

# SQL ENTERPRISE JOB MANAGER

2.3

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SQL Enterprise Job Manager provides the following features:

- Broad visibility in an intuitive Outlook-style interface of all your scheduled, executed, and currently running SQL Server jobs across your environment.
- Simple and actionable user interface that helps you edit/delete and add new jobs.
- Receive your selected alert notifications for the most critical job status so you can take actions as needed.
- View job history and access information of the scheduled jobs.

# 1 Release notes

SQL Enterprise Job Manager provides you an easy-to-use web solution that helps you monitor your SQL Server Agent jobs across your enterprise. From one single web console, you can get an overview of your scheduled jobs across multiple SQL Server instances and edit/add new jobs according to your requirements. Viewing your job history and receiving alert notifications for the most critical job status has never been easier with SQL Enterprise Job Manager.

IDERA strives to ensure our products provide quality solutions for your SQL Server needs. If you need further assistance with any issue, please contact [support](#).

Review the following sections to get a quick glimpse into the newest features, fixed issues, and known issues in this release of SQL Enterprise Job Manager.

- [New features and fixed issues.](#)
- [Previous features and fixed issues.](#)
- [Known issues.](#)

## 1.1 New features and fixed issues

### 1.1.1 New Features in version 2.3

There are no new features in version 2.3

### 1.1.2 Fixed Issues in version 2.3

#### Alerts

**SQLENTE-4900** SQL Enterprise Job Manager now offers the "Always Send Email" option in the Configure Alert Email Settings. This option allows SQL EJM to send email alerts for all job-related alerts.

**SQLENTE-4911** SQL Enterprise Job Manager now allows to Submit on the Alert Wizard for the Job Wizard.

**SQLENTE-4914** SQL Enterprise Job Manager added the ability to configure the location type in the alert rules wizard.

#### Dashboard

**SQLENTE-4922** SQL Enterprise Job Manager web console successfully adds instances in the "FIPS compliant environments" dashboard.

#### Database

**SQLENTE-4775** The SQL Enterprise Job Manager repository database is now properly purged when deleting an instance.

#### Jobs

**SQLENTE-4788** SQL Enterprise Job Manager 2.3 supports a new option for root job lists.

**SQLENTE-4869** In the SQL Enterprise Job Manager 2.3 Job Wizard, the operator view settings is successfully configured.

**SQLENTE-4917** SQL Enterprise Job Manager database configuration remains configured when editing a job.

**SQLENTE-4920** Secondary jobs run successfully when Enterprise Job ManagerJobChain includes root jobs from different instances.

**SQLENTE-4924** Job Chain schedule issues have been fixed, meaning that Job Chain is correctly scheduled, updated, and configured.

#### Schedule

**SQLENTE-4814** Now, it is possible to reconfigure the job's schedule by the drag and drop feature in the Schedule Tab.

#### Other Issues

**SQLENTE-4497** The Server Performance Chart correctly shows CPU information.

**SQLENTE-4809** It is now possible to apply Product Administrator permission to a user group.

**SQLENTE-4857** The links in the side panel of the overview tab now correctly redirect to the disabled Jobs, disabled Job Chans, and Failed Tasks.

**SQLENTE-4899** SQL Enterprise Job Manager now supports .NET 4.8 and below.

**SQLENTE-4905** SQL Enterprise Job Manager installation is successful when enabling FIPS.

## 1.2 Previous features and fixed issues

### 1.2.1 New Features in version 2.2.1

#### IDERA Dashboard

- SQL Enterprise Job Manager is now integrated with IDERA Dashboard 4.6.

#### Support

- SQL Enterprise Job Manager now supports Microsoft Windows 2019 and SQL Server 2019 All Editions (Express, Standard, Enterprise, Datacenter, etc.)

### 1.2.2 Fixed Issues in version 2.2.1

#### Alerts

**SQLENTE-4885** Alert subscriptions are now set properly in the Alert Rules.

#### Jobs

**SQLENTE-4892** SQL Query's are now working properly in SSMS when generating job schedules.

#### Job History

**SQLENTE-4891** The Job History tab is now refreshing all operations properly.

#### Schedule

**SQLENTE-4811** Job and Task filters are now working properly in the Schedule tab.

#### Upgrades

**SQLENTE-4904** Upgrades from SQL EJM 2.1 to 2.2.1 are now working as expected.

### 1.2.3 New Features in version 2.2

#### IDERA Dashboard

- SQL Enterprise Job Manager is now integrated with IDERA Dashboard 4.2.0.29.

#### Overview

- The Home page is renamed to Overview. It is redesigned to allow users to obtain a quick status view of their environment related to scheduled jobs, tasks, and job chains across their enterprise.

#### Schedule

- It is redesigned to allow users to get detailed information about their instances, jobs, tasks, and job chains across their environments.

#### Support

- SQL Enterprise Job Manager now supports SQL Server 2016 and SQL Server 2017.

### 1.2.4 Fixed Issues in version 2.2

#### Email Alerts

**SQLENTE-4736** The SMTP email alerts are sent successfully when one or more subscribers do not have an email address configured.

**SQLENTE-4656** The "Refresh" link on the Instances, Jobs, and Dashboard page is working properly now.

#### Instances

**SQLENTE-4480** A ZK error message is no longer displaying on the Add/Remove Instances window while Adding a Job in the homepage.

#### Jobs

**SQLENTE-4603** Users can now add jobs to a custom category with special characters.

**SQLENTE-4600** Users can now add or edit a job with a description with special characters.

**SQLENTE-4841** Users can now edit jobs created with multiple instances.

#### Job and Schedule History

**SQLENTE-4764** The Maximum Run Time and Average Run Time displayed on the Job History is now displaying the time values in hours/minutes/seconds.

#### Job Chaining

**SQLENTE-4749** The Job Chains are now running properly.

#### Repositories

**SQLENTE-4651** Same repositories names are validated now in the installation wizard.

#### Schedule

**SQLENTE-4542** The Author/login account used to schedule a task is no longer changing to System name/Administrator when running the task.

#### Start Menu

**SQLENTE-4776** Users have now a "SQL Enterprise Job Manager Help" shortcut in the Start Menu.

## 1.2.5 New Features in version 2.1

#### Job overlap viewer

- SQL Enterprise Job Manager now allows you to view and identify jobs running in the same time slot. By modifying settings on overlapping events, users can improve job execution and server resource use.

#### Maintenance mode for instances

- Version 2.1 allows you to assign a Maintenance mode schedule during Instance registration. You can also choose to disable alerts and notifications during the Maintenance mode period.

#### Creating Jobs for multiple instances

- SQL Enterprise Job Manager now allows you to create Jobs to be executed simultaneously on multiple instances in your environment.

#### Server Performance Timeline

- Version 2.1 displays a graphical overview per server. You can view the jobs across all SQL Server instances on a specific server and the number of CPU cycles generated by this workload. Additionally, a job runtime chart displays the jobs that have been run in the server and their duration.

#### Saving filtering options

- SQL Enterprise Job Manager now allows saving your preferred filtering options to apply them later as needed.

### **Monitor, edit, and create Windows Tasks on registered instances**

- Version 2.1 allows you to monitor and edit scheduled Windows tasks from registered instances, as well as to create new Windows tasks.
- Filter options in the Job History Tab
- Users are now able to filter jobs by Day/Week/Month in the Job History tab.
- Owner and Location properties for Instance Alerts
- Users can now configure Instance type alerts using owner and location properties.

## 1.2.6 Fixed Issues in 2.1

### **Schedule Tab**

- When users drag and drop a job over a time slot with other scheduled jobs, the schedule is created accurately.
- Jobs that are dragged and dropped to a time slot where they are already scheduled are no longer duplicated.
- SQL Enterprise Job Manager accurately updates schedules for jobs created between 11:45 and 11:59 p.m. that are dragged and dropped to different time slots.
- Users scheduling jobs at 12:00 pm can now see the accurate time displayed in the Schedule tab of the Job Wizard.
- Users accessing a specific day from the Month view in the Schedule tab can now see the correct date filter in the respective Day view.
- SQL Enterprise Job Manager now displays a warning dialog when users drag and drop jobs in the Schedule tab.
- When double-clicking a time slot in the Schedule tab to create a new job, SQL Enterprise Job Manager now displays the selected time in the Job Wizard.

### **Filters**

- Time filters such as Duration (Schedule and Job History tabs) and # of jobs and # of failed jobs (Instances tab) can now be edited through the respective text boxes.
- After returning the Duration filter sliders in the Schedule tab to their original position, the relevant jobs are displayed accurately.

### **Alerts**

- Alerts descriptions remain hidden after selecting any action on the Alerts section of the Welcome Wizard.
- The Alert Details window now displays an icon for the Agent Status.

### **Other Issues**

- SQL Enterprise Job Manager now allows to edit credentials on a single instance in the Manage SQL Server Instances section of the Administration tab.
- Services names are displaying correctly in the warning message that prompts when services are stopped.

## 1.2.7 New Features in version 2.0

### **Integration with the IDERA Dashboard**

- Version 2.0 allows you to register as many instances of your SQL Enterprise Job Manager with the IDERA Dashboard. The **IDERA Dashboard** provides a platform of services that allow an integrated user experience across multiple IDERA products.

**Job Chaining**

- SQL Enterprise Job Manager now allows you to chain multiple jobs together with created dependencies so that when one job completes, another job is run. This new feature lets the user create and manage job chains for one server or across multiple servers.

**Job Trending**

- The new Job Trends option lets users get a graphical representation and the estimated trends for job runtimes and execution counts. Users can choose to see the trends for the most frequent jobs, top failures, longest-running jobs, and highest percentage duration increase.

**Instance Specific View**

- SQL Enterprise Job Manager now allows users to click any SQL Server instance and access its specific information such as alerts, upcoming jobs, and job history.

**Job Specific View**

- Users can now click any Job and access its specific information such as alerts, upcoming runtimes, and job history.

**SQL Enterprise Job Manager 1.1 Daylight Saving Time (DST) considerations**

- IDERA recommends that you upgrade your SQL Enterprise Job Manager to version 1.1 to avoid issues with DST changes.
- SQL Enterprise Job Manager 1.0 will run your jobs properly (on the correct scheduled times) after DST (March 8th, 2015), but the Schedule tab may show your jobs scheduled offset by one hour.

## 1.2.8 Fixed issues in 2.0

- When the server running SQL Enterprise Job Manager is rebooted, users will no longer find that the SQL Enterprise Job Manager Collection service has not started.

## 1.3 Known issues

### 1.3.1 Known issues in version 2.2

#### Upgrades

- Upgrade SQL Enterprise Job Manager from an earlier version, requires version by version upgrade until the latest version.

### 1.3.2 Known issues in version 2.1

#### Filters

- Instance filter is currently not working for tasks when selected in the Schedule tab.
- Schedule filter is incorrectly placed under the Status filtering options of the Windows Task Scheduler view.

#### Instances Registration

- Users trying to add instances when two different versions of SQL Enterprise Job Manager are installed on the same IDERA Dashboard could find an error message and not be able to add them.
- Instances registered before upgrading SQL Enterprise Job Manager to the latest version are not displayed on the Managed Instances section of the IDERA Dashboard.

#### Jobs

- When users edit a multi-instance job to create individual jobs on each instance, the job history of the relevant instances could not display the original multi-instance job properly.
- Job Details pop-up windows are incorrectly displayed while hovering over different Job Runtime Chart locations.

#### IDERA Dashboard

- Removed Instances may still be displayed in the Managed Instances section of the IDERA Dashboard.
- Removed users may still be displayed in the Managed Users section of the IDERA Dashboard with an unassigned role.

#### Other Issues

- Windows Server 2012 is currently not populated as an operating system option to be configured for in the Task Scheduler wizard.
- SQL Enterprise Job Manager may prompt an error message when double clicking options through the web console.
- The collector service of SQL Enterprise Job Manager may stop running under unknown circumstances. Users will need to reboot the respective service.
- Users may find an error message while executing the Collection Job on a specific Instance on the Instances tab.
- SQL Enterprise Job Manager is not displaying the CPU information accurately in the Server Performance Chart.

### 1.3.3 Known issues in version 2.0

#### Installation



- SQL Enterprise Job Manager 2.0 installer does not upgrade from versions 1.0 and 1.1. Users have to uninstall first the 1.x build, then install 2.0. However, during installation users can point the 2.0 installer to previous repository databases so that no data is lost from their 1.x install.
- As part of integration with the IDERA Dashboard, a Dashboard user is required to log in the SQL Enterprise Job Manager web application. Users created in 1.x versions are no longer valid. After 2.0 is installed, users will need to be re-created either from the Dashboard Administration tab or the SQL Enterprise Job Manager Administration tab (which syncs the user to the Dashboard.)
- SQL Enterprise Job Manager may prompt to close other IDERA products such as SQLdm or SQLsafe for its uninstall process.

### Adding/Editing Jobs

- Users may notice that as soon as they create a new job, the Last Run Outcome for this job is shown as failed in the Jobs tab. Once the collector runs, the status is updated to Unknown or the respective outcome if it ran.
- This version provides the most important functionality to create/edit SQL Server jobs. Users should take into account that some options, like job step types (“SQL Server Analysis Services Command” or “SQL Server Integration Services Package” for example) that are handled by SQL Server Management Studio, may not be present in the current version of SQL Enterprise Job Manager.
- Users may find that when they switch views after they reschedule jobs in the Schedule tab, the changes in the rescheduled job will not be updated in the calendar until the collector runs or they manually refresh the data.
- Users will not be able to edit jobs with names that contain characters such as “&” and “+”. Additionally, users should take into account that jobs with names that include ‘ and “ characters, may not be allowed to edit these jobs or will be prompted with an error message when trying to edit them.
- Any selection made to multiple items across SQL Enterprise Job Manager lists (jobs, instances, and alert rules) will be lost when sorting, filtering, refreshing, moving through pages, or performing other actions on the same section.
- On the Schedule tab when users double click a time slot to create a new job, SQL Enterprise Job Manager currently does not display the job created in the selected time slot. It takes into account the time slot selected, and according to the time zone difference between instance and calendar, it displays in the calendar the time slot that would correspond to that time in the instance. For example, if the time zone of the computer where SQL Enterprise Job Manager is running is at UTC-6 and the instance where the user chooses to create a job is at UTC-8 time zone, when the user double clicks the 7:00 pm time slot to create a job, the following outcomes should be expected:
  - The job will be created at 7:00 pm on the selected instance.
  - The Schedule tab will take into account the time zone difference between instance and calendar and will display the job 9:00 pm.

## 1.3.4 Known issues in version 1.0

### Installation

- SQL Enterprise Job Manager may prompt to close other IDERA products such as SQLdm or SQLsafe for its uninstall process.

### General

- When the server running SQL Enterprise Job Manager is rebooted, users may find that the SQL Enterprise Job Manager Collection service has not started and an error message will be displayed indicating that the service is not running.

### Adding/Editing Jobs

- This first version provides the most important functionality to create/edit SQL Server jobs. Users should take into account that some options, like job step types (“SQL Server Analysis Services Command” or “SQL Server Integration Services Package” for example) that are handled by SQL Server Management Studio, may not be present in the current version of SQL Enterprise Job Manager.
- Users may find that when they switch views after they reschedule jobs in the Schedule tab, the changes in the rescheduled job will not be updated in the calendar until the collector runs or they manually refresh the data.
- Users will not be able to edit jobs with names that contain characters such as “&” and “+”. Additionally, users should take into account that jobs with names that include ‘ and “ characters, may not be allowed to edit these jobs or will be prompted with an error message when trying to edit them.
- Any selection made to multiple items across SQL Enterprise Job Manager lists (jobs, instances, and alert rules) will be lost when sorting, filtering, refreshing, moving through pages, or performing other actions on the same section.
- On the Schedule tab when users double click a time slot to create a new job, SQL Enterprise Job Manager currently does not display the job created in the selected time slot. It takes into account the time slot selected, and according to the time zone difference between instance and calendar, it displays in the calendar the time slot that would correspond to that time in the instance. For example, if the time zone of the computer where SQL Enterprise Job Manager is running is at UTC-6 and the instance where the user chooses to create a job is at UTC-8 time zone, when the user double clicks the 7:00 pm time slot to create a job, the following outcomes should be expected:
  - The job will be created at 7:00 pm on the selected instance.
  - The Schedule tab will take into account the time zone difference between instance and calendar and will display the job 9:00 pm.

## 2 Welcome to SQL Enterprise Job Manager

SQL Enterprise Job Manager provides the following features:

- Broad visibility in an intuitive Outlook-style interface of all your scheduled, executed, and currently running SQL Server jobs across your environment.
- Simple and actionable user interface that helps you edit, delete, and add new jobs.
- Receive your selected alert notifications for the most critical job status, so you can take actions as needed.
- View job history and access information of the scheduled jobs.

## 2.1 What is SQL Enterprise Job Manager?

SQL Enterprise Job Manager provides you an easy-to-use web solution that helps you monitor your SQL Server Agent jobs across your enterprise. From one single web console, you can get an overview of your scheduled jobs across multiple SQL Server instances and edit/add new jobs according to your requirements. Viewing your job history and receiving alert notifications for the most critical job status has never been easier with SQL Enterprise Job Manager.

SQL Enterprise Job Manager provides the following features:

- Broad visibility in an intuitive Outlook-style interface of all your scheduled, executed, and currently running SQL Server jobs across your environment.
- Simple and actionable user interface that helps you edit, delete, and add new jobs.
- Receive your selected alert notifications for the most critical job status, so you can take actions as needed.
- View job history and access information of the scheduled jobs.

## 2.2 How does SQL Enterprise Job Manager help you?

SQL Enterprise Job Manager helps you to get an overview of your SQL Server jobs as well as manage their properties from a single web console.

With SQL Enterprise Job Manager you can:

- View information about your current scheduled, executed, and currently running jobs across multiple instances.
- Register instances whose SQL Server jobs you want to monitor.
- Reschedule jobs according to your needs.
- Edit jobs properties, add new jobs, and delete. Also, you can stop, disable, or manually start jobs.
- Start, stop, or restart your SQL Agent service.
- View the history of your run jobs.
- Set those alert notifications you want to receive, like emails for Job Failures. Besides, you can define the frequency or parameters to prompt your alerts.
- Limit access by defining user roles (Administrator, User, and Read-only).
- Export relevant information about your Jobs, Instances, and Alerts in a PDF, CSV, or XML file.

## 2.3 Using SQL Enterprise Job Manager Help

The IDERA wiki includes a comprehensive online Help system as well as additional resources that support you as you install and use IDERA products. You can also search multiple IDERA support solutions, available at <http://www.idera.com/support/productsupport>.

Additionally, IDERA helps you by providing:

- 24/7 technical support for critical issues.
- Availability to report cases and access a web-based customer portal for update status.
- Access to our [Knowledge center](#) where you can find FAQs, How To's, Best Practices, and Webcasts.

This wiki includes the following Web browser minimum requirements:

- Internet Explorer IE 10+
- Microsoft Edge (MS browser in Windows 10)
- Google Chrome
- Mozilla Firefox
- Safari

You can access the IDERA SQL Enterprise Job Manager Help system through the **HELP** option on the top right section of any tab or by clicking the question mark (?) on any dialog window.

You can print a help topic from the wiki using the Print function in your browser.

## 2.4 Definition of terms

### Alert

An alert is an automatic response to a specific event. The user can define the conditions under which an alert occurs. An alert can notify users and can also run a job. SQL Enterprise Job Manager has the following alert rules defined by default:

- Job Failures
- SQL Server instance connection failures
- SQL Server Agent not running

### Instance

Also known as SQL Server or SQL server instance. SQL Server supports multiple “instances” or installations on the same host computer. Each instance runs independently from all others and has its own set of installation code, configuration parameters, system and user databases, memory allocation, and security configuration.

### Job

A job is a set of defined sequential operations performed by the SQL Server Agent. A job can perform a wide range of activities, including running Transact-SQL scripts, command-line applications, Microsoft ActiveX scripts, Integration Services packages, Analysis Services commands, and queries or Replication tasks. Jobs can be defined to run repetitive tasks; they can be scheduled or ran manually. Jobs can also be configured to run in response to alerts. They can automatically notify users of the job status by generating alerts.

### Job Category

Job categories help the user organize their jobs for easy filtering and grouping. Some default Job categories are: Database maintenance, Data Collector, Log Shipping, Full text indexing, Replication Agent categories, etc. but users can also define their own job categories.

### Job Chain

A Job Chain lets you create dependencies among jobs and schedule their execution in one server or across multiple servers.

### Job Step

A job step is an action that the job takes on a database or a server. Every job must have at least one job step. Job steps can be:

- Executable programs and operating system commands.
- Transact-SQL statements, including stored procedures and extended stored procedures.
- PowerShell scripts.
- Microsoft ActiveX scripts.
- Replication tasks.
- Analysis Services tasks.
- Integration Services packages.

### Schedule

A schedule specifies when a job runs. More than one job can run on the same schedule, and more than one schedule can apply to the same job. Schedules can be set to run

when the SQL Server Agent starts, at a specific date and time, on a recurring schedule, or whenever the CPU utilization of the computer is at a level the user has defined as idle.

**SQL Server Agent**

SQL Server Agent is a Microsoft Windows service that executes scheduled administrative tasks, which are called jobs. SQL Server Agent uses SQL Server to store job information. Jobs contain one or more job steps. Each step contains its own task, for example, backing up a database. The SQL Server Agent can run a job on a schedule, in response to alerts, or on demand.

SQL Server Agent hosts the data collector run-time component. Data collection is scheduled as a SQL Server Agent job. When the job is run, it invokes the data collector run-time component using the parameters required to create and execute a collection set.



## 3 Getting Started

Learn the basics of IDERA SQL Enterprise Job Manager installation, the product requirements and the installation or upgrade instructions. Later on, learn about how to logging into the application, navigating through the Welcome wizard, registering SQL Server instances, managing users, licenses, and other key IDERA SQL Enterprise Job Manager features.

The following topics are included in this section:

- [Installation and deployment](#)
- [How do you log into SQL Enterprise Job Manager?](#)
- [Navigating through the Welcome Wizard](#)
- [Managing licenses](#)

## 3.1 Installation and deployment

In this section, review all the installation process for SQL Enterprise Job Manager. Install and deploy SQL Enterprise Job Manager in any environment that meets the minimum requirements described in the following sections:

- Learn about the [product components and architecture](#).
- Review the [product requirements](#).
- Follow the [SQL Enterprise Job Manager installation steps](#).

### 3.1.1 Product components and architecture

SQL Enterprise Job Manager provides you with an easy-to-use web solution that helps you monitor SQL Server Agent jobs across your enterprise. From one single web console, you can get an overview of your scheduled jobs across multiple SQL Server instances and edit/add new jobs according to your requirements. Viewing your job history and receiving alert notifications for the most critical job status has never been easier with SQL Enterprise Job Manager.

SQL Enterprise Job Manager consists of the following components:

#### SQL Enterprise Job Manager User Interface

SQL Enterprise Job Manager provides a web-based user interface. Through this interface, it displays the main information about your registered SQL Server instances, their jobs, and the respective administration options.

The web-based user interface does not require IIS or other internet servers.

The user interface web service is self-hosting and through the multiple views you can:

- Get broad visibility, in an intuitive Outlook-style interface, of your scheduled, executed, and currently running SQL Server jobs across your environment.
- Register instances whose SQL Server jobs you want to monitor.
- Edit/delete and add new jobs.
- View job history and access information of the scheduled jobs.
- Receive selected alert notifications for instance or job issues to take actions as needed.
- Define which alert notifications you want to receive as well as the parameters that prompt an alert.
- Add users with different roles (Administrator, User, and Read-only).

This Web Application can be accessed through Internet Explorer 9 or later, Google Chrome, and Mozilla Firefox.

You can access the SQL Enterprise Job Manager web application through the following link:

**http://<ServerName>:<web application port>**

**ServerName** is the name of the computer where you installed the SQL Enterprise Job Manager services.

**Web application port** is 9290 by default, but it can be changed during installation.

#### SQL Enterprise Job Manager services

IDERA SQL Enterprise Job Manager uses the following windows services:

- Idera Dashboard Web Application Service
- Idera Dashboard Core Service
- Idera SQL Enterprise Job Manager Collection Service

The Idera Dashboard Core Service is in charge of collecting information on the discovered SQL Server instances, users, and preferences.

The Idera SQL Enterprise Job Manager Collection Service gathers information from the registered instances and collects status data and properties from instances, SQL Server Agents, and jobs.

#### SQL Enterprise Job Manager repositories

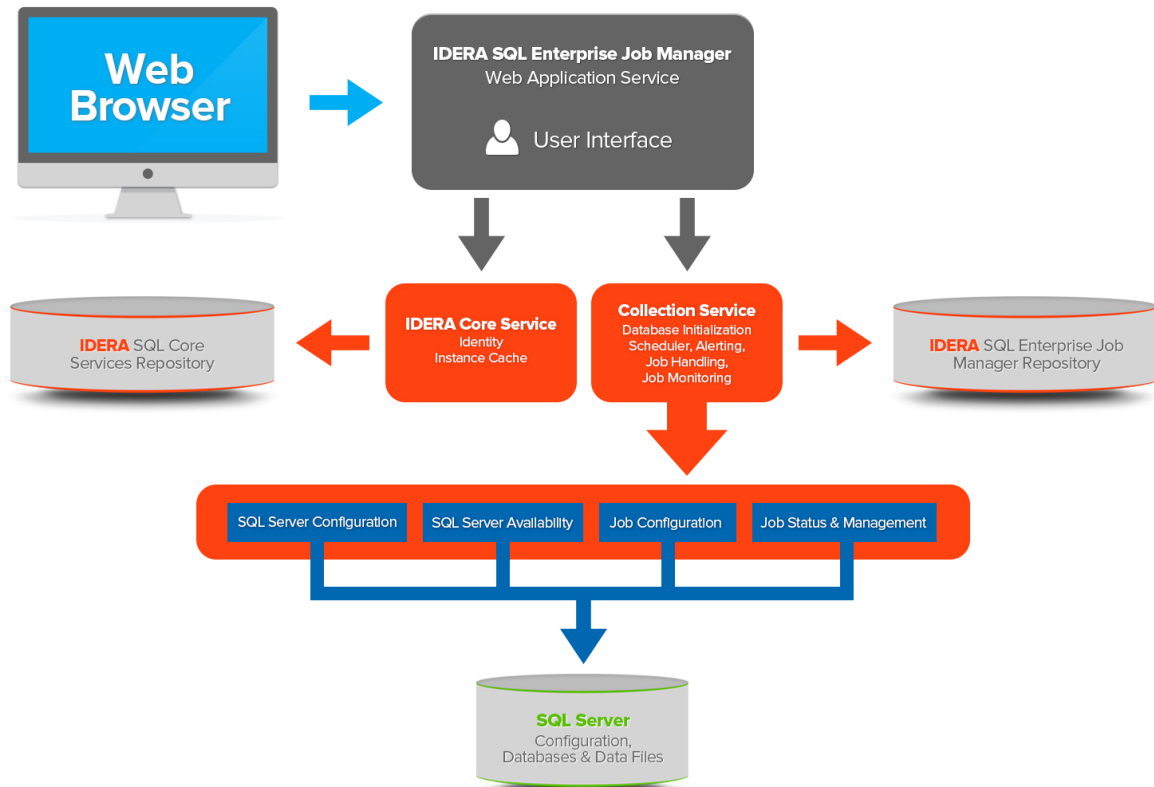
IDERA SQL Enterprise Job Manager creates the two following databases on installation:

- IderaEnterpriseJobManagerRepository

- IderaEnterpriseJobManagerCoreRepository

The Idera Enterprise Job Manager Core Repository stores information related to application users and configuration information. The SQL Enterprise Job Manager Repository stores information about registered instances and their respective monitored jobs.

The following diagram represents IDERA SQL Enterprise Job Manager architecture:



## 3.1.2 Product Requirements

Before installing the IDERA Dashboard and IDERA SQL Enterprise Job Manager, be sure to review the system requirements. It is important that you learn about the hardware and software requirements, and the required accounts and permissions you need to have before installing these products.

The following topics are included in this section:


- [Hardware requirements](#)
- [Software requirements](#)
- [Required accounts and permissions](#)

## Hardware requirements

### General Requirements

The following are the requirements for hosting SQL Enterprise Job Manager collection Services or repositories:


Hardware type	Requirement
CPU	2 GHz
Memory	3 GB
Hard Drive Space	128 MB
Monitor Resolution	1024 by 768 pixels

 Take into account that installing both the services and repositories in one machine may increase the needed requirements.

### Minimal requirements in large environments

If you are planning to monitor over 50 instances with 1000 jobs by instance or more, the requirements for hosting SQL Enterprise Job Manager Collection Services or repositories are:

Hardware type	Requirement
CPU	2 GHz (i7 or higher)
Memory	8 GB

 Take into account that installing both the services and repositories in one machine will increase the needed requirements. For larger environments, IDERA recommends to install the SQL Enterprise Job Manager Collection Services and Repositories in different machines.

### SQL Enterprise Job Manager repositories requirements

The Hard Drive Space for SQL Enterprise Job Manager repositories will depend on the amount of data handled on the monitored instances and how long you plan to retain your data.

## Software requirements

### SQL Enterprise Job Manager services requirements

To install SQL Enterprise Job Manager collection services, you need to meet the following requirements:

Type	Requirement	Suggestions
Microsoft Data Access Components (MDAC)	2.8 or later	
Microsoft. NET Framework version	4.0 or later	Make sure to install this software prior to the installation of the IDERA Dashboard.  For more information about the .NET Framework, see the MSDN article: <a href="#">NET Framework Versions and Dependencies</a> .
Operating System	<ul style="list-style-type: none"> <li>• Windows Server 2008 SP1+</li> <li>• Windows Server 2008 R2</li> <li>• Windows 8</li> <li>• Windows 10</li> <li>• Windows Server 2012</li> <li>• Windows Server 2012 R2</li> <li>• Windows Server 2016</li> <li>• Windows Server 2019</li> </ul>	

### SQL Enterprise Job Manager repository requirements

To install SQL Enterprise Job Manager repositories you must have:

Type	Requirement
All Editions (Express, Standard, Enterprise, etc.)	<ul style="list-style-type: none"> <li>• SQL Server 2008</li> <li>• SQL Server 2008 R2</li> <li>• SQL Server 2012</li> <li>• SQL Server 2014</li> <li>• SQL Server 2016</li> <li>• SQL Server 2017 on Windows &amp; Linux</li> <li>• SQL Server 2019</li> </ul>

### Monitored SQL Server instances requirements

All SQL Server instances that you wish to monitor should meet the following requirements:

Type	Requirement
All Editions (Express, Standard, Enterprise, etc.)	<ul style="list-style-type: none"><li>• SQL Server 2008</li><li>• SQL Server 2008 R2</li><li>• SQL Server 2012</li><li>• SQL Server 2014</li><li>• SQL Server 2016</li><li>• SQL Server 2017 on Windows &amp; Linux</li><li>• SQL Server 2019</li></ul>

#### Browser requirements

IDERA SQL Enterprise Job Manager user interface supports the latest versions of the following browsers:

- Google Chrome
- Mozilla Firefox
- Safari
- Internet Explorer IE 10.x+
- Microsoft Edge (MS browser in Windows 10)

#### Port requirements

IDERA SQL Enterprise Job Manager uses the following ports:

- Collection service port: 9271
- Web application service port: 9292



## Required accounts and permissions

### Required Accounts and Permissions

SQL Enterprise Job Manager connects to registered SQL Server instances and their host computers to collect information. The collection service requires permissions to connect and gather information using SQL connection credentials.

Depending on the level of access and actions you want SQL Enterprise Job Manager to perform on your environment, you should check you have the following permissions in each account:

Account	Action	Permissions required
Windows User Account	To install SQL Enterprise Job Manager components	Windows Administrator permission on the Target computer
	To create and access the SQL Enterprise Job Manager repository databases	<ul style="list-style-type: none"> <li>• Create Database Rights on the target SQL Server Instance</li> <li>• Read and write privileges on the SQL Enterprise Job Manager Repository Databases</li> </ul>
	To start or stop the SQL Server Agent	Windows Administrator permission on the computer running the SQL Server Agent service
SQL Server login account	For most SQL queries	VIEW SERVER STATE VIEW ANY DATABASE VIEW ANY DEFINITION
	To monitor database information	ALTER ANY DATABASE server level permission or CREATE DATABASE in the master database
	To start or stop the SQL Server Agent	sysadmin server roles
	To create and access the SQL Enterprise Job Manager repository databases	<ul style="list-style-type: none"> <li>• Create Database Rights on the target SQL Server Instance</li> <li>• Read and write privileges on the SQL Enterprise Job Manager Repository Databases</li> </ul>



IDERA suggests that you provide SQL connection credentials with "sysadmin" server roles if you want to be able to collect all information from your environment.

### 3.1.3 SQL Enterprise Job Manager installation

This section provides you step-by-step information for installing the IDERA Dashboard and SQL Enterprise Job Manager.

The following topics are included in this section:

- [How to install the IDERA Dashboard.](#)
- [How to install SQL Enterprise Job Manager.](#)
- [How to upgrade to the most recent release.](#)

## Installing the IDERA Dashboard

The **IDERA Dashboard** provides a platform of services that allow an integrated user experience across multiple IDERA products.

When you open the installer, follow these steps:

- In the **Welcome to the IDERA Dashboard Setup Wizard**, click **Next**.
- Accept the terms in the License Agreement, click **Next**.
- Specify the **Destination Folder** where you want to install the **IDERA Dashboard**. Click **Change** to choose a different path than the default folder. Click **Next**.
- Specify the **Service Account** under which the **IDERA Dashboard** services will run. The "Log on as a service" right will be granted to this account. Click **Next**.
- Specify the ports to be used by **IDERA Dashboard** Services. If the Firewall is enabled, make sure it allows TCP traffic through these ports. By default, the following ports are used:

### **IDERA Dashboard Web Application Ports**

- HTTPS Port (Encrypted Transmission): 9291
- HTTP Port (Non-Encrypted Transmission): 9290

### **IDERA Dashboard Service Ports**

- Core Service Port: 9292
- Web application Service Port: 9094
- Determine the name and location (SQL Server instance) of the **IDERA Dashboard Repository Database**. By default, the setup program uses the credentials of your Windows logon account to create the Repository Database. If you want to use **Microsoft SQL Server Authentication**, select this option, then specify the login name and password for this account. Click **Next**.
- The service account you specified before will be granted access to login into the **IDERA Dashboard**. You can later add users. Click **Next**.
- The next window prompts you to review the installation settings. If you want to change them, click **Back** to go to the respective window. If you are ready to install the **IDERA Dashboard**, click **Install**. The Installation process begins.
- When the installation of the **IDERA Dashboard** finishes, a confirmation of completed installation is displayed. Click **Finish**.
- To access the **IDERA Dashboard**, use the following link in the browser of your choice: **http://<ServerName>:9290** where ServerName is the name of the machine on which you installed the IDERA Dashboard.

To install SQL Enterprise Job Manager on your IDERA Dashboard, click [here](#) to find the details.


## Installing SQL Enterprise Job Manager


This section guides you through the installation of SQL Enterprise Job Manager. You can install IDERA SQL Enterprise Job Manager on any computer that meets or exceeds the [product requirements](#).

If you have not installed your IDERA Dashboard, click [here](#) to follow the respective steps.

After you open the SQL Enterprise Job Manager installer file, follow these steps:

1. On the welcome window, click **Next** to continue.
2. Read the **End-User Licensing Agreement** and check the box **I accept the terms in the License Agreement**, click **Next**.
3. On the **Destination Folder** window select where SQL Enterprise Job Manager will be installed. The path **C:\Program Files\Idera\SQLJEM\** is displayed by default. If you want to change this path, click **Change** and select the folder where you want to install the product. Click **Next**.
4. Specify the **Idera Dashboard Location** where you want to install SQL Enterprise Job Manager and type the respective Administrator Credentials to access this Dashboard.
5. Type the name with which you want to register your SQL Enterprise Job Manager instance in the IDERA Dashboard. This name will be used as the identifier for SQLJEM if multiple instances of the product are installed on the Dashboard.
6. Specify the **Service Account** under which the IDERA SQL Enterprise Job Manager services will run. The **Service Account** should be specified in the following format: <Domain Name>\<User Name> and then type the respective **Password**. The installer grants the "Log on as a service" right to the account you specify. Click **Next**. Take into account that the specified account needs to be a member of the local Administrator group.
7. On the **Service Ports** section type the port that SQL Enterprise Job Manager will use for the Collection Service. By default, SQL Enterprise Job Manager uses port 9271 for the Collection service. You can change this value according to your requirements. Take into account that if the Firewall is enabled, it allows TCP traffic through these ports.
8. On the **Repository Databases** window, select the location and name for the repository. You have to specify the SQL Server instance where this repository will be created and the name of the **EJM Database**.
9. In the same window, you can also set the **Connection Credentials** that SQL Enterprise Job Manager uses to create this repository database. By default, the setup program uses the credentials of your Windows logon account, but you can change this account selecting the option: **Use Microsoft SQL Server Authentication**. If you choose this option, SQL Enterprise Job Manager opens a new window where you have to specify the **Login Name** and **Password** for your SQL Server login account. Click **Next**.
10. The next window prompts you to review the installation settings. If you want to change them, click **Back** to go to the respective window. If you are ready to install SQL Enterprise Job Manager, click **Install**. The Installation process begins.
11. When the installation of SQL Enterprise Job Manager finishes, a confirmation of completed installation is displayed. Click **Finish**.
12. To access your instance of SQL Enterprise Job Manager, you have to access your IDERA Dashboard. Use the following link in the browser of your choice: **http://<ServerName>:9290** where ServerName is the name of the machine on which you installed the IDERA Dashboard.

 During the installation process, you should verify that the account provided matches the case-sensitive settings of your Operating System

 **Port numbers and restrictions**  
Port values should be between 1 and 65535.

Keep in mind that browsers may block some specific ports. To check a list of all blocked ports on Mozilla Firefox, click [here](#).

## Upgrading to this release

Before installing 2.3, make sure:

- To backup your previous IDERA Enterprise Job Manager Repository and IDERA Dashboard Core Repository.
- Your environment meets the [hardware](#) and [software](#) requirements for installing SQL Enterprise Job Manager.
- You have the [required accounts and permissions](#).

To install SQL Enterprise Job Manager 2.3, follow these steps:

- Open the installer, SQL Enterprise Job Manager notifies you that you are upgrading to a new version and asks you if you are certain of this action. Click **Yes** to proceed with the upgrade.
- Install version 2.3. You can point the installer to the previous repositories. Go to [Installing SQL Enterprise Job Manager](#) for more information.



**Keep in mind:**


When upgrading from an older version, you need to upgrade to version 2.2, then upgrade to 2.2.1. Support can provide you access to the 2.3 installation kit if needed. You can contact [support@idera.com](mailto:support@idera.com) .

## 3.2 How do you log into SQL Enterprise Job Manager?

After you install SQL Enterprise Job Manager, you can log into the web application with the following link: **http://<ServerName>:<PortNumber>**, where the default port number is 9290.

### 3.2.1 Windows integrated authentication

If your Windows credentials are registered with SQL Enterprise Job Manager, then you can bypass the login process using Windows integrated authentication (You may need to configure your browser for this option, go to [Configuring your browser for Windows Authentication](#) to find out more information).

 Take into account that accounts running the *SQLEnterpriseJobManagerWebApplicationService* that are not part of the Local Administrator group will not be able to bypass the login process using Windows integrated authentication when they use Internet Explorer or Google Chrome as browsers.

### 3.2.2 Login page

If you have not configured Windows integrated authentication, a login page is displayed where you can type the details of your registered account. You can use the account you defined during the installation process.

In the login page use the following format: **<domain\user>**, then type the respective password.

 You must be a registered user in SQL Enterprise Job Manager in order to access the application.


### 3.2.3 Session time out

Your session will expire if there is no activity after 30 minutes but you can configure these settings from the **Administration** tab. For more information, go to [Adding users, assigning roles, and editing their sessions timeouts](#).

## 3.3 Navigating through the Welcome Wizard

When you first install SQL Enterprise Job Manager and log into the product for the first time, a welcome wizard guides through the initial steps that help you to:

- Configure your [alerts](#)
- Add new [users](#)
- Add [instances](#) that you want to manage

 The Welcome wizard is only available to users with Administrator role.

### 3.3.1 Alerts

After the Welcome page opens, click **Next** to go to the Alerts section.

SQL Enterprise Job Manager sends notifications for critical issues on your environment. The Alerts section allows you to enable/disable alert rules and configure your email SMTP server settings. On this section you can perform the following steps:

#### Step 1

Select those default alert rules you want to enable/disable. SQL Enterprise Job Manager initially handles three default alert rules:

- SQL Server instance connection failures
- SQL Server Agent not running
- Job Failures.

You can find more information about these alert rules and how to change their settings by going to [Adding and configuring alert rules](#).

#### Step 2

In order to receive alert notifications, you need to configure your email SMTP Server settings. For more information on what you have to configure in this section, go to [Configuring your SMTP Server settings](#).

### 3.3.2 Users

In order for users to access SQL Enterprise Job Manager, you have to grant them access by adding them as registered users. You can use this section to add as many users as you want. Take into account that there are three types of user roles that you can assign to users: Administrator, User, and Read Only.

- Administrators have complete access and control of all features.
- Users can also perform all actions but do not have access to the Administration settings.
- Read Only users have restricted permissions and can only access the information in a read-only mode.

For more information on what actions each user role is allowed to do and what sections of the product they can access, go to [User Roles](#).

On the Users section, click **Manage Users** to access a new window where you can add new users and specify their settings: role, email, session timeout, and subscription to alerts.

For more information about adding users, go to [Manage users and subscriptions](#).



### 3.3.3 Instances

To get started managing your jobs in your environment, you need to register instances with SQL Enterprise Job Manager.

Click **Add a New SQL Server instance** to register your instances. The wizard for adding new instances opens where you can find the following tabs:

- Instances
- Credentials
- Information
- Maintenance
- Finish

For more information about these sections, go to [Adding SQL Server Instances](#).

### 3.3.4 Finish

Finally, the Finish section of this wizard gives you a summary of all other SQL Enterprise Job Manager features, like the following:

#### Jobs

You can add new jobs; edit existing ones, change settings such as steps, schedules, or notifications. You can also perform actions such as starting, restarting or stopping the SQL Server Agent, or disabling and deleting jobs among other actions.

#### Job History

You can view the history of your jobs, access their steps details, and filter your information according to your jobs, instances, or status.

#### Schedule

You can view all your jobs in Day, Week, or Month view. Additionally, you can select any date and view its respective jobs, filter them according to your needs, and move jobs to new time slots according to new schedule requirements.

#### Alert Rules

You can edit or customize your own alert rules, you can add instance or job type alert rules, set their severity, and choose how these alerts will be generated. You can also subscribe to those ones from which you want to receive email notifications.

Once you finish reviewing this summary, click **Back** to edit your settings or click **Submit** to finish the welcome wizard configuration.

## 3.4 Managing licenses

A license key is required to access all SQL Enterprise Job Manager features. This license determines the number of SQL Server instances that you can monitor.

View your license status, add, or buy a new license key using the Manage License section. To access this option, go to the **Administration** tab and click **Manage License** on the **Licensing** section.

SQL Enterprise Job Manager opens a new window that displays information relevant to your current licenses such as type of license, status, expiration date, total licensed servers, currently monitored servers in your environment, license key, and SQL Enterprise Job Manager repository.

If you want to add a new license key, type the key under the **New License** section, and click **APPLY**.

If you need to buy another license, go to [Click here to buy more SQL Enterprise Job Manager licenses](#).



Only users with the Administrator role can access the **Administration** tab; therefore, the **Manage License** option is only available to them.

## 4 What is available on the Overview tab?

SQL Enterprise Job Manager **Overview** tab allows you to see a summary of the most important information of your environment and get a general overview of the status of your instances and their respective monitored jobs.

On the **Overview** tab you can find:

- A list of the current active [alerts](#) for your SQL Server instances and their monitored jobs.
- A list of all your [managed SQL Server instances](#) with the most important information about their jobs.
- A [summary sidebar](#) with the most relevant information such as failed jobs, disabled jobs, failed tasks, disabled tasks, failed job chains, disabled job chains, instances not contacted, agents not running, managed instances, monitored jobs, monitored tasks, monitor job chains, and number of active alerts.

### 4.1 What other options are available on the Overview tab?


On the All Instances section of the **Overview** tab, you can also find options to:

- [Add Instances](#)
- [Add Jobs](#)
- [Add Job Chains](#)
- [Add Tasks](#)
- [Export](#)
- [Refresh](#)

### 4.2 How do you export the data available?

If you want to export all the information displayed in the current view of the All Instances section, click **Export** on the bar options, and choose the format you want to use for exporting your information: CSV, XML, or PDF.

### 4.3 How do you refresh the data available?

Whenever you want to update the information presented on the All Instances section, click on the  **Refresh** gear icon.

## 4.4 What alerts are available on the Overview tab?

On the first section of the **Overview** tab, you can find the list of current alerts for your SQL monitored instances and their respective jobs. These alerts help you get an overview of the most critical issues regarding the status of your environment.

The alerts in this section are ordered by level of severity and grouped by alert rule. SQL Enterprise Job Manager displays four levels of alert severity, also identified with colors: Critical (**red**), Warning (**yellow**), Informational (**gray**), and OK (**green**).

### 4.4.1 How can you order alert rules?

By default, alert rules are ordered by severity from the most critical to those alert rules with OK severity. If you want to change this order, go to the top menu options of the alert rules section and click **Sort by Severity**.

### 4.4.2 How can you hide all displayed alert rules?

If you do not want to see any of the SQL Enterprise Job Manager alerts, go to the top menu options of this section and click **Hide Alerts**.


To view all alerts again, click **Show Alerts**.


### 4.4.3 What actions can you perform on each Alert Rule?

You can perform actions on each alert rule as well as on each instance or job/task alert that belongs to an alert rule.

Alert rules display the number of instances, jobs, or task alerts associated with them. On each alert rule you can:

- **Show Details** - to see the complete list of jobs/tasks or instances alerts that belong to a specific alert rule. You can use **Hide Details** to display only the summarized form of the alert rule.
- **Dismiss** - to ignore the complete alert rule with their associated instances or jobs/tasks alerts.
- **Collect Data** - to get a recent status of the alert rule.

 When you **Dismiss** an alert rule, it will not be displayed on the **Overview** tab temporarily. SQL Enterprise Job Manager will raise the alert rule when the condition happens again. For example: When a Job status changes.

 When you dismiss an alert, a dialog window opens to confirm this action, you can enable the option **Do not show this warning again** so that SQL Enterprise Job Manager does not prompt this warning message every time you dismiss an alert.

### 4.4.4 What actions can you perform individually on each job/task or instance alert?

When you choose to **Show Details** of a specific alert rule, you can see all instances or jobs/tasks alerts associated with a specific alert rule. On each alert you can:

- Depending on the alert rule, you can execute job actions like **Start Job** (Job Failures alerts) or **Start SQL Server Agent** (Agent not running alerts).
- **Dismiss** - to ignore the alert for a specific instance or job/task.
- **Collect Data** - to get the most recent alert status for a specific instance or job/task.

⚠ When you **Dismiss** a job/task or instance alert, it will not be displayed on the **Overview** tab temporarily. SQL Enterprise Job Manager will raise the alert when the alert rule condition of the respective job/task or instance is triggered again.



⚠ Read-only users cannot perform actions on SQL Server Agents or on Jobs.


✔ For more information about what alert rules are available by default in SQL Enterprise Job Manager and how you can add your own customized alert rules, go to [Managing Alerts](#)


## 4.5 Viewing your monitored instances

On the bottom section of the **Overview** tab, you can find the All Instances section where a list of your monitored SQL Server instances and their most important information is displayed.

In this section, you can find the following information about your registered instances:

-  - Instance status icon.
- **Instance Name** - displays the name of your registered SQL Server Instance.
- **Status** - displays the status of the SQL Server instance.
- **# of Jobs** - displays the total number of jobs on each SQL Server instance.
- **# of Failed Jobs** - displays the total number of jobs in which the last run outcome was failed.
- **Agent Status** - displays the status of the SQL Server Agent services of the respective instance.
- **Actions** - displays a  gear icon where you can Start/Stop/Restart the SQL Server Agent service. These options are available depending on the current status of your agent.

 Click the column headers to order your instances according to your requirements.

 Agent actions for the SQL Server Agent service are not available to Read-only users.

## 4.6 What other information is available on the Overview tab?

The summary sidebar on the right section of the **Overview** tab displays the most important information about your SQL Server instances and jobs.

On this sidebar, you can see the number of:

- Instances that are:
  - **Up** - Both SQL Server instance and SQL Server Agent service are running and can be contacted.
  - **Down** - Either the SQL Server instance or the SQL Server Agent is not running or cannot be contacted.
  - **Critical** - SQL Server instances with Critical alerts.
- **Failed Jobs** - Click this option and the **Job History** tab opens where you can see all your job events filtered by Failed status.
- **Disabled Jobs** - Click this option and the **Job History** tab opens where you can see all your job events filtered by Failed status.
- **Failed Tasks** - Click this option and the **Tasks** view opens where you can see all your tasks filtered by Disabled status.
- **Disabled Tasks** - Click this option and the **Tasks** view opens where you can see all your tasks filtered by Disabled status.
- **Failed Job Chains** - Click this option and the **Job Chains** view opens where you can see all your job chains filtered by Failed Job Chain Outcome.
- **Disabled Job Chains** - Click this option and the **Job Chains** view opens where you can see all your job chains filtered by Failed Job Chain Outcome.
- **Instances Not Contacted** - Click this option and SQL Enterprise Job Manager opens the **Instances** tab with all SQL Server instances that have the following status: Unknown, Connection Failure, Authentication Failure, and Error.
- **Agents Not Running** - Click this option and SQL Enterprise Job Manager opens the **Instances** tab filtering all SQL Server instances by Stopped and Unknown status.
- **Managed Instances** - Click this option and the **Instances** tab opens where you can see all your monitored SQL Server instances.
- **Monitored Jobs** - Click this option and SQL Enterprise Job Manager opens the **Jobs** tab where you can view all your monitored jobs in your environment.
- **Monitored Tasks** - Click this option and SQL Enterprise Job Manager opens the **Tasks** view where you can view all your monitored tasks in your environment.
- **Monitored Job Chains** - Click this option and SQL Enterprise Job Manager opens the **Job Chains** view where you can view all your monitored job chains in your environment.
- **Alerts** - Displays the number of active alerts in your environment.

## 5 Viewing all your monitored SQL Server jobs

The **Jobs** tab allows you to view the complete list of your monitored jobs, tasks, job trending graphs, and job chaining options.

Go to the following sections to get more information about:

- **Jobs** - get the most important information of your jobs, their status, and perform actions like starting or stopping a job for example. This section is displayed by default in the **Jobs** tab.
- **Job Chains** - tie several jobs together in a job chain to create dependencies among jobs and schedule their execution in one server or across multiple servers.
- **Job Trend** - view graphic representations and trending lines of the most important information of your environment.
- **Tasks** - view the most important information of your Windows Scheduled tasks and perform actions like adding new tasks, starting, or disabling them among others.



## 5.1 Viewing current monitored jobs

On the **Jobs** tab, you can see a complete list of all your monitored jobs and their most important information.


On the top section of your **Monitored Jobs** view, you can:

- **Search Jobs** - use this option to search your jobs preferences.
- **View By** - select the jobs (monitored jobs, job trends, job chains, tasks, job history, or task history) you would like to see.

The jobs list displays the following information:

- **Job Name** - The name defined for the job.
- **Instance** - The name of the SQL Server instance to where the job belongs to.
- **Enabled** - If the job is enabled or disabled.
- **Status** - The execution current status of the job. The job status could be: Not idle or suspended, Executing, Waiting for thread, Between retries, Idle, Suspended, or Performing completion actions.
- **Outcome** - The status of the job on its last run. This status could be: failed, succeeded, retry, canceled, or unknown.
- **Duration** - The duration of the job's last run in hh:mm:ss.
- **Last Run** - The last date and time (including the time zone) when the job ran.
- **Next Run** - The next date and time (including the time zone) when the job will run.
- **Category** - The category of the job. Some examples of job categories are Data Collector, Database Engine Tuning Advisor, Database Maintenance, etc.
- **Updated by** - the last date when the job was updated.
- **Actions** - On the gear icon you can find the actions that you can perform on one or several jobs. For more information about these actions, go to [What actions can you perform on jobs?](#).



Click the  more options icon to select the information you want to hide or show on the jobs list.

On the left section of the **Jobs** tab, you can find a sidebar that allows you to filter your information according to your requirements. You can view jobs according to selected status, categories, and other filters. For more information about these options go to [Filtering your jobs](#).

### 5.1.1 How do you add jobs?

You can add new jobs from the **Jobs** tab. Go to the top bar menu, click the option **Add Job**, and SQL Enterprise Job Manager opens the Add Job wizard. For more information on what is available on this wizard, go to [Adding new SQL Server jobs](#).


### 5.1.2 How do you edit jobs?

You can edit your jobs on the **Jobs** tab. Select your job on the job list, go to the top bar menu, and click the option **Edit Job**. SQL Enterprise Job Manager opens the Edit Job wizard.

### 5.1.3 How do you export your Jobs tab information?

You can export the information displayed in the current view of your **Jobs** tab. Go to the **Export** option on the top bar menu of this tab and select the format you want to use for your exported information: CSV, PDF, or XML.

## 5.1.4 How do you refresh the information on the Jobs tab?

Whenever you want to update the information presented on the **Jobs** tab, click on the  **Refresh** icon.

- ✔ You can define how many jobs you want to view per page. Go to the bottom section of the tab and type the number of jobs you want to see per page.

## 5.1.5 What actions can you perform on jobs?

The **Jobs** tab allows you to perform actions on a single job or on several selected jobs. You can find these options by clicking the gear icon under the **Actions** column. Keep in mind that some options can only be applied to one job at a time.

### What actions can you perform on a single job?

On a single job you can perform any of the following actions:

- **Start Job** - This allows you to start a job.
- **Stop Job** - This allows you to stop a job. This option is only enabled when the selected job is running.
- **Enable Job** - This lets you enable a job. This option is only enabled when the selected job is disabled.
- **Disable Job** - This lets you disable a job. This option is only enabled when the selected job is enabled.
- **Refresh Job** - This allows you to get the latest information from the job.
- **Delete Job** - deletes the selected job. You cannot undo this operation.
- **View History** - This allows you to access the history of the selected job. When you click this option, SQL Enterprise Job Manager displays the **Job History** tab filtered by the selected job.
- **Edit Job** - This allows you to edit the configuration settings of the job. When you click this option, SQL Enterprise Job Manager opens the job wizard where you can edit/change its general settings, steps, schedules, alerts, notifications, or targets.
- **Copy Job** - lets you create a copy of the selected job. SQL Enterprise Job Manager opens the Job Wizard with the configuration settings of the selected job. You can choose to copy an identical job or change settings according to your requirements.

### What bulk actions can you perform on several jobs?

You can select several jobs and perform bulk actions on them. For this purpose, select your jobs using the checkbox on their left side.

Click the gear icon of any selected job, and SQL Enterprise Job Manager displays the following options available for your selected jobs:

- **Start Job** - This allows you to start the selected jobs.
- **Stop Job** - This allows you to stop the selected jobs.
- **Enable Job** - This lets you enable the disabled selected jobs.
- **Disable Job** - This lets you disable the enabled selected jobs.
- **Refresh Job** - This lets you refresh the information of all selected jobs.
- **Delete Job** - This allows you to delete all selected jobs. You cannot undo this operation.
- **Edit Job** - This allows you to perform changes on the selected jobs. The bulk options available when editing multiple jobs are: adding a description, enabling/disabling them, assigning them a maintenance mode, assigning a new schedule (schedules in each individual job are maintained), and adding notifications.



Read-only users cannot Start, Stop, Enable, Disable, or Delete Jobs. As a read-only user, you can only view the properties of a job but you cannot edit them.

## 5.1.6 Filtering your jobs

If you need to get a specific view of the jobs displayed on this tab, filter your information using the options available on the left section of this tab.

Filter your jobs by:

- **Status** - Select specific job status to filter your information such as Not idle or suspended, Executing, Waiting for thread, Between retries, Idle, Suspended, or Performing completion actions.
- **Job Name** - Select your job name from the list available.
- **Enabled** - Select if you want to view Enabled (Yes) or Disabled (No) jobs.
- **Category** - Select specific jobs' categories. For example, you can select to view all Log Shipping or Full-text jobs.
- **Instance** - Select your instances for which you want to see their jobs.
- **Updated by** - Use this filter when you want to view the last updated jobs by specific user names. Select the user names in the following format: domain\username.
- **Job Chain Name** - Select a specific job chain for which you want to view job information.
- **Last Run Outcome** - Select specific job status to filter information according to the last run outcome values reported such as: Failed, Successful, Retry, Canceled, In Progress, Unknown.



When using filters take into account:

- Some filters have the option to **Add Filter** in case the information you are looking for is not listed. Once you click on **Add Filter**, a dialog box appears. Type the name you are looking for on the Search bar, then select it from the list, and **Save**. Your filter will be included under the filter list where you added it.
- Click the respective checkbox to add or remove your selections.
- If you want to select filters first and apply the changes later, deselect the **Apply Filter Instantly** option.

### How do you save filters?

You can save your preferred filtering options by typing a name in the **Add Filter** wizard of the **Custom Filter** section and clicking **Save**. Once you save your filter, you can retrieve it from the drop-down bottom of the **Custom Filter** option available on the left side under the **Filter Table By** section.

### How do you remove filters?

You can remove filters by following these options:

- Use the specific **Clear Filter** option in each filter. For example, if you want to remove your status filters, click **Clear Filter**.
- Under **Applied filters** on the top section or your **Jobs** tab, you can see the filters you have selected, click the **X** icon next to the ones you want to remove.
- Use the option **Clear All Filters** on the top section of the **Filter Table By** to remove all filters.

## 5.1.7 Adding SQL Server jobs

You can add jobs by using the **Add Job** wizard which is available from:

- **Overview** tab - top side options of the All Instances section.
- **Schedule** tab - the top side options of the Operation details list.
- **Job** tab - top bar menu.

The **Add Job** wizard lets you specify the [general](#) information about your job, its [steps](#), [schedules](#), [alerts](#), [notifications](#), and [targets](#).

Follow the next sections to get specific details about this wizard and all steps involved in the creation of jobs.




Take into account that Read-only users cannot add new jobs to their monitored instances from SQL Enterprise Job Manager. The option **Add Job** is not available for Read-only users.

## General information about your job

When opening the **Add Job** wizard, requires filling in the general information for the job. You can find the following fields:

- **Add/remove Instances** - Select the instances where you want to create the job. Choose the instances in the **Available Instances** column and click > to add them to the **Selected instances** section. You can also use >> to select all available instances.
- **Name** - Type a name that better describes your job.
- **Owner** - Select the owner of this Job. SQL Enterprise Job Manager allows you to select the owner from a list of available users obtained from the instance you have selected before.
- **Category** - Select a category for your job (Data Collector, Log Shipping, REPL-Alert Response, or others).
- **Enable** - Define if you want your job enabled or disabled. You can create jobs and enable them later. When the job is disabled, the job does not run in response to a schedule or alert.
- **Maintenance mode** - Enable this option to add a maintenance window in your instance for job maintenance. For more information, please see [below](#).

 Jobs created in SQL Server Management Studio (SSMS) do not have the option of selecting jobs for Maintenance Mode; however, you can apply it via Edit Job in the SQL Enterprise Job Manager Web Console.

- **Description** - Write a short description of your job to help you identify its objectives, steps, and any other relevant information.

Consider that to create a job you have to specify at least the instance, name, and category.

How does the Maintenance Mode work?


While SQL Enterprise Job Manager is running, the background collecting Service periodically checks:

- That the maintenance mode is enabled for every instance. If it is enabled then it checks whether the current time falls in between a scheduled window. If it does then SQL Enterprise Job Manager enables the maintenance mode and sets *in\_maintenance* to 1 in the instance table.
- Whether the instance is in maintenance mode and the schedule window is expired. If both do then it stops the maintenance mode and sets the *in\_maintenance* column to 0 in the instance table.

There are more additional options to enhance the behavior of maintenance mode:

- **Disable alerts during maintenance mode** - SQL Enterprise Job Manager skips new alerts raised in the maintenance mode window.
- **Disable non-maintenance jobs during maintenance** - All the jobs which are not marked as maintenance mode are disabled at the beginning of maintenance mode and are re-enabled at the end of the maintenance mode.
- **Stop maintenance jobs that run past the maintenance window** - SQL Enterprise Job Manager sends a trigger to stop the maintenance jobs which are running even after the end of the maintenance mode.

The Maintenance Mode start and stop time might vary because the SQL Enterprise Job Manager Collection Service needs to run at a given time. Because of any delay, network interruption, or performance reasons if the collection is delayed then the Maintenance Mode will also start late.

 Keep in mind the Job Wizard does not display information from SQL Server instances that cannot be reached.

⚠ Consider that Read-only users cannot add new jobs from SQL Enterprise Job Manager to their monitored instances.

⚠ Keep in mind that characters such as &, +, ', ", are not accepted when editing the job name.

After making your settings in the General section of this wizard, you can finish and save the job, or you can go to any of the following sections: [Steps](#), [Schedules](#), [Alerts](#), [Notifications](#), and [Targets](#).

## Defining your job steps

When you add a job, you can define the steps that are part of that job. A step is an action that the job performs on a database or server.

The **Steps** section of the **Add Job** wizard allows you to create new steps, edit them, and organize their sequence according to your requirements.

What information can you see on the steps list section?

The Steps section of this wizard displays the list of steps already created for the respective job. You can see the following information:

- **Step** - displays the Step ID number
- **Step Name** - shows the name defined for the step
- **Type** - displays the type of step defined
- **On Success** - shows the action to be executed if the step is successful
- **On Failure** - displays the action to be executed if the step fails

How do you organize steps?

Below the list of steps, you have the following options for organizing and moving your created/inserted steps:

- Click a step on the list and use the options **UP** or **DOWN** to move it to the position you want.
- Use the option **Start Step** to select which step the job starts with; use the drop-down arrow to select the respective step.

How do you create new steps?

To create new steps, use the option **New** at the top of this section.

You can also use the option **Insert** when you want to insert a new step above a selected one on the list of steps.


For more information of what information you need to specify in order to create a new step, go to [Creating new jobs steps](#).

How do you edit steps?

To edit a previously created step, click the step you want to edit in the list of steps, and click **Edit**.

How do you delete steps?

To delete a specific step, click the step you want to remove in the list of steps, and click **Delete**.

 After making your settings in the Steps section of this wizard, you can finish and save the job, or you can go to any of these sections: [General](#), [Schedules](#), [Alerts](#), [Notifications](#), [Targets](#).



## Creating new jobs steps

On the top menu of the Steps section, you have two options for adding a new step: **New** and **Insert**. Both options open a new window for specifying the characteristics of the step, but the difference between the two options is:

- **New** - This allows you to add a new step at the bottom of the steps list
- **Insert** - This allows you to insert a new step above a selected step

What options are available when defining a new step?

When you define a new step, you have **General** and [Advanced settings](#) which you can specify according to your needs.

The **General** settings options for new steps depend on the type of step you choose. The following options are available to all types of steps:

- **Step name** - Type a name that allows you to identify the step.
- **Type** - Specify the type of step (ActiveX Script, Operating system (CmdExec), PowerShell, and others). Go to [Types of job steps](#) for more information.
- **Command** - You can type commands to be used in the respective step.

What options are available according to the step type?

According to the step type you choose, SQL Enterprise Job Manager displays different options for that type.

Below you have a description of the information displayed for each step type.

### Operating System (CmdExec) step type

When you choose an Operating system step type, you have the following option: **Process exit code of a successful command** - where you determine the exit code the command returns to indicate success.

Additionally, you can determine the option **Run as** to specify the account that will be used to run the step.

### Replication step types

There are different Replication Agent step types that you can choose when defining your step. Some of the Replication step types are:

- Replication Distributor
- Replication Merge
- Replication Queue Reader
- Replication Snapshot
- Replication Transaction-Log Reader

If you select the **Replication Transaction Queue Reader** step type, then you have to specify the **Database** where you want this step to be executed.

Additionally, you can determine the option **Run as** to specify the account that will be used to run the step.


### Power Shell


When you select a Power Shell step type, you can determine the account that will be used to run the step in the **Run as** option. In the box field, type the command that will be executed.

### Transact-SQL script (T-SQL) step type

When you select this step type, you have to specify the **Database** where you want this step to be executed.

Additionally, you can find the **Parse** option to check the syntax of your command.


 Keep in mind that Job steps' types depend on the selected SQL Server instance. SQL Enterprise Job Manager does not handle SQL Server Analysis Services Command, SQL Server Analysis Services Query, and SQL Server Integration Services Package Execution job steps types.

 Go to [Advanced settings](#) to see what other options you can specify for your step.

## Advanced settings for your steps

On the **Advanced** settings for a step you can specify the following fields:

- **On success action** - the action to be executed when the step succeeds. You can choose from the following options:
  - **Go to the next step**
  - **Quit the job reporting success**
  - **Quit the job reporting failure**

 If you have added steps previously, SQL Enterprise Job Manager allows you to select them on an **On success action**.

- **Retry attempts** - how many times the SQL Server Agent retries a step when it fails
- **Retry interval (minutes)** - the interval in minutes between each retry
- **On failure action** - the action to be executed when the step fails. You can choose from the following options:
  - **Quit the job reporting failure**
  - **Go to next step**
  - **Quit the job reporting success**
- Specific options according to the step type you chose before

## Options for Operating System (CmdExqec) job steps

When selecting an Operating System step, SQL Enterprise Job Manager allows you to specify additional settings, such as:

- **Output file** - type an existing file path of the computer where the instance is hosted to be used for the job step. For example D:\Job\outputfile.txt. Then click **check** to verify the path entered is correct.
- **Append output to an existing file** - enable this option if you want the output to be appended to the output file. If you do not enable this option, the selected file content is overwritten each time the job step runs.
- **Log to table** - if you select this option, the job step output is logged to the **sysjobstepslogs** table in the **msdb** database.
- **Append output to existing entry in table** - select this option if you want to append the output to the contents of the table. If you do not select this option, the table contents are overwritten each time the job step runs.
- **Include step output history** - this option lets you include the output of your job step in the job history.

## Options for PowerShell job steps

When you select a PowerShell step type you can specify the additional settings:

- **Output file** - type an existing file path of the computer where the instance is hosted to be used for the job step. For example D:\Job\outputfile.txt. Then click **check** to verify the path entered is correct.
- **Append output to existing file** - enable this option if you want the output to be appended to the output file. If you do not enable this option, the selected file content is overwritten each time the job step runs.
- **Log to table** - if you select this option, the job step output is logged to the **sysjobstepslogs** table in the **msdb** database.
- **Append output to existing entry in table** - select this option if you want to append the output to the contents of the table. If you do not select this option, the table contents are overwritten each time the job step runs.
- **Include step output history** - this option lets you include the output of your job step in the job history.

### Options for Replication Queue Reader job steps

The Replication Queue Reader step type is the only Replication type step that has additional advanced options besides the ones at the beginning of this section. These additional options are:

- **Server** - allows you to specify the server to use for the Replication Queue Reader step.
- **Database** - lets you specify the database to use for the Replication Queue Reader step.

### Options for Transact-SQL script job steps

When you select a Transact-SQL script step type you can specify the additional settings:

- **Output file** - type an existing file path of the computer where the instance is hosted to be used for the job step. For example D:\Job\outputfile.txt. Then click **check** to verify the path entered is correct.
- **Append output to existing file** - enable this option if you want the output to be appended to the output file. If you do not enable this option, the selected file content is overwritten each time the job step runs.
- **Log to table** - if you select this option, the job step output is logged to the **sysjobstepslogs** table in the **msdb** database.
- **Append output to existing entry in table** - select this option if you want to append the output to the contents of the table. If you do not select this option, the table contents are overwritten each time the job step runs.
- **Include step output history** - this option lets you include the output of your job step in the job history.
- **Run as user** - you can specify another SQL login to run this step.

## Types of job steps

When you define steps for a job, you have to determine the type of step. SQL Enterprise Job Manager handles the following types of steps:

- Executable programs and operating systems commands.
- Transact-SQL statements, including stored procedures and extended stored procedures.
- Powershell scripts.
- Replication tasks:
  - Replication Distributor
  - Replication Merge
  - Replication Queue Reader
  - Replication Snapshot
  - Replication Transaction-Log Reader.

✔ For more information about these job steps types, click [here](#).

## Scheduling your jobs

After you define your steps, you can set several schedules for your job. SQL Enterprise Job Manager displays a Schedule list on this window. On this list, you can see the schedule ID, name, if the schedule is enabled, and the description specified in this schedule.

At the top of this section you can find the following options:

- **New** - lets you create a new schedule to be added to your job.
- **Pick** - allows you to select a schedule from those available in your instance. Keep in mind that jobs and schedules must have the same owner; therefore, you can only select schedules that you own. Click this option to access a new window of available schedules, select the one you want to use for your job. You can also edit the selected schedule and change its properties.
- **Edit** - lets you make changes to a selected schedule.
- **Remove** - allows you to delete a selected schedule

### Creating new schedules

When you select **New** to create a new schedule, a window opens and displays the following sections:

- Name
- Schedule type
- One-time occurrence
- Frequency
- Daily Frequency
- Duration

Each section has its own specific options according to the **Schedule type** and **Frequency** you choose.

The following topics describe with more detail your options on these sections.

#### Name your schedule

This option lets you type the name of your schedule. Use a name that allows you to identify your schedule easily.

#### Schedule type

You have different options for the **Schedule type**. Depending on the type you choose, you may need to specify additional settings. You can select from the following schedule types:

- **Start automatically when SQL Server Agent Starts** - if you choose this option, then the job starts automatically when the SQL Server Agent starts. You do not need to specify anything else in your schedule if you choose this option.
- **Start whenever the CPUs become idle** - select this option when you want to start the job whenever the CPUs become idle. You do not need to specify anything else in your schedule if you choose this option.
- **Recurring** - select this option if you want to perform your job on a recurring schedule. If you choose this option, you need to specify the frequency, daily frequency, and duration. You can find more details about these sections on the topics below.
- **One time** - if you only want to execute your job one time, choose this option. The section **One-time occurrence** becomes enabled for this option and the rest of the sections become disabled.

Regardless the **Schedule type** you choose, you can select to have the schedule enabled or disabled using the respective checkbox in this section.

### One-time occurrence

This option is enabled only when you select **One time** in your schedule type. If you choose this option, specify the **Date** and **Time** when your job runs. Keep in mind that the one-time occurrence date and time must be greater than the current date and time.

### Frequency

This option is only available when you select **Recurring** in your schedule type.

On this section, you can specify if you want the frequency of your schedule to be: **Daily**, **Weekly**, or **Monthly**. SQL Enterprise Job Manager displays different options depending on the frequency option you choose.

- If you choose **Daily**, specify in the field **Recurs every** how often in days the job runs. For example, you can set the job to run every 2 days.
- If you choose **Weekly**, define the following fields:
  - In the field **Recurs every** specify how often in weeks the job runs. For example, you can determine to run a job every 2 weeks.
  - The weekly frequency. Select those days of the week when the job runs (Monday, Tuesday, etc.)
- If you choose **Monthly**, you can choose between these two options:
  - The exact day of the month and how often in months the job runs. For example, if you want to set a job to run the 10th day of a month and every 2 months, you have to specify: **Day 10 of every 2 months**.
  - Alternatively, when you do not know specific dates, you can select the first, second, third, fourth, or last day of a specific day in the month (Monday, Tuesday, weekday, weekend day, etc.) and how often in months the job runs. For example, if you want to run the job the second weekday of every 3 months, you have to specify **The second weekday of every 3 months**.

### Daily Frequency

After you determine the frequency of your schedule, you can specify the daily frequency of your job schedule. You have the following two options:


- **Occurs once at** - lets you determine a time in the day when you want your job to run.
- **Occurs every** - lets you schedule your job several times during the day. You can determine if you want the job to run multiple times every certain hours, minutes, or seconds. Additionally, SQL Enterprise Job Manager lets you determine the **Starting at** and the **Ending at** time of your job daily frequency.

For example, you can set the following schedules:

- Run a job every 3 hours starting at 8:00 am and finishing at 8:00 pm.
- Run a job only once a day at 5:00 pm

### Duration

Finally, you can determine the duration of your job schedule: when it starts, when it ends, or if it does not have an ending date. For example, you can set the job to start on 06/30/2014 and end on 06/30/2015.

 After making your settings in the Schedule section of this wizard, you can finish and save the job, or you can go to any of these sections: [General](#), [Steps](#), [Alerts](#), [Notifications](#), [Targets](#).

## Adding alerts to your jobs


The Alerts section helps you view and organize the alerts for your job.

This window displays a list of alerts where you can view the name of the alert, if it is enabled, and the type of alert.

At the top of this window you can find the following options:

- **Add** - allows you to create new alerts
- **Edit** - lets you modify a selected alert
- **Remove** - allows you to delete a selected alert

When you add a new alert, you can specify its [general settings](#), [responses](#), [creating and viewing operators](#), and other [options](#). Go to the next topics to view in detail what options are available in each section.

 After making your settings in the Alerts section of this wizard, you can finish and save the job, or you can go to any of these sections: [General](#), [Steps](#), [Schedules](#), [Notifications](#) or [Targets](#).



## General settings for your alerts

When you **Add** a new alert, a new window opens where you can specify the following general settings:

- **Name** - type a name that identifies your alert.
- **Enabled** - select this option to enable the alert you are creating; otherwise, the alert will not be generated.
- **Type** - choose from these alert types:
  - **SQL Server event alert** - generates an alert that responds to messages in the Microsoft Windows event log.
  - **SQL Server performance condition alert** - generates an alert that responds to a specific condition in a performance counter.
  - **WMI event alert** - generates an alert that responds to a Windows Management Instrumentation (WMI) event.

According to the type of alert type you choose, SQL Enterprise Job Manager displays different options.

### Available options when you select SQL Server event alert type

If you choose a SQL Server event alert type, on the Event alert definition settings you can define:

- **Database name** - identify the database that generates the event. Alternatively, you can choose **All Databases** if you want the alert to respond to a specific message regardless of the database where the event occurs.
- **Alert will be raised based on** - define when alerts will be raised, you can select from any of these options:
  - **Error number** - you can define an alert to be raised in response to an error number you type in this section.
  - **Severity** - you can define the alert to respond to a message with a specific severity. Use the respective drop-down options to select a message with a specific severity.
- **Raise alert when message contains** - use this option when you want the alert to respond to the message you type in the respective box.

### Options when choosing SQL Server performance condition alert type

If you choose a SQL Server performance condition alert type, on the Performance condition alert definition you can define:

- **Object** - select the object to monitor from the drop-down options.
- **Counter** - select the counter to be used with the selected object. The options available on the drop-down options depend on the object selected before.
- **Instance** - specify the instance where the counter generates the alert. The drop-down options available on display depend on the selected object.
- **Alert if counter** - choose how alerts are generated in relation to the selected counter. You can select from: **falls below, becomes equal to, rises above.**
- **Value** - type the value that raises your alert.

### Options when choosing WMI event alert type

If you choose a WMI event alert type, on the WMI event alert definition you can define:

- **Namespace** - type the namespace path where the WMI query runs. Only namespaces on the computer that runs SQL Server Agent are supported.
- **Query** - type a custom WQL statement the alert responds to.

## Defining responses for your alerts

On the **Response** section, you have a list of available operators that you can choose to notify in response to your alert.

On this list, you can enable or disable how notifications will be delivered to operators. You can select/unselect for each operator to receive notifications by **Email, Pager, Net Send**.

If you want to view an operator's settings, select the respective operator from the list and click **View Operator**. SQL Enterprise Job Manager opens a new window where you can see the operator's settings and properties.

If you want to add new operators, click **New Operator**. For more information on what information you can specify when creating a new operator, go to [Creating and viewing operators](#).

## Creating and viewing operators

### Creating operators

If you want to add a new operator that will be notified in response to your alert, select **Notify Operators**, and click **New Operator**. SQL Enterprise Job Manager opens a new window for specifying new operators.

On this window you can define the following fields:

- **Name** - Type the name of the new operator.
- **Enabled** - Select this option if you want the new operator to be enabled. When the operator is not enabled, no notifications are sent to the operator.
- **Email name** - Type the email address where the operator will receive the notifications.
- **Net Send Address** - Type the address/computer name to be used for sending notifications through **Net send**.
- **Pager email name** - Type the email address to be used for the operator's pager.
- **Pager on duty schedule** - Select the days of the week when the operator's pager is active. You can also specify at which times on workdays and weekends the pager is active.

### Viewing Operators

You can view an operator's properties by selecting the operator from the operators' list and clicking **View Operator**. SQL Enterprise Job Manager opens a new window with all details registered for the selected operator. These properties are the same settings specified above when the operator was created. This is only a read-only window and you cannot edit any properties.

## Defining other options for your alerts

When you create new alerts, you can also define the following additional options for your alert:

- **Include alert error text in** - choose this option when you want to include the error text in these options: **Email, Pager, Net send.**
- **Additional notification message to send** - if you want to add an additional text in your message, type what you want to include in the respective box.
- **Delay between responses** - use this option to define the number of minutes and/or seconds you want to wait before sending an alert. Keep in mind that some events may occur during a short period of time and you may not want to get an alert every time the event occurs. When you specify a delay time, the alert will be sent after the specified time.

## Defining notifications for your jobs

On the **Notifications** section, you can define what notifications to deliver when the job is executed.

You can choose the following options:

- **Email** - select this option to send a notification to the operator email address you select. You can define to send the email on one of the following events:
  - **When the job succeeds**
  - **When the job fails**
  - **When the job completes**
- **Page** - select this option to send a notification email to an operator's pager. You can select to notify when the job fails, when it succeeds, or when it completes.
- **Net send** - select this option to use Net send to notify an operator. You can select what triggers the notification: when the job fails, when it succeeds, or when it completes.
- **Write to the Windows Application event log** - select this option if you want to write an entry in the application event log: when the job fails, it succeeds, or it completes.
- **Automatically delete job** - select this option to have the job automatically deleted in one of the following events: when the job fails, it succeeds, or it completes.




Please take into account that new operators created in the wizard will not be available in the Notifications tab until you click **FINISH** to add the job.

## Selecting target servers

The last section of the **Add job** wizard provides you with the option to select from:

- **Target local server** - this option lets you run the job on the local server. It is selected by default.
- **Target multiple servers** - choose this option when you want to replicate the job on several target servers. SQL Enterprise Job Manager displays a list of available target servers where you can replicate the job.

 **Target multiple servers** option is available when you have a multiserver and you are adding the job on the Master server. If the Master server has customized multiserver categories, they will be displayed in the General section of the job wizard under the Category options.

## 5.2 How can you create Job Chains?

### 5.2.1 What is Job Chaining?

SQL Enterprise Job Manager allows you to tie several jobs together across multiple SQL Server instances. A Job Chain lets you create dependencies among jobs and schedule their execution in one server or across multiple servers. You can define your desired execution sequence so that you identify which jobs you want to run after another.

### 5.2.2 How do you access the Job Chains view?

To access the **Job Chains** view, go to the **Jobs** tab. Select **Job Chains** from the drop down list available in the **View By** section.

### 5.2.3 How are Job Chains Scheduled?

When you create a Job Chain, you specify a root job for which you define a schedule. The following jobs run according to the execution status of the preceding job.

Click the following sections to know what information is available on the Job Chains view, what actions you can perform on Job Chains, how to add a new Job Chain, and how to use the Job Designer to create Job Chains.

- [Information available on the Job Chains view](#)
- [Actions you can perform on Job Chains](#)
- [Creating a new Job Chain](#)
- [Creating a Job Chain through the Designer](#)


## 5.2.4 What is available on the Job Chains view?

To access the **Job Chains** view, go to the **Jobs** tab. Select **Job Chains** from the drop down list available in the **View By** section.

On the **Job Chains** view, you can find all job chains defined in your environment. In this list you can see the following information:

- **Name** - the name specified for your job chain
- **Enabled** - if the job chain is enabled or disabled
- **Status** - current status of the job chain. This status could be: Executing, Idle, Error, Cancelled, or Unknown.
- **Last Run Outcome** - the general outcome of the job chain. For a specific status, all jobs in the chain must have that status. For example to show a "Success" status, all jobs in the chain should have completed successfully.
- **Last Run Duration** - the duration of the job chain in hh:mm:ss
- **Last Run** - the last date and time (including the time zone) when the last job in the chain run.
- **Next Run** - the next date and time (including the time zone) when the next job will run.
- **Scheduled** - if the first job (root job) in the chain is scheduled or not
- **Number of Jobs** - number of jobs in the job chain
- **Number of Instances** - Number of SQL Server instances included in the job chain
- **Actions** - click this option to access the [options you can execute on Job Chains](#).



Click the  more options icon to select the information you want to hide or show on the **Job Chains** view.

## How do you filter the information on the Job Chain view?

To see more specific information about your job chains, filter your information using the options available on the left section of this view.

You can filter by:

- **Status** - filter by the current status of the job chain, this refers to the status of the last job to run. This status can be: Executing, Idle, Error, Cancelled, or Unknown.
- **Job Chain Name** - select the names of the job chains for which you want to see the information.
- **Enabled** - filter according to whether the Job Chain is enabled or not.
- **Job Name** - select the name of those jobs for which you want to display job chains information.
- **Instance** - select the name of those SQL Server Instances for which you want to view job chain information.
- **Duration** - use the slider to filter by the duration of the job chain
- **Job Chain Outcome** - filter by the general outcome of the job chain. This status can be: Failed, Succeeded, or Unknown. Take into account that in order to have a Succeeded status, all jobs in the chain must be successful.



When using filters take into account:


- Some filters have the option to **Add Filter** in case the information you are looking for is not listed. Once you click on **Add Filter**, a dialog box appears. Type the name you are looking for on the Search bar, then select it from the list, and **Save**. Your filter will be included under the filter list where you Added.
- Click the respective checkbox to add or remove your selections.



- If you want to select filters first and apply the changes later, deselect the **Apply Filter Instantly** option.
- To remove filters, use the specific **Clear Filter** option in each filter. For example, if you want to remove your Instance filters, click **Clear Filter** under the same filter section.
- Under **Applied filters** on the top section of your **Job Chain** view, you can see the filters you have selected. Click the **X** icon next to the ones you want to remove.
- Use the option **Clear All Filters** on the top section of the **Filter Table By** to remove all filters.
- If you want to save your preferred filtering options, type a name in the **Add Filter** wizard of the Custom Filter section, and click **Save**. Once you save your filter, you can retrieve it from the drop-down bottom of the **Custom Filter** option available in the left side under the **Filter Table By** section.

## What other options are available on the Job Chains view?

On the top section of the **Job Chains** view, you can find the following options:

- **View By** - select the jobs (monitored jobs, job trends, job chains, tasks, job history, or task history) you would like to see.
- **Add Job Chain** - use this option to create a new job chain. Go to [Adding new job chains](#) to find more information.
- **Edit Job Chain** - select a job chain and click this option to access the **Job Chain wizard** where you can edit the general settings of the job chain, the root job schedules, and the respective alerts.
- **View Job Chain Designer** - this option is only available if you select a job chain from the list. Select this option and access the **Job Chain Designer** view. You can add, remove jobs, or edit their execution conditions settings.
- **Export** - select this option to export the information displayed on the **Job Chains** view. You can export as a PDF, CSV, or XML file.
- **Refresh** - use this  Refresh icon to get the latest information from your job chains.

✔ You can define how many jobs you want to view per page. Go to the bottom section of the tab and type the number of jobs you want to see per page.

⚠ Take into account that Read-only users can only access a read-only view of the job properties. Only Administrators and Guest-users can add/edit jobs or add/edit job chains.

## 5.2.5 What actions can you perform on Job Chains?

The **Job Chains** view allows you to perform actions on a selected job chain or several job chains. You can find these options by clicking the gear icon under the **Actions** column. Keep in mind that some options can only be applied to one job chain.

The following options are available for job chains:

**Start Job Chain** - select this option to start the first job of the job chain

**Stop Job Chain** - select this option to stop the execution of the job chain regardless of which job is currently running

**Enable Job Chain** - choose this option to enable the job chain. This option is only available when the selected job chain is disabled. Take into account that you can create disabled job chains and enable them later.

**Disable Job Chain** - select this option to disable job chains. This option is only available when the selected job chains are enabled.

**Refresh Job Chain** - choose this option to refresh the status of the selected job chains

**Delete Job Chain** - select this option to remove the selected job chains from your environment

**View Job Chain Designer** - click this option to access the [Job Chain Designer](#) for a selected job chain

**Edit Job Chain** - click this option to access the [Job Chain Wizard](#) where you can edit the general settings of the chain, the root job schedules, and the job chain alerts.



Above options are only available for Administrators and Guest-users. Read-only users can only access a read-only view of the job properties.

## 5.2.6 Creating a new Job Chain

You can create new job chains from the following sections:

- **Overview** tab - click **Add Job Chain** in the top bar options of the **All Instances** section.
- **Jobs** tab - select **Job Chains** from the drop down list of the **View By** section, then select **Add Job Chain** on the top right corner.

In the **Job Chain Wizard** you can define the following properties for your new Job Chain:

- [Job Chain General Specifications](#)
- [Root Job Schedules](#)
- [Job Chain Alerts](#)




Take into account that only Administrators and Guest-users can add new job chains.

## Defining General Specifications for a Job Chain

The first section of the **Job Chain wizard** allows you to specify the general properties of your job chain. You can set the following information:

- **Job Chain Name** - define a name for your job chain.
- **Root Job Name** - the root Job is the first job to run in your job chain. To define your root job you can use any of the following options:
  - **Browse** - use this option to search for a specific job in your environment.
  - **Add new job** - select this option if you want to create a new job as the root job for your job chain. This option opens the [Job Wizard](#) where you can specify your root job properties.
- **Enabled** - define if you want your job chain enabled or disabled.
- **Job Chain Description** - type a short description for your job chain to help you identify its objectives, steps, and any other relevant information.

 SQL Enterprise Job Manager does not allow you to duplicate Job Chain names.

After you specify these settings, go to [Root Job Schedules](#) section.

## Root Job Schedules

When you schedule the root job, you basically schedule when to start the job chain. You can specify several schedules for the root job which will control the execution of your job chain.

On the **Root Job Schedules** section, SQL Enterprise Job Manager retrieves the specified schedules for your root job (existing job or newly added job). Additionally, you can use the following options:

- **New** - use this option to specify a new schedule. Go to [Scheduling your jobs](#) to find out more about the options available for a new schedule.
- **Edit** - lets you make changes to a selected schedule
- **Remove** - allows you to delete a selected schedule

Click **Next** to go to the [Job Chain Alerts](#) section.

## Job Chain Alerts

You can specify alerts for your job chain or the jobs that belong to this chain.

In this section you can use any of the following options:

- **Add** - to create a new alert.
- **Edit** - to change/edit a previous existing alert.
- **Remove** - to delete a selected alert.

How do you specify a new alert?

When you click **Add**, the **New Alert** wizard opens and you can find the following settings:

- **Name** - type a name to identify your alert.
- **Enable** - select or deselect depending on whether you want to enable the alert or not. Take into account that you can create alerts and enable them later.
- **Subscribe** - check this box if you want to receive alert notifications from this alert. To receive notifications, you must configure your [SMTP Server settings](#) first by clicking **Configure Email**.
- **Alert conditions for the Job Chain** - specify the job chain conditions that generate the alert. You can use any of the following options:
  - **Job Chain Execution** - when you select this option, you can choose to generate an alert when there is a **Failure** or **Success** job chain status
  - **Job Chain Duration** - use this option to specify a time range for the duration of the job chain that will generate an alert
  - **Job Chain Duration greater than** - when the duration of the job chain is greater than the percentage of the Average Chain trend you specify, an alert will be generated.
  - **Job Chain failures** - select this option to generate an alert when the number of job chain failures you specify is met in a determined number of days, weeks, months, or years.
- **Alert conditions for the jobs** - specify the conditions for jobs in the job chain that generate the alert. You can use any of the following options:
  - **Job Execution** - when you select this option, you can choose to generate an alert when there is a **Failure** or **Success** status in the jobs that belong to the job chain.
  - **Job Duration** - use this option to specify a time range for the duration of the jobs that belong to the job chain that will generate an alert
  - **Job duration greater than** - when the duration of the jobs in the job chain is greater than the percentage of the Average Trend you specify, an alert will be generated.
  - **Job Failures** - select this option to generate an alert when the number of job failures you specify is met in a defined number of days, weeks, months, or years.

Click **Submit** to create the job chain. To add other jobs to this new job chain, go to the [Job Designer](#).

## 5.2.7 Creating a Job Chain through the Designer

After using the **Add Job Chain** option to specify the general characteristics of your new job chain, the root job, its schedules, and its respective alerts, you can add more jobs to the job chain by using the **Job Chain designer**. You can add as many jobs as you want.

### How do you use the Job Chain designer?

After you create your job chain, SQL Enterprise Job Manager displays the first job (root job) on the **Job Designer** view. To add more jobs:

- Select one of the existing jobs listed under the **Job Name** section on the left pane of the **Job Designer** view, drag and drop it in the designer space. SQL Enterprise Job Manager opens a dialog window with the following options:
  - **Add to job chain** - select this option to add the selected job without changes to the job chain.
  - **Do not add to job chain** - select this option if you do not want to add the job to the job chain.
  - **Clone job as and add job in chain** - use this option if you want to clone/copy the selected job and add it to the job chain.
  - **Add to job chain and disable its schedule** - select this option to add the selected job without its respective schedule.

You can also access the **Job Designer** view of a previously created job chain on the **Job Chains** view. Select the respective job chain from the list and click **View Job Chain Designer** from the top bar options.

- ✔ To go from the **Job Designer** view to the **Job Chains** view, click the option **Back to Job Chain** located on the top right corner.

### How do you define the execution condition of each job?

The execution of each job in the job chain is defined by a setup condition of the previous job. To define this execution condition, follow these steps:

- Double-click a job in the job chain designer. The **Job Chain Execution Condition** dialog window opens and displays related jobs.
- To define **Execution Conditions**, select a job and choose **Failure** or **Success** from the drop-down **Execution Conditions** options.
- Click **SAVE**.

- ⚠ Take into account that the Root Job depends on its schedules and not executions conditions; hence, when you double click the Root Job on the **Job Designer**, SQL Enterprise Job Manager opens the **Add Job Chain** wizard to access the Root Job settings.

### How do you delete jobs from the job chains?

In order to delete job nodes from the job chain, follow these steps:

- Double-click the respective job.
- The **Job Chain Execution Condition** dialog window opens and displays all related jobs.
- Select the job and click **DELETE**.

Take into account that when you delete a node in the job chain, all its dependent jobs will be deleted as well.

## How do you filter information on the Job Chain Designer?

To filter the list of available jobs on the **Job Designer** view, you can use the following options:

- **Job name** - select the name of the jobs you want to view.
- **Instance** - select the name of the SQL Server instances for which you want to see its jobs.
- **Category** - select those job categories for which you want to see its jobs.




When using filters take into account:

- Some filters have the option to **Add Filter** in case the information you are looking for is not listed. Once you click on **Add Filter**, a dialog box appears. Type the name you are looking for on the Search bar, then select it from the list, and **Save**. Your filter will be included under the filter list where you Added.
- Click the respective checkbox to add or remove your selections.
- If you want to select filters first and apply the changes later, deselect the **Apply Filter Instantly** option.
- To remove filters, use the specific **Clear Filter** option in each filter. For example, if you want to remove your Instance filters, click **Clear Filter** under the same filter section.
- Under **Applied filters** on the top section of your **Job Chain** view, you can see the filters you have selected. Click the **X** icon next to the ones you want to remove.
- Use the option **Clear All Filters** on the top section of the **Filter Table By** to remove all filters.
- If you want to save your preferred filtering options, type a name in the **Add Filter** wizard of the Custom Filter section, and click **Save**. Once you save your filter, you can retrieve it from the drop-down bottom of the **Custom Filter** option available in the left side under the **Filter Table By** section.

## What other options do you have on the Job Designer view?

On the top right section of the panel, you can find the following options:

- **Back to Job Chain** - this option takes you back to the **Monitored Job Chains** view.
- **Add New Job** - this option allows you to open the wizard for adding a new job. Specify the settings for the respective new job. SQL Enterprise Job Manager adds this new job to the list of available jobs on the left pane. You can select (drag and drop) this job and add it to your Job Chain.
- **Help** - the  help icon sends you to this Wiki documentation.



## 5.3 Viewing Job trends

The **Job Trends** view allows you to get graphic trends and a trend chart of the most important information of your environment so that you can easily detect potential problems.

To access this option, go to the **Jobs** tab, and select **Job Trends** from the drop down list available in the **View By** section.

You can select different types of job trend charts like: Most Frequent Jobs, Top Failed Jobs, etc., specify the time range (day, week, month, or year) or filter according to your instances, jobs, jobs categories, and last run duration ranges.

Go to the following section to see [what is available on the Job Trend view](#) or click any of the following job trend chart options to see more details:

- [Top Failure Job Trend Chart](#)
- [Most Frequent Job Trend Chart](#)
- [Longest Running Jobs Trend Chart](#)
- [Highest Percentage Duration Increase Trend Chart](#)

### 5.3.1 What is available on the Job Trend view?

The **Job Trends** view allows you to explore the most important job trends of your environment. According to your requirements, you can choose different job trend chart types, trend durations, and filters.

#### How do you specify the Job Trend type?

On the the left section of the **Job Trends** view, you can select any of the following trending charts from the **Job Trend Type** drop-down options:

- [Top Failure](#)
- [Most Frequent](#)
- [Longest Running](#)
- [Highest Percentage Duration Increase](#)

Click the respective job trend chart type to view more information about this trend.

#### How do you select the trend duration?

The **Trend Duration** drop-down options allow you to choose if you want to see job trend type information per Day, Week, Month, or Year. For example, you can select to see **Most Frequent** jobs of the week. For any of these options, SQL Enterprise Job Manager displays the following information:

- **Day** - job trends based on the job duration collected over the past 24 hours and forecasts for the next 24 hours.
- **Week** - job trends based on the job duration collected over the past 7 days and forecasts for the next 7 days.
- **Month** - job trends based on the job duration collected over the past 30 days and forecasts for the next 30 days.
- **Year** - job trends based on the job duration collected over the past 12 months and forecasts for the next 12 months.

#### How do you filter the information on the Job Trends tab?

After you select the time range for which you want to see the information, you can filter your information according to the following fields:

- **Instance** - select the instances for which you want to see the job trend information.
- **Job Name** - select specific jobs to be displayed in the trending information.
- **Category** - choose specific job categories for which you want to see the trend information.
- **Duration** -use the sliders to determine a specific duration interval that jobs must comply in order to be displayed on the trending information.






When using filters take into account:

- Some filters have the option to **Add Filter** in case the information you are looking for is not listed. Once you click on **Add Filter**, a dialog box appears. Type the name you are looking for on the Search bar, then select it from the list, and **Save**. Your filter will be included under the filter list where you Added.
- Click the respective checkbox to add or remove your selections.
- If you want to select filters first and apply the changes later, deselect the **Apply Filter Instantly** option.

- To remove filters, use the specific **Clear Filter** option in each filter. For example, if you want to remove your Instance filters, click **Clear Filter** under the same filter section.
- Under **Applied filters** on the top section of your **Job Trends** view, you can see the filters you have selected. Click the **X** icon next to the ones you want to remove.
- Use the option **Clear All Filters** on the top section of the **Filter Table By** to remove all filters.
- If you want to save your preferred filtering options, type a name in the **Add Filter** wizard of the Custom Filter section, and click **Save**. Once you save your filter, you can retrieve it from the drop-down bottom of the **Custom Filter** option available in the left side under the **Filter Table By** section.

## What other options are available on the Job Trend Chart?

You can also perform the following actions:

- **Hide trend lines** - select the option **Hide Trend Lines** located on the top left corner of the **Job Trend** chart to hide trend lines (dotted lines) and view only historical data (hard lines).
- **Search Jobs** - to search your jobs, use the searcher located on the top right corner of the **Job Trend** chart.
- **Print chart** - if you want to print the displayed chart, select the **Print Chart** option by clicking the  icon on the bottom right corner of the **Job Trend** chart.
- **Download chart** - you can download your **Job Trend** chart as a PNG, JPEG image file, PDF document, or SVG vector file. Find these options under the  icon located on the bottom right corner of the **Job Trend** chart.
- **View By** - select the jobs (monitored jobs, job trends, job chains, tasks, job history, or task history) you would like to see.
- **Refresh** - to get the latest information, click the  Refresh icon located on the right corner of the **View By** section.


- ✓ You can hover over a specific job on the graphic to see job details such as: date, name, instance and status.

## 5.3.2 Top Failure Jobs Trend Chart

By selecting the option **Top Failure** from the **Job Trend Type** options on the **Job Trends** view, you can see those jobs that failed most frequently in your environment.

To customize this trending chart according to your requirements, you can define the following options:

- Select the time range in the **Trend Duration** drop-down options. Choose to view the information by Day, Week, Month, or Year.
- Filter the information by Instance, Job Name, Category, and Duration. For example, you can select to view Top Failure Jobs from last month for Instance A or Top Failure Jobs from last Week for those jobs that lasted inside a defined time range.

 Consider that when you select a time range from the **Trend Duration** options, SQL Enterprise Job Manager displays job trends based on jobs collected over the past selected time range and forecasts this information for the same period of time in the future.

### What can you see on the grid information?



Below the **Top Failed Jobs** chart, you can see a job grid representing the same information available in the chart. This information includes:


- **Job Name** - The name of the job is included in the chart.
- **Instance** - The name of the SQL Server instance where the job resides.
- **Category** - The category of the job used for the trending chart.
- **Min Duration** - The minimum job duration according to all runs executed in the specified time range.
- **Max Duration** - The maximum job duration according to all runs executed in the specified time range.
- **Average Duration** - The average job duration according to all runs executed in the specified time range.
- **Last Run Date** - The date and time the last job run was executed.
- **Count** - The number of times the job was executed in the specified time range.
- **Failure** - The number of times the job failed in the specified time range.
- **Trend %** - The trend frequency % used for calculating the trend.

To view all events/runs for each job, expand the respective job and SQL Enterprise Job Manager displays each job run/event with its status, duration, and corresponding message information.

### What other options are available on the Job Trend Chart?

You can also perform the following actions:

- **Hide trend lines** - Select the option **Hide Trend Lines** located on the top left corner of the **Job Trend** chart to hide trend lines (dotted lines) and view only historical data (hard lines).
- **Search Jobs** - To search your jobs, use the searcher located on the top right corner of the **Job Trend** chart.
- **Print chart** - If you want to print the displayed chart, select the **Print Chart** option by clicking the  download icon on the bottom right corner of the **Job Trend** chart.
- **Download chart** - You can download your **Job Trend** chart as a PNG, JPEG image file, PDF document, or SVG vector file. Find these options under the  download icon located on the bottom right corner of the **Job Trend** chart.
- **View By** - Select the jobs (monitored jobs, job trends, job chains, tasks, job history, or task history) you would like to see.

- **Refresh** - To get the latest information, click the  Refresh icon located on the right corner of the **View By** section.


✔ You can hover over a specific job on the graphic to see job details such as date, name, instance, and status.

### 5.3.3 Most Frequent Jobs Trend Chart

By selecting the options **Most Frequent** from the **Job Trend Type** options on the **Job Trends** view, you can see the jobs that run most frequently in your environment.

To customize this trending chart according to your requirements, you can define the following options:

- Select the time range in the **Trend Duration** drop-down options. Choose to view the information by Day, Week, Month, or Year.
- Filter the information by Instance, Job Name, Category, and Duration. For example, you can select to view the Most Frequent Jobs from last week for Instance B or the Most Frequent Jobs from last day for those jobs whose duration is between 1 and 2 minutes.

 Consider that when you select a time range for the **Trend Duration** option, SQL Enterprise Job Manager displays job trends based on jobs collected over the past selected time range and forecasts this information for the same period of time in the future.

#### What can you see on the grid information?




Below the **Most Frequent Jobs** chart, you can see a job grid representing the same information available in the chart. This information includes:

- **Job Name** - The name of the job is included in the chart.
- **Instance** - The name of the SQL Server instance where the job resides.
- **Category** - The category of the job used for the trending chart.
- **Min Duration** - The minimum job duration according to all runs executed in the specified time range.
- **Max Duration** - The maximum job duration according to all runs executed in the specified time range.
- **Avg Duration** - The average job duration according to all runs executed in the specified time range.
- **Last Run Date** - The date and time the last job run was executed.
- **Count** - The number of times the job was executed in the specified time range.
- **Trend Frequency** - The trended frequency used for calculating the trend.

To view all events/runs for each job, expand the respective job and SQL Enterprise Job Manager displays each job run/event with its status, duration, and corresponding message information.

#### What other options are available on this Job Trend Chart?

You can also perform the following actions:

- **Hide trend lines** - Select the option **Hide Trend Lines** located on the top left corner of the **Job Trend** chart to hide trend lines (dotted lines) and view only historical data (hard lines).
- **Search Jobs** - To search your jobs, use the searcher located on the top right corner of the **Job Trend** chart.
- **Print chart** - If you want to print the displayed chart, select the **Print Chart** option by clicking the  download icon on the bottom right corner of the **Job Trend** chart.
- **Download chart** - You can download your **Job Trend** chart as a PNG, JPEG image file, PDF document, or SVG vector file. Find these options under the  download icon located on the bottom right corner of the **Job Trend** chart.
- **View By** - Select the jobs (monitored jobs, job trends, job chains, tasks, job history, or task history) you would like to see.
- **Refresh** - To get the latest information, click the  Refresh icon located on the right corner of the **View By** section.


✔ You can hover over a specific job on the graphic to see job details such as date, name, instance, and status.

### 5.3.4 Longest Running Jobs Trend Chart

By selecting the option **Longest Running Jobs** from the **Job Trend Type** options on the **Job Trends** view, you can see the jobs that have the longest time duration in your environment.

To customize this trending chart according to your requirements, you can define the following options:

- Select the time range in the **Trend Duration** drop-down options. Choose to view the information by Day, Week, Month, or Year.
- Filter the information by Instance, Job Name, Category, and Duration. For example, you can select to view the Longest Running Jobs from last month for Instance A or the Longest Running Jobs from last Week for those jobs that have a Data Collector category.

 Consider that when you select a time range for the **Trend Duration** option, SQL Enterprise Job Manager displays job trends based on jobs collected over the past selected time range and forecasts this information for the same period of time in the future.

#### What can you see on the grid information?



Below the **Longest Running Jobs** chart, you can see a job grid representing the same information available in the chart. This information includes:

- **Job Name** - The name of the job is included in the chart.
- **Instance** - The name of the SQL Server instance where the job resides.
- **Category** - The category of the job used for the trend chart.
- **Min Duration** - The minimum job duration according to all runs executed in the specified time range.
- **Max Duration** - The maximum job duration according to all runs executed in the specified time range.
- **Avg Duration** - The average job duration according to all runs executed in the specified time range.
- **Last Run Date** - The date and time the last job run was executed.
- **Duration** - The time duration of your job.
- **Count** - The number of times the job was executed in the specified time range.
- **Trend Duration** - The trend frequency used for calculating the trend.

To view all events/runs for each job, expand the respective job and SQL Enterprise Job Manager displays each job run/event with its status, duration, and corresponding message information.

#### What other options are available on this Job Trend Chart?

You can also perform the following actions:

- **Hide trend lines** - Select the option **Hide Trend Lines** located on the top left corner of the **Job Trend** chart to hide trend lines (dotted lines) and view only historical data (hard lines).
- **Search Jobs** - To search your jobs, use the searcher located on the top right corner of the **Job Trend** chart.
- **Print chart** - If you want to print the displayed chart, select the **Print Chart** option by clicking the  download icon on the bottom right corner of the **Job Trend** chart.
- **Download chart** - You can download your **Job Trend** chart as a PNG, JPEG image file, PDF document, or SVG vector file. Find these options under the  download icon located on the bottom right corner of the **Job Trend** chart.
- **View By** - Select the jobs (monitored jobs, job trends, job chains, tasks, job history, or task history) you would like to see.



- **Refresh** - To get the latest information, click the  Refresh icon located on the right corner of the **View By** section.


✔ You can hover over a specific job on the graphic to see job details such as date, name, instance, and status.

### 5.3.5 Highest Percentage Duration Increase

By selecting the option **Highest Percentage Duration Increase** from the **Job Trend Type** options on the **Job Trends** view, you can see those jobs that are forecast to have the highest increase (in percentage) in their duration time.

To customize this trending chart according to your requirements, you can define the following options:

- Select the time range in the **Trend Duration** drop-down options. Choose to view the information by Day, Week, Month, or Year.
- Filter the information by Instance, Job Name, Category, and Duration. For example, you can select to view the Highest Percentage Duration Increase from last week for Instance A.

 Consider that when you select a time range from the **Trend Duration** options, SQL Enterprise Job Manager displays job trends based on jobs collected over the past selected time range and forecasts this information for the same period of time in the future.

What can you see on the grid information?



Below the **Highest Percentage Duration Increased Jobs** chart, you can see a job grid representing the same information available in the chart. This information includes:


- **Job Name** - The name of the job is included in the chart.
- **Instance** - The name of the SQL Server instance where the job resides.
- **Category** - The category of the job used for the trend chart.
- **Min Duration** - The minimum job duration according to all runs executed in the specified time range.
- **Max Duration** - The maximum job duration according to all runs executed in the specified time range.
- **Avg Duration** - The average job duration according to all runs executed in the specified time range.
- **Last Run Date** - The date and time the last job run was executed.
- **Duration** - The time duration of your job.
- **Count** - The number of times the job was executed in the specified time range.
- **Trend Duration** - The trend frequency used for calculating the trend.

To view all events/runs for each job, expand the respective job and SQL Enterprise Job Manager displays each job run/event with its status, duration, and corresponding message information.

What other options are available on this Job Trend Chart?

You can also perform the following actions:

- **Hide trend lines** - Select the option **Hide Trend Lines** located on the top left corner of the **Job Trend** chart to hide trend lines (dotted lines) and view only historical data (hard lines).
- **Search Jobs** - To search your jobs, use the searcher located on the top right corner of the **Job Trend** chart.
- **Print chart** - If you want to print the displayed chart, select the **Print Chart** option by clicking the  download icon on the bottom right corner of the **Job Trend** chart.
- **Download chart** - You can download your **Job Trend** chart as a PNG, JPEG image file, PDF document, or SVG vector file. Find these options under the  download icon located on the bottom right corner of the **Job Trend** chart.
- **View By** - Select the jobs (monitored jobs, job trends, job chains, tasks, job history, or task history) you would like to see.

- **Refresh** - To get the latest information, click the  Refresh icon located on the right corner of the **View By** section.

✔ You can hover over a specific job on the graphic to see job details such as date, name, instance, and status.

## 5.4 Viewing your Scheduled Tasks

SQL Enterprise Job Manager supports monitoring your Windows Scheduled Tasks.

In order to monitor tasks from a SQL Server instance, you must register the instance with SQL Enterprise Job Manager. For more information go to [Adding SQL Server Instances](#).

You can view your monitored tasks by going to the **Jobs** tab, and select **Tasks** from the drop down list available in the **View By** section.

Go to the following sections to view more detailed information about your monitored tasks:

- [Viewing information about your tasks](#)
- [Performing actions on your tasks](#)
- [Creating tasks](#)

## 5.4.1 Viewing information about your Tasks

To view your monitored tasks, go to the **Jobs** tab, and select **Tasks** from the drop down list available in the **View By** section.

SQL Enterprise Job Manager allows you to see the following information about your tasks:

- **Server Name** - The name of the SQL Server instance to where the task belongs to.
- **Task Name** - The name defined for the task.
- **Enabled** - If the task is enabled or disabled.
- **Status** - the current execution status of the task.
- **Last Run Outcome** - The numeric value assigned by Windows Task Scheduler.
- **Last Run** - The last date and time (including the time zone) when the task run.
- **Next Run** - The next date and time (including the time zone) when the task will run.
- **Scheduled** - If the task is scheduled or not.
- **Actions** - Use the gear icon under this column to access actions for your selected tasks. For more information about these actions go to [Performing actions on your tasks](#).



Click the  more options icon to select the information you want to hide or show on the **Tasks** view.

### How can you filter your information on the Tasks view?

You can filter your task information by the following fields:

- **Status** - The execution status of the task: Unknown, Disabled, Ready, Running, WaitingForChildrenToComplete, RanToCompletion, Canceled, Faulted, or Scheduled.
- **Task Name** - The name used to identify the task.
- **Enabled** - Whether the task is enabled or not.
- **Server name** - The computer server where the task resides.
- **Last Run Outcome** - Select specific task status to filter information according to the last run outcome values reported such as: Failed, Successful, Retry, Canceled, Unknown.




When using filters consider:

- Some filters have the option to **Add Filter** in case the information you are looking for is not listed. Once you click on **Add Filter**, a dialog box appears. Type the name you are looking for on the Search bar, then select it from the list, and **Save**. Your filter will be included under the filter list where you added it.
- Click the respective checkbox to add or remove your selections.
- If you want to select filters first and apply the changes later, deselect the **Apply Filter Instantly** option.
- To remove filters, use the specific **Clear Filter** option in each filter. For example, if you want to remove your Instance filters, click **Clear Filter** under the same filter section.
- Under **Applied filters** on the top section of your **Tasks** view, you can see the filters you have selected. Click the **X** icon next to the ones you want to remove.
- Use the option **Clear All Filters** on the top section of the **Filter Table By** to remove all filters.
- If you want to save your preferred filtering options, type a name in the **Add Filter** wizard of the Custom Filter section, and click **Save**. Once you save your filter, you can retrieve it from the drop-down bottom of the **Custom Filter** option available on the left side under the **Filter Table By** section.

## What other options are available on the Tabs view?

On the top section of the **Tasks** view, you can find the following options:


- **View By** - Select the jobs (monitored jobs, job trends, job chains, tasks, job history, or task history) you would like to see.
- **Add Task** - Use this option to create a new task. Go to [Add Task](#) to find more information.
- **Export** - select this option to export the information displayed on the **Job Chains** view. You can export as a PDF, CSV, or XML file.
- **Refresh** - Use this  Refresh icon to get the latest information from your tasks.

✔ You can define the number of tasks you want to view per page. Go to the bottom section of the tab and type the number of tasks you want to see per page.


⚠ Consider that Read-only users can only access a read-only view of the job properties. Only Administrators and Guest-users can add/edit jobs or add/edit job chains.

## 5.4.2 Performing actions on your tasks

SQL Enterprise Job Manager allows you to perform actions on your monitored Windows tasks.

To perform actions on tasks, use the checkbox to select your desired tasks, and click the  gear icon under the **Actions** column.

- **Start Task** - This allows you to start a task
- **Stop Task** - This allows you to stop a task. This option is only enabled when the selected task is running.
- **Enable Task** - This lets you enable a task. This option is only enabled when the selected task is disabled.
- **Disable Task** - This lets you disable a task. This option is only enabled when the selected task is enabled.
- **Refresh Task** - This allows you to get the latest information from the task
- **Delete Task** - This deletes the selected task. You cannot undo this operation. SQL Enterprise Job Manager warns you that any associated data will be permanently deleted.
- **Edit Task** - You can use this option to access the properties of a task and edit them. This option is only available when you select one Task.

 Read-only users cannot Start, Stop, Enable, Disable, or Delete Tasks. As a Read-only user, you can view the properties of a task but you cannot edit them.

### 5.4.3 Creating Tasks

SQL Enterprise Job Manager supports monitoring your Windows Scheduled Tasks.

In order to monitor tasks from a SQL Server instance, you must register the instance with SQL Enterprise Job Manager and select the option **Monitor task for the instance(s)**. For more information about these options go to [Adding SQL Server Instances](#).

You can view your monitored tasks by going to the **Jobs** tab, and select **Tasks** from the drop down list available in the **View By** section.

Go to the following sections to view more detailed information about creating tasks:

- [Defining general specifications for your task](#)
- [Defining triggers for your task](#)
- [Defining actions for your task](#)
- [Defining conditions for your task](#)
- [Defining settings for your task](#)



## Defining General Specifications for your Task

When you open the **Add Task** wizard, the first section requires you to fill in general information about your task.

You can find the following fields:


- **Server Name** - select from the drop-down list the SQL Server instance where you want to create your task.
- **Name** - specify the name for your Task. Take into account that two tasks cannot have the same name.
- **Author** - the account used to create the task.
- **Description** - type a description that allows you to identify your task, its objectives, and procedures.
- **Security Options** - by default, the **Author** is used as the default account to run the task. You can select one of the following options:
  - **When running the task, use the following user account** - you can select in this field the user account to be used when running the task
  - **Run only when user is logged on** - use this option to specify the task will run only when the user who created the task is logged on when the task is triggered.
  - **Run whether user is logged on or not** - use this option if you want to run the task even when the account that created the task is not logged on when the task is triggered. Keep in mind that even if you select **Do not store password. The task will have access to local resources**, Windows will prompt you to type the specified credentials when the task is triggered and the user is not logged on.
  - **Run with highest privileges** - if you select this box, the Task Scheduler will run the task using an elevated privileges token.
  - **Hidden** - use this option if you want your task to remain hidden in your Windows Task Scheduler.
  - **Configure for** - use this option to select the OS for which you want to configure your task

Click **Next** to go to the next section and [define triggers for your task](#).

## Defining Triggers for your Task

What is a trigger?

A trigger is a set of criteria that when met, starts the execution of a task. When creating a task you need to define the trigger for that task.

 Tasks can contain one or more triggers. If a task has multiple triggers, the task will start when any of the triggers occur.

How do you add triggers?

In the **Triggers** section of the **Add Task** wizard, click **Add** to create a new trigger; SQL Enterprise Job Manager opens the **Add Trigger** window. You can go to [Triggers Options](#) to find more information about creating new triggers.

After you create the new trigger, you can also use the following options:

- **Edit** - To access the properties of a trigger and modify it according to your requirements
- **Remove** - To delete a selected trigger

Additionally, you can specify [Advanced Settings](#) for any Trigger.

## Triggers options

To create a trigger for your task, you can define triggers that are based on time or specific events such as:

- **On a schedule** - use this option to create a trigger based on a scheduled criteria.
- **At log on** - select this option to run the task when a user logs on to the computer.
- **At startup** - use this option to run the task when the computer starts up.
- **On Idle** - select this option to run the task after the computer enters an idle state.
- **On an event** - use this option to run the task when specific event entries are added to an event log.
- **At task creation/modification** - select this option if you want to run the task as soon as it is created or when the task is modified.
- **On connection to user session** - use this option to run the task when a user session is connected to the local computer or from a remote desktop connection.
- **On disconnect from user session** - select this option to run the task when a user session is disconnected from the local computer or from a remote desktop connection.
- **On workstation lock** - use this option to run the task when the computer is locked.
- **On workstation unlock** - use this option to run the task when the computer is unlocked.

Specific settings are defined for each option. Go to the respective sections below to view these options.

### Creating a Trigger On a Schedule

If you select this option, you can select from one of the following drop-down options from the **Setting occurs** field.

- **One Time** - use this option to run the task once at a specific date and time.
- **Daily** - use this option to run the task once per day every X number of days (**Rekurs every** option). For example, you can specify to run a task every 2 or 3 days.
- **Weekly** - use this option to run the task in certain days of the week every X number of weeks (**Rekurs every** option). For example, you can specify to run a task each Sunday and Wednesday every three weeks.
- **Monthly** - use this option to identify specific dates of certain months according to these options:
  - **Day of every month(s)** - select a specific date in a month in which you want to run the task. For example, you can define to run a task the 12th of January.
  - **The of every month(s)** - use this option when you do not want to determine specific dates. You can select from options such as **First, Second, Third, Fourth, or Last** of a selected week day of a specific month. For example, you can determine to run a task the Second Sunday of March.

- ✓ Use the option **Synchronize across time zones** to make the time relative to UTC (Coordinated Universal Time) instead of the computer time zone that runs the task. Use this setting when you want to run tasks simultaneously in multiple time zones.

After you select your trigger time-based specifications, go to [Advanced Settings](#) for more trigger options.

### Creating a Trigger at Log on

Use this option if you want the task to run when a user logs on to the computer. You can select from:

- **Any User** - use this option to run the task when any user logs on to the computer.
- **Specified User** - use this option to determine a specific user that will trigger the task.

### Creating a Trigger at Startup

Select this option if you want to run the task when the computer starts up.

### Creating a Trigger On idle

Select this option to run the task after the computer enters an idle state. You can set the idle settings in the [Conditions](#) tab of this wizard.

### Creating a Trigger On an Event

Use this option if you want to identify specific event entries added to an event log that will cause to run the task. You can select from:

- **Log** - displays a drop down list with different logs. Choose the log that contains your event.
- **Source** - displays the publisher name. Identify it from the drop-down list.
- **Event ID** - specify the event identifier in the field.

### Creating a Trigger at Task Creation/Modification

Select this option if you want to run the task as soon as it is created or when the task is modified. If you select this option you do not need additional settings, but you can configure [Advanced Options](#).

### Creating a Trigger On Connection to User Session

Use this option run a task when a user session connects from a local or remote desktop connection. You can specify the following settings:

- **Any User** - use this option to run the task when any user connects.
- **Specified User** - select this option to specify the user that will cause the task to run.
- **Connection from remote computer** - use this option to run the task when the user connects from a Remote Desktop Connection program from a remote computer.
- **Connection from local computer** - use this option to run the task when the user connects to a user session on the local computer.

### Creating a Trigger On Disconnect from User Session

Use this option run a task when a user session disconnects from a local or remote desktop connection. You can specify the following settings:

- **Any User** - use this option to run the task when any user disconnects.
- **Specified User** - select this option to specify the disconnected user that will cause the task to run.
- **Connection from remote computer** - use this option to run the task when the user disconnects from a Remote Desktop Connection program from a remote computer.
- **Connection from local computer** - use this option to run the task when the user disconnects from a user session on the local computer.

### Creating a Trigger On Workstation Lock

Select this option to run a task when the computer is locked. You can specify from the following options:

- **Any user** - use this option to run the task when any user locks the computer.
- **Specified User** - select this option to specify the user that will cause the task to run.

### Creating a Trigger On Workstation Unlock

Select this option to run a task when the computer is unlocked. You can specify from the following options:

- **Any User** - use this option to run the task when any user unlocks the computer.
- **Specified User** - select this option to specify the user that will cause the task to run.

## Advanced Settings for Triggers

When you define settings for your trigger, you can also specify the following advanced options:

- **Delay task for up to** - specify an amount of time the task will wait before running after the task is triggered. The task will run at a random time between the time the task is triggered and the time you specified.
- **Repeat task every** - specify a frequency interval and duration for your task. For example, you can specify to run a task every 30 minutes for a duration of 12 hours. Select the option **Stop all running tasks at end of repetition duration** to stop your task at the end of the selected frequency interval and duration.
- **Stop task if it runs longer than** - use this option to stop tasks that run longer than the amount of time you specify.
- **Activate** - set a date and time for the trigger to activate. You can select the option **Synchronize across time zones** to make the time relative to UTC (Coordinated Universal Time) and coordinate tasks in multiple time zones.
- **Expire** - set a date and time for the trigger to expire. When the trigger expires, the task cannot run any longer. You can select the option **Synchronize across time zones** to make the time relative to UTC (Coordinated Universal Time) and coordinate tasks in multiple time zones.
- **Enabled** - define if you want to enable or disable your task. You can create a task and not enable it until a later time.

## Defining actions for your Task

After you define triggers for your task, you can define actions to be performed when the task runs.

To add an action, in the **Actions** section of the **Add Task** wizard, click **Add**. SQL Enterprise Job Manager opens the **Add Action** dialog window.

What type of actions can you set for your task?

There are three types of actions you can set for your task: **Start a program**, **Send an e-mail**, and **Display a message**. These options are available in the **Begin the task** drop-down list.

Each type of action contains specific settings. The next sections explain in detail the settings for these actions.

### Start a program

When you select to start a program as the action for your task, you have to specify a program or script to execute.

In the **Program/script** field, type the name of the program or script to execute.

Additionally, you can define the following optional parameters:

- **Add arguments** - If your program or script takes command-line arguments, you can type them in this field.
- **Start in** - You can specify the working directory for the command line that executes the program or script. Type the path to the program or script file.

### Send an e-mail

You can select to send an e-mail when the task runs. If you select this action, specify the following settings:

- **From** - Type the e-mail address from where the e-mail will be sent.
- **To** - Type the email address to where the e-mail will be sent.
- **Subjects** - Type the subject of your e-mail.
- **Text** - Type the body of your message.
- **Attachment** - Type files paths to be attached in your email.
- **SMTP server** - Specify the SMTP server to use to send the e-mail.

### Display a message

Use this option to show a message on the desktop when the task runs. You can specify the following settings:

- **Title** - Type the title for the message box.
- **Message** - Type the content body of your message.

What other options are available in the Actions section?

After you create your actions, you can also use any of the following options:

- **Edit** - Select one of the created actions to edit/change its settings.
- **Delete** - Use this option to remove actions.

## Defining Conditions for your Task

You can also specify conditions that need to be met to run the task. These conditions, along with the triggers, determine whether the task runs or not. The task does not run if any of the conditions specified in this section is not met.

There are three condition categories: **Idle conditions**, **Power conditions**, and **Network conditions**. Go to the respective sections below to find out more about their respective settings:

### Idle Conditions

Use this option when you want to run the task after the trigger is activated, only if the computer is in an idle state for a specific amount of time. You can specify the following settings:

- **Start the task only if the computer is idle for** - use the drop-down options to select the amount of time that you want the computer to be idle in order to run the task. Use the option **Wait for idle for** to select the amount of time the Task Scheduler will wait to have an idle state
- **Stop if the computer ceases to be idle** - select this option if you want to stop your task once the computer ceases to be idle. Choose **Restart if the idle state resumes** if you want to start the task again if the idle state resumes.

 Keep in mind that the Task Scheduler service checks if the computer is in an idle state every 15 minutes

### Power Conditions

Use these options to run the task when your computer is on AC power only and to stop the task when it switches to battery power. Select any of the following options:

- **Start the task only if the computer is on AC power** - Your task will only run when the computer is on AC power. Choose **Stop if the computer switches to battery power** to stop the task if the computer changes to battery power
- **Wake the computer to run this task** -When the trigger is activated, your task will wake your computer from a sleep mode to run the task.

### Network Conditions

Use this option to start the task when **Any connection** is available after the task trigger is activated.

## Defining Settings for your Task

In this section, you can specify additional settings for your tasks. You can use any of the following options:

- **Allow task to be run on demand** - This allows you to run the task at any time on demand (before or after it is scheduled).
- **Run task as soon as possible after a scheduled start is missed** - In some situations (for example, the computer was turned off or the Task Scheduler service was busy) the task will not run on the scheduled time. You can select this option to start the task as soon as possible in case it misses running on time.
- **If task fails, restart every** - In case your task fails to run, after the number of minutes you specify, it will attempt to restart the task. You can set the time interval between attempts and the number of attempts during the time interval.
- **Stop the task if it runs longer than** - Use this option to stop running tasks that are taking longer to perform than the time selected from the drop-down list.
- **If the running task does not end when requested, force it to stop** - If the task does not respond to a request to stop, you can select this option to force the task to stop.
- **If the task is not scheduled to run again, delete it after** - Select this option to delete tasks after they are performed and are not scheduled to run again. Select from the drop-down list the amount of time the Task Scheduler service will wait before deleting the task.
- **If the task is already running, then the following rule applies** - Use this option to specify how the Task Scheduler behaves in case another instance of the task is already running:
  - **Do not start a new instance** - The Task Scheduler service will not run a new instance of the task and will not stop the instance that is already running.
  - **Run a new instance in parallel** - The Task Scheduler service will run a new instance of the task in parallel with the instance that is already running.
  - **Queue a new instance** - The Task Scheduler service will add a new instance of the task to the queue of tasks the service will run
  - **Stop the existing instance** - The Task Scheduler service will stop the instance of the task that is already running, and run a new instance of the task.



## 6 Viewing the history of your jobs

The **Job History** tab displays all your jobs and tasks historical information.

Every time a job runs, it is recorded in the SQL Server instance. The SQL Enterprise Job Manager displays it as an entry. These events are ordered chronologically with the latest on top, but you can also change this order or use the available filters on the left side to view specific information. For more information, go to [Organizing and Filtering your Job History Information](#).

By default, the **Job History** tab displays the historical information of your jobs, but you can click the [Task History](#) option on the top right corner to access the historical information of your Windows scheduled tasks.

Additionally, you can view the history of your jobs and tasks by going to the **Jobs** tab, and selecting **Job History** or **Task History** from the drop-down list available in the **View By** section.







## 6.1 What is available on the Job History tab?

The **Job History** tab lists chronologically all jobs events of your managed instances. SQL Enterprise Job Manager displays an entry each time a job runs.

You can use the **View By** drop-down options on the left side of this tab to specify if you want to view your job history by day, week, or month. Alternatively, you can use the calendar in **Date** to select a specific date for which you want to view your job history.

On this list you can see the following values:


- **Status** - Displays the status of each job event: failed, successful, retry, canceled, or unknown. Take into account that this is not the status of the job itself but of each event (every time the job runs).
- **Date/Time** - Displays the date and time of each job event, including the time zone.
- **Duration** - Shows the duration in hh:mm:ss of each job event (total duration of all steps executed for that job).
- **Instance** - Displays the name of the SQL Server instance where the job ran.
- **Job Name** - Shows the name of the respective job.
- **Max Run Time** - The maximum run time of a job step in the job event
- **Avg Run Time** - The average run time of job steps in the job event
- **Message** - Displays additional information of the job event: status, schedule used, the last step run, etc.

- The status of job events is represented with the following icons:  Successful,  Canceled,  Failed,  Retry, or  Unknown.
- Click the  more options icon to select the information you want to hide or show on the **Job History** view.

### 6.1.1 How can you export the information available on Job History?

To export the information displayed in the current view of the **Job History** tab, click the option **Export** on the top bar menu and select your required format: PDF, CSV, or XLS for exporting the information displayed.

### 6.1.2 How do you refresh the information available on the Job History tab?


Whenever there is new information to be updated on the **Job History** tab, the  **Refresh** option (located on the top of this tab) becomes available so you can click and update it to the latest information.

- Additionally, you can drill into any job event to see specific details about its steps. For more information on what is available when drilling into job events go to [Viewing the steps of your job](#). To learn how to order and filter the information on the Job History tab, go to [Organizing and filtering your job history information](#).

### 6.1.3 What other options are available on the Job History tab?

Whenever you want to see your [Task History](#), click this option located on the top right side of this view.

## 6.1.4 Viewing the steps of your job

The **Job History** tab allows you to drill into any job event and see more specific information about its steps. Click the  more icon to expand and view the following information of each job event:

- **Status** - Displays the status of each step.
- **Date/Time** - Shows the date, time, and timezone when the step is finished.
- **Step Id** - Displays the identification number (ID) of each step.
- **Step Name** - Displays the name of the step.
- **Message** - Shows additional information of the step.

For more information on how to order and filter the information on the **Job History** tab, go to [Organizing and filtering your job history information](#).

## 6.1.5 Organizing and filtering your job history information

You can organize and view more specific information in the **Job History** tab.

To sort the information available on the job events list, click the header of any column, and SQL Enterprise Job Manager orders the information according to the selected column. For example, click **Duration** to sort jobs by the duration time.

You can use the **View By** drop-down options on the left side of this tab to specify if you want to view your job history by day, week, or month. Alternatively, you can use the calendar in **Date** to select a specific date for which you want to view your job history.

If you want to view more specific information, go to the filters section on the left side of the **Job History** tab and use the filters available there. You can filter your information by:

- **Status** - Filter according to the status of your job: Failed, Successful, Retry, Canceled, In Progress, or Unknown.
- **Instance** - Select those instances whose jobs you want to see.
- **Job name** - Select the names of the jobs for which you want to view their historical information.
- **Duration** - Type or use the time slider to define the interval of duration job time for which you want to see the job history.



When using filters consider:

- Some filters have the option to **Add Filter** in case the information you are looking for is not listed. Once you click on **Add Filter**, a dialog box appears. Type the name you are looking for on the Search bar, then select it from the list, and **Save**. Your filter will be included under the filter list where you added it.
- Click the respective checkbox to add or remove your selections.
- If you want to select filters first and apply the changes later, deselect the **Apply Filter Instantly** option.

### How do you save filters?

You can save your preferred filtering options by typing a name in the **Add Filter** wizard of the **Custom Filter** section and clicking **Save**. Once you save your filter, you can retrieve it from the drop-down bottom of the **Custom Filter** option available on the left side under the **Filter Table By** section.

### How do you remove filters?

You can remove filters by following these options:

- Use the specific **Clear Filter** option in each filter. For example, if you want to remove your status filters, click **Clear Filter**.
- Under **Applied filters** on the top section or your **Job History** tab, you can see the filters you have selected, click the **X** icon next to the ones you want to remove.
- Use the option **Clear All Filters** on the top section of the **Filter Table By** to remove all filters.

## 6.2 Viewing the History of your Tasks


To view the history of your tasks, you have to first enable the option **Enable All Tasks History** under the **Actions** section of your Windows Task Scheduler. Consider that gathering historical information may impact your SQL Enterprise Job Manager performance.


To view the history of your tasks, go to the **Job History** tab, and select the **Task History** option from the top right corner.

In the **Task History** view you can see the following information for your tasks:

- **Status** - the current status of your task, which could be: Unknown, Disabled, Ready, Running, WaitingForChildrenToComplete, RanToCompletion, Canceled, Faulted, or Scheduled.
- **Task Name** - the name of your task.
- **Last Run** - the date and time of the last task run.
- **Server name** - the name of the computer on which the task occurs.
- **Last Run Outcome** - the numeric value assigned by Windows Task Scheduler.



Click the  more options icon to select the information you want to hide or show on the **Task History** view.

Additionally, you can click the  more icon to expand each task and see events for that task. In each task event you can see the following information:

- **Task Level** - the severity level of the event. It could be Information, Warning, Error, or Critical.
- **Date/Time** - the date and time when each event ran.
- **Event ID** - the identifying ID of the event; in other words, a number identifying the particular event type.
- **Category** - the event publisher uses categories to represent activities such as: Task completed, Action completed, Action Started, Task Started, Task Engine received a message to start a task, or Task triggered on the scheduler.
- **Operation Code** - a numeric value that identifies the activity or the point within an activity that the application was performing when it raised the event.
- **Server name** - the name of the computer on which the event occurred.

For more information about event properties, go to the following [Microsoft Technet Event Guide](#).

## 6.2.1 Organizing and filtering your task history information

You can organize and view more specific information in the **Task History** tab.

To sort the information available on the task history list, click the header of any column, and SQL Enterprise Job Manager orders the information according to the selected column. For example, click **Last Run** to sort tasks by the date and time of the last task run.

If you want to view more specific information, go to the filters section on the left side of the **Task History** tab and use the filters available there. You can filter your information by:

- **Status** - Filter according to the status of your tasks: Unknown, Disabled, Ready, Running, Failed, Successful, Retry, Canceled, In Progress, or Unknown.
- **Task Name** - Select the name of your task.
- **Server Name** - Select the name of the computer on which the task occurs.



When using filters take into account:

- Some filters have the option to **Add Filter** in case the information you are looking for is not listed. Once you click on **Add Filter**, a dialog box appears. Type the name you are looking for on the Search bar, then select it from the list, and **Save**. Your filter will be included under the filter list where you added it.
- Click the respective checkbox to add or remove your selections.
- If you want to select filters first and apply the changes later, deselect the **Apply Filter Instantly** option.

### How do you save filters?

You can save your preferred filtering options by typing a name in the **Add Filter** wizard of the **Custom Filter** section and clicking **Save**. Once you save your filter, you can retrieve it from the drop-down bottom of the **Custom Filter** option available on the left side under the **Filter Table By** section.

### How do you remove filters?

You can remove filters by following these options:

- Use the specific **Clear Filter** option in each filter. For example, if you want to remove your status filters, click **Clear Filter**.
- Under **Applied filters** on the top section or your **Task History** tab, you can see the filters you have selected, click the **X** icon next to the ones you want to remove.
- Use the option **Clear All Filters** on the top section of the **Filter Table By** to remove all filters.

## 7 Viewing your jobs on the Schedule tab

SQL Enterprise Job Manager displays in the **Schedule** tab all your instances, jobs, tasks, and job chains across your environment. It also displays them in an Outlook Calendar view.

You can choose to see your jobs and tasks according to a combination of **Start / End Date** filter and **Start / End Time** filter. There are varying views available, such as **Daily, Weekly, Monthly**, or **Snapshot** to filter the information according to your requirements.

Go to the next section to see a more detailed description of this tab and what actions you can execute.

## 7.1 What is available on the Schedule tab?

SQL Enterprise Job Manager displays a Calendar view of all your executed instances, jobs, tasks, and job chains in containers.

### 7.1.1 How do you identify the containers?

- The title of the containers are the name of the instances, jobs, tasks, and/or job chains.
- You can identify your instances, jobs, tasks, and job chains with the following colors:
  - **Brown** - instances
  - **Blue** - jobs
  - **Green** - tasks
  - **Yellow** - job chains
- Each container provides a numeric value that represents the number of instances, jobs, tasks, and job chains that exists within the time slot (row) in the Calendar view.

### 7.1.2 How is the information displayed on the Calendar view?

By default, the **Schedule** tab displays your current date instances, jobs, tasks, and job chains in a **Day** calendar view; however, you can change this setting to view them by:

- Week
- Month
- Snapshot

The Week and Month view are available when you set the combinations of the **Start / End Date** filter and **Start / End Time** filter. The Snapshot view is available when you click on either the containers or the time slot.

To find more information, go to [Viewing your jobs on the Schedule tab](#).

### 7.1.3 How do you change the Calendar behavior?

The **Schedule** tab has a **View** drop-down box that allows you to filter the calendar information according to your requirements. The following options are available:

- **All** - displays all jobs, tasks, and job chains in the Calendar and Operation list.
- **Jobs Only** - displays all jobs in the Calendar and Operation list.
- **Tasks Only** - displays all tasks in the Calendar and Operation list.
- **Job Chains Only** - displays all job chains in the Calendar and Operation list.
- **Empty Time Slot** - displays the time slots where there are no jobs, tasks, and/or job chains scheduled. This option is highlighted with yellow color in the Calendar.
- **Overlap Period** - displays the time slots where an overlapping of jobs, tasks, and/or job chains exist. This option is highlighted with orange color in the Calendar.

### 7.1.4 How do you change the date, time, and scale filters?

For any of these views (Day, Week, Month), you can specify the date, time, and scale of your preference.

You can set the combinations of the **Start / End Date** filter and **Start / End Time** filter for the Calendar view using the Date & Time picker available on this option.



You can set a Scale for the Calendar view. The Scale defines the interval time axis of the Calendar and there is a drop-down box available with the following options:

- Hour (default)
- 30 minute
- 15 minute
- 5 minute

This settings are located on the top of the **Schedule** tab next to the **View** option. You can navigate to previous or future weeks, months, or even years.

### 7.1.5 How do you change your time zone?


By default, SQL Enterprise Job Manager displays your calendar according to your system time zone. However, you can change this value and set a different time zone by going to **Timezone**, on the top section of your calendar view, and selecting your required option from the drop-down UTC list.

### 7.1.6 How is the information displayed on the Operation list?

The operation list displays a list of all jobs, tasks, and job chains that match the filters selected on the Schedule view. This list also filters items based on the options specified on the Calendar view. The following options are available:

- **Outcome** - the current status of the job, task, or job chain scheduled. It can be: Successful or Failed.
- **Status** - displays the current status of the job, task, or job chain.
- **Type** - displays the type of work running, such as job, task, or job chain.
- **Start Time (GMT)** - displays the start time of the job, task, or job chain running.
- **Start Time (Local)** - displays the local time zone of the browser.
- **Start Time (Server)** - displays the time zone of the instance/server managed.
- **Max Runtime** - the maximum run time of a job, task, or job chain.
- **Avg. Runtime** - the average run time of a job, task, or job chain.



Click the  more options icon to select the information you want to hide or show on the **Operation list** view.

## 7.2 How to view your jobs on the Schedule tab?

SQL Enterprise Job Manager displays a Calendar view of all your executed instances, jobs, tasks, and job chains in containers.

By default, the **Schedule** tab displays your current date instances, jobs, tasks, and job chains in a **Day** calendar view; however, you can change this setting to view them by:

- [Week](#)
- [Month](#)
- [Snapshot](#)

The Week and Month views are available when you set the combinations of the **Start / End Date** filter and **Start / End Time** filter. The Snapshot view is available when you click on either the containers or the time slot.

- ✓ Hover over jobs, tasks, job chains, or time slots (specific date and hour) to get into the **Snapshot view**. This view displays the Instance and the Average Runtime of your selection at that particular time. For example: click on Jobs, the Snapshot view will display only Jobs for that particular time slot on which the clicked Job exists. Additionally, you can view specific details of your selection on the [Operation list](#).

### 7.2.1 Viewing your information by Day

SQL Enterprise Job Manager displays all instances, jobs, tasks, and job chains of your selected day on their respective time slots in the calendar.

Set the **Start / End Date** filter to view your information by **Day**. SQL Enterprise Job Manager changes to a day view with the day you selected. You can modify this date view by going to the top section of the **Scheduled** tab and selecting the dates you require.

### 7.2.2 Viewing your information by Week

SQL Enterprise Job Manager displays all instances, jobs, tasks, and job chains per day and time for each day of the selected week on their respective time slots in the calendar.

Set the **Start / End Date** filter to view your information by **Week**. SQL Enterprise Job Manager changes to a weekly view with the days of the week you selected. You can modify this week's view by going to the top section of the **Scheduled** tab and selecting the dates of the week you require.

### 7.2.3 Viewing your information by Month

SQL Enterprise Job Manager displays all instances, jobs, tasks, and job chains per day of the selected month on their respective time slots in the calendar.


Set the **Start / End Date** filter to view your information by **Month**. SQL Enterprise Job Manager changes to a monthly view with the days of the month you selected. You can modify this month's view by going to the top section of the **Scheduled** tab and selecting the dates of the month you require.

## 7.2.4 Viewing your information through the Snapshot view

The Snapshot view allows you to get detailed information of jobs, tasks, and/or job chains that exists within a specific time slot.

It can be accessed when the **Start / End Date** are the same and the **Start / End Time** are a maximum of an hour apart.

Each container displays information about a specific instance, job, task, and job chain.

 The instance containers reflect all jobs, tasks, and job chains that are running under the instance or on the server hosting that instance.

### How are the containers displayed on the Snapshot view?

- Each container displays the average run time in seconds of the specific job, task, or job chain.
- If the job, task, or job chain has already been run and completed, then the actual run time (duration) is displayed instead of the average run time.
- If a specific job, task, or job chain runs successively with less than 5 minutes in between each run, then the containers are merged into one container.

### How are the containers placed on the Calendar view?

- The placement of the container on the Calendar view is determined by the start time of the job, task, or job chain for which the container represents.
- The placement of the right edge of the container depends on the average run time or actual run time.
- Containers that extend the past visible of the Calendar area, display an ellipsis to indicate that there is information hidden.



- The edges of the Calendar allow you to navigate to the previous or next hour.
- You can drag and drop a job, task, or job chain container to reschedule it. For more information, go to [Reschedule](#).

## 7.3 Filtering your Schedule tab

You can filter the information displayed on your Calendar view to see more specific information. On the left side of your **Schedule** tab, you can find the **Filter Table By** section where you can filter jobs and tasks by:

- **Status** - Select the specific job and task status to display: Failed, Successful, Retry, Canceled, Running, or Scheduled
- **Instance** - Select the instances whose jobs and tasks you want to see on the calendar view.
- **Job Name** - Select the names of jobs you want to see on your calendar view.
- **Duration** - Type or use the sliders to determine the time range that SQL Enterprise Job Manager will use to filter your jobs and tasks.
- **Job/Task** - Select if you want to see jobs or tasks.



When using filters consider:

- Some filters have the option to **Add Filter** in case the information you are looking for is not listed. Once you click on **Add Filter**, a dialog box appears. Type the name you are looking for on the Search bar, then select it from the list, and **Save**. Your filter will be included under the filter list where you added it.
- Click the respective checkbox to add or remove your selections.
- If you want to select filters first and apply the changes later, deselect the **Apply Filter Instantly** option.

### 7.3.1 How do you save filters?

You can save your preferred filtering options by typing a name in the **Add Filter** wizard of the **Custom Filter** section and clicking **Save**. Once you save your filter, you can retrieve it from the drop-down bottom of the **Custom Filter** option available on the left side under the **Filter Table By** section.

### 7.3.2 How do you remove filters?


You can remove filters by following these options:


- Use the specific **Clear Filter** option in each filter. For example, if you want to remove your status filters, click **Clear Filter**.
- Under **Applied Filters** on the top section or your **Schedule** tab, you can see the filters you have selected, click the **X** icon next to the ones you want to remove.
- Use the option **Clear All Filters** on the top section of the **Filter Table By** to remove all filters.

## 7.4 What other options are available on the Schedule tab?

On the top section of the **Operations list**, you can find the following options:

- **Add Instance** - Use this option to add an instance. Go to [Add Instance](#) to find more information.
- **Add Job** - Use this option to create a new job. Go to [Add Job](#) to find more information.
- **Add Task** - Use this option to create a new task. Go to [Add Task](#) to find more information.
- **Export** - Select this option to export the information displayed on the **Operation list**. You can export as a PDF, CSV, or XML file.

 You can define how many jobs you want to view per page. Go to the bottom section of the tab and type the number of jobs you want to see per page.


 Consider that Read-only users can only access a read-only view of the job properties. Only Administrators and Guest-users can add/edit jobs or add/edit job chains.

### 7.4.1 How do you reschedule jobs?

SQL Enterprise Job Manager allows you to reschedule jobs, tasks, and job chains by dragging and dropping the scheduled ones to new time slots.

For example, to reschedule a job, click over the scheduled job, drag it, and drop it on your required new time slot.

Keep in mind that SQL Enterprise Job Manager creates a new one-time occurrence job on the time slot where you dropped the job. If the job you selected to reschedule has a recurring schedule, SQL Enterprise Job Manager creates a one-time occurrence on the new time slot and adjusts its schedule so that the recurrence remains unaltered.

-  **Keep in mind:**
- Dragging and dropping to reschedule a job, task, or job chain is only available in the **Day** and **Week** views.
  - You cannot reschedule past jobs or move any scheduled job to a past date.
  - When you reschedule a job and you change to different views, the changes of the rescheduled job will not be updated until the collector runs or you manually refresh the data.

## 8 Viewing all your monitored SQL Server instances

The **Instances** tab has a complete view of all your registered SQL Server instances and their respective jobs. On this tab, you can manage your instances. For more information, go to [What information is available on the instances tab?](#)

Additionally, the **Instances** tab allows you to perform actions on single instances or as bulk operations on several instances. For more information, go to [What actions can you perform on a single instance?](#) or [What bulk operations are available for several instances?](#)

The following sections explain in detail the information available on the **Instances** tab.

## 8.1 What information is available on the Instances tab?


On the **Instances** tab, you can find a list of all your registered instances, the most important information of their status, and their jobs.

This tab allows you to see the following information:

- **Instance name** - Displays the name of the registered SQL Server instance.
- **Status** - Displays the status of the SQL Server instance. The status could be: Unknown, Online, Connection Failure, Unsupported SQL Server Version, Authentication Failure, or Error.
- **Agent Status** - Displays the status of the SQL Server Agent services of the respective instance. The agent status could be: Running, Stopped, Stopping, Starting, or Unknown.
- **SQL Server Version** - Displays the version of the SQL Server instances.
- **# of Jobs** - displays the total number of jobs on each instance.
- **# of Failed Jobs** - displays the total number of jobs in which the last run outcome was failed.
- **Owner** - displays the owner specified for each instance.
- **Location** - displays the location specified for each instance.
- **Edition** - displays the edition of the SQL Server instances.
- **Actions** - displays a gear icon where you can find the actions you can perform on a single instance or on several selected instances. To find more information, go to [What actions you can perform on a single instance?](#) or [What bulk actions can you perform on several instances?](#).




Keep in mind:

- You can sort the information available on this tab by clicking the column header by which you want to order your instances.
- Click the  more options icon to select the information you want to hide or show on the **Instance list** view.

### 8.1.1 How do you add SQL Server Instances?

To add new SQL Server instances to your environment, go to the top menu options of this tab, and click **Add Instance**; the wizard for registering instances opens. Go to [Registering new SQL Server instances](#) for more information.

### 8.1.2 How do you edit your Instances?

If you select one or several SQL Server instances, you can find the **Edit Properties** option on the top bar menu from the **Instances** tab or from the options displayed on the  gear icon. For more information, go to [Editing your SQL Server instances](#).


### 8.1.3 How do you filter your Instances?

On the left section of the **Instances** tab, you can find the **Filter Table By** section that allows you to filter your information according to your requirements. For more information about these options go to [Filtering your instances information](#).

### 8.1.4 How do you export information available on the Instances tab?

To export the information displayed in the current view of your **Instances** tab, go to the top menu options of this tab and click **Export**. Specify the format you want to use for the exported document: PDF, CSV, or XML.

### 8.1.5 How do you refresh the information on the Instances tab?

Whenever you want to update the information presented on the **Instance list**, click the  **Refresh** icon.



## 8.1.6 Registering new SQL Server instances

You can define which SQL Server instances you want to add to your SQL Enterprise Job Manager environment. You can only monitor jobs from registered SQL Server instances.

You can add new SQL Server instances by selecting the **Add Instance** option from the following sections:

- **Overview** tab - Top menu bar of the All Instances section.
- **Schedule** tab - Top menu bar of the Operation list.
- **Instances** tab - Top menu bar of the Instance list.
- **Administration** tab - Under the Instances section.

✔ You can also [Import instances](#) using the **Import SQL Servers** option under the **Instances** section from the **Administration** tab.

⚠ Read-only users cannot do the following actions on the **Instances** tab:

- Add/register new SQL Server instances.
- Remove registered SQL Server instances.
- Edit instance properties.
- Perform actions on SQL Server Agents.

When you open the Add SQL Server Instance wizard, you have the following sections:

### Instances

To add instances you can:

- Type the name of instance or instances you want to register in the SQL Server Instance box. Use a semicolon to separate several instances.
- Use the **Browse** button to access a list of discovered instances that have not been registered yet with SQL Enterprise Job Manager. Check the box next to the instances you want to add and click **Apply**.

Specify the **Data Collection Settings**:

- Determine the **Collection Interval** in minutes or days - This option lets you define how often data will be collected for your registered instances.
- Determine how many days SQL Enterprise Job Manager will **Keep Data for** - This option lets you specify how much time data is kept before grooming it.

Determine if you want to monitor the Windows Tasks of your added instances. You can specify the following options:

- Monitor task for the instance(s) - Select this option if you want to monitor the tasks of your added instances
- Keep task and task history data for the instance(s) - Select this option to keep tasks and their respective history if you decide to stop monitoring them.

Click **Next** to go to the next section.

## Credentials

### SQL connection credentials

SQL Enterprise Job Manager connects to registered SQL Server instances to collect information. The collection service requires permissions to connect and gather information using the account you specify.

By default, SQL Enterprise Job Manager connects using the **SQL Enterprise Job Manager service account**. However, if you need to provide alternative credentials you can also choose from:

- SQL Server login account
- Windows user account

If you select a **Windows user account** or a **SQL Server login account**, type the respective user name and password.

SQL Enterprise Job Manager uses this account for SQL queries to gather availability and configuration data.

### WMI connection credentials

Specify the credentials that SQL Enterprise Job Manager will use to access Windows configuration data of the computer that hosts the registered instance.

By default, SQL Enterprise Job Manager uses the **SQL Enterprise Job Manager service account**. However, if you need to provide alternative credentials you can also select the **Windows user account**. If you select this option, you have to provide the respective user name and password.



Use the option **TEST CREDENTIALS** to make sure the credentials specified can gather data for instances and host computers.

## Information

In this section, you can specify additional information for your instances like Owner, Location, and Comments.

Use the **Owner** and **Location** drop-down lists to access previously registered options.

## Maintenance

Use this section to specify the maintenance schedule for the instances you are adding.

You can define two types of schedules:

- **Recurring** - select this option if you want SQL Enterprise Job Manager to perform the maintenance on a recurrent schedule.
- **One time** - choose this option to execute maintenance on a one-time schedule.

You can also select the **Enabled** option to enable the schedule type for the instance.

When you choose **Recurring**, you can define the frequency of your maintenance schedule. You can select from the following frequencies:

- **Daily** - if you select this option, specify the number of days SQL Enterprise Job Manager uses as the interval to perform maintenance. Determine if you want to perform maintenance once per day, at a specific time of the day, or if you want to perform it every determined number of hours.
- **Weekly** - if you choose this option, specify the number of weeks SQL Enterprise Job Manager uses as the interval to perform maintenance. You can select the days of the week when maintenance is executed. Additionally, you can determine the daily frequency, i.e. the exact time of the day when maintenance is performed or how many times per day the process is done.

- **Monthly** - when you select this option, you can determine on which days of the month SQL Enterprise Job Manager performs maintenance and with which exact monthly frequency. For example, you can define a maintenance schedule for the second Monday of the month, every 2 months.

These options are also available on the Maintenance tab:

- Determine the duration of your maintenance schedule by specifying the dates when the schedule begins and finishes.
- Specify how long the maintenance mode will last.
- Disable alerts and jobs during this period. In this section you have the following options:
  - **Disable Alerts during the maintenance** - define which alerts severity you want to disable and if you want to disable alerts for jobs or instances.
  - **Disable non-maintenance jobs during maintenance** - by selecting this option, no other jobs will run during the maintenance period.
  - **Stop maintenance jobs that run past the maintenance** - by selecting this option, jobs that run past the maintenance will be stopped.

## Finish

In this section, you can review your instance registration details such as Instance, Data Collection Interval, Keep Data for, SQL Connection Credentials, WMI Connection Credential, Location, Owner, and Comments.

To change any of these registration details, you can do one of the following:

- Click on any of the specified values on the Finish tab and SQL Enterprise Job Manager takes you directly to the place where you need to make the changes.
- Click **Back** to go back to the previous sections until you find the place where you need to make changes.


After you review your registration details, click **Submit**.

SQL Enterprise Job Manager registers your SQL server instances in the repository and immediately begins to collect instances information like availability, configuration, and job handling information.

After registration, you can still change these settings. Go to [Edit instance properties](#) for more information.

## 8.1.7 Editing your SQL Server instances properties


SQL Enterprise Job Manager allows you to view and edit the most important properties of your registered SQL Server instances.

If you select one or several SQL Server instances, you can find the **Edit Properties** option on the top bar menu from the **Instances** tab or from the options displayed on the  gear icon.

The **Edit Properties** wizard displays the following sections:

- Instance Details and Ownership
- Data Collection Settings

You can edit any of these sections according to your needs.

 Read-only users can only access a read-only version of the **Edit Properties** wizard, they cannot change any of the displayed fields.

### Editing Instance Details and Ownership

You can define the owner, location, and add comments when you register an instance; however if you did not type them before, or you want to change any of these fields, go to the Instance Details and Ownership section and make your required changes, then click **SAVE**.

You can select other owners and locations from the respective drop-down options.

### Data Collection Settings

When you register an instance, you define your data collection settings. You can change these settings anytime by editing these fields.

- The **Collection Interval** allows you to define how often SQL Enterprise Job Manager collects data for your instance. This interval is specified in minutes or days.
- The **Keep Data for** section, allows you to determine how many days SQL Enterprise Job Manager keeps your data before grooming it. This interval is specified in days.

## 8.1.8 Filtering your instances information

If you need to view instances according to more specific requirements, you can use the **Filter Table By** section available on the left side of the **Instances** tab.

You can filter your instances by:

- **Instance** - Select the instances you want to see.
- **Owner** - Select the owner of the instance you want to see.
- **Location** - Select the location for which you want to see their respective instances.
- **SQL Server Version** - Select specific SQL Server versions.
- **Status** - Filter your instances according to the instance status (Unknown, Online, Connection Failure, Unsupported SQL Server Version, Authentication Failure, or Error).
- **Agent status** - Select specific agent status to filter your information. You can select from: Running, Stopped, Stopping, Starting, or Unknown.
- **# of Jobs** - Use the sliders to specify an interval of a number of jobs. The instances that fall in this interval will be displayed.
- **# of Failed Jobs** - Use the sliders to specify the interval of jobs whose last status was failed. The instances that fall in this interval will be displayed.



When using filters take into account:

- Some filters have the option to **Add Filter** in case the information you are looking for is not listed. Once you click on **Add Filter**, a dialog box appears. Type the name you are looking for on the Search bar, then select it from the list, and **Save**. Your filter will be included under the filter list where you added it.
- Click the respective checkbox to add or remove your selections.
- If you want to select filters first and apply the changes later, deselect the **Apply Filter Instantly** option.

### How do you save filters?

You can save your preferred filtering options by typing a name in the **Add Filter** wizard of the **Custom Filter** section and clicking **Save**. Once you save your filter, you can retrieve it from the drop-down bottom of the **Custom Filter** option available on the left side under the **Filter Table By** section.

### How do you remove filters?



You can remove filters by following these options:


- Use the specific **Clear Filter** option in each filter. For example, if you want to remove your status filters, click **Clear Filter**.
- Under **Applied filters** on the top section or your **Schedule** tab, you can see the filters you have selected, click the **X** icon next to the ones you want to remove.
- Use the option **Clear All Filters** on the top section of the **Filter Table By** to remove all filters.

## 8.2 What actions can you perform on a single instance?


The **Instances** tab allows you to perform actions on specific SQL Server instances.


To see what options are available for one single instance, select the instance first, then the following options become available on the top bar menu of the **Instances** tab:

- **Collect Data** - select this option if you want to force the collector to retrieve new information for the selected instance.
- **SQL Server Agent** - select this option to Start, Stop, or Restart the SQL Server Agent service of the instance.
- **Edit Credentials** - select this option to edit the connection credentials that SQL Enterprise Job Manager uses to connect to the selected instance. This option is also available under the  gear **Action** option.
- **Edit Properties** - use this option to change instance properties such as owner, location, collection interval, etc. For more information, go to [Editing your SQL Server instance properties](#). This option is also available under the  gear **Action** option.

Additionally, there are actions available for one single instance. Once you select your instance, on the same line under the **Actions** column there is a  gear icon that allows you to perform the following actions:


- **Remove** - Use this option when you no longer want to monitor the instance and you want to remove it from your environment. SQL Enterprise Job Manager stops collecting information from this instance, its jobs, will not generate related alerts, and will not display any related information.
- **Start SQL Server Agent** - If the SQL Server Agent service on the selected instance is not running, use this option to start it.
- **Stop SQL Server Agent** - If the SQL Server Agent service on the selected instance is running, use this option to stop it.
- **Restart SQL Server Agent** - Use this option to restart the SQL Server Agent service on your selected instance.

 To start or stop the SQL Server Agent, the SQL Server service account must have permissions to start/stop services.

 Read-only users cannot remove instances, perform actions on their SQL Server Agents, or edit instances properties. However, they can access a read-only version of the instance's properties.

## 8.3 What bulk options are available for several instances?

You can also perform bulk actions on several selected instances.

Use the checkbox next to each instance to select them and click the  more gear icon of any selected instance.

The available options are:

- **Remove** - Use this option to delete/remove selected instances from your environment when you do not want to monitor them any longer. SQL Enterprise Job Manager stops collecting information from this instance, its jobs, will not generate related alerts, and will not display any related information.
- **Edit Properties** - Use this option to change instance properties such as owner, location, collection interval, etc. For more information, go to [Editing your SQL Server instance properties](#). This option is also available on the **Instance** tab top bar menu.
- **Edit Credentials** - Select this option to edit the connection credentials that SQL Enterprise Job Manager uses to connect to the selected instances. This option is also available on the **Instance** tab top bar menu.
- **Start SQL Server Agent** - If the SQL Server Agent service on the selected instances is not running, use this option to start it.
- **Stop SQL Server Agent** - If the SQL Server Agent service on the selected instances is running, use this option to stop it.
- **Restart SQL Server Agent** - Use this option to restart the SQL Server Agent service on your selected instances.



To start or stop the SQL Server Agent, the SQL Server service account must have permissions to start/stop services.



Read-only users cannot remove or edit the credentials of several selected instances.

## 9 Viewing your Job Details

SQL Enterprise Job Manager allows you to see the specific details for a selected Job. This view includes all your job information across all instances associated with it.

To access this view, click the name of the Job on the **Jobs** tab and a new page opens displaying your **Job Details** with the following sections:

- [Job Alerts](#).
- [Job Schedule](#).

### 9.1 Job Alerts

In this section, you can view all alerts related to your job across all instances associated with it. The alerts in this section are ordered by level of severity and grouped by alert rule.

In the Alerts section, you can perform the following actions:

- **Sort by Severity** - Use this option to order your alerts by severity. SQL Enterprise Job Manager displays four levels of alert severity, also identified with colors: Critical (**red**), Warning (**yellow**), Informational (**gray**), and OK (**green**).
- **Hide Alerts** - Select this option if you do not want to see any of the displayed alerts. Use **Show Alerts** to view all alerts again.

For each alert rule you can view the following options:

- **Show Details** - By choosing this option, SQL Enterprise Job Manager shows the complete list of job event alerts that belongs to a specific alert rule. Use **Hide Details** to display the summarized form of the alert rule.
- **Dismiss** - By selecting this option, SQL Enterprise Job Manager ignores the complete alert rule with their associated job alerts.
- **Collect Data** - By clicking this option, SQL Enterprise Job Manager gets the latest information available on the job alert.

When you choose to **Show Details** of a specific alert rule, you can see all job events associated with that specific alert rule. For each job event you can:

- **Start Job at Step** - use the drop-down options to select a specific step to start the job again.
- **Dismiss** - click this option to ignore the job event alert.
- **Collect Data** - use this option to get the latest information on the job event alert.




When you **Dismiss** an alert, it will not be displayed on the alerts section temporarily. SQL Enterprise Job Manager will raise the alert when the alert rule condition of the respective job event is triggered again.

### 9.2 Job Schedule

In this section, you can view the schedule information of your job. There is a grid list displaying your job schedule details:

- **Status** - Displays the status of each job event (every time the job runs)
- **Date/Time** - Displays the date and time of each job event, including the time zone.
- **Duration** - Shows the duration in hh:mm:ss of each job event (total duration of all steps executed for that job event).
- **Instance** - Displays the name of the SQL Server instance where the job run.
- **Job Name** - Displays the name of the job.
- **Message** - Displays additional information about the job event.




Additionally, this section allows you to drill into any job event and see more specific information about its steps. Click the  button to expand and view the following information of each step:

- **Status** - Displays the status of each step.
- **Date/Time** - Shows the date, time, and timezone when the step is finished.
- **Step ID** - Displays the identification number (ID) of each step.
- **Step Name** - Displays the name of the step.
- **Message** - Shows additional information about the step.



Keep in mind:

- You can sort the information available on this tab by clicking the column header by which you want to order your jobs.
- Click the  more options icon to select the information you want to hide or show on the **Job Overlap view** list.
- You can define how many jobs you want to view per page. Go to the bottom section of the tab and type the number of jobs you want to see per page.

On the top right of this section, you can use the following tabs to access other job views:

- **View Full Schedule** - Select this option to access the **Schedule** tab and explore your scheduled jobs. For more information, go to [Viewing your jobs on the Schedule tab](#).
- **Job Overlap Viewer** - Select this option to see which jobs are overlapped: running or scheduled to run at the same time across your registered SQL Server instances. For more information, go to [Job Overlap Viewer](#).

## 10 Job Overlap Viewer

The **Job Overlap Viewer** allows you to see which jobs are overlapped: running or scheduled to run at the same time across your registered SQL Server instances.

You can find the **Job Overlap Viewer** on the **Job details** view, specifically on the top right corner options of the **Job Schedule** section. To access the **Job details** view of a job, click the name of the job in the **Jobs** tab.

### 10.1 What information can you see in the Job Overlap Viewer?

For those overlapped jobs you can view the following information:


- **Instance Name** - Overlapped jobs across different instances in your environment.
- **Start Time** - The start time of the overlapped jobs.
- **End Time** - When each job finished executing.
- **Duration** - The duration time for each job.
- **Overlapping Job** - The name of the job.
- **Start Time** - The start time of the overlapped jobs.
- **End Time** - When the overlapped jobs finished executing.
- **Duration** - The duration time of the overlapped jobs.
- **Total Overlap Time** - The total amount of time the jobs are overlapped.

Additionally, on the top right corner you can find the following information:

- **Total overlap events** - a counter of the total number of overlapped jobs.
- **Total overlap** - the total amount of time the events are overlapped.



Keep in mind:

- You can sort the information available on this tab by clicking the column header by which you want to order your instances.
- Click the  more options icon to select the information you want to hide or show on the **Job Overlap view** list.

### 10.2 How can you filter and organize your information in the Job Overlap Viewer?

On the top section of the **Job Overlap** viewer, you can select the Overlap Period. Specify a day and use the slider for a specific time range.

Additionally, you can filter the information available on this view with the following options:

- **Instance name** - select the instances for which you want to view overlapped jobs.
- **Job name** - select the job for which you want to view conflicting events.
- **Duration** - use the time slider to define a job duration for which you want to view overlapped events.



When using filters consider that:

- Some filters have the option to **Add Filter** in case the information you are looking for is not listed. Once you click on **Add Filter**, a dialog box appears. Type the name you are looking for on the Search bar, then select it from the list, and **Save**. Your filter will be included under the filter list where you added it.

- Click the respective checkbox to add or remove your selections.
- If you want to select filters first and apply the changes later, deselect the **Apply Filter Instantly** option.

 To export the information on this view, use the **Export** option on the top menu of this tab and select your preferred format: CSV, PDF, or XML.

### 10.3 How do you save filters?

You can save your preferred filtering options by typing a name in the **Add Filter** wizard of the **Custom Filter** section and clicking **Save**. Once you save your filter, you can retrieve it from the drop-down bottom of the **Custom Filter** option available on the left side under the **Filter Table By** section.

### 10.4 How do you remove filters?

You can remove filters by following these options:

- Use the specific **Clear Filter** option in each filter. For example, if you want to remove your status filters, click **Clear Filter**.
- Under **Applied filters** on the top section or your **Job Overlap** viewer, you can see the filters you have selected, click the **X** icon next to the ones you want to remove.
- Use the option **Clear All Filters** on the top section of the **Filter Table By** to remove all filters.

## 11 Viewing your Instance Details

SQL Enterprise Job Manager lets you view the specific details of any SQL Server instance you select. For this purpose, click the name of the Instance from any section of the console, and you will be directed to the **Instance Details** tab.

In this view you can see the following information:

### 11.1 Instance Alerts

In this section, you can see all the alerts that belong to the specific instance. These alerts help you get an overview of the most critical issues regarding the status of your specific instance.

The alerts in this section are ordered by level of severity and grouped by alert rule. SQL Enterprise Job Manager displays four levels of alert severity, also identified with colors: Critical (**red**), Warning (**yellow**), Informational (**gray**), and OK (**green**).

#### 11.1.1 How can you order alert rules?

By default, alert rules are ordered by severity from the most critical to those alert rules with OK severity. If you want to change this order, go to the top menu options of the alert rules section for this instance and click **Sort by Severity**.

#### 11.1.2 How can you hide all displayed alert rules?

If you do not want to see any of the SQL Enterprise Job Manager alerts for this instance, go to the top menu options of this section and click **Hide Alerts**.

To view all alerts again, click **Show Alerts**.

#### 11.1.3 What actions can you perform on each Alert Rule?

You can perform actions on each alert rule as well as on each job alert that belongs to an alert rule.

Alert rules display the number of jobs alerts associated with them. On each alert rule you can:

- **Show Details** - to see the complete list of job alerts that belong to a specific alert rule. You can use **Hide Details** to display only the summarized form of the alert rule.
- **Dismiss** - to ignore the complete alert rule with their associated jobs alerts.
- **Collect Data** - to get a recent status of the alert rule.


⚠ When you **Dismiss** an alert rule, it will not be displayed on the rules section temporarily. SQL Enterprise Job Manager will raise the alert rule when the condition happens again. For example: When a job status changes.


✓ When you dismiss an alert, a dialog window opens to confirm this action, you can enable the option **Do not show this warning again** so that SQL Enterprise Job Manager does not prompt this warning message every time you dismiss an alert.


### 11.1.4 What actions can you perform individually on each job alert?

When you choose to **Show Details** of a specific alert rule, you can see all job alerts associated with a specific alert rule. On each alert you can:

- Depending on the alert rule, you can execute job actions like **Start job** (job Failures alerts) or **Start SQL Server Agent** (Agent not running alerts).
- **Dismiss** - To ignore the alert for a specific job.
- **Collect Data** - To get the most recent alert status for a specific job.

 When you **Dismiss** a job alert, it will not be displayed on the alert section temporarily. SQL Enterprise Job Manager will raise the alert when the alert rule condition of the respective job is triggered again.

 Read-only users cannot perform actions on SQL Server Agents, such as starting them or starting jobs.

 For more information about what alert rules are available by default in SQL Enterprise Job Manager and how you can add your own customized alert rules, go to [Managing Alerts](#).

## 11.2 Job Schedule

In this section, you can view the scheduled job for your specific instance for the present day. You can view what jobs already ran or are scheduled to run in the present day.


To view jobs on other dates, click the **View Full Schedule** option on the top right side of this section. For more information, go to [Viewing your jobs on the Schedule tab](#).


Additionally, this section displays a grid list with your job schedule details:

- **Status** - Displays the status of each job event (every time the job runs)
- **Date/Time** - Displays the date and time of each job event, including the time zone.
- **Duration** - Shows the duration in hh:mm:ss of each job event (total duration of all steps executed for that job event).
- **Instance** - Displays the name of your respective SQL Server instance.
- **Job Name** - Displays the name of the job.
- **Message** - Displays additional information about the job event: status, schedule used, the last step ran, etc.

You can drill into any job event and see more specific information about its steps. Click the  button to expand and view the following information of each step:

- **Status** - Displays the status of each step.
- **Date/Time** - Shows the date, time, and timezone when the step is finished.
- **Step ID** - Displays the identification number (ID) of each step.
- **Step Name** - Displays the name of the step.
- **Message** - Shows additional information about the step.

 Keep in mind:

- You can sort the information available on this tab by clicking the column header by which you want to order your instances.
- Click the  more options icon to select the information you want to hide or show on the **Job Overlap view** list.

- You can define how many jobs you want to view per page. Go to the bottom section of the tab and type the number of jobs you want to see per page.

## 11.3 Server Performance Timeline

The instance specific view allows you to access the **Server Performance Timeline** of the server that hosts the instance. SQL Enterprise Job Manager collects the CPU information using the specified WMI credentials. To find more information about editing these credentials, click [here](#).

In this view, SQL Enterprise Job Manager displays two charts:

- **Server Performance Chart** - Displays jobs running across all server instances compared to the CPU cycles consumed while executed.
- **Job Runtime Chart** - Displays the jobs running or that have run in the server and their duration. You can hover over each event to view details about the instance name, job name, CPU cycles, average run time, maximum run time, status and duration.

In this view you can specify and filter the following information:

- **Date** - The date for which you want the jobs displayed
- **Time** - On the **From** and **To** options of this section, specify a time period for the day. You can either type, use the drop-down options, or the slider to determine this period.
- **Filters** - Filter your information by:

- ✓ When using filters take into account:
  - Some filters have the option to **Add Filter** in case the information you are looking for is not listed. Once you click on **Add Filter**, a dialog box appears. Type the name you are looking for on the Search bar, then select it from the list, and **Save**. Your filter will be included under the filter list where you added it.
  - Click the respective checkbox to add or remove your selections.
  - If you want to select filters first and apply the changes later, deselect the **Apply Filter Instantly** option.
    - **Instance** - Select the instances whose jobs you want to see in the charts.
    - **Job Name** - Select the names of jobs you want to see in the charts.
    - **Category** - Select the job category you want to see in the charts.
    - **Duration** - Type or use the time slider to define the last run duration of the jobs you want to display. For example, you can define to view jobs which last run duration is between one and two minutes.

### 11.3.1 How do you save filters?

You can save your preferred filtering options by typing a name in the **Add Filter** wizard of the **Custom Filter** section and clicking **Save**. Once you save your filter, you can retrieve it from the drop-down bottom of the **Custom Filter** option available on the left side under the **Filter Table By** section.

### 11.3.2 How do you remove filters?



You can remove filters by following these options:

- Use the specific **Clear Filter** option in each filter. For example, if you want to remove your status filters, click **Clear Filter**.

- Under **Applied filters** on the top section of your **Server Performance view**, you can see the filters you have selected, click the **X** icon next to the ones you want to remove.
- Use the option **Clear All Filters** on the top section of the **Filter Table By** to remove all filters.

### 11.3.3 What other options are available on the Server Performance Timeline?

In the graphic section you can find the following options:

- **Refresh** - Click the  **Refresh** icon to refresh the information collected on this view. By default SQL Enterprise Job Manager updates the information every six minutes. In the chart, you can also view the Max cycles, the Min cycles, and the Avg cycles.
- **Options to download and print** - Click the  download icon to access the print and download options for each chart. You can select to download charts as PNG, JPEG, PDF document, or SVG vector.

## 12 Managing alerts

SQL Enterprise Job Manager displays alerts that warn you about the status of your instances, jobs, and tasks. These alerts depend on the alert rules that you configure and customize according to your needs in the **Alerts Rules** tab.

SQL Enterprise Job Manager has three default alert rules:

- SQL Server Instance Connection Failures
- SQL Server Agent Not Running
- Job Failures

On the **Alerts Rules** tab, you can change the settings of these alert rules. For example, you can [create your own new alert rules](#), [perform actions](#) such as enable/disable, or [subscribe/unsubscribe](#) to alert rules. The following sections explain in detail how to perform these actions.



Read-only users cannot create/edit or remove alert rules in the **Alert Rules** tab, but they can view alert rules properties and subscribe/unsubscribe to the individual or to all critical alert rules.




## 12.1 What information is available on the Alerts Rules tab?

The **Alert Rules** tab displays the alert rules you have defined for your environment. By default, there are three alert rules configured in your application:


- SQL Server instance connection failures
- SQL Server Agent not running
- Job Failures

If you want to edit these default alert rules or to add new ones, go to [Adding and Configuring alert rules](#).

The **Alert Rules** tab shows a list of alert rules with the following information:

- **Name** - The name of the alert rule.
- **Description** - A brief description of the alert rule.
- **Severity type** - The severity assigned to the alert rule. Severity can be OK, Informational, Warning, or Critical.
- **Enabled** - If the alert rule is enabled or disabled.
- **Alert type** - The type of alert rule, if it is an instance, job, or task-related alert rule.
- **Subscribed** - If you are subscribed to the alert rule or not. For more information, go to [Subscribing to alerts](#).
- **Actions** - A  gear icon that lets you access actions that can be performed on a single alert rule or on several selected ones. For more information, go to [Performing actions on alert rules](#).

### ✓ Keep in mind:

- Click the  more options icon to select the information you want to hide or show on the **Job Overlap view** list.
- You can define how many jobs you want to view per page. Go to the bottom section of the tab and type the number of jobs you want to see per page.

⚠ Read-only users cannot create/edit or remove alert rules in the **Alert Rules** tab but they can view alert rules properties and subscribe/unsubscribe to an individual or to all critical alert rules.

### 12.1.1 How can you export the information available on Alert Rules?

To export the information available on the **Alert Rules** tab, click **Export** on the top bar menu, and select your preferred format for exporting the information: PDF, CSV, or XML.

### 12.1.2 How can you filter information on the Alert Rules tab?

To view more specific information, you can filter your alert rules on the left section of this tab under the **Filter Table by**:

- **Severity type** - filter alert rules that have an OK, Informational, Warning, or Critical severity.
- **Alert type** - filter alert rules according to whether the alert rules are job/task or instance-related.
- **Enabled** - filter alert rules to be displayed according to whether they are enabled or not.

### ✓ When using filters consider that:

- Click the respective checkbox to add or remove your selections.

- If you want to select filters first and apply the changes later, deselect the **Apply Filter Instantly** option.

### 12.1.3 How do you save filters?

You can save your preferred filtering options by typing a name in the **Add Filter** wizard of the **Custom Filter** section and clicking **Save**. Once you save your filter, you can retrieve it from the drop-down bottom of the **Custom Filter** option available on the left side under the **Filter Table By** section.

### 12.1.4 How do you remove filters?

You can remove filters by following these options:

- Use the specific **Clear Filter** option in each filter. For example, if you want to remove the alert type, click **Clear Filter**.
- Under **Applied filters** on the top section or your **Alert Rules** tab, you can see the filters you have selected, click the **X** icon next to the ones you want to remove.
- Use the option **Clear All Filters** on the top section of the **Filter Table By** to remove all filters.

## 12.2 Adding and configuring alert rules

### 12.2.1 How are Alert Rules helpful to you?

SQL Enterprise Job Manager allows you to create your own specific alert rules based on your requirements for specific jobs, tasks, instances, jobs duration, etc., and assign them your preferred severity.

For example, you can create a new alert rule that informs you when Job A in instance B is taking more time than what is expected.

SQL Enterprise Job Manager lets you define these alert rules so that you can get notified of the most relevant issues of your environment.

### 12.2.2 Adding new Alert Rules

To add a new alert rule, click **Add Alert Rule** on the top bar menu. SQL Enterprise Job Manager opens a wizard for configuring new alert rules with two tabs: **General** and **Configuration**.

### 12.2.3 What fields are available on the General tab?

The **General** tab allows you to specify the general settings of your alert rule. You can find the following fields:

- **Name** - Type a name that helps you identify your alert rule
- **Enabled** - Select this option if you want to enable the alert as soon as it is created. You can add alert rules first and enable them later.
- **Severity type** - Choose your desired severity for the alert rule. Choose from CRITICAL, WARNING, INFORMATIONAL, or OK.
- **Alert type** - Select the type of alert rule you are creating. It could be an alert rule for instances, jobs, or tasks.
- **Description** - Type a description that helps you identify the alert rule and describes its main characteristics.

### 12.2.4 What fields are available on the Configuration tab?

The **Configuration** tab allows you to define the main parameters of your alert rule; in other words, what conditions have to meet in order to generate an alert.


Depending on the type of alert that you choose, the options on the **Configuration** tab vary.

If you choose a **Job type Alert Rule**, then you have the following options:

- **Property** - Select those properties you want the alert rule to take into account for generating alerts. You can choose to have alerts according to the Job name, Instance, Owner, Category, Duration, or Last Run Outcome.
- **Type** - For your selected properties, choose if you want to INCLUDE or EXCLUDE a defined value.
- **Value** - Specify a value for each selected Property. This value determines when your alert rule is generated. For example, you can specify to generate an alert rule whenever the job Duration property is between a time range of 10 and 20 minutes. For the values consider that:
  - If you choose properties such as Job name, Instance, Owner, or Category, you can use wildcard characters such as %, \_, [ ], [^]. Avoid using these characters in names or SQL Enterprise Job Manager can take them for wildcard characters.

- If you select the Duration property, set the values manually or use the sliders to specify the time range that your jobs have to meet or the time range that SQL Enterprise Job Manager has to exclude to trigger the alert rule.
- If you select the Last Run Outcome property, use the drop-down options to select from Failed, Successful, Retry, Canceled, In Progress, or Unknown.

For one alert rule, you can select several properties and define their respective parameters. For example, you can create an alert rule where the job name excludes all "backup" references (using the % character as a wildcard), where the job duration is between 1 and 2 hours, and the job last run outcome is failed.

 If your Job name has [ ] characters, replace them with the underscore "\_" character so that SQL Enterprise Job Manager does not take them as wildcards and the alert rule is triggered correctly.

If you choose an **Instance type Alert Rule**, then you have the following options:

- **Property** - Select those properties you want the alert rule to take into account for generating alerts. You can choose to have alerts according to the Instance, Status, Agent Status, Owner, or Location.
- **Type** - For your selected properties, choose if you want to INCLUDE or EXCLUDE a defined value.
- **Value** - Specify a value for each selected Property. This value determines when your alert rule is generated.

For the values take into account:

- If you choose the Instance property, you can use wildcard characters such as %, \_, [ ], [^]. Avoid using these characters in names or SQL Enterprise Job Manager can take them for wildcard characters.
- If you select the Status property, use the drop-down options to select from Unknown, Online, Connection Failure, Unsupported SQL Server Version, Authentication Failure, or Error.
- If you select the Agent Status property, use the drop-down options to select from Running, Stopped, Stopping, Starting, or Unknown.
- If you select the Owner property, specify the domain/username, remote "Where the instance is running".
- If you select the Location property, use the drop-down option to select the instance location.

If you choose a **Task type Alert Rule**, then you have the following options:

- **Property** - Select those properties you want the alert rule to take into account for generating alerts. You can choose to have alerts according to the Task Name, Server Name, Task Author, Task Action, or Status.
- **Type** - For your selected properties, choose if you want to INCLUDE or EXCLUDE a defined value.
- **Value** - Specify a value for each selected Property. This value determines when your alert rule is generated.

For the values take into account:

- If you choose the Task Name property, you can use wildcard characters such as %, \_, [ ], [^]. Avoid using these characters in names or SQL Enterprise Job Manager can take them for wildcard characters.
- If you select the Server Name property, type the name of the respective server.
- If you choose the Task Author property, type the name of the respective author.
- If you choose the Task Action property, then you can select tasks that Start a program, Send an e-mail, or Display a message.
- If you select the Status property, use the drop-down options to select from Unknown, Disabled, Ready, Running, WaitingForChildrenToComplete, RanToCompletion, Canceled, Faulted, or Scheduled.


## 12.2.5 How do you edit alert rules?

You can edit your own created alert rules as well as the established default alert rules (SQL Server instance connection failures, SQL Server Agent not running, and Job Failures).

To edit alert rules, select the alert rule you want to change and click **Edit Alert Rule** on the top bar menu. You can also find this option in the gear icon options of the respective alert rule.

For more information on what actions you can execute on alert rules, go to [Performing actions on alert rules](#).

## 12.3 Performing actions on alert rules

The  gear icon next to each alert rule allows you to perform specific actions. You can perform these actions on a single alert rule or you can execute bulk operations on several selected alert rules.

### 12.3.1 What actions can you perform on a single alert rule?

When you select a single alert rule, you can perform the following actions:

- Enable Alert Rule
- Disable Alert Rule
- Delete Alert Rule
- Edit Alert Rule
- Subscribe
- Unsubscribe

When you disable an alert rule, SQL Enterprise Job Manager stops generating alerts that meet the respective alert rule. If you are subscribed to the alert rule, no notifications will be sent until you enable the alert rule again.

When you delete an alert rule, SQL Enterprise Job Manager stops its relevant alerts and notifications.

When you click Subscribe, SQL Enterprise Job Manager automatically subscribes you to the alert rule you specify. If you want to unsubscribe to the alert rule, click Unsubscribe and you will no longer receive notifications from these alert rules. For more information, go to [Subscribing to alerts](#).


### 12.3.2 What actions can you perform on several selected alert rules?

You can perform bulk actions on several selected alert rules. Select those alerts on which you want to execute actions and choose from the following options:

- Enable Alert Rules
- Disable Alert Rules
- Delete Alert Rules
- Subscribe
- Unsubscribe

When you disable several alert rules, SQL Enterprise Job Manager stops generating alerts that meet the respective alert rules. If you are subscribed to the alert rules, no notifications will be sent until you enable the alert rules again.

When you delete alert rules, SQL Enterprise Job Manager stops their relevant alerts and notifications.


 You cannot edit properties for several selected alert rules. Since each alert rule has different settings, you can only edit the properties of one alert rule at a time.

## 12.4 Subscribing to alerts

You can subscribe to alert rules from the Actions option of the **Alert Rules** tab. When you subscribe to alert rules, you can receive notifications from these alert rules in the email address you specify. To add or edit email addresses for users, go to [Manage Users](#) in the **Administration** tab.

Take into account that you must configure your SMTP server settings first in order to receive notifications. For more information, go to [Configuring your email SMTP server settings](#).

### 12.4.1 How do you subscribe/unsubscribe to Alert Rules?


To subscribe/unsubscribe to alert rules, select the alert rule you want to subscribe to in the **Alert Rules** tab, click the  gear icon of the selected alert rule, and click **Subscribe/Unsubscribe** according to your requirements.

You can also select several alert rules at once and **Subscribe/Unsubscribe** to them.

### 12.4.2 How do you subscribe to all critical Alert Rules?


The option **Subscribe to all critical Alert Rules** lets you subscribe to all alert rules that have a critical severity in your environment. You can find this option in the following sections:

- **Administration** tab - Go to the **Manage users** option and when you add/edit a new user you can select the option to subscribe to all critical alerts. For more information, go to [Adding, Editing, and Removing users](#).
- **Administration** tab - Go to **Manage Subscriptions for all users**, click the number of notifications to access the **Subscriptions** window where you can select to subscribe to all critical alerts.

 Keep in mind that when you subscribe to all critical alerts, you need to unsubscribe to all of them first, to be able to subscribe/unsubscribe individually to one or several selected alert rules.

### 12.4.3 How do you manage subscriptions for all users?

As a user with Administrator role, you can manage subscriptions per user. For more information, go to the **Administration** tab, and click [Manage Subscriptions for all users](#).

 The option for **Managing Subscriptions for all users** from the **Administration** tab is only available to users with Administrator role.

## 13 Administering your SQL Enterprise Job Manager

Users that have an Administrator role can access the **Administration** tab. On this tab, you can manage the main settings of your environment: Users, Instances, Licensing, Alert Rules, and Alert Emails.

### 13.1 Users

Manage your users from one single section. Add new users, edit their settings, or remove users according to your requirements.

You can edit users' settings such as roles (Administrator, User, or Read Only), email addresses, session time out, and whether they are subscribed to all critical alerts or not. For more information, go to [Manage Users](#).

### 13.2 Instances

In order to monitor SQL Server instances, you need to register them with SQL Enterprise Job Manager. Use the option [Add Instance](#) or [Import SQL Servers](#) to add new instances to your environment. You can also [Manage your SQL Server Instances](#), view their properties, and change their credentials.

### 13.3 Licensing

A license is required to access SQL Enterprise Job Manager features. Use the option [Manage License](#) to view your license status, its characteristics, and add a new license key if needed.

### 13.4 Alert Rules

SQL Enterprise Job Manager displays alerts that warn you about the status of your instances and jobs. These alerts depend on alert rules that you can configure and customize according to your requirements. Use the option [Manage Alert Rules](#) to access the tab where you can manage all these settings.

### 13.5 Alert Emails

SQL Enterprise Job Manager sends alerts notifications that inform users about critical issues from their environment such as instances or agents' status. To receive these notifications, you must [Configure your email \(SMTP\) settings](#) first. Additionally, you have to subscribe to alert rules in order to receive these notifications. Use the option [Manage subscriptions for all users](#) to manage subscriptions per user.

### 13.6 Schedule

SQL Enterprise Job Manager allows you to schedule a [Projection Period](#) for all your instances, jobs, tasks, and job chains across your environment.



## 13.7 Manage users in SQL Enterprise Job Manager

In order for users to access SQL Enterprise Job Manager, they must be registered. To add new users, edit their details (name, role, session time-out, email, etc.), or remove them, go to the **Administration** tab, and then click **Manage users** under the Users section.

SQL Enterprise Job Manager allows you to define three types of user roles:

- Administrator
- User
- Read-only

While Administrators can access all SQL Enterprise Job Manager features, Users and Read-only users have restrictions to some pages and actions within the application. Go to [User Roles](#) to see more information about each role.

To view more information on how to manage your users, go to [Adding, Editing, and Removing users](#).

## 13.7.1 Users roles

### ADMINISTRATORS

As an Administrator, you have complete access and control of all SQL Enterprise Job Manager sections and features. A key characteristic of Administrators is that you can perform all Administrative tasks such as adding new users for example, and defining their roles as other Administrators, or as Users or Read-Only users.

Among the multiple tasks that you can perform as an Administrator, the following are just an example of the main features available to this user role:

- Select multiple instances and register them for monitoring.
- Change the connection credentials used to connect to your monitored instances.
- Remove/delete those instances that you no longer want to monitor.
- Start the SQL Server Agent Service for several instances.
- Edit the properties of a selected job.
- Add new jobs, edit their schedules, and perform actions on them such as start, stop, enable, disable, or remove them respectively.
- Access the Administrative section of SQL Enterprise Job Manager where you can manage your licenses, add/import instances, manage users, change job grooming settings, manage collection interval settings, configure alerts notifications, and subscriptions to alerts. Go to [Administering your SQL Enterprise Job Manager](#) for more information about what is available on this page.

### USERS

As a regular user, you can access all the SQL jobs and instances management functionalities in SQL Enterprise Job Manager but you cannot access or perform any of the Administrative tasks located on the respective tab.

Regular users can perform tasks such as:

- Register multiple SQL Server instances for monitoring.
- Change the connection credentials of those SQL Server instances that you are monitoring.
- Remove/delete those instances that you no longer want to monitor.
- Start the SQL Server Agent Service for several instances
- Access the editing properties window of a job and make the necessary changes.
- Add new jobs, edit their schedules, and perform actions on jobs such as start, stop, enable, disable, or remove them respectively.

### READ-ONLY USERS

As a Read-only user, you can access all SQL Enterprise Job Manager tabs except the Administration tab. You can get an overview of the Home tab, view Scheduled jobs, their job history, and access the list of registered instances but you are restricted to perform the following tasks:

- Editing/adding new jobs.
- Adding new instances to monitor or disabling instances that you do not want to monitor anymore.
- Rescheduling jobs.
- Performing actions on jobs such as start, stop, enable, disable, or delete.
- Changing job's properties, although you can access a read-only version of these properties.
- All options available in the Administration tab are not available for this user role.

## 13.7.2 Adding, Editing, and Removing users

You can add new users, edit their information, or remove them by accessing the **Manage Users** option. To access this window, go to the **Administration** tab and click **Manage Users**.

### Adding a user

To register a new user click **Add User** in the **Manage Users** and specify the following information:

- **User Name** - Type a Windows account user name in the following format 'domain\username'.
- **Role** - Click the drop-down options to select from the following user roles: **Administrator**, **Read Only**, or **User**. For more information on each role, go to [Users Roles](#).
- **Email** - Type the email address where the new user will receive notifications from SQL Enterprise Job Manager.
- **Session timeout** - By default SQL Enterprise Job Manager has a timeout session of 30 minutes. If you want to determine a different time-out session, select this option, and specify the time-out of your preference. If you don't want your session to expire, unselect this option.
- **Subscribed to All Critical Alerts** - Select this option if you want the new user to receive notifications. Take into account that you must configure your SMTP server settings first in order to receive notifications. For more information on how to configure your email server settings, go to [Configuring SMTP Server settings](#).

### Editing users

If you want to change users settings like email, timeout session, role, etc., select the user, then click **Edit User**. SQL Enterprise Job Manager opens a new window where you can modify the user's settings according to your requirements.

### Removing users

To remove a user from SQL Enterprise Job Manager, select the respective user, and click **Remove User**.



Keep in mind that only users with an **Administrator** role can Add, Edit, or Remove users.

## 13.8 Adding SQL Server instances

You can define which SQL Server instances you want to add to your SQL Enterprise Job Manager environment. You can only monitor jobs from registered SQL Server instances.

You can add new SQL Server instances from the **Add Instance** option from the following sections:

- **Overview** tab - On the top menu bar of the All Instances section.
- **Schedule** tab - On the top menu bar of the Operation list available on this tab.
- **Instances** tab - On the top menu bar.
- **Administration** tab - Under the Instances section.

✔ You can also [Import instances](#) using the respective option under the **Instances** section from the **Administration** tab.

⚠ Read-only users cannot do the following actions on the **Instances** tab:

- Add/register new SQL Server instances
- Remove registered SQL Server instances
- Change instances properties
- Perform actions on SQL Server Agents

When you open the Add SQL Server Instance wizard, you have the following sections:

### 13.8.1 Instance

To add instances you can:

- Type the name of instance or instances you want to register in the SQL Server Instance box. Use a semicolon to separate several instances.
- Use the **Browse** button to access a list of discovered instances that have not been registered yet with SQL Enterprise Job Manager. Check the box next to the instances you want to add and click **Apply**.

Specify the **Data Collection Settings**:

- Determine the **Collection Interval** in minutes or days - This option lets you define how often data will be collected for your registered instances.
- Determine how many days SQL Enterprise Job Manager will **Keep Data for** - This option lets you specify how much time data is kept before grooming it.

Determine if you want to monitor the Windows Tasks of your added instances. You can specify the following options:

- Monitor task for the instance(s) - Select this option if you want to monitor the tasks of your added instances
- Keep task and task history data for the instance(s) - Select this option to keep tasks and their respective history if you decide to stop monitoring them.

Click **Next** to go to the next section.

### 13.8.2 Credentials

#### SQL connection credentials

SQL Enterprise Job Manager connects to registered SQL Server instances to collect information. The collection service requires permissions to connect and gather information using the account you specify.

By default, SQL Enterprise Job Manager connects using the **SQL Enterprise Job Manager service account**. However, if you need to provide alternative credentials you can also choose from:

- SQL Server login account
- Windows user account

If you select a **Windows user account** or a **SQL Server login account**, type the respective user name and password. SQL Enterprise Job Manager uses this account for SQL queries to gather availability and configuration data.

### WMI connection credentials

Specify the credentials that SQL Enterprise Job Manager will use to access Windows configuration data of the computer that hosts the registered instance. You can choose to use the **SQL Enterprise Job Manager service account** or a **Windows user account**. If you select the latter, you have to provide the respective user name and password.



You can test the correctness of your credentials by clicking **TEST CREDENTIALS**.

## 13.8.3 Information

In this section, you can specify additional information for your instances like Owner, Location, and Comments.

Although none of these fields are compulsory, Owner, Location, and Comments provide a powerful method for grouping instances and organizing your managed instances.

Use the **Owner** and **Location** drop-down lists to access previously registered options.

## 13.8.4 Maintenance

Use this section to specify the maintenance schedule for the instances you are adding.

You can define two types of schedules:

- **Recurring** - Select this option if you want SQL Enterprise Job Manager to perform the maintenance on a recurrent schedule.
- **One time** - Choose this option to execute maintenance on a one-time schedule.

When you choose **Recurring**, you can define the frequency of your maintenance schedule. You can select from the following frequencies:

- **Daily** - If you select this option, specify the number of days SQL Enterprise Job Manager uses as the interval to perform maintenance. Also, you can set the maintenance frequency, once per day at a specific time, or if you want to perform it every determined number of hours.
- **Weekly** - If you choose this option, specify the number of weeks SQL Enterprise Job Manager uses as the interval to perform maintenance. You can choose the days of the week when maintenance is executed. Additionally, you can determine the daily frequency, i.e. the exact time of the day when maintenance is performed or how many times per day the process is done.
- **Monthly** - When you select this option, you can determine the monthly frequency and on which days of the month SQL Enterprise Job Manager performs maintenance. For example, you can define a maintenance schedule for the second Monday of the month, every 2 months.

These options are also available on the Maintenance tab:

- Determine the duration of your maintenance schedule by specifying the dates when the schedule begins and finishes.
- Specify how long the maintenance mode will last.
- Disable alerts and jobs during this period. In this section you have the following options:
  - **Disable Alerts during the maintenance** - Define which alerts severity you want to disable and if you want to disable alerts for jobs or instances.
  - **Disable non-maintenance jobs during maintenance** - By selecting this option, no other jobs will run during the maintenance period.
  - **Stop maintenance jobs that run past the maintenance** - By selecting this option, jobs that run past the maintenance will be stopped.

### 13.8.5 Finish

In this section, you can review your instance registration details such as Instance, Data Collection Interval, Keep Data for, SQL Connection Credentials, Owner, Location, and Comments.

To change any of these registration details, you can do one of the following:

- Click any of the title sections (INSTANCE, CREDENTIALS, MAINTENANCE, or INFORMATION) and go directly to the place where you need to make the changes.
- Click **PREV** to go back to the previous sections until you find the place where you need to make changes.
- Click any of the specified values on the Finish tab and SQL Enterprise Job Manager takes you to the respective section.

After you review your registration details, click **FINISH**.

SQL Enterprise Job Manager registers your SQL server instances in the repository and immediately begins to collect instances information like availability, configuration, and job handling information.

After registration, you can still change these settings. Go to [Edit instance properties](#) for more information.

## 13.9 Importing SQL Server instances

SQL Enterprise Job Manager allows you to monitor imported SQL Server instances. Follow these steps to import instances:

- Go to the **Administration** tab, under the Instances section, select **Import SQL Servers**. SQL Enterprise Job Manager opens a new window for importing new instances.
- Click **UPLOAD** and select a .csv file that contains your SQL Server instances.
- SQL Enterprise Job Manager displays the instances names of your uploaded file. Select the ones you want to import and click **IMPORT**.

✔ By default, the instances that you import use the SQL Enterprise Job Manager service account to collect information, if you want to change these credentials or add other settings such as Owner, Location, or Data Collection Intervals, go to [Editing the properties of your instances](#).


⚠ Only users with Administrator roles can access the **Administration** tab, and therefore, **Importing SQL Server instances** is only available to this user role.

## 13.10 Manage SQL Server instances

To view all your registered SQL Server instances, their respective credentials, and login information, you can also go to the **Administration** tab and click **Manage SQL Server Instances** under the Instances section.

SQL Enterprise Job Manager opens a new window with all your monitored instances, their user account type, and user names specified to collect instances information.

Consider that the **User name** column in this window refers to the user name for a Windows user account or the login information for a SQL Server account.

Click the  more options icon to select the information you want to hide or show on the list.

### 13.10.1 Editing Credentials

You can bulk edit credentials for several selected SQL Server instances.

Select those instances for which you want to edit their credentials, click the gear icon or use the **Edit Credentials** option on the top of the window. Then, SQL Enterprise Job Manager opens a new window where you can change the following credentials:

- **SQL connection credentials** - These credentials collect information from your registered SQL Server instances. You can choose from the following account types: SQL Enterprise Job Manager service account, SQL Server login account, or Windows user account. These last two options require you to provide the respective username/login and password.
- **WMI connection credentials** - These credentials collect Windows configuration data of the computers hosting your registered instances. You can choose from one of the following account types: SQL Enterprise Job Manager service account or Windows user account. The last option requires you to provide the respective username/login and password.

You can use the option **TEST CREDENTIALS** to make sure that the credentials you are selecting can connect to the respective SQL Servers and gather their information.

### 13.10.2 Editing Properties

You can edit properties for an instance in the **Manage SQL Server Instances** window.


Select the instance you want to edit its properties, click the gear icon or use the **Edit Properties** option on the top of the window. Then, SQL Enterprise Job Manager opens a new window where you can change the following properties:

- **General** - Change or add information about Owner, Location, Comments, Data Collection Settings, and Task monitoring.
- **Credentials** - Edit the credentials you use to collect SQL Server instance information (SQL connection credentials) and the credentials used to gather information from your instances host computers (WMI connection credentials)
- **Maintenance** - Specify new maintenance mode settings, including schedule type, frequency, duration, and other additional options.

If you select several instances, SQL Enterprise Job Manager opens a window where you can bulk edit the following information:

- Owner, Location, and Comments.
- Data Collection Settings



 Only users with Administrator roles can access the **Administration** tab, and, therefore, **Managing SQL Server instances** is only available to this user role.

## 13.11 Managing your SQL Enterprise Job Manager licenses


To access all SQL Enterprise Job Manager features you need a license key. This license determines the number of SQL Server instances that you can monitor.

In the Manage License section, you can view your license status, add, or buy a new license key. To access this option, go to the **Administration** tab and click **Manage License** on the **Licensing** section.

SQL Enterprise Job Manager opens a new window that displays information relevant to your current licenses such as type of license, status, expiration date, total licensed servers, current monitored servers in your environment, license key, and SQL Enterprise Job Manager repository.

If you want to add a new license key, type the key under the **New License** section and click **Apply**.

If you need to buy another license, go to [Click here to buy more SQL Enterprise Job Manager licenses](#).

 Only users with the Administrator roles can access the **Administration** tab, and therefore, **Manage License** is only available to this user role.

## 13.12 Managing alert rules

SQL Enterprise Job Manager displays alerts that warn you about the status of your instances and jobs. These alerts depend on alert rules that you can configure and customize according to your requirements.


Use the option **Manage Alert Rules** under the Alert Rules section of the **Administration tab** to access the **Alert Rules** tab where you can manage all these settings.

For more information on what is available on the **Alert Rules** tab, go to [Managing Alerts](#).

## 13.13 Configuring your SMTP Server settings

IDERA SQL Enterprise Job Manager can send email notifications for critical conditions from your instances and jobs. You can also customize your own [Alert Rules](#) and subscribe to them to receive notifications. However, before subscribing to these email notifications; you must first configure your email (SMTP) settings.

You can access this option by going to the **Administration** tab.

 Only users with the Administrator role can configure the SMTP Server settings of your SQL Enterprise Job Manager.

In the **Alert Emails** section, click **Configure email (SMTP) settings**. A dialog box opens with three main sections:

- Email Information
- Outgoing Mail Server Information
- Test Email Settings

### 13.13.1 Email Information

#### Sender Address

Enter the email address that SQL Enterprise Job Manager will use as the sender of the emails notifications.

#### Reply To Address

You must specify a reply-to email address to receive replies from emails.

#### Message Footer

Enter the text that you want to appear in the footer of emails.

### 13.13.2 Outgoing Mail Server Information

In order to send email notifications, you must specify the settings of the email server you want to use. You need to provide the following information:

#### SMTP Server Address

Enter the name or Internet Protocol (IP) address of your SMTP mail server.

#### SMTP Server Port

Enter the IP port that your SMTP mail server uses. Otherwise, the default SMTP port is 25.

#### Use an SSL encrypted connection

Select this check box if you want to use an SSL encrypted connection to connect to the email server.

## SMTP Server requires authentication

Select this checkbox if your SMTP server requires authentication, specify then a valid user name and password to access the email server.

### 13.13.3 Test Email Settings

You can use this section to test your email settings. For this purpose, enter the **Recipient of test email** and click **SEND TEST EMAIL**. SQL Enterprise Job Manager sends a test email to the recipient you specify. You can verify this test email in the respective recipient account.

After you configure your email settings, you can subscribe to alerts. For more information on how to subscribe to alerts, go to [Subscribing to Alerts](#).

## 13.14 Manage Subscriptions for all users

You can manage subscriptions to alert rules per user. To access this option, go to the **Administration** tab, click **Manage Subscriptions For All Users** under the Alert Emails section. SQL Enterprise Job Manager opens a new window with a list of all your registered users and the number of notifications per user.

### 13.14.1 Subscribing to Alert Rules


To subscribe to alert rules and view which ones each user is subscribed to, go to the respective user and click the number of subscriptions. SQL Enterprise Job Manager opens a new **Subscriptions** window where you can view all disabled/enabled alert rules that are available in your environment.


If no email is defined for the selected user, SQL Enterprise Job Manager displays an email option on the top of the window, you can use this field to add the respective email address. Consider that you must [configure your SMTP settings](#) in order to send notifications.


On the left side of the **Subscriptions** window, you can find filters that allow you to filter your available alert rules according to their severity (critical, warning, info, ok).


To subscribe to alert rules, select the alert rules you want to subscribe to and click **Submit**.

If you want to subscribe to all critical alert rules, you can select the option **Subscribe to all critical Alert Rules**, available at the bottom section of this window.

 You can define how many alerts you want to view per page. Go to the bottom section of the window and type the number of jobs you want to see per page.

 If you do not receive a notification, you should review if the alert is enabled.

 Take into account that when you subscribe to all critical alerts, you need to unsubscribe to all of them first, in order to be able to subscribe/unsubscribe individually to one or several selected alert rules.

 Only users with the Administrator role can access the **Administration** tab, and therefore, **Manage Subscriptions For All Users** is only available to this user role.

## 13.15 Projection Period

SQL Enterprise Job Manager provides you with an option to schedule a projection period for all your instances, jobs, tasks, and job chains across your environment.

To access this option, go to the **Administration** tab, and click **Set Projection Period** under the Schedule section. Once you click on it, SQL Enterprise Job Manager opens a new window with this option. You can specify the number of days for what you want to set the projection period by using the buttons on the corner of the box or typing the number, then click Apply to save your changes.

## 14 Navigate the IDERA Dashboard

### 14.1 What is the IDERA Dashboard?

The **IDERA Dashboard** is a common technology framework designed to support the entire IDERA product suite. The **IDERA Dashboard** allows users to get an overview of their SQL Servers' status and hosted databases in a consolidated view while providing users the means to drill in to individual product dashboards for details.




The **IDERA Dashboard** is comprised of the following tabs:

- [Overview](#)
- [Details View](#)
- [Alerts](#)
- [Administration](#)

### 14.2 What actions can be performed in the Overview tab of the IDERA Dashboard?

In the **IDERA Dashboard** users can glance at their registered products' overall status through the **Overview** tab. This tab contains product widgets of all the products registered with the IDERA Dashboard. By default the **Overview** tab contains the following widgets:

- **Alert Status** - Displays the total number of alerts available on the environment at the current date and time. It also displays the number of alerts by status: Critical, Warning, Informational, or Ok.
- **Instance status** - displays the total number of the monitored instances on the environment in the current date and time. It also displays the number of instances by status: Critical, Warning, Informational, Ok, or Disabled.

✓ You can expand or collapse a widget by clicking . You can also view a widget in full size by clicking  or remove it by clicking .

Additionally, you can **Filter** information either by product or tags on the top section of this tab. If you want to remove your filters, click on **Clear filters**.

### 14.3 What actions can be performed in the Details view of the IDERA Dashboard?

The **Details View** allows users to view their **Instance Details**. Select the instance on the drop-down list available and the **IDERA Dashboard** will filter information regarding that instance.

### 14.4 What actions can be performed in the Alerts view of the IDERA Dashboard?

The **Alerts** view allows users to view the information about available alerts on the environment. This information can be filtered by:


- Product
- Category



- Severity
- Metric
- Tag

- ✓ When using filters consider:
  - Click the respective checkbox to add or remove your selections.
  - If you want to select filters first and apply the changes later, deselect the **Apply filter as it changes the** option.
  - To remove filters, use the specific **Remove Filter** option in each filter. For example, if you want to remove your product filters, click **Remove Product Filter** under the same filter section.
  - Under **Applied filters** on the top section of your **Alerts** view, you can see the filters you have selected. Click the **X** icon next to the ones you want to remove.
  - Use the option **Clear** on the top section of the **Filtering** to remove all filters.

## 14.5 What other options are available on the IDERA Dashboard?


Once on the **IDERA Dashboard** page, click the  gear icon available for the **Administration** settings. Once you click on it, there are the following options available:

## 14.6 What actions can be performed in the Administration view of the IDERA Dashboard?

In the **IDERA Dashboard**, all products show a common **Administration** tab when the logged-in user has administrator privileges. Selecting this tab displays the Administration view which hosts a range of sections for performing administration-related actions.

In this tab you can perform the following options:

- [Manage Users](#)
- [Manage Instances](#)
- [Manage Products](#)
- [Managing Tags](#)
- [Configure Navigation Order](#)
- [Configure Dashboard Views](#)
- [Send Notifications](#)
- [Manage Licenses](#)

- ✓ Most of these options can also be accessed from the  gear icon located on the top right corner of the UI.

## 14.7 Manage Users in the IDERA Dashboard

The **Users** section of the **Administration** view allows users to grant access to other team members or groups and manage their roles. For more information about user roles, see [Understanding user roles](#).

Users with administrative privileges are divided in:

- **Dashboard administrators** - Users can manage access over IDERA Dashboard functions as well as individual products functions.
- **Product administrators** - Users can grant access to individual products for which they have administrative rights.

To add new users, edit their details (account name, display name, enable/disable, and add new permissions), or remove them, select **Manage Users** in the **Administration** view.

### 14.7.1 Adding a user in the IDERA Dashboard

In the **IDERA Dashboard**, access is granted to Windows users or groups. To add users follow these steps:

1. Click the **Add user/group** option and the User/Group Details dialog displays.
2. Type the **Account name** of the user you want to grant access to. You should enter a Windows user name in the following format: **<domain\user>**.
3. Type the **Display name** with which the user will be displayed.
4. Select the **Account Type**: User or Group.
5. Select the **Do not timeout the browser session for this account** check box to stay logged in.
6. Click the **Add** option to specify where would you like to include the user.
7. In the **Product** field, you can select to add a user to the IDERA Dashboard or SQL Enterprise Job Manager.
  - If you select the IDERA Dashboard, in the **Role** field you can assign the user as the Dashboard Administrator or Dashboard Guest.
  - If you select SQL Enterprise Job Manager, in the **Role** field you can assign the user as a ProductAdministrator, ProductUser, or ProductGuest.
8. Click **Save** and the user will be displayed in the list available under this section.
9. If you want to remove any user listed under this section select the check box and click **Delete**.
10. Click **Save** or **Discard changes**.

✔ You can define how many users you want to view per page. Go to the bottom section of the tab and type the number of users you want to see per page.

### 14.7.2 Editing a user in the IDERA Dashboard

This option allows you to edit the account name, display name, enable or disable the user account, and add new permissions. To edit a user or group follow these steps:

1. Click the user you want to edit to access its details.
2. Change the necessary settings.
3. **If you want to disable a user account**, clear the **Enabled Account** checkbox.
4. **If you want to add more roles to this user account or group**, click **Add**. IDERA Dashboard displays additional **Product** and **Role** fields for you to add another role.
5. Click **Save**.

⚠ You cannot edit the logged-in user credentials.

### 14.7.3 Removing a user from the IDERA Dashboard

This option allows you to remove a user from access to the IDERA Dashboard. To delete a user or group follow these steps:

1. Click the user you want to remove from the list of available users.
2. Click **Delete** in the user details window.
3. A warning that requires confirmation of whether you want to delete the selected user or group displays.

## 14.8 Manage Instances in the IDERA Dashboard

The **IDERA Dashboard** tracks all SQL Server instances, including not only instances managed or registered with SQL Enterprise Job Manager, but also those discovered on the network.

To access these options, select **Manage Instances** in the **Administration** view. The **Manage Instances** view allows you to select the following filters by clicking **Options**:

- **Instance Name** - Select your instance from the drop-down list with all available SQL Server instances in your environment.
- **MSSQL Version** - Select the SQL Version for which you want to view instances information.
- **Tags** - Select the tags for which you want to view instances information.
- **Discovered** - Choose a period of time when instances were discovered.
- **Last Seen** - Select a period of time when IDERA products last monitored the instances.
- **Idera Product** - Select the IDERA product you want to view instances.
- **Status** - Choose if you want to view Managed (Registered), Unmanaged (discovered on the network but not registered), Archived, Discovered, Ignored, Unsupported, or Deleted instances.

According to your requirements, select the options you would like to filter from your SQL Server instances. Click **Search** and your filter options will be displayed under the list available in this section.

- ✓ If you specifically know what you would like to filter, use the **SEARCH** option on the top section of this tab.

When selecting any of the instances displayed on the list, you can:

- View its details (products where they are registered, SQL Server version, Status, and Available License).
- Change the instance status by product and then click **Save** to keep the changes.

To remove all filters, click **Clear Filters**.

- ✓ You can define how many instances you want to view per page. Go to the bottom section of the tab and type the number of instances you want to see per page.

## 14.9 Manage Products in the IDERA Dashboard

The **IDERA Dashboard** hosts IDERA products that are registered with the dashboard. The **Products** section of the **Administration** tab allows users to view and manage registered products.

### 14.9.1 Register a product

To register a product, follow these steps:

1. Click **Register a Product** on the top section of the Manage Products tab.
2. In the **Register a Product to IDERA Dashboard** window, fill in the required fields:
  - **Product Install Location:** Specify where you would like to install your product (local or remote).
  - **Product Information:** Specify the following product information:
    - **Product:** Select or enter *SQLSafeRestService*.
    - **Display name:** Specify a unique name.
    - **Port:** Specify the port on which the SQLSafeRestService is listening on. The default port is 9998.
  - **Product Administrator Credentials:** provide the following user credentials:
    - **User Name:** Specify the user with Dashboard Administrator privileges.
    - **Password:** Enter the password for the user.
3. Click the **Register** button.



Keep in mind:

- If you specifically know what you would like to filter, use the **SEARCH** option on the top section of this tab.
- You can define how many products you want to view per page. Go to the bottom section of the tab and type the number of products you want to see per page.

### 14.9.2 Editing a product

To edit a product, follow these steps:

1. Click the product from the list of available products.
2. In the **Edit IDERA Registered Product** window, you can change the location and the connection credentials.
3. Click **Save** to keep changes.
  - **Host:** Specify the host on which the SQLSafeRestService has been installed.
  - **Port:** Specify the port on which the SQLSafeRestService is listening on. By default, 9292 port is set.
  - **Product Administrator Credentials:** provide the following user credentials:
    - **User Name:** Specify the user with Dashboard Administrator privileges.
    - **Password:** Enter the password for the user. To migrate the product to a different IDERA Dashboard, click **Migrate product**. In the new window, specify the following options:
4. Click **Migrate** to keep changes.

### 14.9.3 Removing a product

To remove a product, follow these steps:

1. Click the product from the list of available products.
2. Select **Delete** on the **Edit IDERA Registered Product** window.

3. A window will appear asking for confirmation for the removal of the product. Click **Yes** to continue with the removal of the product. Click **No** to cancel.

## 14.10 Manage Tags in the IDERA Dashboard

Tags allow you to organize and manage your instances and databases according to your work environment preferences. The IDERA Dashboard allows you to create, import, view, edit, and delete tags and their associated instances and databases. Click the **Manage Tags** option in the **Administration** tab to access these options.

The **Manage Tags** view allows you to view through a list of tags information and select the following filters by clicking **Options**:

- **Product** - Select the IDERA product you want to view its tags.
- **Instance** - Select your instance from the drop-down list with all available SQL Server instances in your environment.
- **Database** - Select the database you want to view its tags.

To specify different search criteria, click **Clear Filters**.

When selecting any of the tags displayed on the list, you can:

- View its details (products where they are registered, the instance and database where the tag resides, the type of tag, and its conflict).
- Change the tag by type and then click **Save** to keep the changes.

To include tags, click **Add Tag** on the top section of this tab, and the **Manage Tags** dialog window appears. Specify the following options:

- **Tag**: type the name of the tag.
- **Instances**: Shows a list with the instance name and product. To include an instance, click **Add instance**.
- **Databases**: Shows a list with the instance name, database, and product. To include a database, click **Add Database**.



Keep in mind:

- If you specifically know what you would like to filter, use the **SEARCH** option on the top section of this tab.
- You can define how many tags you want to view per page. Go to the bottom section of the tab and type the number of tags you want to see per page.
- To remove all filters, click **Delete**.

## 14.11 Configure Navigation Order in the IDERA Dashboard

The **Configure Navigation Order** section of the **Administration** view, allows users to customize the order of the different IDERA products on the navigation tab.

### 14.11.1 Customizing navigation

1. Click the **Customize Main Navigation Tab Order** link and a dialog displays.
2. Move tabs using a drag-and-drop operation.

 To go to the previous settings, click **Reset to default order**.



## 14.12 Configure IDERA Dashboard views

The **Configure Dashboard Views** section allows users to customize the objects displayed in the **Overview** and **Details** view tabs of the **IDERA Dashboard**.

### 14.12.1 Customizing the IDERA Dashboard Views

1. Click the **Customize DBA Dashboard** link and a dialog displays.
2. In the **Customize DBA Dashboard** dialog you can try the following:
  - **Hide/Show DBA Dashboard** - You can choose to show the DBA Dashboard to all users, hide it, or show it to users with permissions in two or more products
  - **Add or remove columns** - By using these options, you can customize how many widget columns you want to view in your **Overview** or **Details** tabs.
  - **Select View** - Select if you want to apply the settings of this window to your **Overview** or **Details** tab.
  - **Add a Widget** - Use the drop-down option to select the widget you want to add to your view. You can specify in which column you want the widget to be displayed.
  - Consider that the option **Total Widgets** automatically updates the number of widgets you selected for your view.
  - **Set column Width (%)** - Specify the width percentage of each column and click **APPLY**. Note that all your column's width should sum up 100%.
  - **Replace/delete/move product widgets** - On each widget, you can perform the following actions:
    - **Choose Another** - Use the drop-down options to select another available widget to be displayed instead of the current one. Note that you can only replace your current widget with another that is not currently displayed on your view.
    - **Delete** - Click the **X** icon on the upper right corner of each widget to remove it.
    - **Settings** - Use this option to specify the default state for your widget on your view: **Expanded** or **Collapsed**.
    - **Move** - Drag and drop widgets to order them according to your view requirements.

## 14.13 Send Notifications in the IDERA Dashboard

If you want to send a message to all users notifying an important status, upgrade, or other news, follow these steps:

- Go to the **Administration** tab and click **Send Notification**.
- Type your message and click **Send**.
- The message will be sent to all users registered within the IDERA Dashboard.

## 14.14 Manage Licenses in the IDERA Dashboard

To view the license status of your IDERA products, go to the **Administration** tab and click **Manage Licenses**.

The new view allows you to check all the licenses used in your IDERA products. You can see the following information:

- Product
- License Key
- Number of Instances

To **Add**, **Edit**, and/or **Delete** a license, click on a license from the list and fill in the required information or make the necessary changes.

## 15 About data schedule and retention schedules

SQL Enterprise Job Manager gathers information from the registered instances and collects information from the instances status, SQL Server Agent status, job status, and other properties.

The following table shows you the frequency with which SQL Enterprise Job Manager collects information.

Data Category	Schedule
Collector	By default, every 6 minutes but configurable per instance. <ul style="list-style-type: none"> <li>• Min value: 1 minute</li> <li>• Max value: 34560 minutes</li> </ul>
Instance Discovery	By default, every 12 hours (720 min). This value is configurable through the service configuration file. For more information, click <a href="#">here</a> . <ul style="list-style-type: none"> <li>• Min value: 1 Minute.</li> <li>• Max value: 34560 minutes</li> </ul>
Grooming (Job History information)	By default, this job runs daily at 1:00 AM The run time is configurable through the SQL Server Management Studio console for SQL Server instances that do not have an Express Edition. Users can set " <b>Keep data for</b> " that defines how long Job History data will be kept before being groomed in the daily 1:00 AM job. If users do not specify this setting, the default value is 30 days.
Refresh collection	Every minute SQL Enterprise Job Manager detects if there are new changes and the Refresh option becomes available.

## 16 Troubleshooting guide

SQL Enterprise Job Manager provides a priority-ranked list of recommendations that help you resolve the issues that are affecting the product performance.

The following topics are covered in this section:

- [Configuring your browser for Windows Authentication.](#)
- [SQL Server instance is down.](#)
- [How to enable/disable security.](#)
- [Collector configuration.](#)
- [What happens if you cannot log in to SQL Enterprise Job Manager?](#)

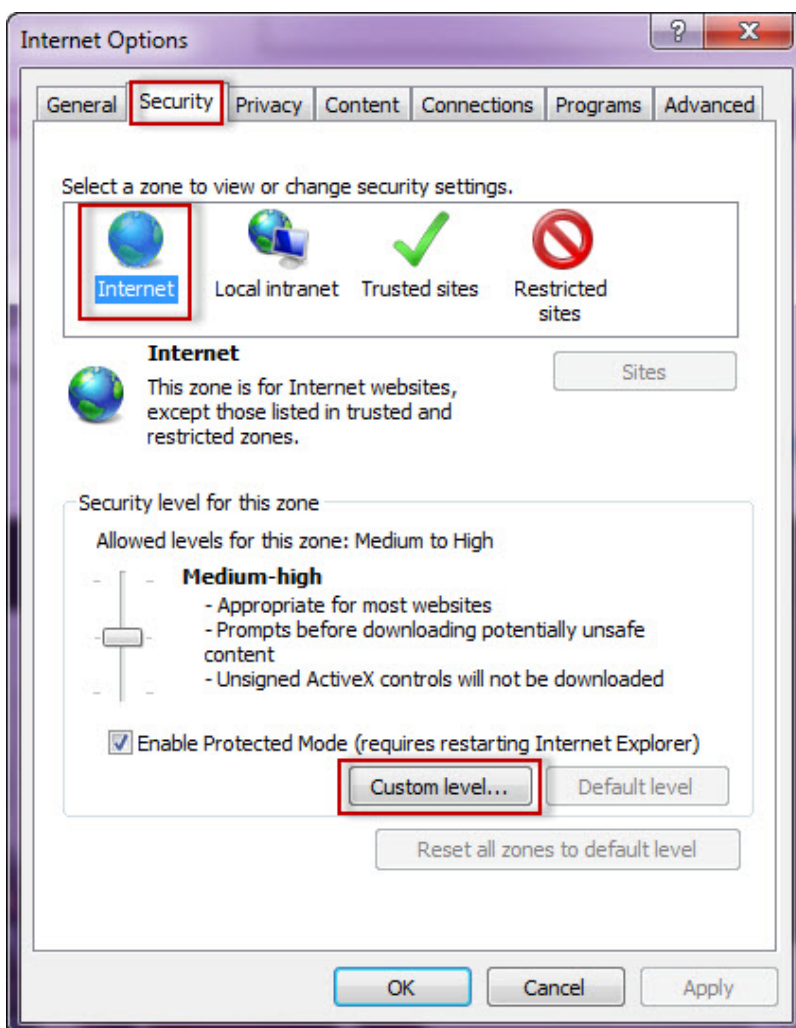
## 16.1 Configuring your browser for Windows Authentication

In order to be able to use Windows Authentication to log into SQL Enterprise Job Manager, you have to configure your browser settings.

### 16.1.1 Internet Explorer 9,10,11

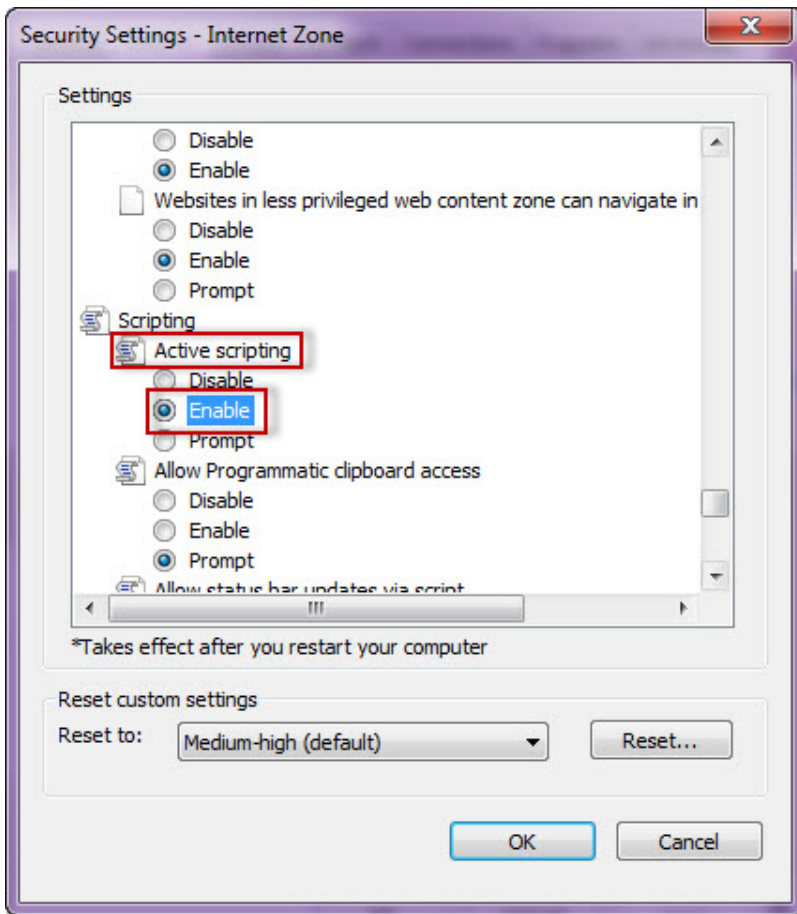
To configure these versions of **Internet Explorer**, follow these steps:

1. Go to **Internet Options**.
2. Click **Security**.
3. Click **Internet** and then **Custom Level**.

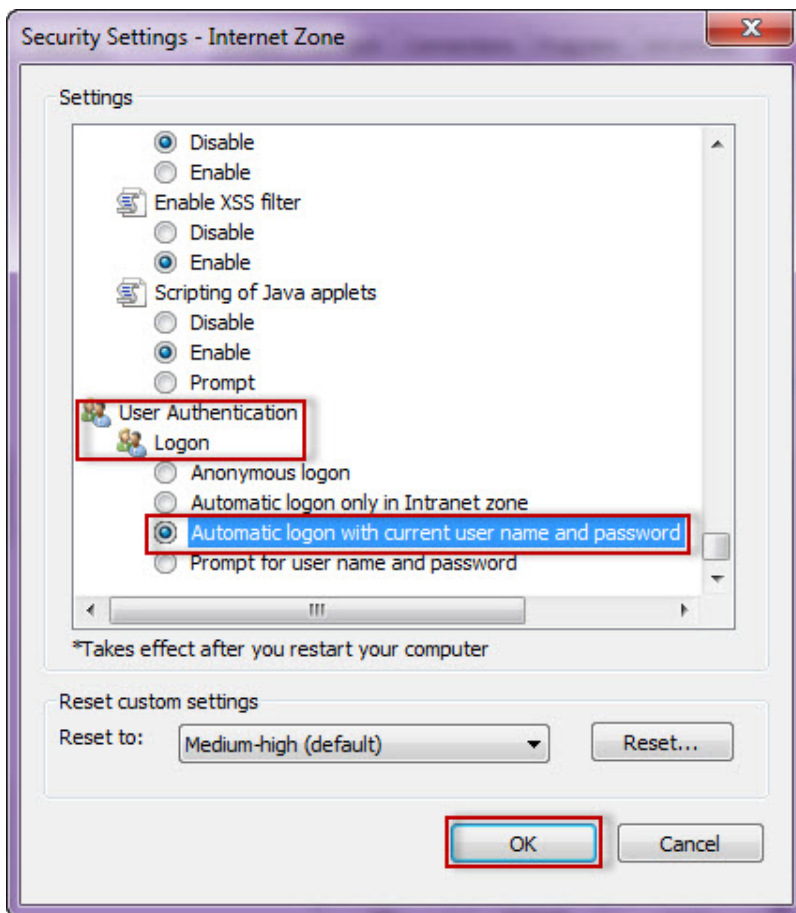


4. Go to Scripting/Active scripting and make sure **Enable** is selected.
5. Then go to User Authentication/Logon and make sure **Automatic logon with current user name and password** is selected.

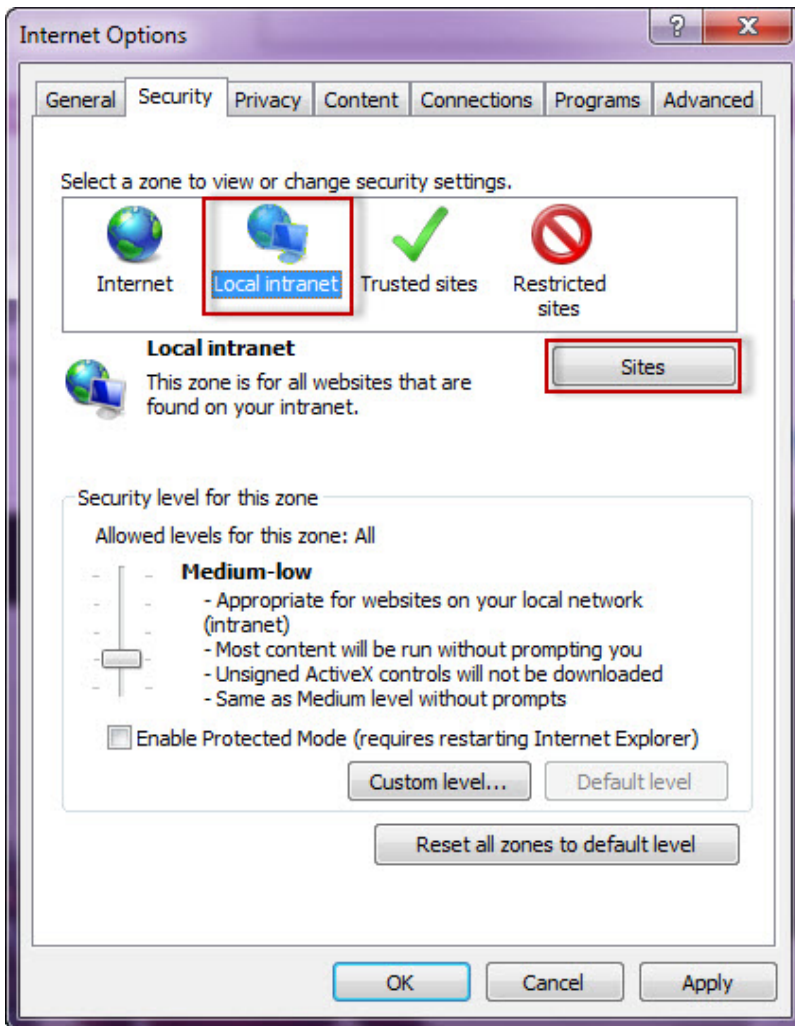
6. Click **OK**.



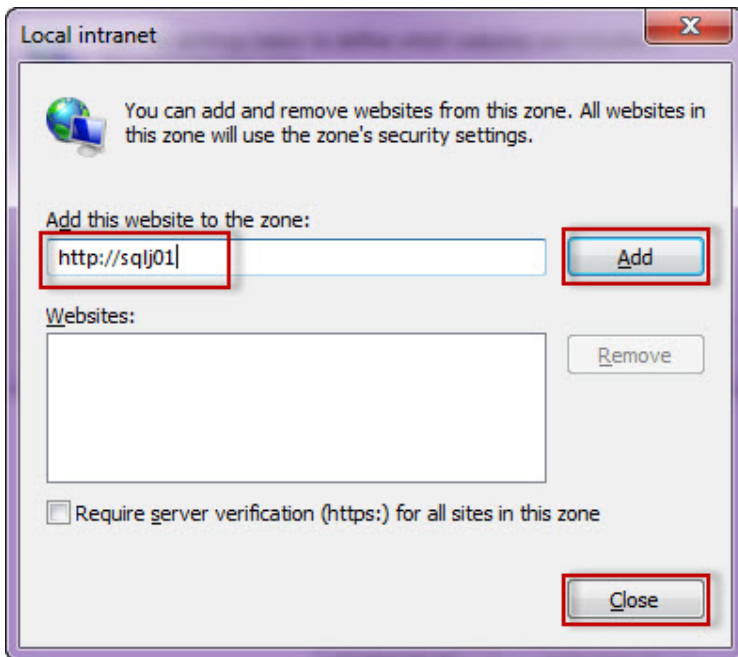




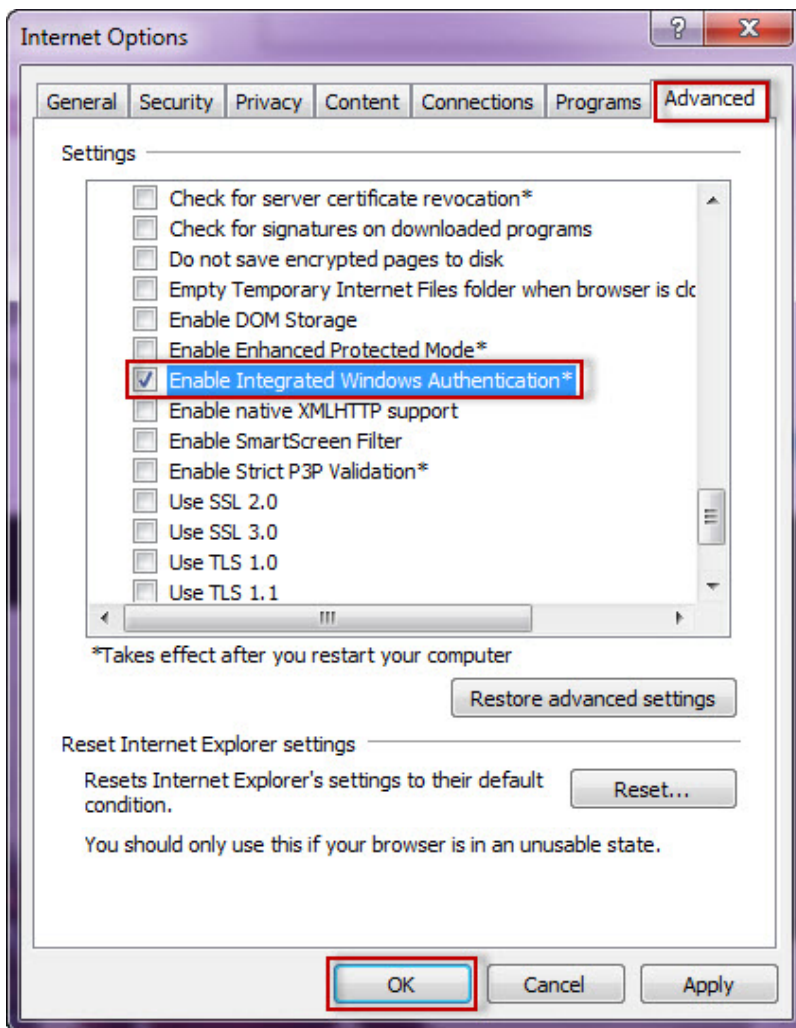
7. Click **Local intranet** and then **Sites**.



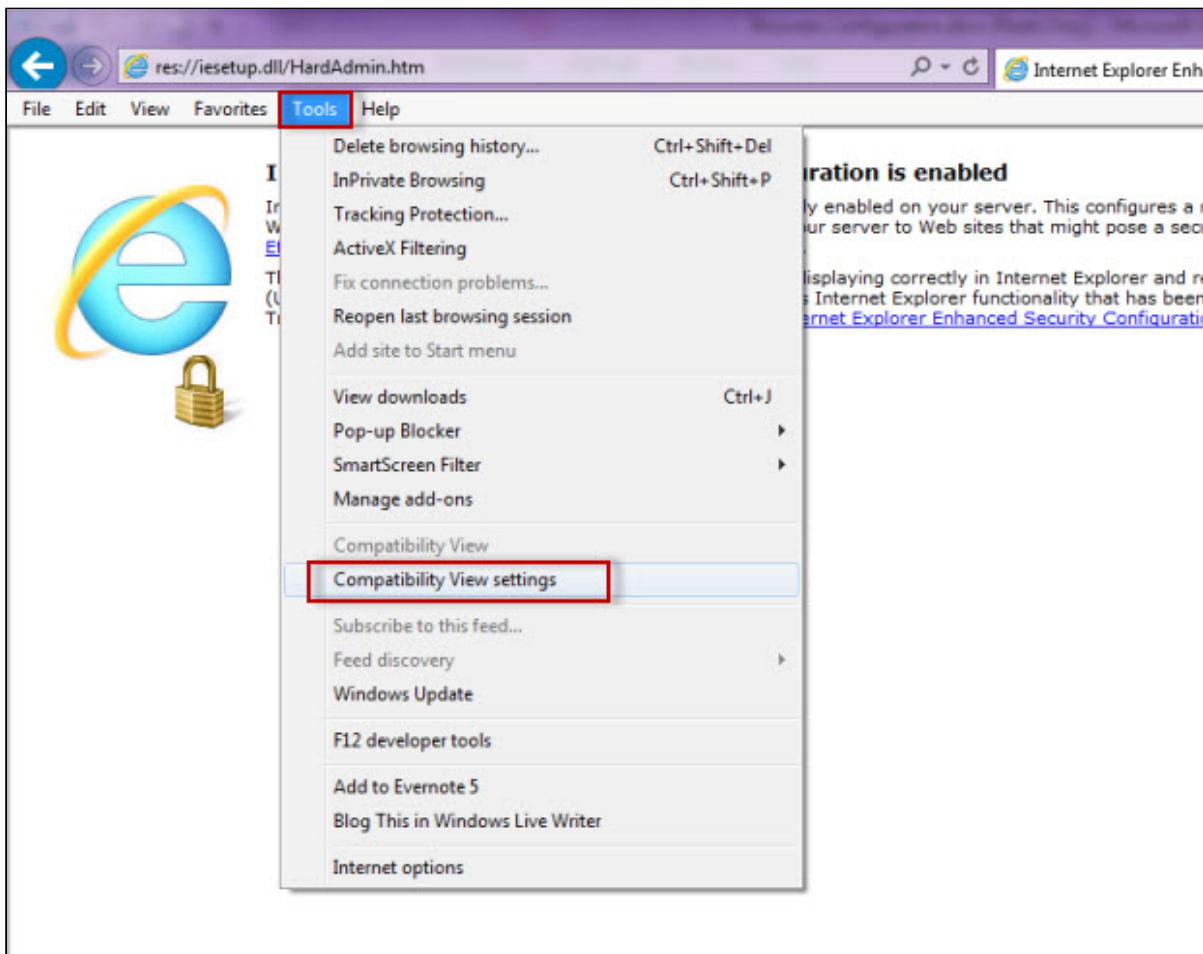
8. Type the following site **http://sqlj01** and click **Add**.
9. Click **Close**.



10. Go to **Advanced** and make sure **Enable Integrated Windows Authentication** is selected.
11. Click **OK**.

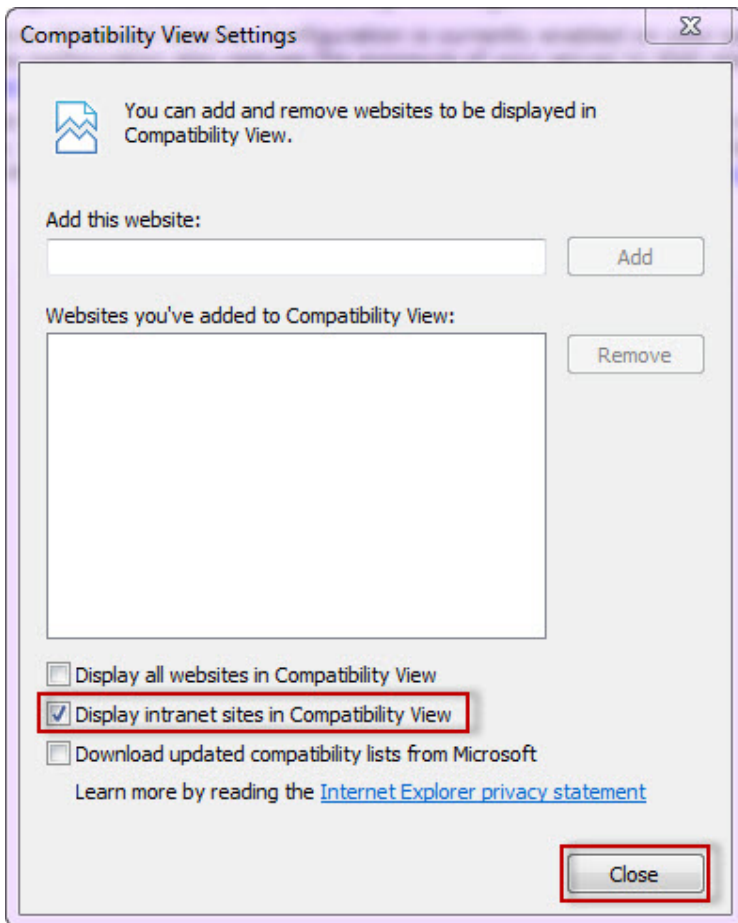


12. Go to **Tools** in the menu bar, and select **Compatibility View Settings**.



13. In the **Compatibility View Settings** window make sure **Display intranet sites in Compatibility View** is selected.

14. Click **Close**.

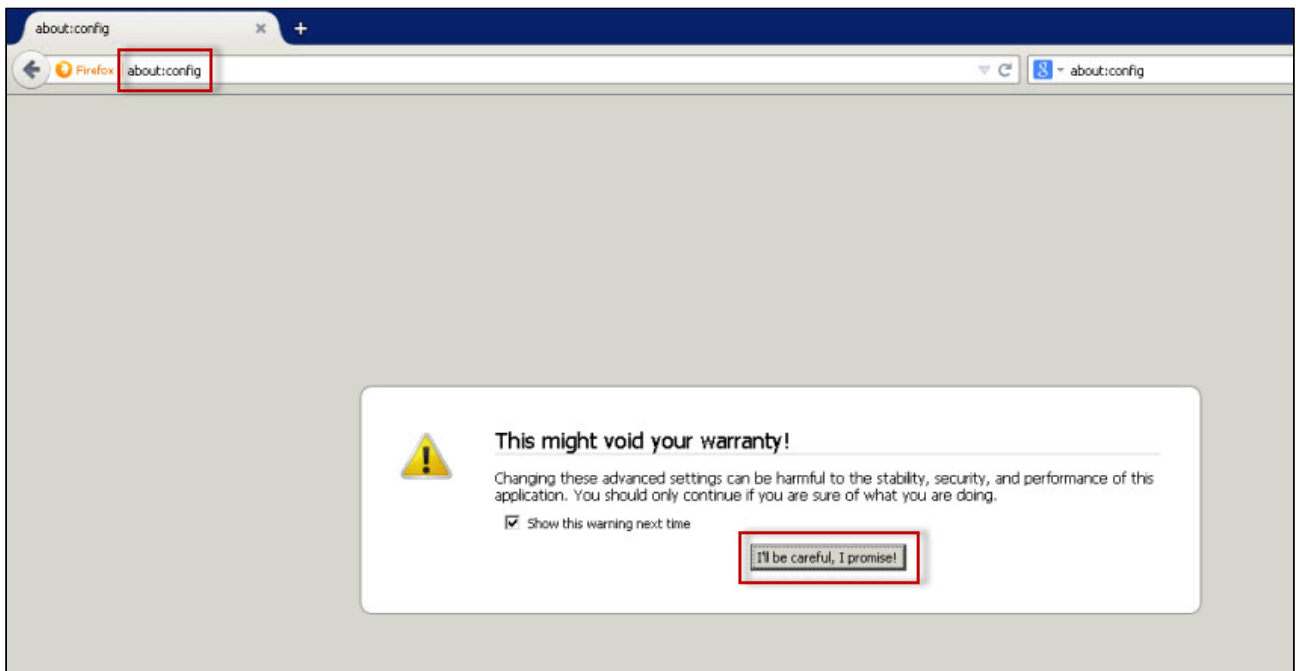


### 16.1.2 Configuring Google Chrome and Mozilla Firefox

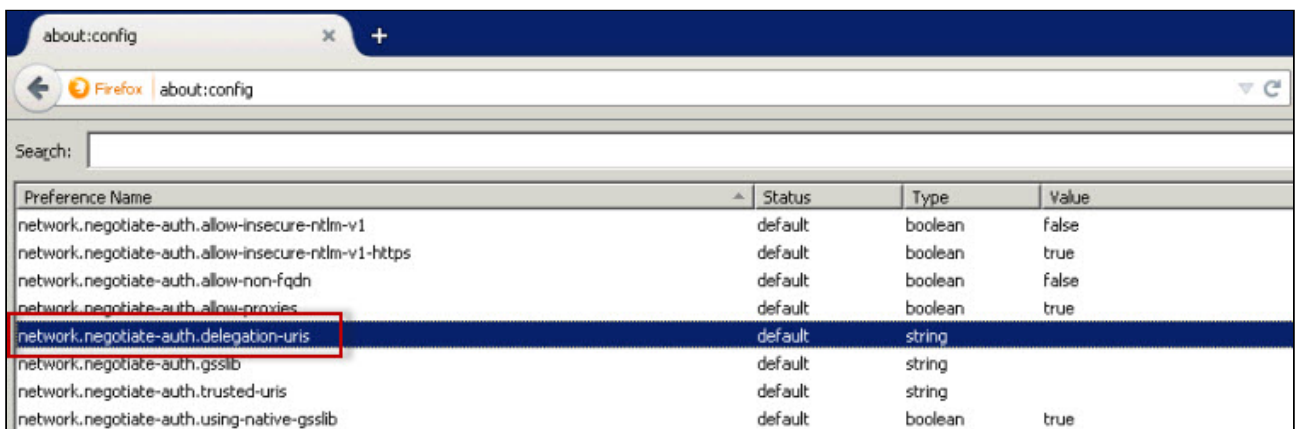
To configure **Google Chrome**, you can go to the following link: <http://dev.chromium.org/developers/design-documents/http-authentication>.

To configure **Mozilla Firefox**, view the following steps:

1. Open your Mozilla Firefox browser and type **about:config**.
2. Click **I'll be careful, I promise!**.



3. Search and double click **network.negotiate-auth.delegation-uris**.



4. Type <https://localhost:9291>. Click **OK**.

5. Search **network.automatic-ntlm-auth.trusted-uris**, double-click it and type the same value as before: <https://localhost:9291>. Click **OK**.

6. Close all instances of the Firefox browser to make the changes effective. Launch the browser again and access the application.

## 16.2 SQL Server instance is down

SQL Enterprise Job Manager connects frequently to managed SQL Server instances to ensure they are available and responsive. If the SQL instance becomes unreachable for any reason an alert will be raised to let operators know that an availability problem may have arisen.

Below you can find some possible workarounds:

- First, attempt to connect to the SQL Server instance by means other than SQL Enterprise Job Manager.
- If the connection fails, take note of any error message, which may in some cases explain what the issue is. If the message is not helpful or if the connection simply times out, verify whether the host Windows server is available through a ping test or by attempting to connect via remote desktop.
- If the server is not responsive, it may be necessary to troubleshoot further to determine whether it is a network issue or whether the server is offline or unresponsive. When the server is verified to be back online and reachable, check to make sure that the SQL Server services are started for any and all hosted SQL Server instances.
- If the SQL Server instance or Windows server was offline and the downtime was sudden or unexpected, SQL Server may need to run recovery for its hosted databases before the instance will be fully available again. Recovery is the process by which completed database transactions are recovered and incomplete transactions are rolled back, bringing the system back into a consistent state. This may complete quickly or it could take an extended period of time, so pay close attention to the status of the databases on this instance until they are all accessible again.
- If the server is online and this message appears to be in error, it could be that network or security issues are preventing SQL Enterprise Job Manager from making a connection. Ensure that SQL Enterprise Job Manager is connecting to the SQL Server with credentials that have the right to connect to the target server.



## 16.3 How to enable/disable security

SQL Enterprise Job Manager supports authentication between internal services, this feature is disabled by default. You can enable/disable security, making the following changes in the configuration files:

### 16.3.1 IDERA Core

Go to the *IDERACoreServices.exe.config* file available at: *%installationfolder%\IDERA\SQL\Enterprise Job Manager Core\IDERACoreServices.exe.config*

Change `<value>>false</value>` to `true` to enable authentication.

```
<setting name="EnableSecurity" serializeAs="String">
  <value>>true</value>
</setting>
```

### 16.3.2 SQL Enterprise Job Manager

Go to the *SQLEnterpriseJobManagerService.exe.config* file available at: *%installationfolder%\IDERA\SQL\Enterprise Job Manager\CollectionService\SQLEnterpriseJobManagerService.exe.config*.

Change `<value>>false</value>` to `true` to enable authentication.

```
<!--Security-->
<add key="EnabledSecurity" value="true"/>
```

### 16.3.3 UI: web.properties

This feature is enabled by default, to change it, go to *%installationfolder%\IDERA\SQL\Enterprise Job Manager\WebApplication\IDERA-main\conf\web.properties*

Change `"EnableAuthenticationForRest = true"` to `false` to disable authentication.



If you change the configuration files, you need to restart the services.

## 16.4 Collector configuration

SQL Enterprise Job Manager gathers information through a job collector that uses “batches” to collect data. The batches execution is a parallel process and it is possible to configure the number of batches and the number of instances per batch.

You can configure these settings in the configuration file available at `%installationfolder%\IDERA\SQL\Enterprise Job Manager\CollectionService\SQLEnterpriseJobManagerService.exe.config`.

In this file you can find:

```
<!-- Collector Settings -->  
<add key="CollectorNumberOfBatches" value="3" />  
<add key="CollectorInstancesPerBatch" value="2" />  
<add key="IsCollectorAutomaticConfiguration" value="true" />
```

Where `"IsCollectorAutomaticConfiguration"` is true by default. When this automatic configuration is enabled, SQL Enterprise Job Manager reviews how many logical processors you have in your machine and creates the configuration based on the following rule:

- Number of batches = Number of logical processors \* 2
- Instance per batch = 2

If you want to perform a manual configuration you need to change the automatic configuration to "false" and SQL Enterprise Job Manager will use the values set in the collector settings. You can change these values according to your requirements.



You need to restart the IDERA SQL Enterprise Job Manager Collection Service for your changes to take effect.

## 16.5 What happens if you cannot login in SQL Enterprise Job Manager?

If you are unable to login into SQL Enterprise Job Manager after the installation, you can run the following query in the IDERA Core database.

```
DECLARE @UserId INT
DECLARE @ApplicationId INT
DECLARE @RoleId INT

SET @ApplicationId = 3
SET @RoleId = (SELECT AR.ID FROM [Common].[ApplicationRoles] as AR WHERE AR.AppID = 3 AND AR.Name = N'Admin')
SET @UserId = (SELECT TOP 1 US.ID FROM [Common].[Users] as US WHERE US.UserName <> N'ServiceUser' AND US.Active = 1 AND US.UserType = N'U')

INSERT INTO [Common].[ApplicationUsers] ([UserID],[ApplicationID]) VALUES (@UserId,@ApplicationId)
INSERT INTO [Common].[ApplicationUserRoles]([UserID],[AppID],[RoleID]) VALUES (@UserId ,@ApplicationId , @RoleId)
```