.

Editing a custom role in SAP CPS

1. Navigate to *Security > Roles*.

2. Choose *Edit* from the context menu of an editable role.Editable roles have a description: *Created automatically on first login*.

3. On the *Assign Privileges* tab, choose an Object definition and then *Next*.

4. Choose the desired range of the privileges.

5. Choose a *Rank* with the desired privileges. *Admin* privileges allow the user to perform the action and to grant the privilege to others as well. *Access* privileges allow the user to perform the actions.

Assigning a user to a role

1. Connect to the *UME* in SAP NetWeaver where SAP CPS was installed.

2. Fill in the *Search Criteria* field and locate the user.

3. Choose the user, and choose the *Assigned Roles* tab.

4. Search for one of the roles previously created, and choose *Add*.

5. Choose *Add* and *Save*.

6. Log out of the *UME*.

Values

Assign Privileges

- *Object Definition* - The role name.

- *Grantable* - If this option is selected, the user can grant this role to any other user.

Assigned Global Privileges

- *Granted Subject* - The privilege name.

- *Grantable* - If this option is selected, the user can grant this privilege to any other user.

Example

- The URL to the NetWeaver UME http://sapnwprd.masalan.com:50200/useradmin

- The account with sufficient privileges to create a role and add members to the role is Administrator

- The username and password of the user to add to the role is masalan and process1 respectively, created previously.

- The Scheduler Manager user account is ProcAdmin.

Creating a role that maps to the *scheduler-event-operator* SAP CPS role

1. Connect to http://sapnwprd.masalan.com:50200/useradmin using the Administrator login

2. Choose *Role* in the drop-down box for *Search Criteria*.

3. Choose *Create Role* and enter *scheduler-event-operator* into the *Unique Name* field.

4. Choose the *Assigned Actions* tab.

5. Search for scheduler and choose the action name *AccessScheduler*, choose *Add* and *Save*.

6. Log out of the *UME*.

Managing Users and Roles in SAP CPS

Users and roles are defined in external authentication systems, however, you can manage certain SAP CPS-specific aspects of these in SAP CPS. The user or the role must to appear in SAP CPS.

Users

You can disable and enable login for users, this only affects SAP CPS and has no incidence on other applications running on the J2EE application server. In isolated environments, users can be members of one or more isolation groups, this can be managed by the isolation group manager.

Roles

Only custom roles, or roles that were not built-in, can be edited.

Actions

Users support the following actions:

Action	Description
Enable login for user	Enable login for a disabled user
Disable login for user	Disable login for an enabled user
Edit	Edit the user's privileges
Expand All	Expand all users in the current filter
Import Users	Import users into an isolation group, you need to be the isolation group manager to be able to import users

Roles support the following actions:

Action	Description
Edit	Edit the role's privileges
Expand All	Expand all roles in the current filter

See Also

- [Managing Users and Roles in External Systems](#)

Creating Isolation Groups and Assigning them to Users

With an isolation group, a user is limited to interacting with objects of the same isolation group as well as objects from the GLOBAL isolation group. You assign users to [isolation groups](#) in the Security section in the navigation bar. The user must either have the role *scheduler-isolation-administrator* or a custom role granted which has the *redwood.com/ManageSchedulerIsolation* action to be able to add users to an isolation group. Users can have multiple isolation groups; in this case, the user needs to choose an isolation group for the session during login.

Note

In the Free of Charge version, only one SAP client can be in an isolation group. This is governed by the value of the *ProcessServerService.SAP.limit* [license key](#).

Prerequisites

- the user needs the role *scheduler-isolation-administrator* or a custom role granted which has the *redwood.com/Scheduler.AccessScheduler* action.

Procedure

Create an isolation group

1. Navigate to *Security > Isolation Groups*.

2. Choose *New* from the context menu.

3. Enter a name for the isolation group. Names should be all upper case.

4. Choose *Save & Close* to exit edit dialog.

Assign an isolation group to users

1. Navigate to *Security > Isolation Groups*.

2. Choose *Import Users*

3. Use the search dialog to locate users from the Authentication system, wildcard * and ? are allowed.

4. Select the users to import and choose Import.

5. Close the window when you are finished importing users into the isolation group.

Assign Users from External Platforms to Jobs

To run jobs on external platforms as a specific user, you can specify the user and password in the job definition *Run As User* field and you can use credentials. Credentials are used to store login details for users on external systems in both a central and secure manner. When the password of a user changes, you can change it on the credential, which takes effect immediately; if you had specified the user explicitly on job definitions, you would have to change the password on every job definition, this is error-prone. Credentials are part of the *Security* section of the navigation bar.

Note

SAP strongly recommends the use of credentials over specifying a username and password in the *Run As User* field.

The built-in *login* [credential protocol](#) is used to authenticate users against the remote system defined in *Endpoint*.

Note

The value in *Endpoint* must match the value of the *RemoteHostName* [process server parameter](#) for the corresponding process server The central server must be able to resolve the hostname entered.

Actions

Credentials support the following actions:

Action	Description
Edit	Edit the credential
Edit Security	Edit the security of the credential
Delete	Delete the credential
Expand All	Expand all credentials in the current filter
New	Create a new credential

Standard Credentials

With standard credentials, you specify the username in the *Run As User* field of a job definition. When the job gets allocated to a process server, SAP CPS retrieves the credential by searching for a credential where the following conditions are met:

- the process server parameter *RemoteHostName* matches the value of *Endpoint*

- the value of the *Run As User* matches the value of *Real User*

The *Password* is used in combination with the value of *Run As User* to log on and execute the code in the job.

When either fails, the job is put into status *Error*, as no password could be found for the user on that system.

You use standard credentials, when the usernames and passwords of specific users are the same across systems.

Virtual Credentials

Virtual credentials allow you to specify a user across several systems by the same name although their username and password are different. When the job gets allocated to a process server, SAP CPS retrieves the credential by searching for a credential which meet the following conditions:

- the process server parameter *RemoteHostName* matches the value of *Endpoint*

- the value of the *Run As User* matches the value of the *Virtual User* (the `{Virtual}:` prefix is trimmed)

The *Real User* and *Password* from the credential are the used to log on and execute the code in the job.

When either fails, the job is put into status error, as no username and password could be found for the user on that system.

You use virtual credentials, when the usernames and passwords of specific users are different across systems.

For example, all your systems could have a virtual user named `erpuser` which has a different username and password on one or more systems. In the *Run As User* field of the job definition you can then specify `{Virtual}:erpuser`. The credential with the *Virtual User* `erpuser` will be used, the actual username and password can be different across systems, see the example below.

Syntax

When you need to specify a standard credential in the *Run As User* field of a job definition, provide just the username of the user for Unix and VMS systems. On windows, you might need to specify a windows domain, use *[domain\]username*, for example *masalan\jdoe*.

On Windows, the syntax without credentials for the *Run As User* is *[domain\]username/password*, for example *masalan\jdoe/mysecret* or *jdoe/mysecret*; on UNIX and OpenVMS it is *username*.

Summary

	Standard Credentials	**Virtual Credentials**
Run As User value	username	{Virtual}:vuser
Lookup by	Username=username EndPoint=Remote-HostName	VirtualUser=vuser EndPoint=RemoteHost-Name
Result	Password	Username Password

Security

To use a credential, the user must have sufficient privileges, like *Credential.view* system privileges or corresponding object privileges.

To create a credential, you need to have privileges to see the credential protocol you want to use.

Privilege	**Description**
Credentials.Create	Create credentials
Credentials.Delete	Delete credentials
Credentials.Edit	Edit credentials
Credentials.View	Access credentials

You can grant privileges on two levels, *Access* and *Admin;* a privilege granted on *Admin* level allows the grantee to grant the privilege to other users. These privileges can be granted *system-wide*, per *partition* or *isolation group*.

You specify which users can access, edit, and delete the credential on the *Security* tab of the credential.

- Granting and Revoking System Privileges

- Granting or Revoking Object Privileges

Note

Please be very careful when you create credentials, make sure that only specific users can use them. A credential allows you to log onto a system without a password and can potentially cause havoc if you are not careful.

Procedure

Create a credential

1. Navigate to *Security > Credentials*

2. Choose *New* from the context menu, fill a hostname into the *Endpoint* field (hostname must match the *RemoteHostName* process server parameter).

3. Specify the username and password, which in most cases are case-sensitive.

4. Choose *Save and Close*.

Use a credential

1. Navigate to *Definitions > Job Definitions*.

2. Choose *Edit* from the context menu of a job definition that runs on an external platform.

3. On the *Source* tab, enter the username of the user provided in a credential.

4. Submit the job and choose a queue that is served by a process server running on the *Endpoint* specified in the credential.

Values

Field	Description
Protocol	The protocol used for the credential, *login* is the default
Endpoint	The hostname of the system where the user is valid; this must be set to the same value as the *RemoteHostName* process server parameter
Real User	The username of the user on the endpoint
Password	The password of the user on the endpoint
Virtual User	The virtual username for the user

Example

The production ERP system at Masalan Inc has an additional development and a quality assurance system; job definitions are developed and tested before they reach production. To ease the pain of migration, Masalan Inc uses the virtual user property of their credentials. The following accounts are used to run the jobs on the different systems:

- `pr1adm` - production system

- `qa1adm` - quality assurance system

- `dv1adm` - development system

Note

The use of administrative SAP users is for illustration purposes only, you should not use these accounts without your SAP Administrator knowing.

In the development system, you create a credential as follows:

Field	Value
Protocol	login
Endpoint	dv1.masalan.com
Real User	dv1adm
Password	someGoodSecret
Virtual User	erpuser

In the quality assurance system, you create a credential as follows:

Field	Value
Protocol	login
Endpoint	qa1.masalan.com

Real User	`qaladm`
Password	`someGoodSecret`
Virtual User	erpuser

In the production system, you create a credential as follows:

Field	Value
Protocol	login
Endpoint	`pr1.masalan.com`
Real User	`pr1adm`
Password	`someGoodSecret`
Virtual User	erpuser

Job definitions that need to run as the environment-specific user contain `{Virtual}:erpuser` in the *Run As User* field; the job definition can be migrated without the need to change the *Run As User* field as in each system, the correct user is used to execute the code.

Privileges

There are two types of privileges, object privileges and system privileges. Object privileges can be granted for a specific object. System privileges can be granted for object types in the entire system, in a partition or an isolation group and allow you to limit the privilege to objects in a particular partition or with a particular isolation group.

Isolation groups isolate users and objects from other users and objects. A user must have the same isolation group to be able to see and access users or objects in an isolation group, provided the user has the required privileges. A user can have one or more isolation groups, in this case he must choose his enabled isolation group for the session at logon. See the isolation group section for more information.

Object Privileges

Object privileges always relate to a specific object and allow the grantee a specific right on the object. A *View* privilege on the *RS_PrintStatements* job definition, for example, is only valid for that job definition. If the user has no other job definition-related system privileges and no other object privileges on job definitions, the only job definition the grantee can view, or access, is *RS_PrintStatements*.

Object privileges cannot be granted directly, you grant ranks of privileges. For example, the *Edit* rank contains both *View* and *Edit* privileges, this prevents human error, as you need to see an object before you can edit it. Furthermore, privileges can be granted as *Access* and *Admin*, when you grant a privilege as *Admin*, the grantee can grant the privilege to other users.

System Privileges

System privileges are granted on three levels, per partition, per isolation group or system wide. If you are using multiple partitions or isolation groups, you can restrict a system privilege to one partition or isolation group.

The *EventDefinition.Raise* system privilege, for example, allows the grantee to raise all events he can view, combined with the *EventDefinition.View* he can access all events in a partition, isolation group, or across the entire system.

The default roles cannot be edited, but roles you created in external authentication systems are editable in SAP CPS provided you have the necessary security module, please check your license if you are unsure. The default permissions granted to built-in roles are listed in the Granted System Privileges section.

See Also

- [Granting and Revoking System Privileges](#)

- [Granting and Revoking Object Privileges](#)

- [Privileges Required to use Objects](#)

System Privileges

Granted System Privileges

The following pre-defined roles are available:

- `scheduler-administrator` - can perform all actions.

- `scheduler-event-operator` - can raise and clear events.

- `scheduler-job-administrator` - can create/edit/delete event definitions, job definitions, job chains. Can modify jobs.

- `scheduler-user` - has access to SAP CPS only, cannot see any objects.

- `scheduler-viewer` - read only access to all objects.

- `scheduler-isolation-administrator` - can create/edit/delete isolation groups and add users to these.

- `scheduler-screen-reader` - indicates that you are using a screen reader.

All users need at least the *scheduler-user* role, even if they have the *scheduler-administrator* role, or they will not be able to access SAP CPS.

System privileges can be granted for the entire system, a partition or an isolation group, this allows you to limit the privilege to objects in a particular partition or with a particular isolation group.

System-wide privileges are only valid in the partitions the user has at least read privileges for.

The default grants of the above mentioned roles are as follows:

1. The Administrator role privileges

Role	System Privilege
scheduler-administrator	Application.Create
scheduler-administrator	Application.Delete
scheduler-administrator	Application.Modify
scheduler-administrator	Application.View
scheduler-administrator	EventDefinition.Clear
scheduler-administrator	EventDefinition.Create
scheduler-administrator	EventDefinition.Delete
scheduler-administrator	EventDefinition.Modify
scheduler-administrator	EventDefinition.Raise

scheduler-administrator	EventDefinition.View
scheduler-administrator	Format.Create
scheduler-administrator	Format.Delete
scheduler-administrator	Format.Modify
scheduler-administrator	Format.View
scheduler-administrator	Job.Delete
scheduler-administrator	Job.Modify
scheduler-administrator	Job.View
scheduler-administrator	JobDefinition.Create
scheduler-administrator	JobDefinition.Delete
scheduler-administrator	JobDefinition.DeleteJob
scheduler-administrator	JobDefinition.Modify
scheduler-administrator	JobDefinition.SubmitJob
scheduler-administrator	JobDefinition.View
scheduler-administrator	JobDefinitionType.Create
scheduler-administrator	JobDefinitionType.Delete
scheduler-administrator	JobDefinitionType.Modify
scheduler-administrator	JobDefinitionType.View
scheduler-administrator	JobFile.View
scheduler-administrator	JobLock.Create
scheduler-administrator	JobLock.Delete
scheduler-administrator	JobLock.Modify
scheduler-administrator	JobLock.View
scheduler-administrator	ProcessServer.Create
scheduler-administrator	ProcessServer.Delete
scheduler-administrator	ProcessServer.Modify
scheduler-administrator	ProcessServer.View
scheduler-administrator	Queue.Create
scheduler-administrator	Queue.Delete
scheduler-administrator	Queue.DeleteJobIn
scheduler-administrator	Queue.Modify
scheduler-administrator	Queue.SubmitJobIn
scheduler-administrator	Queue.View
scheduler-administrator	RegistryEntry.Create
scheduler-administrator	Resource.Create
scheduler-administrator	Resource.Delete
scheduler-administrator	Resource.Modify
scheduler-administrator	Resource.View
scheduler-administrator	SAPSystem.Create
scheduler-administrator	SAPSystem.Delete

scheduler-administrator	SAPSystem.Modify
scheduler-administrator	SAPSystem.View
scheduler-administrator	Service.Create
scheduler-administrator	Service.Delete
scheduler-administrator	Service.Modify
scheduler-administrator	Service.View
scheduler-administrator	Subject.CanGrant
scheduler-administrator	Subject.Create
scheduler-administrator	Subject.Delete
scheduler-administrator	Subject.Modify
scheduler-administrator	Subject.View
scheduler-administrator	SubmitFrame.Create
scheduler-administrator	SubmitFrame.Delete
scheduler-administrator	SubmitFrame.Modify
scheduler-administrator	SubmitFrame.View
scheduler-administrator	TimeWindow.Create
scheduler-administrator	TimeWindow.Delete
scheduler-administrator	TimeWindow.Modify
scheduler-administrator	TimeWindow.View

2. Secondary role privileges

Role	System Privilege
scheduler-job-administrator	EventDefinition.Create
scheduler-job-administrator	EventDefinition.Delete
scheduler-job-administrator	EventDefinition.Modify
scheduler-job-administrator	Job.Modify
scheduler-job-administrator	JobDefinition.Create
scheduler-job-administrator	JobDefinition.Delete
scheduler-job-administrator	JobDefinition.DeleteJob
scheduler-job-administrator	JobDefinition.Modify
scheduler-job-administrator	JobDefinition.SubmitJob
scheduler-job-administrator	Queue.DeleteJobIn
scheduler-job-administrator	Queue.SubmitJobIn
scheduler-event-operator	EventDefinition.Clear
scheduler-event-operator	EventDefinition.Raise

3. The generic role privileges

Role	System Privilege
scheduler-viewer	Application.View
scheduler-viewer	EventDefinition.View

scheduler-viewer	Format.View
scheduler-viewer	Job.View
scheduler-viewer	JobDefinition.View
scheduler-viewer	JobDefinitionType.View
scheduler-viewer	JobFile.View
scheduler-viewer	JobLock.View
scheduler-viewer	ProcessServer.View
scheduler-viewer	Queue.View
scheduler-viewer	Resource.View
scheduler-viewer	SAPSystem.View
scheduler-viewer	Service.View
scheduler-viewer	Subject.View
scheduler-viewer	SubmitFrame.View
scheduler-viewer	TimeWindow.View

Object Privileges

Object privileges are used to grant specific users access to specific objects. Unlike system privileges, object privileges are only valid for one object. Object privileges require the *Security.Module* which is specified in a license key. You know you have object privileges when you see a *Security* tab on repository objects, like job definitions, for example.

The following basic object privileges are available for most objects:

- View

- Edit

- Delete

Some Objects have additional privileges, for example, two more object-specific object privileges exist for job definitions:

- Submit

- View Jobs

Object privileges can be granted with the *Access* or *Admin* option; the *Admin* option allows the grantee to grant the privilege on to other users. Object privileges cannot be granted directly, you grant ranks of privileges. For example, the *Edit* rank contains both *View* and *Edit* privileges, this prevents human error, as you need to see an object before you can edit it.

See Also

Granting and Revoking Object Privileges

Granting and Revoking System Privileges

System Privileges

Granting and Revoking System Privileges

System privileges can be granted to a custom role for all objects system-wide, in a partition or with an isolation group. Custom roles are created in the authentication system, they are created in SAP CPS as soon as a user with that role logs on.

You cannot modify any of the built-in roles:

- `scheduler-administrator` - can perform all actions.

- `scheduler-event-operator` - can raise and clear events.

- `scheduler-job-administrator` - can create/edit/delete event definitions, job definitions, job chains. Can modify jobs.

- `scheduler-user` - has access to SAP CPS only, cannot see any objects.

- `scheduler-viewer` - read only access to all objects.

- `scheduler-isolation-administrator` - can create/edit/delete isolation groups and add users to these.

- `scheduler-screen-reader` - indicates that you are using a screen reader.

Procedure

Granting privileges to a custom role

1. Navigate to *Security > Roles*.

2. Choose *Edit* from the context menu of an editable role. Editable roles have a description: *Created automatically on first login*.

3. On the *Assign Privileges* tab, choose an Object definition and then *Next*.

4. Choose the desired range of the privileges.

5. Choose a *Rank* with the desired privileges. *Admin* privileges allow the user to perform the action and to grant the privilege to others as well. *Access* privileges allow the user to perform the actions.

Revoking privileges from a custom role

1. Navigate to *Security > Roles*.

2. Choose *Edit* from the context menu of an editable role.Editable roles have a description: *Created automatically on first login*.

3. On the *Assign Privileges* tab, choose an Object definition and then *Next*.

4. Choose the desired range of the privileges.

5. Choose a *Rank* with the desired privileges. *Admin* privileges allow the user to perform the action and to grant the privilege to others as well. *Access* privileges allow the user to perform the actions.

See Also

- [Granting or Revoking Object Privileges](#)

Granting and Revoking Object Privileges

Object privileges can be granted/revoked to/from a custom role or user for a specific object. You cannot modify any of the built-in roles:

- `scheduler-administrator` - can perform all actions.

- `scheduler-event-operator` - can raise and clear events.

- `scheduler-job-administrator` - can create/edit/delete event definitions, job definitions, job chains. Can modify jobs.

- `scheduler-user` - has access to SAP CPS only, cannot see any objects.

- `scheduler-viewer` - read only access to all objects.

- `scheduler-isolation-administrator` - can create/edit/delete isolation groups and add users to these.

- `scheduler-screen-reader` - indicates that you are using a screen reader.

Object privileges cannot be granted directly, you grant ranks of privileges. For example, the *Job Administrator* rank contains *View* and *View Jobs* and *Submit Onto* privileges, this prevents human error, as you need to be able to see the queue, the jobs in that queue and you need to be able to submit a job into the queue to be able to be able to submit a job into the queue and monitor its status. Furthermore, privileges can be granted as *Access* and *Admin*, when you grant a privilege as *Admin*, the grantee can grant the privilege to other users.

Exportable privileges will be exported together with the object, the grantee has to exist in the system where you import the object.

The figure below illustrates the privileges of user *jdoe* on the queue *ER2_Queue*.
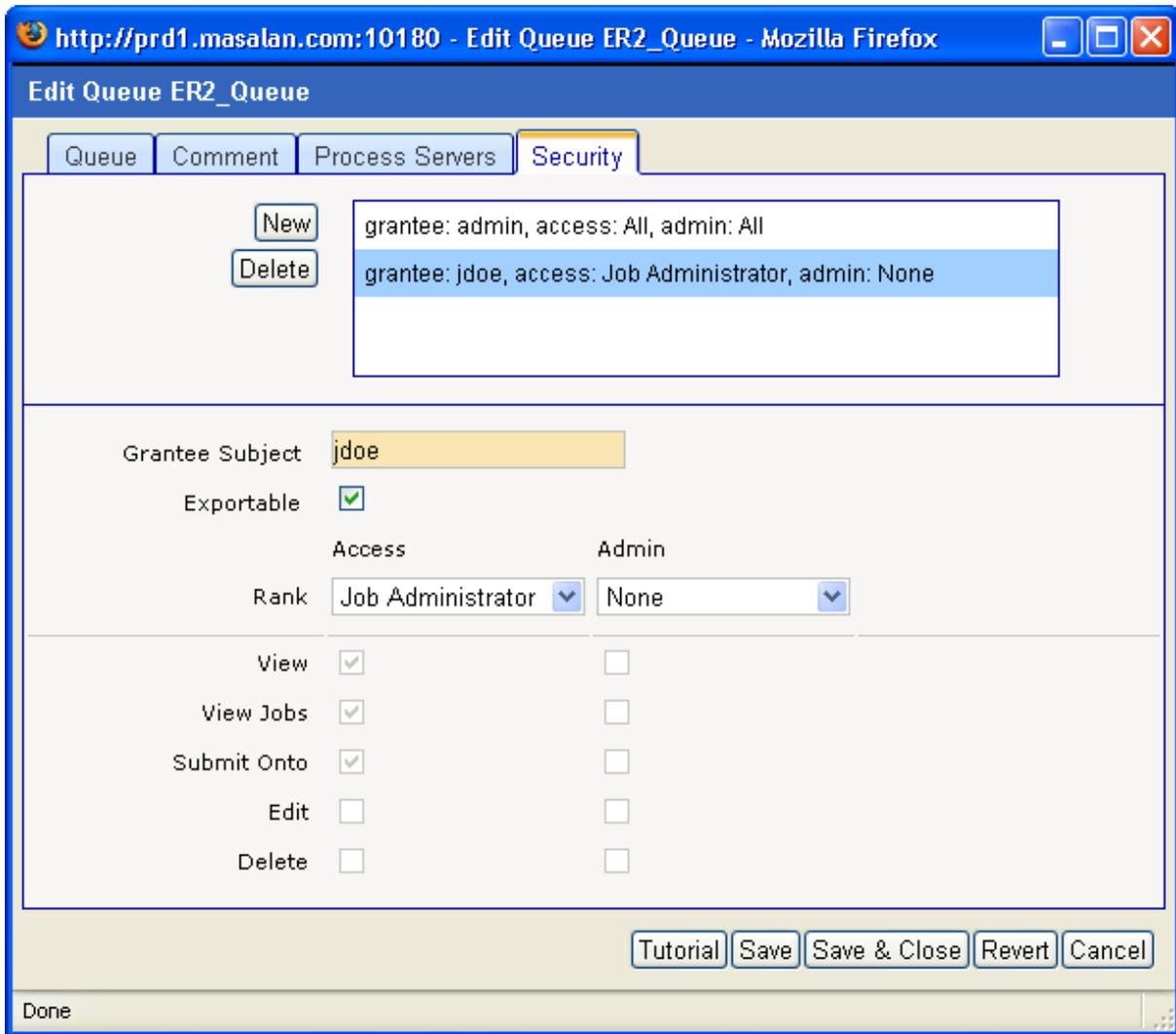
Procedure

Granting object privileges

1.   Navigate to the object you want to change the security for.

2.   Choose *Edit Security* from the context menu.

3.   On the *Security* tab, choose *New* and select the grantee.

4.   Choose a *Rank* with the desired privileges. *Admin* privileges allow the user to perform the action and to grant the privilege to others as well. *Access* privileges allow the user to perform the actions.

Revoking object privileges

1.   Navigate to the object you want to change the security for.

2.   Choose *Edit Security* from the context menu.

3.   On the *Security* tab, choose the grantee.

4. Choose a *Rank* with the desired privileges, if you want to revoke all privileges for this object from the grantee, choose *Delete*. *Admin* privileges allow the user to perform the action and to grant the privilege to others as well. *Access* privileges allow the user to perform the actions.

Example

Granting *Submit* privileges on the job definition *ProcessPartnerFile* to user *jdoe*.

```
{
//Get the job definition and user
JobDefinition myjd = jcsSession.getJobDefinitionByName("ProcessPartnerFile");
Subject myUser = jcsSession.getSubjectByTypeName(SubjectType.User,"jdoe");
//Create an empty grant
SubjectObjectPrivilegeGrant myGrant = myjd.createSubjectObjectPrivilegeGrant();
//Set the grantee and the rank
myGrant.setGranteeSubject(myUser);
myGrant.setGrantedRank(myGrant.getAllRanks()[3]);
//Save the changes to the database
jcsSession.persist();
}
```

See Also

- [Granting and Revoking System Privileges](#)

Privileges Required to use Objects

The following sections cover the privileges that are required to use SAP CPS objects.

- [Privileges Required to use Ad Hoc Alert Sources](#)

- [Privileges Required to use Applications](#)

- [Privileges Required to use Audit Rules](#)

- [Privileges Required to use the Audit Trail](#)

- [Privileges Required to use the CounterCategories](#)

- [Privileges Required to use Credentials](#)

- [Privileges Required to use Credential Protocols](#)

- [Privileges Required to use Dashboard](#)

- [Privileges Required to use Email Alert Gateways](#)

- [Privileges Required to use Escalations](#)

- [Privileges Required to use Event Definitions](#)

- [Privileges Required to use Export Rule Sets](#)

- [Privileges Required to use Formats](#)

- [Privileges Required to use Import Rule Sets](#)

- [Privileges Required to use Isolation Groups](#)

- [Privileges Required to use Jobs](#)

- [Privileges Required to use Job Chains](#)

- [Privileges Required to use Job Definition Alert Sources](#)

- [Privileges Required to use Job Definitions](#)

- [Privileges Required to use Libraries](#)

- [Privileges Required to use Locks](#)

- [Privileges Required to use Partitions](#)

- [Privileges Required to use Period Functions](#)

- [Privileges Required to use Process Server Alert Sources](#)

- [Privileges Required to use Process Servers](#)

- [Privileges Required to use QueryFilters](#)

- [Privileges Required to use Queues](#)

- [Privileges Required to use Reports](#)

- [Privileges Required to use Resources](#)

- [Privileges Required to use Roles](#)

- [Privileges Required to use SAP Systems](#)

- [Privileges Required to use StatisticCategories](#)

- [Privileges Required to use SubjectIsolationGroups](#)

- [Privileges Required to use Submit Frames](#)

- [Privileges Required to use Table Definitions](#)

- [Privileges Required to use Tables](#)

- [Privileges Required to use Registry Entries](#)

- [Privileges Required to use the Shell](#)

- [Privileges Required to use Time Windows](#)

- [Privileges Required to use Time Zones](#)

- [Privileges Required to use Triggers](#)

- [Privileges Required to use Users](#)

Privileges Required to use Ad Hoc Alert Sources

To use ad hoc alert sources, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Ad Hoc Alert Sources

You need the either of the following privilege ranks to be able to create ad hoc alert sources:

- *Create* - allows you to create an ad hoc alert source on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on ad hoc alert sources you create.

- *Edit* - allows you to create, view, and edit all ad hoc alert sources on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all ad hoc alert source on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all ad hoc alert sources on the level the privilege was granted (system, partition, isolation-group)

Creating Alert Source Actions

You need the either of the following privilege ranks to be able to create ad hoc alert sources:

- *Create* - allows you to create an alert source action on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on ad hoc alert sources you create.

- *Edit* - allows you to create, view, and edit all alert source actions on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all alert source actions on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all alert source actions on the level the privilege was granted (system, partition, isolation-group)

Editing Ad Hoc Alert Sources

To successfully edit a ad hoc alert source, you have to have either of the following privileges:

- *Edit* - privilege rank on the ad hoc alert source, or on ad hoc alert sources in its partition, isolation group or system-wide

- *Delete* - privilege rank on the ad hoc alert source, or on ad hoc alert sources in its partition, isolation group or system-wide

- *All* - privilege rank on the ad hoc alert source, or on ad hoc alert sources in its partition, isolation group or system-wide

Ad hoc alert sources can reference the following objects, you need at least *View* privileges on these objects when you want to edit an ad hoc alert source that references them:

- *Application*

- *Alert Escalation*

Editing Alert Source Actions

To successfully edit a ad hoc alert source, you have to have either of the following privileges:

- *Edit* - privilege rank on the alert source action, or on alert source actions in its partition, isolation group or system-wide

- *Delete* - privilege rank on the alert source action, or on alert source actions in its partition, isolation group or system-wide

- *All* - privilege rank on the alert source action, or on alert source actions in its partition, isolation group or system-wide

See Also

- [Privileges Required to use Applications](#)

- [Privileges Required to use Alert Escalations](#)

Privileges Required to use Audit Rules

To use audit rules, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Audit Rules

You need the following privilege ranks to be able to create audit rules:

- *Create* - allows you to create audit rules on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on audit rules you create.

- *Edit* - allows you to create, view and edit all audit rules on the level the privilege was granted (system, partition, isolation-group, object)

- *Delete* - allows you to create, view, and delete all audit rules on the level the privilege was granted (system, partition, isolation-group, object)

- *All* - full control over all audit rules on the level the privilege was granted (system, partition, isolation-group, object)

Editing Audit Rules

- *Edit* - privilege rank on the audit rule, or on audit rules in its partition, isolation group or system-wide

- *All* - privilege rank on the audit rule, or on audit rules in its partition, isolation group or system-wide

Audit rules can reference the following objects, you need at least *View* privileges on these objects when you want to edit an audit rule that references them:

- *Application*

Deleting Audit Rules

- *Delete*

- *All*

Privileges Required to use the Audit Trail

To view the audit trail, you need either:

- `scheduler-administrator` role

- system or isolation goup-level permissions

Viewing Audit Trail AuditObjects

- *View* - allows you to view AuditObjects on the level the privilege was granted (system, isolation-group), you have no further privileges through this rank.

- *Edit* - allows you to view and restore all AuditObjects on the level the privilege was granted (system, isolation-group)

- *Delete* - allows you to view, restore and delete any AuditObject on the level the privilege was granted (system, isolation-group)

- *All* - full control over all AuditObjects on the level the privilege was granted (system, isolation-group)

> **Note**
>
> A user with the *View* privilege on AuditObject does not require - privilege rank on the auditied object to see it in the audit trail., or on auditied object to see it in the audit trail.s in its partition, isolation group or system-wide

Restoring Objects

- *Edit* - allows you to create, view and restore all AuditObjects on the level the privilege was granted (system, isolation-group)

- *Delete* - allows you to view, restore and delete any AuditObjects on the level the privilege was granted (system, isolation-group)

- *All* - full control over all AuditObjects on the level the privilege was granted (system, isolation-group)

See Also

- [Privileges Required to use Isolation Groups](#)

- [Privileges Required to use Partitions](#)

Privileges Required to use CounterCategories

CounterCategories are used to calculate job statistics.

To use CounterCategories, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating CounterCategories

You need the either of the following privilege ranks to be able to create CounterCategories:

- *Create* - allows you to create an CounterCategory on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on CounterCategories you create.

- *Edit* - allows you to create, view, and edit all CounterCategories on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all CounterCategory on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all CounterCategories on the level the privilege was granted (system, partition, isolation-group)

Editing CounterCategories

To successfully edit a CounterCategory, you have to have either of the following privileges:

- *Edit* - privilege rank on the CounterCategory, or on CounterCategories in its partition, isolation group or system-wide

- *Delete* - privilege rank on the CounterCategory, or on CounterCategory. s in its partition, isolation group or system-wide

- *All* - privilege rank on the CounterCategory, or on CounterCategories in its partition, isolation group or system-wide

See Also

[StatisticCategory](#)

Privileges Required to use Credentials

To use credentials, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Using Credentials

You need the following privilege ranks to be able to use credentials in job definitions:

- *View* - allows you to view the credential and use it in a job definition.

Creating Credentials

You need the following privilege ranks to be able to create credentials:

- *Create* - allows you to create credential on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on audit rules you create.

- *Edit* - allows you to create, view and edit all credentials on the level the privilege was granted (system, partition, isolation-group, object)

- *All* - full control over all credentials on the level the privilege was granted (system, partition, isolation-group, object)

Editing Credentials

- *Edit* - allows you to create, view and edit all credentials on the level the privilege was granted (system, partition, isolation-group, object)

- *All* - full control over all credentials on the level the privilege was granted (system, partition, isolation-group, object)

Credentials can reference the following objects, you need at least *View* privileges on these objects when you want to edit a credential that references them:

- *Application*

- *Credential Protocol*

Deleting Credentials

- *Delete* - allows you to view and delete all credentials on the level the privilege was granted (system, partition, isolation-group, object)

- *All* - full control over all credentials on the level the privilege was granted (system, partition, isolation-group, object)

See Also

- [Privileges Required to use Applications](#)

- [Privileges Required to use Credential Protocols](#)

Privileges Required to use Credential Protocols

To use credential protocols, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Using Credential Protocols

You need the following privilege ranks to be able to use credential protocols in job definitions:

- *View* - allows you to view the credential protocols and use it in a job definition.

Creating Credential Protocols

- *Create* - allows you to create credential protocols on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on audit rules you create.

- *Edit* - allows you to create, view and edit all credential protocols on the level the privilege was granted (system, partition, isolation-group, object)

- *Delete* - allows you to create, view, and delete all credential protocols on the level the privilege was granted (system, partition, isolation-group, object)

- *All* - full control over all credential protocols on the level the privilege was granted (system, partition, isolation-group, object)

> **Note**
>
> You can create credential protocols, however, you will only be able to use them with specially crafted job definition types.

Editing Credential Protocols

- *Edit* - privilege rank on the credential protocol, or on credential protocols in its partition, isolation group or system-wide

- *All* - privilege rank on the credential protocol, or on credential protocols in its partition, isolation group or system-wide

Credential protocols can reference the following objects, you need at least *View* privileges on these objects when you want to edit a credential protocols that references them:

- *Application*

Deleting Credential Protocols

- *Delete* privilege on the credential protocol, or on credential protocols in its partition, isolation group or system-wide

- *All* credential protocol, or on credential protocols in its partition, isolation group or system-wide

See Also

- [Privileges Required to use Applications](#)

Privileges Required to use Dashboard

To use dashboards, you need either:

- `scheduler-administrator` role

- `scheduler-job-administrator` role

Creating Dashboards

You need one of the following privilege ranks to be able to create dashboards:

- *Create* - allows you to create dashboards

- *Edit* - allows you to create, view, and edit all dashboards

- *Delete* - allows you to create, view, and delete all dashboards

- *All* - full control over all dashboards

Editing Dashboards

To successfully edit a dashboard, you have to have one the following privileges:

- *Edit* - system-wide privilege rank for the dashboard

- *Delete* - system-wide privilege rank for the dashboard

- *All* - system-wide privilege rank for the dashboard

Privileges Required to use Email Alert Gateways

To use email alert gateways, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Email Alert Gateways

You need the following privilege ranks to be able to create email alert gateways:

- *Create* - allows you to create email alert gateways on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on email alert gateways you create.

- *Edit* - allows you to create, view and edit all email alert gateways on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all email alert gateways on the level the privilege was granted (system, partition, isolation-group)

Editing Email Alert Gateways

- *Edit* - allows you to create, view and edit all email alert gateways on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all email alert gateways on the level the privilege was granted (system, partition, isolation-group)

Email alert gateways can reference the following objects, you need at least *View* privileges on these objects when you want to edit an email alert gateway that references them:

- *Application*

See Also

- [Privileges Required to use Applications](#)

Privileges Required to use Escalations

To use alert escalations, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Alert Escalations

You need one of the following privilege ranks to be able to create escalations:

- *Create* - allows you to create alert escalations on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on alert escalations you create.

- *Edit* - allows you to create, view and edit all alert escalations on the level the privilege was granted (system, partition, isolation-group, object)

- *All* - full control over all alert escalations on the level the privilege was granted (system, partition, isolation-group, object)

Editing Escalations

To successfully edit alert escalations, you have to have one the following privileges:

- *Edit* - allows you to create, view and edit all alert escalations on the level the privilege was granted (system, partition, isolation-group, object)

- *All* - full control over all alert escalations on the level the privilege was granted (system, partition, isolation-group, object)

Alert escalations can reference the following objects, you need at least *View* privileges on these objects when you want to edit an alert escalation that references them:

- *Application*

See Also

- [Privileges Required to use Applications](#)

Privileges Required to use Event Definitions

To use event definitions and their events, you need either:

- `scheduler-administrator` role

- `scheduler-event-operator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Event Definitions

You need either of the following privilege ranks to be able to create event definitions:

- *Create* - allows you to create events on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on events you create.

- *Edit* - allows you to create, view and edit all events on the level the privilege was granted (system, partition, isolation-group, object)

- *Delete* - allows you to create, view, manage and delete all event definitions and events on the level the privilege was granted (system, partition, isolation-group, object)

- *All* - full control over all event definitions and events on the level the privilege was granted (system, partition, isolation-group, object)

Editing Event Defintions

To successfully edit an event definition, you have to have at least one of the following privileges:

- *Edit* - privilege rank on the event definition, or on event definitions in its partition, isolation group or system-wide

- *All* - privilege rank on the event definition, or on event definitions in its partition, isolation group or system-wide

Event definitions can reference the following objects, you need at least *View* privileges on these objects when you want to edit an event definition that references them:

- *Application*

- *Process Server* - file events only

Editing Events

- *Clear* - privilege rank on the event definition, it allows you to clear events on the level the privilege was granted (system, partition, isolation-group, object), or on event definition, it allows you to clear events on the level the privilege was granted (system, partition, isolation-group, object)s in its partition, isolation group or system-wide

- *Raise* - privilege rank on the event definition, it allows you to raise events on the level the privilege was granted (system, partition, isolation-group, object), or on event definition, it allows you to raise events on the level the privilege was granted (system, partition, isolation-group, object)s in its partition, isolation group or system-wide

- *Manage Events* - privilege rank on the event definition, it allows you to raise and clear events on the level the privilege was granted (system, partition, isolation-group, object), or on event definition, it allows you to raise and clear events on the level the privilege was granted (system, partition, isolation-group, object)s in its partition, isolation group or system-wide

- *Edit* - privilege rank on the event definition, or on event definitions in its partition, isolation group or system-wide

- *All* - privilege rank on the event definition, or on event definitions in its partition, isolation group or system-wide

See Also

- [Privileges Required to use Applications](#)

- [Privileges Required to use Process Servers](#)

Privileges Required to use Export Rule Sets

To use export rule sets, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

The privileges for the following objects are derived from export rule set privileges:

- Export

Creating Export Rule Sets

You need one of the following privilege ranks to be able to create export rule sets:

- *Create* - allows you to create export rule sets on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on export rule sets you create.

- *Edit* - allows you to create, view, and edit all export rule sets on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create,view, and delete all export rule sets on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all export rule sets on the level the privilege was granted (system, partition, isolation-group)

Editing Export Rule Sets

To successfully edit a export rule set, you have to have one the following privileges:

- *Edit* - privilege rank on the export rule set, or on export rule sets in its partition, isolation group or system-wide

- *Delete* - privilege rank on the export rule set, or on export rule sets in its partition, isolation group or system-wide

- *All* - privilege rank on the export rule set, or on export rule sets in its partition, isolation group or system-wide

Export rule sets can reference the following objects, you need at least *View* privileges on these objects when you want to edit a export rule set that references them:

- *Application*

See Also

- [Privileges Required to use Applications](#)

Privileges Required to use Formats

To use formats, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Formats

You need one of the following privilege ranks to be able to create formats:

- *Create* - allows you to create formats on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on formats you create.

- *Edit* - allows you to create, view, and edit all formats on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all formats on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all formats on the level the privilege was granted (system, partition, isolation-group)

Editing Formats

To successfully edit a format, you have to have one the following privileges:

- *Edit* - privilege rank on the format, or on formats in its partition, isolation group or system-wide

- *Delete* - privilege rank on the format, or on formats in its partition, isolation group or system-wide

- *All* - privilege rank on the format, or on formats in its partition, isolation group or system-wide

Formats can reference the following objects, you need at least *View* privileges on these objects when you want to edit a format that references them:

- *Application*

See Also

- [Privileges Required to use Applications](#)

Privileges Required to use Import Rule Sets

To use import rule sets, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Privileges for the following objects are derived from the import rule set pivileges:

- Import

- ImportRuleDefinition

- ImportSource

Creating Import Rule Sets

You need one of the following privilege ranks to be able to create import rule sets:

- *Create* - allows you to create import rule sets on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on import rule sets you create.

- *Edit* - allows you to create, view, and edit all import rule sets on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all import rule sets on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all import rule sets on the level the privilege was granted (system, partition, isolation-group)

Editing Import Rule Sets

To successfully edit a import rule set, you have to have one the following privileges:

- *Edit* - privilege rank on the import rule set, or on import rule sets in its partition, isolation group or system-wide

- *Delete* - privilege rank on the import rule set, or on import rule sets in its partition, isolation group or system-wide

- *All* - privilege rank on the import rule set, or on import rule sets in its partition, isolation group or system-wide

Import rule sets can reference the following objects, you need at least *View* privileges on these objects when you want to edit a import rule set that references them:

- *Application*

See Also

- [Privileges Required to use Applications](#)

Privileges Required to use Isolation Groups

To create, edit, and delete isolation groups, you need the following role:

- `scheduler-isolation-administrator`

A user with this privilege is allowed no further privileges.

Privileges Required to use Jobs

To use jobs, you need either:

- `scheduler-administrator` role

- `scheduler-job-administrator` role

- object, system, partition or isolation goup-level permissions

Submitting or Restarting Jobs

To successfully submit a jobs, you have to have one of the following privileges:

- *Submit* - privilege rank on the jobs, or on jobs in its partition, isolation group or system-wide

- *All* - privilege rank on the jobs, or on jobs in its partition, isolation group or system-wide

As well as the following privileges

- *Submit Onto* - privilege rank on the queue where the job is supposed to run , or on queue where the job is supposed to run s in its partition, isolation group or system-wide

- *View* - privilege rank on the process server that serves the queue and where the job is going to run, or on process server that serves the queue and where the job is going to runs in its partition, isolation group or system-wide

Optionally, if you want to use a library, submit frame and/or time window, you will need *View* privileges on them, as well. If the jobs has a default submit frame, a default time window, or uses a library (in parameters or in the code) you will require *View* privielges on the objects or you will not be able to submit the jobs or restart the job.

Jobs can reference the following objects, you need at least *View* privileges on these objects when you want to submit a jobs that references them:

- *Credentials*

- *Events*

- *Library* - if the job uses code from the library.

- *Locks*

See Also

- [Privileges Required to use Event Definitions](#)

- [Privileges Required to use Credentials](#)

- [Privileges Required to use Libraries](#)

- [Privileges Required to use Locks](#)

- [Privileges Required to use Process Servers](#)

- [Privileges Required to use Queues](#)

- [Privileges Required to use Resources](#)

Privileges Required to use Job Chains

To use job chains, you need either:

- `scheduler-administrator` role

- `scheduler-job-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

See [Privileges Required to use Job Definitions](#) for more information.

Privileges Required to use Job Definition Alert Sources

To use job definition alert sources, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Job Definition Alert Sources

You need one of the following privilege ranks to be able to create job definition alert sources:

- *Create* - allows you to create job definition alert sources on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on job definition alert sources you create.

- *Edit* - allows you to create, view, and edit all job definition alert sources on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all job definition alert sources on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all job definition alert sources on the level the privilege was granted (system, partition, isolation-group)

Creating Alert Source Actions

You need the either of the following privilege ranks to be able to create ad hoc alert sources:

- *Create* - allows you to create an alert source action on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on ad hoc alert sources you create.

- *Edit* - allows you to create, view, and edit all alert source actions on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all alert source actions on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all alert source actions on the level the privilege was granted (system, partition, isolation-group)

Editing Job Definition Alert Sources

To successfully edit a job definition alert source, you have to have one the following privileges:

- *Edit* - privilege rank on the job definition alert source, or on job definition alert sources in its partition, isolation group or system-wide

- *Delete* - privilege rank on the job definition alert source, or on job definition alert sources in its partition, isolation group or system-wide

- *All* - privilege rank on the job definition alert source, or on job definition alert sources in its partition, isolation group or system-wide

Job definition alert sources can reference the following objects, you need at least *View* privileges on these objects when you want to edit a job definition that references them:

- *Application*

- *Escalation*

- *Time Window*

Editing Alert Source Actions

To successfully edit a ad hoc alert source, you have to have either of the following privileges:

- *Edit* - privilege rank on the alert source action, or on alert source actions in its partition, isolation group or system-wide

- *Delete* - privilege rank on the alert source action, or on alert source actions in its partition, isolation group or system-wide

- *All* - privilege rank on the alert source action, or on alert source actions in its partition, isolation group or system-wide

See Also

- [Privileges Required to use Applications](#)

- [Privileges Required to use Applications](#)

Privileges Required to use Job Definitions

To use job definitions, you need either:

- `scheduler-administrator` role

- `scheduler-job-administrator` role

- object, system, partition or isolation goup-level permissions

The sections below will reference the object-level permissions you need, hoever, equivalent system, partition or isolation goup-level permissions are also valid.

Creating Job Definitions

You need one of the following privilege ranks to be able to create job definitions:

- *Create* - allows you to create job definitions on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on job definitions you create.

- *Edit* - allows you to create, view, and edit all job definitions on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all job definitions on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all job definitions on the level the privilege was granted (system, partition, isolation-group)

Submitting Job Definitions

To successfully submit a job definition, you have to have one of the following privileges:

- *Submit* - privilege rank on the job definition, or on job definitions in its partition, isolation group or system-wide

- *All* - privilege rank on the job definition, or on job definitions in its partition, isolation group or system-wide

As well as the following privileges

- *Submit Onto* - privilege rank on the queue where the job is supposed to run , or on queue where the job is supposed to run s in its partition, isolation group or system-wide

- *View* - privilege rank on the process server that serves the queue and where the job is going to run, or on process server that serves the queue and where the job is going to runs in its partition, isolation group or system-wide

Optionally, if you want to use a library, submit frame and/or time window, you will need *View* privileges on them, as well. If the job definition has a default submit frame, a default time window, or uses a library (in parameters or in the code) you will require *View* privielges on the objects or you will not be able to submit the job definition or restart the job.

Job definitions can reference the following objects, you need at least *View* privileges on these objects when you want to submit a job definition that references them:

- *Credentials*

- *Events*

- *Locks*

Editing Job Definitions

To successfully edit a job definition, you have to have one the following privileges:

- *Edit* - privilege rank on the job definition, or on job definitions in its partition, isolation group or system-wide

- *Delete* - privilege rank on the job definition, or on job definitions in its partition, isolation group or system-wide

- *All* - privilege rank on the job definition, or on job definitions in its partition, isolation group or system-wide

Job definitions can reference the following objects, you need at least *View* privileges on these objects when you want to edit a job definition that references them:

- *Library*

- '"Credential"

- *Application*

- *Formats*

- *Locks*

- *Events*

- *Queues*

- *Submit Frame*

- *Time Window*

- *Resource*

See Also

- [Privileges Required to use Applications](#)

- [Privileges Required to use Event Definitions](#)

- [Privileges Required to use Formats](#)

- [Privileges Required to use Credentials](#)

- [Privileges Required to use Libraries](#)

- [Privileges Required to use Locks](#)

- [Privileges Required to use Process Servers](#)

- [Privileges Required to use Queues](#)

- [Privileges Required to use Reports](#)

- [Privileges Required to use Resources](#)

- [Privileges Required to use Submit Frames](#)

- [Privileges Required to use Time Windows](#)

Privileges Required to use Libraries

To use libraries, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Libraries

You need one of the following privilege ranks to be able to create libraries:

- *Create* - allows you to create libraries on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on librarys you create.

- *Edit* - allows you to create, view, and edit all libraries on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all libraries on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all libraries on the level the privilege was granted (system, partition, isolation-group)

Editing Libraries

To successfully edit a library, you have to have one the following privileges:

- *Edit* - privilege rank on the library, or on libraries in its partition, isolation group or system-wide

- *Delete* - privilege rank on the library, or on libraries in its partition, isolation group or system-wide

- *All* - privilege rank on the library, or on libraries in its partition, isolation group or system-wide

Libraries can reference the following objects, you need at least *View* privileges on these objects when you want to edit a library that references them:

- *Application*

See Also

- [Privileges Required to use Applications](#)

Privileges Required to use Locks

To use locks, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Locks

u need one of the following privilege ranks to be able to create locks:

- *Create* - allows you to create locks on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on locks you create.

- *Edit* - allows you to create, view, and edit all locks on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all locks on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all locks on the level the privilege was granted (system, partition, isolation-group)

Editing Locks

To successfully edit a lock, you have to have one the following privileges:

- *Edit* - privilege rank on the lock, or on locks in its partition, isolation group or system-wide

- *Delete* - privilege rank on the lock, or on locks in its partition, isolation group or system-wide

- *All* - privilege rank on the lock, or on locks in its partition, isolation group or system-wide

Locks can reference the following objects, you need at least *View* privileges on these objects when you want to edit a lock that references them:

- *Application*

See Also

- [Privileges Required to use Applications](#)

Privileges Required to use Partitions

To use partitions, you need either:

- `scheduler-administrator` role

- system or isolation goup-level permissions

- object-specific privileges

Creating Partitions

You need one of the following privilege ranks to be able to create partitions:

- *Create* - allows you to create partitions on the level the privilege was granted (system, isolation-group), you have no further privileges through this rank, you automatically get privileges on partitions you create.

- *Edit* - allows you to create, view, and edit all partitions on the level the privilege was granted (system, isolation-group)

- *Delete* - allows you to create, view, and delete all partitions on the level the privilege was granted (system, isolation-group)

- *All* - full control over all partitions on the level the privilege was granted (system, isolation-group)

Editing Partitions

To successfully edit a partition, you have to have one the following privileges:

- *Edit* - privilege rank on the partition, or on partitions in its isolation group or system-wide

- *Delete* - privilege rank on the partition, or on partitions in its isolation group or system-wide

- *All* - privilege rank on the partition, or on partitions in its isolation group or system-wide

Privileges Required to use Period Functions

To use period functions, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Period Functions

You need one of the following privilege ranks to be able to create period functions:

- *Create* - allows you to create period functions on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on period functions you create.

- *Edit* - allows you to create, view, and edit all period functions on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all period functions on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all period functions on the level the privilege was granted (system, partition, isolation-group)

Editing Period Functions

To successfully edit a period function, you have to have one the following privileges:

- *Edit* - privilege rank on the period function, or on period functions in its partition, isolation group or system-wide

- *Delete* - privilege rank on the period function, or on period functions in its partition, isolation group or system-wide

- *All* - privilege rank on the period function, or on period functions in its partition, isolation group or system-wide

Period functions can reference the following objects, you need at least *View* privileges on these objects when you want to edit a period function that references them:

- *Library*

- *Application*

See Also

- [Privileges Required to use Applications](#)

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Privileges Required to use Process Server Alert Sources

To use process server alert sources, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Process Server Alert Sources

You need one of the following privilege ranks to be able to create pocess server alert sources:

- *Create* - allows you to create process server alert sources on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on process server alert sources you create.

- *Edit* - allows you to create, view, and edit all process server alert sources on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all process server alert sources on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all process server alert sources on the level the privilege was granted (system, partition, isolation-group)

Editing Process Server Alert Sources

To successfully edit a process server alert source, you have to have one the following privileges:

- *Edit* - privilege rank on the process server alert source, or on process server alert sources in its partition, isolation group or system-wide

- *Delete* - privilege rank on the process server alert source, or on process server alert sources in its partition, isolation group or system-wide

- *All* - privilege rank on the process server alert source, or on process server alert sources in its partition, isolation group or system-wide

Process server alert sources can reference the following objects, you need at least *View* privileges on these objects when you want to edit a Pocess server alert source that references them:

- *Application*

- *Process Server*

Editing Alert Source Actions

To successfully edit a ad hoc alert source, you have to have either of the following privileges:

- *Edit* - privilege rank on the alert source action, or on alert source actions in its partition, isolation group or system-wide

- *Delete* - privilege rank on the alert source action, or alert source actions in its partition, isolation group or system-wide

- *All* - privilege rank on the alert source action, or on alert source actions in its partition, isolation group or system-wide

See Also

Privileges Required to use Process Servers

To use process servers, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Process Severs

You need one of the following privilege ranks to be able to create process severs:

- *Create* - allows you to create process severs on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on process severs you create.

- *Edit* - allows you to create, view, and edit all process severs on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all process severs on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all process severs on the level the privilege was granted (system, partition, isolation-group)

Editing Process Severs

To successfully edit a process sever, you have to have one the following privileges:

- *Edit* - privilege rank on the process sever, or on process severs in its partition, isolation group or system-wide

- *Delete* - privilege rank on the process sever, or on process severs in its partition, isolation group or system-wide

- *All* - privilege rank on the process sever, or on process severs in its partition, isolation group or system-wide

Process severs can reference the following objects, you need at least *View* privileges on these objects when you want to edit a process sever that references them:

- *Application*

- *Queues*

See Also

- [Privileges Required to use Applications](#)

- [Privileges Required to use Queues](#)

Privileges Required to use QueryFilters

To use object filters, you need either:

- `scheduler-administrator` role

- object, system, partition or isolation goup-level permissions

The sections below will reference the object-level permissions you need, hoever, equivalent system, partition or isolation goup-level permissions are also valid.

Creating Query Filters

You need one of the following privilege ranks to be able to create object filters:

- *Create* - on QueryFilter allows you to create object filters

- *Edit* - on QueryFilter allows you to create, view, and edit all object filters

- *Delete* - on QueryFilter allows you to create, view, and delete all object filters

- *All* - on QueryFilter grants full control over all object filters

Editing Query Filters

To successfully edit a object filter, you have to have one the following privileges:

- *Edit* - system-wide privilege rank on QueryFilter

- *Delete* - system-wide privilege rank on QueryFilter

- *All* - system-wide privilege rank on QueryFilter

Privileges Required to use Queues

To use queues, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Queues

You need one of the following privilege ranks to be able to create queues:

- *Create* - allows you to create queues on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on queues you create.

- *Edit* - allows you to create, view, and edit all queues on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all queues on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all queues on the level the privilege was granted (system, partition, isolation-group)

Editing Queues

To successfully edit a queue, you have to have one the following privileges:

- *Edit* - privilege rank on the queue, or on queues in its partition, isolation group or system-wide

- *Delete* - privilege rank on the queue, or on queues in its partition, isolation group or system-wide

- *All* - privilege rank on the queue, or on queues in its partition, isolation group or system-wide

Queues can reference the following objects, you need at least *View* privileges on these objects when you want to edit a queue that references them:

- *Application*

- *Submit Frame*

- *Time Window*

- *Process Servers* - A queue might appear held to you while it is open to others; this is usually due to the fact that you cannot see any of the running process servers that are serving the queue.

See Also

- [Privileges Required to use Applications](#)

- [Privileges Required to use Process Servers](#)

- [Privileges Required to use Submit Frames](#)

- [Privileges Required to use Time Windows](#)

Privileges Required to use Reports

To use reports, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Reports

You need one of the following privilege ranks to be able to create reports:

- *Create* - allows you to create reports on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on reports you create.

- *Edit* - allows you to create, view, and edit all reports on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all reports on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all reports on the level the privilege was granted (system, partition, isolation-group)

Editing Reports

To successfully edit a report, you have to have one the following privileges:

- *Edit* - privilege rank on the report, or on reports in its partition, isolation group or system-wide

- *Delete* - privilege rank on the report, or on reports in its partition, isolation group or system-wide

- *All* - privilege rank on the report, or on reports in its partition, isolation group or system-wide

Reports can reference the following objects, you need at least *View* privileges on these objects when you want to edit a report that references them:

- *Application*

See Also

- [Privileges Required to use Applications](#)

Privileges Required to use Resources

To use resources, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Resources

You need one of the following privilege ranks to be able to create resources:

- *Create* - allows you to create resources on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on resources you create.

- *Edit* - allows you to create, view, and edit all resources on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all resources on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all resources on the level the privilege was granted (system, partition, isolation-group)

Editing Resources

To successfully edit a resource, you have to have one the following privileges:

- *Edit* - privilege rank on the resource, or on resources in its partition, isolation group or system-wide

- *Delete* - privilege rank on the resource, or on resources in its partition, isolation group or system-wide

- *All* - privilege rank on the resource, or on resources in its partition, isolation group or system-wide

Resources can reference the following objects, you need at least *View* privileges on these objects when you want to edit a resource that references them:

- *Application*

- *Process Server*

See Also

- [Privileges Required to use Applications](#)

- [Privileges Required to use Process Servers](#)

Privileges Required to use Roles

Roles are hosted in external authentication systems and cannot be edited from within SAP CPS.

Users can grant roles privileges they have with an '"Admin" rank to custom roles. Custom roles are roles that did not ship with SAP CPS.

Privileges Required to use SAP Systems

To use SAP systems, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating SAP Systems

You need one of the following privilege ranks to be able to create SAP systems:

- *Create* - allows you to create SAP systems on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on SAP systems you create.

- *Edit* - allows you to create, view, and edit all SAP systems on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all SAP systems on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all SAP systems on the level the privilege was granted (system, partition, isolation-group)

Editing SAP Systems

To successfully edit a SAP system, you have to have one the following privileges:

- *Edit* - privilege rank on the SAP system, or on SAP systems in its partition, isolation group or system-wide

- *Delete* - privilege rank on the SAP system, or on SAP systems in its partition, isolation group or system-wide

- *All* - privilege rank on the SAP system, or on SAP systems in its partition, isolation group or system-wide

SAP systems can reference the following objects, you need at least *View* privileges on these objects when you want to edit a SAP system that references them:

- *Application*

- *Events*

Using the SAP CPS RFC Server

A special rank allows you to use the RFC server for Closing Cockpit, Solution Manager integration and use of other SAP technologies.

- *Business Automation API* - allows you to interact with SAP CPS from within an ABAP stack of an SAP instance.

See Also

- [Privileges Required to use Applications](#)

- [Privileges Required to use Event Definitions](#)

Privileges Required to use StatisticCategories

StatisticCagtegories are used to calculate job statistics.

To use StatisticCagtegories, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating StatisticCagtegories

You need the either of the following privilege ranks to be able to create StatisticCagtegories:

- *Create* - allows you to create an ad StatisticCagtegory on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on Statist-icCagtegories you create.

- *Edit* - allows you to create, view, and edit all StatisticCagtegories on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all ad StatisticCagtegory on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all StatisticCagtegories on the level the privilege was granted (system, partition, isolation-group)

Editing StatisticCagtegories

To successfully edit a ad StatisticCagtegory, you have to have either of the following privileges:

- *Edit* - privilege rank on the ad StatisticCagtegory, or on StatisticCagtegories in its partition, isolation group or system-wide

- *Delete* - privilege rank on the ad StatisticCagtegory, or on ad StatisticCagtegory. s in its partition, isolation group or system-wide

- *All* - privilege rank on the ad StatisticCagtegory, or on StatisticCagtegories in its partition, isolation group or system-wide

Privileges Required to use SubjectIsolationGroups

SubjectIsolationGroups are used to calculate job statistics.

To use SubjectIsolationGroups, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating SubjectIsolationGroups

You need the either of the following privilege ranks to be able to create SubjectIsolationGroups:

- *Create* - allows you to create an SubjectIsolationGroup on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on SubjectIsolationGroups you create.

- *Edit* - allows you to create, view, and edit all SubjectIsolationGroups on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all SubjectIsolationGroups on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all SubjectIsolationGroups on the level the privilege was granted (system, partition, isolation-group)

Editing SubjectIsolationGroups

To successfully edit a SubjectIsolationGroup, you have to have either of the following privileges:

- *Edit* - privilege rank on the SubjectIsolationGroup, or on SubjectIsolationGroups in its partition, isolation group or system-wide

- *Delete* - privilege rank on the SubjectIsolationGroup, or on SubjectIsolationGroups in its partition, isolation group or system-wide

- *All* - privilege rank on the SubjectIsolationGroup, or on SubjectIsolationGroups in its partition, isolation group or system-wide

See Also

StatisticCategory

Privileges Required to use Submit Frames

To use submit frames, you need either:

- `scheduler-administrator` role

- `scheduler-job-administrator`

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Submit Frames

You need one of the following privilege ranks to be able to create time windows:

- *Create* - allows you to create time windows on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on time windows you create.

- *Edit* - allows you to create, view, and edit all time windows on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all time windows on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all time windows on the level the privilege was granted (system, partition, isolation-group)

Editing Submit Frames

To successfully edit a time window, you have to have one the following privileges:

- *Edit* - privilege rank on the time window, or on time windows in its partition, isolation group or system-wide

- *Delete* - privilege rank on the time window, or on time windows in its partition, isolation group or system-wide

- *All* - privilege rank on the time window, or on time windows in its partition, isolation group or system-wide

Time windows can reference the following objects, you need at least *View* privileges on these objects when you want to edit a time window that references them:

- *Application*

- *Time Window*

See Also

- [Privileges Required to use Applications](#)

- [Privileges Required to use Time Windows](#)

Privileges Required to use Table Definitions

To use table definitions, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Table Definitions

You need one of the following privilege ranks to be able to create table definitions:

- *Create* - allows you to create table definitions on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on table definitions you create.

- *Edit* - allows you to create, view, and edit all table definitions on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all table definitions on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all table definitions on the level the privilege was granted (system, partition, isolation-group)

Editing Table Definitions

To successfully edit a table definition, you have to have one the following privileges:

- *Edit* - privilege rank on the table definition, or on table definitions in its partition, isolation group or system-wide

- *Delete* - privilege rank on the table definition, or on table definitions in its partition, isolation group or system-wide

- *All* - privilege rank on the table definition, or on table definitions in its partition, isolation group or system-wide

Table definitions can reference the following objects, you need at least *View* privileges on these objects when you want to edit a table definition that references them:

- *Application*

See Also

- [Privileges Required to use Applications](#)

Privileges Required to use Tables

To use tables, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Tables

You need one of the following privilege ranks to be able to create tables:

- *Create* - allows you to create tables on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on tables you create.

- *Edit* - allows you to create, view, and edit all tables on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all tables on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all tables on the level the privilege was granted (system, partition, isolation-group)

Editing Tables

To successfully edit a table, you have to have one the following privileges:

- *Edit* - privilege rank on the table, or on tables in its partition, isolation group or system-wide

- *Delete* - privilege rank on the table, or on tables in its partition, isolation group or system-wide

- *All* - privilege rank on the table, or on tables in its partition, isolation group or system-wide

Tables can reference the following objects, you need at least *View* privileges on these objects when you want to edit a table that references them:

- *Application*

See Also

- [Privileges Required to use Applications](#)

Privileges Required to use Registry Entries

To use registry entries, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Registry Entries

You need one of the following privilege ranks to be able to create registry entries:

- *Create* - allows you to create registry entries on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on registry entries you create.

- *Edit* - allows you to create, view, and edit all registry entries on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all registry entries on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all registry entries on the level the privilege was granted (system, partition, isolation-group)

Editing Registry Entries

To successfully edit a registry entry, you have to have one the following privileges:

- *Edit* - privilege rank on the registry entry, or on registry entries in its partition, isolation group or system-wide

- *Delete* - privilege rank on the registry entry, or on registry entries in its partition, isolation group or system-wide

- *All* - privilege rank on the registry entry, or on registry entries in its partition, isolation group or system-wide

Registry entries can reference the following objects, you need at least *View* privileges on these objects when you want to edit a registry entry that references them:

- *Library*

- *Credential*

- *Application*

- *Formats*

- *Locks*

- *Events*

- *Queues*

- *Submit Frame*

- *Time Window*

- *Resource*

See Also

- [Privileges Required to use Applications](#)

- [Privileges Required to use Event Definitions](#)

- [Privileges Required to use Formats](#)

- [Privileges Required to use Credentials](#)

- [Privileges Required to use Libraries](#)

- [Privileges Required to use Locks](#)

Privileges Required to use the Shell

To use the shell, you need the following *Global Privilege* :

- *System_Shell* - allows you to access the command-line interface known as the *Shell*.

Privileges Required to use Time Windows

To use time windows, you need either:

- `scheduler-administrator` role

- `scheduler-job-administrator`

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Time Windows

You need one of the following privilege ranks to be able to create time windows:

- *Create* - allows you to create time windows on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on time windows you create.

- *Edit* - allows you to create, view, and edit all time windows on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all time windows on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all time windows on the level the privilege was granted (system, partition, isolation-group)

Editing Time Windows

To successfully edit a time window, you have to have one the following privileges:

- *Edit* - privilege rank on the time window, or on time windows in its partition, isolation group or system-wide

- *Delete* - privilege rank on the time window, or on time windows in its partition, isolation group or system-wide

- *All* - privilege rank on the time window, or on time windows in its partition, isolation group or system-wide

Time windows can reference the following objects, you need at least *View* privileges on these objects when you want to edit a time window that references them:

- *Application*

- *Period Function*

- *Submit Frame*

- *Time Window*

- *Resource*

See Also

- [Privileges Required to use Applications](#)

- [Privileges Required to use Submit Frames](#)

- [Privileges Required to use Period Functions](#)

Privileges Required to use Time Zones

Time zones are viewable by all SAP CPS users.

Privileges Required to use Triggers

To use triggers, you need either:

- `scheduler-administrator` role

- system, partition or isolation goup-level permissions

- object-specific privileges

Creating Triggers

You need one of the following privilege ranks to be able to create triggers:

- *Create* - allows you to create triggers on the level the privilege was granted (system, partition, isolation-group), you have no further privileges through this rank, you automatically get privileges on triggers you create.

- *Edit* - allows you to create, view, and edit all triggers on the level the privilege was granted (system, partition, isolation-group)

- *Delete* - allows you to create, view, and delete all triggers on the level the privilege was granted (system, partition, isolation-group)

- *All* - full control over all triggers on the level the privilege was granted (system, partition, isolation-group)

Editing Triggers

To successfully edit a trigger, you have to have one the following privileges:

- *Edit* - privilege rank on the trigger, or on triggers in its partition, isolation group or system-wide

- *Delete* - privilege rank on the trigger, or on triggers in its partition, isolation group or system-wide

- *All* - privilege rank on the trigger, or on triggers in its partition, isolation group or system-wide

Triggers can reference the following objects, you need at least *View* privileges on these objects when you want to edit a trigger that references them:

- *Library*

- *Application*

See Also

- [Privileges Required to use Applications](#)

- [Privileges Required to use Libraries](#)

Privileges Required to use Users

Users are hosted in external authentication systems and cannot be edited from within SAP CPS.

Users can grant privileges they have with an *Admin* rank to other users.

Chapter 2. Reference

Chapter 3. Glossary

A

ABAP [SAP]

ABAP is a programming language that the SAP R/3 software and later most other software by SAP AG was written in.

ABAP program [SAP]

A program written in the ABAP language.

Application

An object used to group objects like job definitins and job chains.

AS/400 [IBM]

In SAP CPS the older names AS/400 and OS/400 are used to refer to the hardware and operating system as these are the names that have been in use longest. There are at least two other names for the machine:

- From 2000-2004 the machine was known as the IBM eServer iSeries (generally abbreviated as iSeries).

- Since 2004 the machine has been known as the IBM i5 and the operating system as i5/OS.

B

Batch Input Sessions [SAP]

A special SAP job that processes incoming data. A directory is designated in SAP as the Batch Input Folder. Applications can send data, in a special SAP format called iDocs, to the SAP System by placing the files in this directory. The ABAP program RSBDCSUB reads the batch input folder and submits a new SAP job for every file it finds.

C

CCMS [SAP]

The SAP Computer Center Management System (CCMS) is part of an SAP solution that provides common functionality such as user management, monitoring and background jobs.

CCMS Job [SAP]

A background request in CCMS for the execution of one or more ABAP programs and/or repeating system commands.

CEN [SAP]

The SAP monitoring architecture assumes that a system in your system landscape is the central monitoring system (CEN). The monitoring information for your system landscape is collected by this system and displayed in the Structure Alert Monitor.

Client [SAP]

In SAP terminology, a self contained unit in an R/3 system with separate master records and its own set of tables. An SAP mandanten identified by a 3 digit (numeric) field in SAP CPS.

Constraints

Constraints are conditions that parameters must fulfill.

Context Menu

A list of context sensitive actions that appears by right-clicking. Also called pop-up menus, speed menus, quick menus or shortcut menus.

E

EAR

Enterprise Application Archive. A file that contains a Web-based application. An EAR file is an archive of MIME type "application/zip" and can be extracted with any pack program. It always contains a file in which all of the components belonging to the archive are described. Further applications are necessary to enable the correct implementation of the applications contained in the archive after extraction.

Endpoint

An endpoint is a device that is connected as part of a computer network.

Event

Jobs can wait for one or more events to happen before they start. SAP CPS has two types of events: job events (raised by jobs having specific job statuses or return codes) and file events (raised by files that are created or modified on the operating system). File events require the Platform Agent Module, please check your license.

F

Format

A format can be assigned to a job definition. The format defines the type of output that the job generates or captures.

G H I

GRMG [SAP]

You can use the Generic Request and Message Generator (GRMG) to monitor the availability of technical components and entire business processes. GRMG is suitable both for technical monitoring and for application monitoring.

i5/OS [IBM]

see AS/400

Instance [SAP]

An administrative unit that groups components of an SAP System. The SAP System identification.

iSeries [IBM]

see AS/400

Isolation Group

Isolation groups are used to isolate objects from specific users. Some users can access all isolation groups while others can only access one or more; this is controlled with roles. In the Free of Charge version, isolation groups isolate SAP client/instance combinations from each other allowing you to interact with only one at any given time.

J

Job

A job is a job definition that is submitted to the process server. When users request the execution of a script, a process server creates a job record in the jobs table, calculates the start time and set the job status to SCHEDULED.

Job Chain

A job chain is a special job definition that has no command text and executes one or more job definitions (job chain jobs) in parallel or sequentially. The job chain jobs are grouped into steps. All job chain jobs in one step are executed directly (parallel processing) and process server waits until all job chain jobs get a final job status before proceeding with a next step (sequential processing).

Job Count [SAP]

A job count is a number that represents the id of a job in an SAP System. It is sometimes referred to as *Job Id* in some SAP Systems.

Job Definition

A job definition defines a process to be executed by the process server. A job definition consists of the command text to be executed and several runtime and scheduling controls.

Job Execution

SAP CPS determines when a job can be run according to the specified start date, time window, and so on. A job is executed in a queue. When the start time arrives, the process server creates a runner and executes the job.

Job Id [SAP]

A job id is a number that represents the id of a job in an SAP System. It is sometimes referred to as **Job Count** in some SAP Systems. These is also a job id in SAP CPS, which is SAP CPS specific and is the *unique* identifier of a job in an instance of SAP CPS.

Job Status

Indicates the current condition of a job, such as `Scheduled`, `Never`, `Queued`, `Hold`, `QueueHold`, `Overdue`, `EventWait`, `LockWait`, `Running`, `Completed`, `Console`, `Waiting`, `Deleting`, `Error`, `Canceled`, or `Killed`.

JXBP

Java External Background Processing is an interface to the JAVA stack of an SAP NetWeaver AS. It offers scheduling capabilities for Message-Driven Beans.

K

Keep Clause

The conditions used to determine how many versions of the job output should be kept.

Keep Until

Keep Until is used to specify how long trace files for a specific process server should be kept. The process server checks every 15 minutes for trace files that should be deleted.

L

Lock

Locks are used to make sure that specific job definitions do not run concurrently. You can add multiple locks to a job definition to define which jobs can and cannot run together.

M

Mass Activities [SAP]

A special set of SAP transactions are used to define mass activities. A mass activity run results in a moderate number of jobs can be processed in parallel. This allows good resource usage of large computer systems with multiple CPUs, but avoids the large overheads of too many jobs.

Module

SAP CPS provides a number of ERP interfaces, utilities and systems tools. These are called Modules.

MVS [IBM]

See z/OS.

N O

Node

A node is a device that is connected as part of a computer network. A monitor node is an element of the monitor tree. A leaf node in the monitor tree is a node that does not have any children.

OS/390 [IBM]

See z/OS.

OS/400 [IBM]

See AS/400.

P Q

PI [SAP]

The PI interface allows you to connect to NetWeaver AS Java systems and control communication channels.

Precondition Functions

A precondition is a Boolean Redwood Expression Language function stored in the repository. If the outcome of the function evaluates to `true`, SAP CPS proceeds with the step or job chain job; if the outcome evaluates to `null` or `false`, SAP CPS skips the step or job chain job and sets the job status to `Skipped`.

Process Chain

A sequence of processes that are scheduled in the background to wait for a particular event. Some of these processes trigger an additional event, which in turn can start other processes.

Process Server

Process servers are used to execute jobs.

Queue

Jobs are executed in queues. A queue can be open or held. While a queue is held, no new jobs are started in the queue.

R

Recurrence

Recurrence is used to request multiple executions of a script. There are two types of job recurrence, structured recurrence and calendar recurrence. Structured recurrence is based on a pattern, and calendar recurrence is based on calendar dates.

Rescheduling

Restarting any job that has a final status (such as `Completed`, `Error`, or `Canceled`) or changing the properties of a scheduled or queued job (such as its start time).

Resource

A process server provides one or more resources, such as an Oracle database, an HP LaserJet printer, or a Windows environment. By assigning these resources to the job definition definitions, all jobs for these job definitions are executed by the appropriate process servers.

S

SCH [SAP]

The Business Information Warehouse - Job Scheduling (BW-SCH) interface allows other systems to schedule Process Chains and InfoPackages in SAP BW.

Scheduler

The scheduler is used to refer to the SAP CPS server, usually as *Central Scheduler*.

Scheduling Parameters

A job definition contains a queue, status on submit, and priority. These scheduling parameters define how the process server handles jobs after they are submitted.

Submit Frame

A submit frame is a cyclic calendar which forces a job to be executed respectively. When job definition execution is requested and a submit frame is used, the corresponding job will be restarted automatically by a process server according to the frequency defined in the submit frame.

T

Time Window

A time window defines a time zone in which the job is allowed to be executed. A job calendar that defines the period of time during which a job or a queue can be active. A time window consists of time intervals with either fixed run dates and times or rules such as the first working day of the month, or a combination of run dates and times, and rules. A time window is open whenever one of the time elements of this time window is open.

Time Zones

Time zones are areas of the Earth that have adopted the same standard time. All time zones are defined relative to Coordinated Universal Time (UTC). Time zones are generally centered on meridians of a longitude (a multiple of 15 degrees) which makes neighboring time zones one hour apart. The one hour separation is not always universal, and time zone shapes can be quite irregular because they usually follow the boundaries of states or countries.

U V W X Y Z

Variant [SAP]

A variant is a named object containing a set of valid parameter values that an ABAP program requires to do its work. Only ABAP programs that require parameters require variants. The idea behind a variant is that the parameter values change less often than batch jobs are run. In other words, they can be re-used. The variant concept also allows for extreme task differentiation, where one person determines the contents of the variant, and another person does the scheduling of the ABAP program with the variant.

XAL [SAP]

The External Interface for Alert Management (BC-XAL or XAL) is an interface to the SAP CCMS monitoring infrastructure. It allows other systems to retrieve monitor information from the SAP System.

XBP [SAP]

External Background Processing (BC-XBP) is an interface to the SAP *CCMS Job Scheduling and Event Handling System*. It allows other systems to submit, monitor, and intercept jobs as well as raise and clear events in an SAP System.

XMW [SAP]

External Monitoring Write (BC-XMW or XMW) is an interface to the SAP CCMS monitoring infrastructure. It allows other systems to create, edit, and update SAP Monitors.

z/OS [IBM]

The software platform running on IBM Mainframe computers, currently named *IBM System z*. z/OS has had many names over the years, including MVS and OS/390.

zSeries [IBM]

The name of the hardware platform, generally referred to as Mainframe, has been named eServer zSeries, then zSeries for short.

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  The data format used by the zlib library is described by RFCs (Request for
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