CA Workload Automation DE

Services Perspective Help

r11.3 SP2

CA Technologies Product References

This document references the following CA Technologies products:

- CA Workload Automation DE
- CA Workload Automation Desktop Client (CA WA Desktop Client)
- CA Workload Automation DE Web Client
- CA Workload Automation High Availability DE (CA WA High Availability)
- CA Workload Automation Web Services (CA WA Web Services)
- CA Workload Automation Agent for UNIX (CA WA Agent for UNIX)
- CA Workload Automation Agent for Linux (CA WA Agent for Linux)
- CA Workload Automation Agent for Windows (CA WA Agent for Windows)
- CA Workload Automation Agent for i5/OS (CA WA Agent for i5/OS)
- CA Workload Automation Agent for z/OS (CA WA Agent for z/OS)
- CA Workload Automation Agent for Application Services (CA WA Agent for Application Services)
- CA Workload Automation Agent for Web Services (CA WA Agent for Web Services)
- CA Workload Automation Agent for Micro Focus (CA WA Agent for Micro Focus)
- CA Workload Automation Agent for Databases (CA WA Agent for Databases)
- CA Workload Automation Agent for SAP (CA WA Agent for SAP)
- CA Workload Automation Agent for PeopleSoft (CA WA Agent for PeopleSoft)
- CA Workload Automation Agent for Oracle E-Business Suite (CA WA Agent for Oracle E-Business Suite)
- CA Workload Automation Restart Option EE (CA WA Restart Option)
- CA Spectrum® Service Assurance (CA Spectrum SA)

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Contents

Chapter 1: Working with Alerts

This section contains the following topics:

Alert Notifications

An Alert notification can trigger additional workload automatically. When a job reaches the state specified in the Alert notification, the server automatically triggers the Event defined in the Alert. For example, when the last job of an Application completes, an Alert can trigger an Event to run another Application. You can trigger an Event for all jobs or specific jobs in an Application.

An Alert notification can also run a JavaScript script automatically. When a job reaches the state specified in the Alert notification, the server automatically runs the JavaScript script defined in the Alert.

An Alert can run a JavaScript script to execute commands such as the following:

- Resubmitting a job
- Completing a job or Application
- Dropping job dependencies
- Dropping resource dependencies
- Resetting time dependencies
- Bypassing a job
- Holding and releasing jobs or Applications
- Resetting resource availability counts

You can store the scripts for these actions in a central repository.

For example, you can set up an Alert to run a JavaScript script to complete an Application when a job is overdue or resubmit a job if it completes with a particular exit code before a specific time.

In the JavaScript script that the Alert runs, you can use built-in variables. When the Alert runs, the server sets those variables. These variables are only available in the JavaScript script that specific Alert runs. You can assign these variables to other variables so that other JavaScript scripts can use them.

Define an Alert that Triggers the Event

You can define an Alert to trigger an Event when a job reaches a particular state.

To define an Alert

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Alerts under your server connection, and click New from the pop-up menu.

   The New Alert view opens.

3. Enter the Alert name in the Alert name field.
4. Select the Trigger an Event option button.
5. Enter the Event prefix and Event name, and click the Save icon.

   The Alert is defined.

More information:

Create an Event that the Alert Triggers (see page 52)

Define an Alert that Runs the JavaScript Script

You can define an Alert to run a JavaScript script when a job reaches a particular state.

To define an Alert that runs the JavaScript script

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Alerts under your server connection, and click New from the pop-up menu.

   The New Alert view opens.

3. Enter the Alert name in the Alert name field.

4. Do *one* of the following:

   - To run a script from the repository, select the Run a JavaScript from Repository option button, and select the script from the Name drop-down list.

     The script appears in the editor, but it cannot be edited. Skip to the last step.

   - To import a script from your local computer or a network drive, select the Run this JavaScript option button, click Import, browse to the script, and click Open.

     The imported script appears in the editor.

   - To define a script, select the Run this JavaScript option button, and type the script content in the editor.

5. (Optional) Press Ctrl+spacebar in the editor to invoke content assist.

   A pop-up displays the built-in JavaScript variables and functions that you can use in the script. The pop-up also displays the native JavaScript functions and objects.

   Notes:

   - You can filter the variables, objects, and functions that appear in the pop-up. For example, if you type **file** and invoke content assist, the pop-up displays all server built-in functions that begin with file. You can further filter the list in the pop-up by typing additional text, for example, **_l**.

   - To display the description of a built-in JavaScript variable or function, select the variable or function in the pop-up. You cannot display the description of a native JavaScript function or object. For more information about the native JavaScript functions and objects, visit the ECMA International website (www.ecma-international.org) and search for the ECMA-262 Standard for scripting languages.

   - The pop-up displays all global variables and functions. To display all variables and functions that belong to an object or context, type the object or context name followed by a period in the editor. For example, if you type **APPL.**, a pop-up displays all the APPL built-in variables and functions.

6. Select a variable or function in the list and press Enter to insert it in the script.

   The selected variable or function appears in the editor.

7. (Optional) Click Check Syntax to validate the syntax of the script.

   Errors and warnings, if any, are displayed in a dialog. The errors are also highlighted in the editor.

   Note: After you correct the script, click Check Syntax again. Repeat until you do not receive any errors or warning messages. Click OK to close the dialog.

8. (Optional) Click Export to save the script on your local computer or a network drive. Browse to the location where you want to save the script, enter a file name, and click Save.

9. Click the Save icon to save the Alert.

   The Alert is defined.

Note: For more information about JavaScript expressions and built-in functions, see the *Programming Guide*.

More information:

JavaScripts (see page 83)

Delete an Alert

You can delete an Alert if it is no longer in use.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Alert under your server connection, and click Delete from the pop-up menu.

   The Alert view opens.

3. Right-click the resource that you want to delete, and click Delete from the pop-up menu.

   If the resource being deleted is associated with any Applications, the Affected Artifacts dialog opens, and lists the Applications that are affected by the deletion. Otherwise, a confirmation dialog appears, and you can skip the next step.

   Note: If you selected multiple resources, the Affected Artifacts dialog lists all of the Applications that are affected by the deletion of the selected resources.

4. Select one of the following, if applicable.

   - Yes—Proceeds with the deletion.

     The Alert is permanently deleted.

   - No—Cancels the deletion request.

     Note: To avoid the warning, you can update the Alert notifications specified in the Application definition.

5. Click Yes in the confirmation dialog, if applicable.

   The Alert is permanently deleted.

Chapter 2: Working with Calendars

This section contains the following topics:

Calendars

CA Workload Automation DE has many integrated scheduling terms, such as dates and times. Your enterprise may want to set up additional scheduling terms, such as holidays, special days, and special processing periods, which are unique to your enterprise. You can define these terms in CA Workload Automation DE using a calendar.

CA Workload Automation DE uses one or more calendars to store definitions of scheduling elements unique to your installation. You can define calendars to meet your installation requirements. Your CA Workload Automation DE administrator controls access to these calendars.

A calendar contains the following:

- Holidays (holidays can span one day or several days)
- Special days such as inventory day, company meeting, or pay day
- Special processing periods such as fiscal months, fiscal years, and 4-5-4 periods
- Days of the week considered to be workdays

Different groups of users can have their own unique holidays, special days, and periods. After you have set up calendars that meet your needs, you can use these calendars to schedule workload.

CA Workload Automation DE includes a default calendar, named the SYSTEM calendar. You can use the SYSTEM calendar to store holidays and special days that are common to many Applications within your organization. You can store department-specific holidays and special days in as many additional calendars as required.

Note: The SYSTEM calendar cannot be deleted.

Holidays

A holiday is a non-workday with a special significance for scheduling at your installation. If a holiday coincides with a workday in the calendar you are using, the server no longer considers the day to be a workday for scheduling purposes. A single calendar can contain multiple holidays.

After you define a holiday, you can use it in scheduling criteria.

For example, if you want to schedule an Application at 16:00 every holiday, specify the following scheduling criteria in the Event definition:

```
16:00 HOLIDAY
```

If you want to schedule a job a day before a bank holiday, specify the following run frequency in the job definition:

```
BANK_HOLIDAY LESS 1 WORKDAY
```

When you specify the run frequency of a job in an Application, you can advance, delay, or ignore processing of a job based on a holiday as shown in the following examples.

Example: Advance a job on a holiday

The following run frequency instructs the server to run a job on Friday unless Friday is a holiday:

```
RUN FRIDAY LESS 0 WORKDAYS
```

If Friday is a holiday, the job runs on the previous workday, Thursday. If Thursday is also a holiday, the job may actually run on Wednesday.

Example: Delay a job on a holiday

The following run frequency instructs the server to run a job on Friday unless Friday is a holiday:

```
RUN FRIDAY PLUS 0 WORKDAYS
```

If Friday is a holiday, the job runs on the next workday, Monday. If Monday is also a holiday, the job may actually run on Tuesday.

Example: Ignore processing on holidays

The following run frequency instructs the server to run a job on Friday unless Friday is a holiday:

```
RUN FRIDAY EXCEPT HOLIDAYS
```

If Friday is a holiday, the job does not run.

More information:

Define a Holiday (see page 22)

Special Days

A special day is a user-defined day with special significance for scheduling in your installation. A single calendar can contain multiple special days.

After you define a special day, you can use it in scheduling criteria.

For example, if you want to schedule an Application at 5 p.m. on a special day named BALANCE_DAY, specify the following scheduling criteria in the Event definition:

```
5PM BALANCE_DAY
```

If you want to schedule an Application at 3 p.m., two workdays before a special day named BALANCE_DAY, specify the following scheduling criteria in the Event definition:

```
3PM BALANCE_DAY LESS 2 WORKDAYS
```

If you want to schedule an Application one week after a special day named BALANCE_DAY at 4 p.m., specify the following scheduling criteria in the Event definition:

```
16:00 BALANCE_DAY PLUS 1 WEEK
```

If you want to schedule a job on the first Saturday on or after a special day named BALANCE_DAY, enter the following run frequency in the job definition:

```
1ST SATURDAY OF BALANCE_DAY
```

More information:

Define a Special Day (see page 23)

Special Processing Periods

A special processing period is a period of processing between two special days, such as a fiscal month, with special significance to your installation. To define a special period, you define two special days with the same name, representing the length of the special period.

Special processing periods can occur at regular intervals, such as a fiscal year or 4-5-4 period, or at irregular intervals, such as a trading period. One trading period, for example, can start three weeks after the beginning of the previous trading period and five weeks before the beginning of the next.

Individual users or groups of users can have their own set of special processing periods. A single calendar can contain multiple special processing periods.

After you define a special period, you can use it in scheduling criteria.

For example, the Accounting department considers the period from September 1 to August 31 as its fiscal year. You can define a special processing period in a calendar and call that period FISCAL_YEAR. You can perform special processing during that period by referencing FISCAL_YEAR when setting up scheduling criteria for the processing.

If you want to schedule a job on the last workday of each 4-5-4 period, specify the following run frequency in the job definition:

```
LAST WORKDAY OF PERIOD454
```

If you want to schedule a job on the first workday of the current 4-5-4 period, specify the following run frequency in the job definition:

```
1ST WORKDAY OF THIS PERIOD454
```

If you want to schedule a job on the last workday of the second week of each 4-5-4 period, specify the following run frequency in the job definition:

```
LAST WORKDAY OF THE 2ND WEEK OF PERIOD454
```

You do not need to know the day of the week or the date to which each statement refers. The server calculates it.

More information:

Define a Special Processing Period (see page 27)

Create a New Calendar

You can create a calendar in the Services perspective to store department-specific holidays and special days.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Calendars under your server connection, and click New from the pop-up menu.

   The New Calendar view opens.

3. Enter the calendar name and additional information as appropriate.

   Note: You can use the Remarks text box to maintain the calendar's change history.

4. Click the Save icon.

   The calendar is created.

Copy an Existing Calendar

You can copy a calendar in the Services perspective and save it with a different name to create a new calendar.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Calendars under your server connection, and click Open from the pop-up menu.

   The Calendars view opens.

3. Right-click the calendar you want to copy and select Open.

   The calendar definition details appear.

4. Click the Copy icon.

   The New Calendar view opens.

5. Enter a new calendar name and modify the remaining fields as appropriate.

6. Click the Save icon.

   The new calendar is saved.

View or Modify a Calendar

You can view and modify an existing calendar in the Services perspective if you need to change its details.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Calendars under your server connection, and click Open from the pop-up menu.

   The Calendars view opens.

3. Right-click the calendar you want to view and select Open.

   All the details of the calendar appear.

4. (Optional) Modify the details and click the Save icon.

   The modified calendar is saved.

Delete a Calendar

A calendar may exist for a specific purpose. Once that purpose is fulfilled, you can delete the calendar. Deleting a calendar deletes all its contents, including holidays, special days, and special periods. You cannot delete the SYSTEM calendar.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Calendars under your server connection, and click Open from the pop-up menu.

   The Calendars view opens.

3. Right-click the calendar you want to delete, and select Delete from the pop-up menu.

   If the calendar being deleted is associated with any Events, the Affected Artifacts dialog opens and lists the Events that are affected by the deletion. Otherwise, a confirmation dialog appears, and you can skip the next step.

   Note: If you selected multiple calendars, the Affected Artifacts dialog lists all of the Events that are affected by the deletion of the selected calendars.

4. Select one of the following, if applicable.

   - Yes—Proceeds with the deletion.

     The calendar is permanently deleted.

     Note: Deleting a calendar that is referenced from an Event causes a processing error in the Event.

   - No—Cancels the deletion request.

     Note: To avoid the warning, you can update the calendar specified in the Event definition.

5. Click Yes in the confirmation dialog, if applicable.

   The calendar is permanently deleted.

Define a Holiday

You can add a holiday to your calendar to define a specific date or range of dates as non-workdays.

Follow these steps:

1. Open the calendar definition.
2. Click New in the Holidays section of the calendar definition.

   The Holiday definition dialog opens.
3. Complete the fields as appropriate, and click OK.

   You can select either an occurrence or a specific date. In the occurrence you can select a relative day (for example, 1st day of January) or a specific day of the week (for example, 4th Thursday of November).

   Note: You can define a holiday multiple times for future years by selecting the Repeat for next check box and entering the number of years in the years text box.

   The defined holiday is listed in the selected calendar.
4. Click the Save icon.

   The holiday is defined in the calendar.

Example: Define an Annual Holiday

New Year's Day occurs annually on January 1st. You can define New Year's Day for five years starting on January 1, 2008.

To define January 1st as an annual holiday

1. Open the calendar definition.
2. Click New in the Holidays section of the calendar definition.

   The Holiday definition dialog opens.
3. Enter NEWYEARSDAY as the holiday name.
4. Select the Date option button in the Occurrences section and select Jan 1, 2008 as the date.
5. Select the Repeat for next check box and enter 5 as the number of years.
6. Click OK and then click the Save icon.

   NEWYEARSDAY is defined as an annual holiday in the calendar.

Example: Define a Holiday That Occurs on a Different Day Each Year

In the United States, Thanksgiving is celebrated on the fourth Thursday in November. You can define Thanksgiving for the next three years.

To define an annual holiday that occurs on a different day each year

1. Open the calendar definition.
2. Click New in the Holidays section of the calendar definition.

   The Holiday definition dialog opens.
3. Enter THANKSGIVING as the holiday name.
4. Select the 4th option button in the Occurrences section.
5. Select the specific day option button in the Day of Month section, and select Thursday as the day and November as the month.
6. Select the Repeat for next check box and enter 3 as the number of years.
7. Click OK and then click the Save icon.

   THANKSGIVING is defined as an annual holiday in the calendar.

More information:

Holidays (see page 16)

Define a Special Day

You can define a special day to your calendar to define a day with special significance for scheduling at your installation.

Follow these steps:

1. Open the calendar definition.
2. Click New in the Special Days section of the calendar definition.

   The Special day definition dialog opens.
3. Complete the fields as appropriate, and click OK.

   Note: To define a special day that repeats at a regular interval, select the Repeat check box in the Frequency section and specify how often the special day repeats in days, weeks, or years.

   The defined special day is listed in the selected calendar.
4. Click the Save icon.

   The special day is defined in the calendar.

Example: Define a Special Day that Occurs Only Once

The All Company Meeting is a special day that occurs only once on June 29, 2008.

To define a special day that occurs only once

1. Open the calendar definition.
2. Click New in the Special Days section of the calendar definition.

   The Special day definition dialog opens.
3. Enter ALL_COMPANY_MEETING as the special day name.
4. Enter Jun 29, 2008 as the starting date.
5. Click OK and then click the Save icon.

   ALL_COMPANY_MEETING is defined as a special day in the calendar.

Example: Define an Annual Special Day

Fiscal Day occurs every January 1st annually for the next three years. This special day repeats on the following days:

- Jan 1, 2008
- Jan 1, 2009
- Jan 1, 2010

To define an annual special day

1. Open the calendar definition.
2. Click New in the Special Days section of the calendar definition.

   The Special day definition dialog opens.
3. Enter FISCAL_DAY as the special day name.
4. Enter Jan 1, 2008 as the starting date.
5. Select the Repeat check box and enter 3 as the number of times.
6. Enter 1 in the every text box and select years.
7. Click OK and then click the Save icon.

   FISCAL_DAY is defined as an annual special day for the next three years.

Example: Define a Special Day that Occurs Every Two Weeks

Pay Day occurs every two weeks (or every 14 days) starting Jan 1, 2008. This special day repeats on the following days:

- Jan 1, 2008
- Jan 15, 2008
- Jan 29, 2008
- ...

To define a special day that occurs every two weeks

1. Open the calendar definition.
2. Click New in the Special Days section of the calendar definition.

   The Special day definition dialog opens.
3. Enter PAY_DAY as the special day name.
4. Enter Jan 1, 2008 as the starting date.
5. Select the Repeat check box and enter 26 as the number of times.
6. Enter 2 in the every text box and select weeks.
7. Click OK and then click the Save icon.

   PAY_DAY is defined as a reoccurring special day in the calendar.

Example: Define a Special Day That Occurs on Specific Non-repeating Days

Inventory Day is a special day that repeats on dates that do not have a specific frequency. For example, this special day occurs on the following days:

- February 21, 2008
- April 20, 2008
- June 13, 2008

In this scenario, you must define this special day three times, one for each date.

To define a special day that occurs on specific days

1. Open the calendar definition.
2. Click New in the Special Days section of the calendar definition.

   The Special day definition dialog opens.
3. Enter INVENTORY_DAY as the special day name.
4. Enter Feb 21, 2008 as the starting date.
5. Click OK and then click the Save icon.
6. Repeat the above steps for the dates April 20, 2008 and June 13, 2008 with INVENTORY_DAY as the special day name.

   INVENTORY_DAY is defined as a repeating special day in the calendar.

More information:

Special Days (see page 17)

Define a Special Processing Period

You can define a special processing period to your calendar to define a period with special significance for scheduling at your installation.

Follow these steps:

1. Open the calendar definition.
2. Click New in the Special Days section of the calendar definition.
3. The Special day definition dialog opens.
4. Enter a name for the special period in the Special day name field.
5. Select the date when you want the first period to start from the calendar in the Starting date field, and click OK.

   The start of the first special period is defined.
6. Click New in the Special Days section of the calendar definition.

   The Special day definition dialog opens.
7. Enter the same name for the special period in the Special day name field.
8. Select the date when you want the next period to start from the calendar in the Starting date field, and click OK.

   The end of the first special period is defined.
9. Repeat the above steps for the remaining periods.
10. Click the Save icon.

    The special period is defined in the calendar.

Example: Define a Fiscal Year

Suppose that you want to define a fiscal year from September 1st to August 31st.

To set up a fiscal year

1. Open the calendar definition.
2. Click New in the Special Days section of the calendar definition.

   The Special day definition dialog opens.
3. Enter **FISCALYEAR** as the special day name.
4. Select September 1 of the current year as the starting date and click OK.

   The start of the fiscal year is defined.
5. Click New in the Special Days section of the calendar definition.

   The Special day definition dialog opens.
6. Enter **FISCALYEAR** again as the special day name.

7. Select September 1 of the following year as the starting date and click OK.

   The start of the next fiscal year is defined.

   Note: By using September 1st as the start date for the second special day, the server considers August 31st as the last day of the fiscal year.

8. Click the Save icon.

   FISCAL_YEAR is defined as a special period in the calendar.

Example: Define a Period That Repeats Every Two Weeks

Suppose that you want to define payroll periods to occur every two weeks.

To set up payroll periods every two weeks

1. Open the calendar definition.
2. Click New in the Special Days section of the calendar definition.

   The Special day definition dialog opens.

3. Enter **PAYROLL_PERIOD** as the special day name.
4. Select January 1 of the current year as the starting date.
5. Select the Repeat check box and enter **26** as the number of times.
6. Enter **2** in the every text box and select weeks.
7. Click OK.

   The dates your special day falls on is listed in the Special Days section.

8. Click the Save icon.

   PAYROLL_PERIOD is defined as a special period in the calendar.

More information:

Special Processing Periods (see page 18)

Chapter 3: Working with Events

This section contains the following topics:

Active Events

After an Event is defined on the server, it becomes active.

With scheduled Events, the server schedules them based on their schedule criteria. When you view a scheduled Event, the server displays the Event's next scheduled time.

With monitor Events, the agent monitoring the trigger criteria begins monitoring immediately.

With manual Events (Events without scheduling or trigger criteria), you can trigger them at any time or issue commands against them to prevent them from triggering.

You can issue commands against Events to do the following:

- Trigger the Event manually.
- Bypass and unbypass the next scheduled execution or future scheduled execution of an Event (scheduled and manual Events only).
- Hold an Event, preventing the Event from triggering until you release it.
- Suspend an Event, postponing the Event from triggering until you resume it.
- Unquiesce an Event, releasing the scheduled Event from a quiesced state. However, the missed executions are not triggered.

Note: To run commands against Events, you require the appropriate security permissions. For more information, contact your administrator.

Event Schedule

You can display a list of Events scheduled within a specific time period (default is next 24 hours). For each scheduled Event, the server displays the Event name and its scheduled time.

Note: To display detailed information about the jobs scheduled to run in a specific period, you can run a forecast report.

If an Event is scheduled more than once during the period you specify, the server, by default, only displays the time of the first execution. You can specify the number of Event executions the server displays. For example, you can request that the server displays the next five executions of Event CYBER.BACKUP within the next two weeks. If Event CYBER.BACKUP is scheduled to execute 10 times within the next two weeks, only the times and dates for the first five executions appear.

Note: Suspended Events do not appear on the schedule. Non-scheduled Events do not appear on the schedule unless they have an expect time, which indicates an expected time for execution.

More information:

List Scheduled Events (see page 40)

Event Trigger

You may need to trigger workload manually for the following reasons:

- To run a non-scheduled Event
- To alter the next scheduled time of a scheduled Event
- To add a new scheduled Event execution
- To trigger the Event, but hold the Application it submits
- To pass user parameters to the Application
- To run a subset of jobs in the Application

By default, when you trigger an Event manually, the Application triggered by the Event runs with the security permissions of the execution user specified in the Event definition. If you want the Application to run with the security permissions of the user triggering the Event, you can use the inherit trigger user (ITU) option in the Event definition.

When the Event triggers, the execution user requires the appropriate permissions to read the Application triggered by the Event. When each job runs in the Application, the execution user requires the appropriate permissions to run the job on the agent and to read any global variables specified in the job.

More information:

Trigger an Event (see page 42)

Scheduled and Manual Event Trigger

You can trigger a scheduled or manual Event by specifying schedule criteria that resolves to a single date and time. The default time is now.

Note: If you specify a time in the past (for example, to rerun an Application), the Event triggers now, but jobs are selected and variables resolved based on the past date.

When triggering workload manually, you can specify the following:

- Time only (for example, 4PM). The server triggers the Event at the next occurrence of that time.
- Specific date and, optionally, time (for example, 8:00 JULY 23)
- Relative date and, optionally, time in past or future (for example, YESTERDAY, TODAY LESS 1 WEEK)

When triggering a scheduled Event or manual Event with an expect time, you can add a new scheduled Event execution as a temporary addition to the schedule or replace the Event's next scheduled or expected execution.

Add a New Scheduled Event Execution

Adds a new scheduled Event execution to the Event's usual schedule. For example, suppose that your Event is scheduled to run at 4 p.m. daily, and you want to trigger the Event now and again at 4 p.m. today. This behavior is the default.

Replace an Event's Next Scheduled or Expected Execution

Replaces the Event's next scheduled or expected execution with a new time. For example, suppose that your Event is scheduled to run at 4 p.m. daily, but you want the Event to run now instead of at 4 p.m.

When you replace an Event's next scheduled or expected execution, the server selects jobs and resolves symbolic variables based on the replaced time, and updates the next scheduled or expected execution time. For example, if you have an Event that runs every Saturday and this week you trigger the Event to run on Friday instead, the server selects the jobs and resolves symbolic variables based on Saturday's date. The server uses the following Saturday as the next scheduled or expected execution time.

Monitor Event Trigger

Monitor Events monitor for a specific condition and trigger each time the condition occurs (for example, a file being created).

If the monitor Event has an expect time, the server selects jobs and resolves variables based on the Event's next expected time. If the monitor Event does not have an expect time, the server selects jobs and resolves variables based on the current time.

Root Jobs

Sometimes, you may need to run only part of an Application. For example, you may want to run part of an Application to rerun one or more jobs or to run a job when a request comes in for it to run.

To run part of an Application, you can choose a subset of jobs within the Application when you trigger the Event that runs it. The jobs within the subset are named root jobs.

To specify the root jobs, you can specify any one of the following:

- A single job name, such as PAYROLL. You must include the job name qualifier if a qualifier exists, for example, PAYROLL.ABC.
- A job name followed by a plus (+) sign, which indicates to include the job and all its successors (descendants). For example, D+ selects job D and all its successor jobs.
- A list that contains job names with optional plus signs, for example, A,C,E+. Separate the job names using commas. The job name order does not matter.

Example: Root Jobs

Suppose that, in an Application, jobs A, B, C, and D run daily, job E runs Friday, and job F runs on the last workday of the month.

The following table shows the result of using different syntax to specify root jobs:

Root jobs to run	Result
A	The server selects job A. Job A runs
D+	The server selects and runs job D. If it is Friday, the server also selects and runs job E. If it is the last workday of the month, the server also selects and runs job F.
A, E	The server selects job A and job E. Job A and job E run. Job E runs regardless of the day because it is specified explicitly.
A, D+	The server selects job A and job D. Job A and job D run. If it is Friday, the server also selects and runs job E. If it is the last workday of the month, the server also selects and runs job F.

When the server builds the Application containing the root jobs, it inherits the relationships between jobs unless the Application definition overrides job inheritance. The server also considers release conditions when it generates the Application containing the root jobs.

To ensure you run the correct jobs within your Application, you should simulate the Event before you trigger it, specifying the same root jobs to run in the simulation.

Note: You can use symbolic variables to specify root jobs if the job names are defined using variables. You can specify the job name as a variable or as the resolved name.

Event Bypass and Unbypass

To prevent an execution of an Event from triggering, you can bypass the Event execution. You can bypass the next scheduled execution or future scheduled executions of an Event. You can only bypass scheduled and manual Events.

For example, suppose that an Event triggers at 7 p.m. daily. At 3 p.m., you decide that the Event should not run that night. To prevent the Event from running the one time, you bypass the next scheduled execution of the Event.

When you list the Events scheduled within a specific period, Event executions to be bypassed are displayed in a different color. You can view the details of a bypassed Event execution to find out which user requested the bypass and when the request was made.

You can unbypass a bypassed Event execution before the server bypasses the Event execution. For example, if an Event execution is bypassed by mistake, you can undo the action by unbypassing the Event execution. At the Event execution's scheduled time, the server triggers the Event as usual.

Important! If an Event is modified, the server reschedules the Event and all existing bypass requests against that Event are lost.

Example: Lost Bypass Requests

Consider the following scenario:

- An Event is scheduled to trigger on Monday, Tuesday, and Thursday.
- A user decides to bypass the Event execution scheduled next Tuesday and issues a bypass request.
- Before next Tuesday, the user opens the Event, adds some comments in the Remarks text box, and saves the Event on the server.

Because the Event was modified, the server reschedules the Event for Monday, Tuesday, and Thursday. The bypass request is lost and must be issued again.

More information:

Bypass the Next Scheduled Execution of an Event (see page 45)
Unbypass the Next Scheduled Execution of an Event (see page 45)
Bypass a Future Scheduled Execution of an Event (see page 46)
Unbypass a Future Scheduled Execution of an Event (see page 46)

Skipped Bypass Requests

Event bypass requests can be skipped if the scheduled time of an Event execution changes after the bypass request is made. For example, a bypass request can be skipped if an Event is manually triggered to replace the Event's next scheduled execution or if the definition of a special day used in an Event's scheduling criteria changes. You can list skipped (invalid) bypass requests.

Example: Skipped Bypass Requests

Consider the following scenario:

- A special day named festivus is defined in a calendar for the following days: June 10, August 10, and September 10.
- An Event is scheduled is to run on the days defined by the festivus special day. In the Event definition, the scheduling criteria references the special day (for example, SCHEDULE 9AM FESTIVUS).
- A user decides to bypass the Event execution scheduled on August 10 and issues a bypass request.
- Another user updates the definition of the festivus special day, replacing August 10 with August 11.

Because the Event no longer triggers on August 10, the bypass request for August 10 is now invalid and will be skipped. Instead of August 10, the Event triggers on August 11.

More information:

List the Skipped Bypass Requests of an Event (see page 47)

Event Hold and Release

You may need to postpone an Event at times. To postpone an Event, you must instruct the server to hold it. The Event remains in the on hold state until you release it. When you want to release the Event, you instruct the server to release it.

The server marks an Event as overdue in the following cases:

- For scheduled Events—if an Event's scheduled time occurs while the Event is being held
- For monitor Events—if an Event's condition is met (for example, a file is created for a File Trigger Event) while the Event is being held

When you release an overdue Event from hold, the server immediately triggers the Event once, regardless of the number of missed executions. The server uses the time and date of the last missed execution to select the jobs and resolve scheduled variables.

Note: If you want to prevent future executions of an Event from triggering, suspend the Event instead. When you resume the Event, the missed executions are skipped. If an Event is both suspended and held at its scheduled execution time, the server ignores the on hold state and considers the Event suspended.

Example: Hold and Release an Event

Consider the following scenario:

- At 3 p.m., you are asked to postpone an Event named ACCNT.PAYROLL, which is usually processed at 4 p.m. daily.
- You hold the Event named ACCNT.PAYROLL.
- At 4 p.m., the server does not process ACCNT.PAYROLL because it is on hold.
- At 5 p.m., you are instructed to let ACCNT.PAYROLL process.
- You release the Event named ACCNT.PAYROLL.

By default, the Event then processes because the server knows the Event missed its scheduled execution at 4 p.m.

Event Hold Counts

When you hold an Event, its hold count increments by 1. When the hold count of an Event is greater than zero, the server does not trigger the Event. The server keeps track of missed executions.

When you release an Event, its hold count decrements by 1. When the hold count reaches zero, the Event is eligible to be triggered again.

Event Suspend and Resume

To prevent an Event from triggering, you can instruct the server to suspend it. The Event remains suspended until you resume it. When you want the Event to resume its execution, you instruct the server to resume it.

Note: An Event can be automatically suspended and resumed at certain times. For more information about automatically suspending and resuming an Event, see the *Define Perspective Help*.

The server handles suspended Events as follows:

- For scheduled Events—The server does not schedule the Event until the Event is resumed. The server ignores any missed scheduled executions while the Event is suspended.
- For monitor Events—The server does not trigger the Event until the Event is resumed. The agent monitoring for the Event stops monitoring while the Event is suspended.
- For manual Events—you cannot trigger the Event until the Event is resumed.

Note: If you want the server to trigger missed Event executions when the Event is eligible for execution, hold the Event instead. When you release the Event, the server triggers the last missed execution while the Event was on hold. If an Event is both suspended and held at its scheduled or expected execution time, the server ignores the on hold state and considers the Event suspended.

Example: Suspend and Resume an Event

Consider the following scenario:

- On August 2nd at 3 p.m., you are told that the ACCNT.PAYROLL Event should not process until August 23rd. This Event is usually processed at 4 p.m. each day.
- You suspend ACCNT.PAYROLL.
- On August 2nd at 4 p.m., the server does not process ACCNT.PAYROLL because it is suspended.
- Every day after August 2nd, at 4 p.m. the server sees that ACCNT.PAYROLL is suspended and does not process this Event.
- On August 23rd, prior to 4 p.m., you resume ACCNT.PAYROLL as requested.
- On August 23rd at 4 p.m., the server finds that the Event has been resumed, so it processes the Event as scheduled.

More information:

Suspend an Event (see page 48)
Resume a Suspended Event (see page 49)

Event Suspend Counts

When you manually suspend an Event, its suspend count increments by one. When the suspend count of an Event is greater than zero, the server bypasses all executions of the Event.

When you manually resume an Event, its suspend count decrements by 1. When the suspend count reaches zero, the Event is eligible for execution. For scheduled Events, the Event triggers at its next scheduled execution. For monitor Events, the agent resumes monitoring.

Note: When you schedule an Event to resume, the Event will become eligible for execution, regardless of what its suspend count is.

Monitor Event Statuses

When you define a monitor Event and save it to the server, the Event becomes active and the agent starts monitoring. If the agent is down, the Event becomes inactive until the problem is resolved.

The server displays one of the following Event statuses:

Active

Indicates that the Event is active. The agent monitors for the trigger condition.

Not active: Agent down

Indicates that the agent is down or there is a communication problem between the agent and the server. The agent needs to be restarted or the communication problem needs to be resolved.

Not active: <problem reported by the agent>

Indicates that the agent is experiencing a problem. The Status field displays the agent status and the last status message sent by the agent.

Suspended

Indicates that the Event is suspended and needs to be resumed.

More information:

Check the Status of a Monitor Event (see page 51)

List Events

To update, control, or check the status of Events defined on your system, you must list them.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Events under your server connection, and click Open from the pop-up menu.

   The Events view opens.

3. (Optional) Enter the complete or partial Event prefix in the Event prefix field to limit the Events displayed, or leave the field blank to display all Event prefixes.

   Note: You must include a wildcard for a partial name. For example, CYB* lists all the Events whose prefixes start with CYB.

4. (Optional) Enter the complete or partial Event name in the Event name field to limit the Events displayed, or leave the Event name field blank to display all Event names..

   Note: You must include a wildcard for a partial name. For example, EVT* lists all the Events whose names start with EVT.

5. (Optional) Clear the check boxes of the Event triggers you do not want to list.

6. Click the arrow next to the Event prefix drop-down list.

   A list of the Events matching your criteria is displayed.

7. (Optional) Right-click an Event in the Events view, and select Open from the pop-up menu to show the Event definition.

   Note: In the Event definition, you can review the details of the Event, for example, the file being monitored in a File Trigger Event.

Note: To refresh the list, right-click the list and select Refresh from the pop-up menu.

List Scheduled Events

You can display a list of Events scheduled within a specific time period (the default is the next 24 hours). For each scheduled Event execution, the Event name, its scheduled time, and bypass status are displayed, as well as whether the Event execution was manually triggered.

Follow these steps:

1. List the Events in the Services perspective.
2. Right-click the list in the Events view, and select List Scheduled Events from the pop-up menu.

   The List Scheduled Events dialog opens.
3. Complete the following fields as appropriate:

   Prefix

   Specifies an Event prefix.

   Note: You can use wildcards to display Events with similar prefixes. Use the asterisk (*) wildcard to match zero or more characters. For example, to list all Event prefixes that begin with CYB, enter **CYB***. To display all prefixes, enter ***.

   Name

   (Optional) Specifies an Event name.

   Note: You can use wildcards to display Events with similar names. Use the asterisk (*) wildcard to match zero or more characters. For example, to list all Event names that begin with EVT, enter **EVT***. To list all Event names, enter ***** or leave blank.

   Starting at

   Specifies the starting time and date of the schedule's period.

   Default: Now

   Note: To select a date and time, click the button to the right of the Starting at field and select the time from the Select date and time dialog.

   Continuing for

   Specifies the length of the schedule's period in hours, workdays, days, or weeks.

   Default: 1 day

Count

(Optional) Specifies the number of Event executions that are displayed.

Default: Next execution

4. Click List.

   The Event executions scheduled during the period you specified are displayed in the Results table. Event executions to be bypassed are displayed in a different color.

More information:

Event Schedule (see page 30)

View Details of an Event Execution

You can display additional information about an Event execution. The additional information includes details about bypassed and manually triggered Event executions, as well as any Application parameters defined in the Event.

Follow these steps:

1. List scheduled Events in the Services perspective (see page 40).
2. Select an Event execution in the Results table to view its details.
3. Click Display.

   The execution details of the selected Event are displayed in the right pane of the List Scheduled Events dialog.

   Note: You can select another Event execution to display its details while the right pane is open. However, you cannot view the Event execution details and the context-sensitive help simultaneously.

4. (Optional) Click Details again to hide the details.

   The right pane of the dialog closes.

Trigger an Event

You can trigger an Event to run the Application, forecast, or report at a specified time.

Note: For Date-Time/Manual and monitor Events, you can also trigger your Event from within your Application in the Define perspective. In the Application Events view, right-click the Event and select Trigger from the pop-up menu.

Follow these steps:

1. List the Event you want to trigger in the Services perspective.
2. Right-click the Event you want to trigger in the Events view, and select Trigger from the pop-up menu.

   The Trigger Event dialog opens.
3. Complete the following fields as appropriate:

   Schedule criteria

   (Optional) Specifies the time and the date when the Event triggers.

   Default: Trigger the Event immediately

   Note: This field does not apply to monitor Events.

   Root jobs to run

   (Optional) Specifies the jobs that are to be submitted when the Event is triggered. You can use this field to run, or rerun, a subset of jobs within the Application. Separate the list of jobs to run with commas. For example, enter **A,B,C**. To select a job with all of its successors (descendants), append a plus sign (+). For example, enter **D+**.

   Note: This field does not apply to Forecast and Report Events.

   Add new scheduled Event/Replace next scheduled Event

   Indicates whether to add a new scheduled Event execution to the Event's usual schedule or replace the Event's next scheduled or expected execution with a new time.

   Default: Add new scheduled Event

   Notes:

   - This field does not apply to monitor Events.
   - You can override the default value for this option. From the main menu, select Window, Preferences, Desktop Client, Services Perspective, Event.

Submit Application on hold

(Optional) Indicates whether to submit the Application on hold when the Event is triggered.

Default: Not on hold

Notes:

- This field does not apply to Forecast and Report Events.
- You can override the default value for this option. From the main menu select Window, Preferences, Desktop Client, Services Perspective, Event.

User Parameters to pass to Event

(Optional) Specifies the parameter fields to pass user information to the Application that the Event triggers.

Note: This field does not apply to Forecast and Report Events.

4. (Optional) Specify variables to pass to the monitor Event in the variables section. When the Event triggers, the server substitutes the values of these variables in the Application triggered by the Event. For example, when you trigger a File Trigger Event, you can specify a file name, and the server substitutes this file name in the APPL._filename symbolic variable wherever it occurs in the Application.

   Note: This step does not apply to Date-Time/Manual, Forecast, and Report Events.

5. Click OK.

   The server triggers the Event at the resolved time.

More information:

Event Trigger (see page 31)

Run Part of an Application

You can run part of an Application to rerun one or more jobs or to run a specific job when a request comes in for it to run.

Note: You can also run part of your Application from within your Application in the Define perspective. In the Event Triggers workspace, right-click the Event and select Trigger from the pop-up menu.

Follow these steps:

1. List the Events you want to run in the Services perspective.
2. Right-click the Event in the Events view, and select Trigger from the pop-up menu.

   The Trigger Event dialog opens.
3. Do one of the following:
   - Specify the root jobs you want to run in the Application in the Root jobs to run field.

     Note: Separate the list of jobs to run with commas. For example, enter **A,B,C**. To select a job with all of its successors (descendants), append a plus sign (+). For example, enter **D+**.
   - Select jobs with the following steps:
     a. Click Select Jobs.

        The Select jobs dialog opens.

     b. Select the root jobs from the Jobs in Application section, and click Add to select a job without its successors or click Add with Successors to select a job and all of its successors (descendants).

        Note: Press the Ctrl key while making your selections to select multiple jobs at once.

     c. Click OK.

        The Select jobs dialog closes.
4. Click OK.

   The server runs the subset of the Application that you specified.

More information:

Root Jobs (see page 33)

Bypass the Next Scheduled Execution of an Event

You can bypass the next scheduled execution of an Event to prevent the server from triggering it at its scheduled time.

Follow these steps:

1. List the Event you want to bypass in the Services perspective.
2. Right-click the Event in the Events view, and select Bypass from the pop-up menu.

   A confirmation dialog opens.
3. Click Yes.

   The server bypasses the next execution of the Event at its scheduled time.

More information:

Event Bypass and Unbypass (see page 34)

Unbypass the Next Scheduled Execution of an Event

You can cancel the bypass of the next scheduled execution of an Event if it has been bypassed. The server triggers the Event at its next scheduled time.

Follow these steps:

1. List the Event you want to unbypass in the Services perspective.
2. Right-click the Event in the Events view, and select Un-bypass from the pop-up menu.

   A confirmation dialog opens.
3. Click Yes.

   The server cancels the bypass of the next scheduled execution of the Event.

More information:

Event Bypass and Unbypass (see page 34)

Bypass a Future Scheduled Execution of an Event

You can bypass a future scheduled execution of an Event to prevent the server from triggering it at its scheduled time.

Follow these steps:

1. List scheduled Events in the Services perspective (see page 40).
2. Right-click the Event execution you want to bypass in the Results table, and select Bypass from the pop-up menu.

   Note: To bypass multiple Event executions at once, hold the Ctrl key and select each Event execution you want to bypass, right-click one of the selected Event executions, and select Bypass.

   A confirmation dialog opens.
3. Click Yes.

   The server bypasses the selected Event executions. The Events table is refreshed. Event executions to be bypassed are displayed in a different color.

More information:

Event Bypass and Unbypass (see page 34)

Unbypass a Future Scheduled Execution of an Event

You can cancel the bypass of a future scheduled execution of an Event if it has been bypassed. The server triggers the Event at its scheduled time.

Follow these steps:

1. List scheduled Events in the Services perspective (see page 40).
2. Right-click the Event execution you want to unbypass in the Results table, and select Un-bypass from the pop-up menu.

   Note: To unbypass multiple Event executions at once, hold the Ctrl key and select each Event execution you want to unbypass, right-click one of the selected Event executions, and select Un-bypass.

   A confirmation dialog opens.
3. Click Yes.
4. The server cancels the bypass of the selected Event executions. The Events table is refreshed. Event executions to be bypassed are displayed in a different color.

More information:

Event Bypass and Unbypass (see page 34)

List the Skipped Bypass Requests of an Event

You can list the skipped (invalid) bypass requests of an Event. Event bypass requests can be skipped if the scheduled time of an Event execution changes after the bypass request is made. For example, a bypass request can be skipped if an Event is manually triggered to replace the Event's next scheduled execution or if the definition of a special day used in an Event's scheduling criteria changes.

Follow these steps:

1. List scheduled Events in the Services perspective (see page 40).
2. Right-click any execution of the Event in the Results table, and select List Invalid Bypass Requests from the pop-up menu.

   The Invalid Bypass Requests dialog lists the skipped bypass requests for the Event, if any. Otherwise, a warning message indicates that there are no skipped bypass requests for the Event.

More information:

Skipped Bypass Requests (see page 35)

Hold an Event

You can hold an Event if you want to prevent the Event from triggering until you release the Event.

Follow these steps:

1. List the Event you want to hold in the Services perspective.
2. Right-click the Event in the Events view, and select Hold from the pop-up menu.

   Note: To hold multiple Events at once, keep the Ctrl key pressed and select each Event you want to hold, right-click one of the selected Events, and select Hold.

   A confirmation dialog opens.
3. Click Yes.

   The server increments the Event's hold count by 1. The Event is held.

More information:

Event Hold and Release (see page 36)

Release a Held Event

Before a held Event can be triggered, you must release it. If the Event missed a scheduled execution while on hold, the server immediately triggers the Event once, regardless of the number of missed executions.

Follow these steps:

1. List the held Event you want to release in the Services perspective.
2. Right-click the Event in the Events view, and select Release from the pop-up menu.

   Note: To release multiple Events at once, hold the Ctrl key and select each Event you want to release, right-click one of the selected Events, and select Release.

   A confirmation dialog opens.
3. Click Yes.

   The server decrements the Event's hold count by 1. If the hold count becomes zero, the Event is released.

More information:

Event Hold and Release (see page 36)

Suspend an Event

You can suspend an Event to prevent it from triggering.

Follow these steps:

1. List the Event that you want to suspend in the Services perspective.
2. Right-click the Event in the Events view, and select Suspend from the pop-up menu.

   Note: To suspend multiple Events at once, hold the Ctrl key and select each Event you want to suspend, right-click one of the selected Events, and select Suspend.

   A confirmation dialog opens.
3. Click Yes.

   The server increments the Event's suspend count by 1. The Event is suspended.

More information:

Event Suspend and Resume (see page 37)

Resume a Suspended Event

When you want a suspended Event to resume its execution, you must resume it.

Follow these steps:

1. List the Event you want to resume in the Services perspective.
2. Right-click the Event in the Events view, and select Resume from the pop-up menu.

   Note: To resume multiple Events at once, hold the Ctrl key and select each Event you want to resume, right-click one of the selected Events, and select Resume.

   A confirmation dialog opens.
3. Click Yes.

   The server decrements the Event's suspend count by 1. If the suspend count becomes zero, the Event is no longer suspended.

More information:

Event Suspend and Resume (see page 37)

Unquiesce an Event

You can unquiesce a scheduled quiesced Event. After the Event is unquiesced, it can be triggered to run its Application.

Follow these steps:

1. List the Events in the Services perspective.

   The Events are listed in a table. The Quiesced column displays True for all quiesced Events.
2. Right-click the quiesced Event you want to unquiesce, and select Unquiesce from the pop-up menu.

   A confirmation dialog appears.
3. Click Yes.

   The Event is unquiesced.

Unquiesce Specific Events or Application Generations

You can unquiesce specific Application generations and Events. After an Event is unquiesced, it can be triggered to run its Application. After an active Application generation is unquiesced, it continues to run.

Note: The missed executions of the quiesced Event are not triggered.

Follow these steps:

1. Right-click the server node you want to unquiesce, and select Unquiesce from the pop-up menu.

   The Unquiesce dialog appears.

2. Select *one* of the following options in the Application generations section:

   ALL

   Unquiesces all Application generations.

   Application generation name

   Unquiesces the specified Application generations in the format *application.generation*, where *application* specifies the Application name and *generation* specifies the generation number.

   Example: appl.1,appl.2

   Note: You can also use a wildcard for a partial name. For example, APPL* unquiesces all generations of Applications with names that start with APPL. You can use commas to separate multiple Application generations.

   None

   Does not unquiesce any Application generations.

3. Select *one* of the following options in the Event section:

   ALL

   Unquiesces all Events.

   Event name

   Unquiesces the specified Events in the format *eventprefix.eventname*, where *eventprefix* specifies the Event prefix and *eventname* specifies the Event name.

   Example: CYBER.VERIFY

   Note: You can use a wildcard for a partial name. For example, CYB* unquiesces all the Events whose prefixes start with CYB.You can use commas to separate multiple Events.

None

Does not unquiesce any Events.

The specified Application and Events are unquiesced.

Check the Status of a Monitor Event

You can check the status of a monitor Event to verify that the Event is active.

Note: If the Event is already listed in the Events view, you can right-click the listing and select Refresh to obtain the Event status.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Events under your server connection, and select Open from the pop-up menu.

   The Events view opens.

3. Enter an Event prefix and an Event name.

4. Select the check box for your Event trigger type, clear all of the other check boxes, and click the arrow next to the Event prefix drop-down list.

   The status of the specified Event is displayed.

5. (Optional) Right-click the Event in the Events view, and select Open from the pop-up menu to show the Event definition.

   Note: In the Event definition, you can review the details of the Event, for example, the file being monitored in a File Trigger Event.

More information:

Monitor Event Statuses (see page 38)

Create an Event that the Alert Triggers

If you want the Alert to trigger an Event when the job reaches the states specified in the Alert notification, you must define the Event.

To create the Event that the Alert triggers

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Events under your server connection, and click Open from the pop-up menu.

   The Events view opens.

3. Right-click in the Event listing, and select New DateTime/Manual from the pop-up menu.

   The New DateTime/Manual view opens.

4. Enter the Event prefix and Event name referenced in the Alert.

5. Specify the Application to run in the Application field, and click the Save icon.

   Note: Since the Alert triggers the Event automatically, you do not need to enter scheduling criteria for the Event.

   The Event that the Alert triggers is created.

More information:

Define an Alert that Triggers the Event (see page 10)

Schedule a Forecast Report

You can schedule forecast reports using Events to save the output on the server for viewing later. When defining a Forecast Event, you can specify a list of users to notify by email when the forecast execution is complete. You can also grant permission to a list of users to view the report output.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Events under your server connection, and click Open from the pop-up menu.

   The Events view opens.

3. Right-click in the listing, and select New Forecast Event from the pop-up menu.

   The Properties tab of the New Forecast view opens.

4. Complete the following required fields:

   Event prefix

   Defines a prefix for the Event.

   Limits: Up to 32 characters

   Note: To set a default prefix, from the main menu click Window, Preferences, Desktop Client, Services Perspective, Event, and enter the default prefix in the Prefix field.

   Event name

   Defines the name of the Event.

   Limits: Up to 128 characters

   Note: The prefix and descriptive name uniquely identify the Event on the system where it resides.

   Priority

   Specifies the Event priority as an integer from 1 (lowest priority) through 10 (highest priority). When multiple Events are eligible for execution at the same time, the server triggers the Events in descending priority order.

   Default: 5

   Note: To set a default Event priority, from the main menu click Window, Preferences, Desktop Client, Services Perspective, Event, and enter the default priority in the Priority field.

Forecast

Specifies the name of the forecast to run when the Event triggers. The drop-down list displays the forecasts defined on the server.

5. (Optional) Specify the following additional information:

Execution user

(Optional) Specifies the execution user for the Forecast Event. The execution user can always view and delete the output of a forecast report.

Default: Name of the user defining the Event

Note: The execution user requires the appropriate permissions to alter the forecast triggered by the Event.

Inherit trigger user

Overrides the execution user for Events triggered manually. If this option is set, the execution user is set to the user that manually triggered the Event.

Note: To apply this option to all the Events you define, from the main menu click Window, Preferences, Desktop Client, Services Perspective, Event, and select the Inherit trigger user check box.

Specify Calendars

Specifies up to two calendars that are used to schedule the Event.

Default: SYSTEM calendar

Note: If your Event uses any terms in a calendar other than the SYSTEM calendar, specify those calendars in this section. You can set default calendars by selecting Window, Preferences, Desktop Client, Services Perspective, Event from the main menu.

6. (Optional) Select the Schedule tab to schedule the forecast report.

The Schedule tab opens.

7. Click Add Schedule, and type your scheduling criteria in the When field.

Note: If you are unfamiliar with the scheduling terms, you can build and test your schedule criteria by clicking the ellipses (…).

8. (Optional) Select the Result Options tab to specify options for the forecast report.

The Result Options tab opens.

9. (Optional) Grant permission to a list of users to view the report output as follows:

a. Click Add in the Users allowed to read the report section.

A row is added to the table.

b. Specify the name of the user in the Name field.

c. (Optional) Add additional users as required.

10. (Optional) Specify a list of email addresses to notify when the forecast execution is complete as follows:
    a. Click Add in the E-mail addresses to be notified section.

       A row is added to the table.

    b. Specify the email address in the Name field.
    c. (Optional) Add additional email addresses as required.
    d. (Optional) Select the Attach report check box to attach the forecast results in PDF format to the email notifications.
11. Click Save at the top right corner of the New Forecast view.

    The server triggers the Event and runs the forecast report at the scheduled dates and times.

More information:

Forecasts (see page 62)

Schedule a Report

You can schedule reports using Events to save the output on the server for viewing later. When defining a Report Event, you can specify a list of users to notify by email when the report execution is complete. You can also grant permission to a list of users to view the report output.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Events under your server connection, and click Open from the pop-up menu.

   The Events view opens.

3. Right-click in the listing, and select New Report Event from the pop-up menu.

   The Properties tab of the New Report view opens.

4. Complete the following required fields:

   Event prefix

   Defines a prefix for the Event.

   Limits: Up to 32 characters

   Note: To set a default prefix, from the main menu click Window, Preferences, Desktop Client, Services Perspective, Event, and enter the default prefix in the Prefix field.

   Event name

   Defines the name of the Event.

   Limits: Up to 128 characters

   Note: The prefix and descriptive name uniquely identify the Event on the system where it resides.

   Priority

   Specifies the Event priority as an integer from 1 (lowest priority) through 10 (highest priority). When multiple Events are eligible for execution at the same time, the server triggers the Events in descending priority order.

   Default: 5

   Note: To set a default Event priority, from the main menu click Window, Preferences, Desktop Client, Services Perspective, Event, and enter the default priority in the Priority field.

Report

Specifies the name of the report to run when the Event triggers. The drop-down list displays the reports defined on the server.

5. (Optional) Specify the following additional information:

Execution user

(Optional) Specifies the execution user for the Report Event. The execution user can always view and delete the output of a report.

Default: Name of the user defining the Event

Note: The execution user requires the REPORTX and REPORT_DESIGN permissions to execute the report triggered by the Event.

Inherit trigger user

Overrides the execution user for Events triggered manually. If this option is set, the execution user is set to the user that manually triggered the Event.

Note: To apply this option to all the Events you define, from the main menu click Window, Preferences, Desktop Client, Services Perspective, Event, and select the Inherit trigger user check box.

Specify Calendars

Specifies up to two calendars that are used to schedule the Event.

Default: SYSTEM calendar

Note: If your Event uses any terms in a calendar other than the SYSTEM calendar, specify those calendars in this section. You can set default calendars by selecting Window, Preferences, Desktop Client, Services Perspective, Event from the main menu.

6. (Optional) Select the Schedule tab to schedule the report.

The Schedule tab opens.

7. Click Add Schedule, and type your scheduling criteria in the When field.

Note: If you are unfamiliar with the scheduling terms, you can build and test your schedule criteria by clicking the ellipses (…).

8. (Optional) Select the Parameters tab to specify parameters for the report.

The Parameters tab opens.

Note: The parameters that you see depend on the report you selected in the Report field in the Properties tab.

9. Specify the parameter information as required.

   Notes about date parameters:

   - When specifying date parameters for scheduled reports, use relative dates, not absolute dates. When the report runs, the server evaluates the date parameters relative to the report execution time. For example, you can schedule the Failed Jobs report weekly to report on the jobs that failed during the previous week using the following relative dates:
     - From Date Time—1st day of this week starting today less 1 week
     - To Date Time—last day of this week starting today less 1 week
   - To help specify relative date parameters, you can click the button to the right of the date parameter field to build and test your schedule criteria using the Define Report Date Parameter dialog. The Define Report Date Parameter dialog is similar to the other scheduling dialogs that you use to simulate or schedule Events. For example, the following selections specify the first day of the previous week (1st day of this week starting today less 1 week):
     - Occurrences—1st
     - Type of Day—day
     - Period type—previous 1
     - Period—week

     You can test the generated statement by clicking Test. The Test results text box displays only one result.

10. (Optional) Select the Result Options tab to specify options for the report.

    The Result Options tab opens.

11. (Optional) Grant permission to a list of users to view the report output as follows:

    a. Click Add in the Users allowed to read the report section.

       A row is added to the table.

    b. Specify the name of the user in the Name field.

    c. (Optional) Add additional users as required.

12. (Optional) Specify a list of email addresses to notify when the report execution is complete as follows:
    a. Click Add in the E-mail addresses to be notified section.

       A row is added to the table.

    b. Specify the email address in the Name field.

    c. (Optional) Add additional email addresses as required.

    d. (Optional) Select the Attach report check box to attach the report results in PDF format to the email notifications.

13. Click Save at the top right corner of the New Report view.

    The server triggers the Event and runs the report at the scheduled dates and times.

More information:

Predefined Reports (see page 92)

Add New Application Parameters to a Date-Time/Manual Event

You can add new Application parameters to a Date-Time/Manual Event without using an existing Application. You can use this approach if you want to define the Application parameters in the Event before defining them in the Application or if the Application is not defined yet.

Note: For more information about how to work with Application parameters, see the *Define Perspective Help*.

Follow these steps:

1. List Date-Time/Manual Events in the Services perspective.
2. Right-click the Date-Time/Manual Event in the Events view, and select Open from the pop-up menu.

   The Event definition dialog opens.
3. Select the Application Parameters tab.

   The Parameters page opens.
4. Click Add, and enter the following information for the new Application parameter that you want to add:

   Parameter Name

   Defines the Application parameter name.

   Value

   Defines the Application parameter value.
5. (Optional) Repeat the previous step to add additional Application parameters.
6. Click the Save icon at the top right of the Event definition dialog.

   The Application parameters are added to the Event.

Chapter 4: Working with Forecasts

This section contains the following topics:

Forecasts

You can create forecast reports about jobs scheduled to run during a specific period and use these reports to plan your workload. You can generate forecast reports to view the output of the report immediately or schedule forecast reports using Events to save the output on the server for viewing later.

You can view the output of forecast reports in the Services perspective and export the output in different formats including CSV and HTML.

Each report contains the following information about scheduled jobs:

- Job name and qualifier
- Predecessor and successor names
- Event submission date and time
- Estimated execution time based on historical information
- Agent name
- Application and subApplication name
- Event prefix and name
- Job type
- Home Application name (external jobs only)

You can limit the Events, Applications, subApplications, and jobs that appear in your forecast reports. For example, your report can include Applications triggered by a specific Event or exclude Applications that run hourly.

When scheduling forecast reports, you can also specify a list of users to notify by email when the forecast report execution is complete. You can also grant permission to a list of users to view the report output.

Note: Suspended Events do not appear on forecasts. Nonscheduled Events such as File Trigger Events do not appear in forecast reports unless the Event has an expect time.

More information:

Schedule a Forecast Report (see page 53)

List Forecast Reports

You can list the forecast reports defined on the server. For scheduled forecast reports, you can also view the output of each scheduled forecast report.

Note: To view the output of a scheduled forecast report, you must be the execution user for the forecast report Event or be granted permission to read the report in the Event definition.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Forecasts under your server connection, and select Open from the pop-up menu.

   The Forecasts view opens.

3. Enter the complete or partial forecast name in the Forecast name field to limit the forecasts displayed, and click the arrow next to the Forecast name field.

   Note: Include a wildcard for a partial name. For example, F* displays all the forecasts whose names start with F.

   A list of forecast reports appears along with the results of each forecast report.

Note: To refresh the list, right-click in the listing, and select Refresh from the pop-up menu.

More information:

Schedule a Forecast Report (see page 53)

Create a Forecast Report

You can create a forecast report to view the jobs scheduled to run in a specific period and use the report to plan your workload.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Forecasts under your server connection, and select New from the pop-up menu.

   The New Forecast view opens.

3. Complete the following fields as required:

   Forecast name

   Defines the report name.

   Starting at

   Specifies the starting time and date of the report's period.

   Note: To select a date and time, you can click the button to the right of the field.

   Continuing for

   Specifies the length of the report's period.

   Default: Events scheduled during the next 24 hours.

   Event names

   (Optional) Specifies the Events to be included in the report. The Event name can include wildcards. For example, VER* includes all Events that begin with VER.

   Default: All Events scheduled in the report's period

   Application names

   (Optional) Specifies the Applications to be included in the report. The Application name can include wildcards. For example, APPL* includes all Applications that begin with APPL.

   subApplication names

   (Optional) Specifies the subApplications to be included in the report. The subApplication name can include wildcards. For example, SUB* includes all subApplications that begin with SUB.

   Job names

   (Optional) Specifies the jobs to be included in the report. The job name can include wildcards. For example, JOB* includes all jobs that begin with JOB.

Threshold frequency

(Optional) Specifies a threshold frequency in minutes to exclude frequently scheduled Events from the report. An Event execution is excluded from the forecast report if the time between its scheduled execution and its next scheduled execution is less than the threshold frequency. For example, to exclude all Events that run more frequently than two hours, enter 120.

4. Click the Save icon.

   The forecast report is saved on the server.

Example: Show the Hourly Events in a Weekly Report

Suppose that you need to run a report that shows all jobs, including hourly jobs, scheduled to run during one week starting at noon today.

To show hourly Events in a weekly report

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Create a forecast report as follows:

   a. Right-click Forecasts under your server connection, and select New from the pop-up menu.

      The New Forecasts view opens.

   b. Enter **WEEKLY** in the Forecast name field, select 12:00:00 PM in the Starting at field, and select weeks in the Continuing for field.

   c. Enter ***** in the Event names field to include all Events scheduled in the report period.

   d. Enter **0** in the Threshold frequency field.

   e. Click the Save icon.

   The forecast report is saved on the server.

Example: Show All the Jobs Scheduled in a 24-hour Period

Suppose that you need to run a report that shows all the jobs scheduled to run between 5:00 a.m. today and 4:59 a.m. tomorrow.

To show all jobs scheduled in a 24-hour period

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Create a forecast report as follows:

   a. Right-click Forecasts under your server connection, and select New from the pop-up menu.

      The New Forecasts view opens.

   b. Enter **DAILY** in the Forecast name field, select 5:00:00 AM in the Starting at field, and leave the default of 1 day in the Continuing for field.

   c. Enter ***** in the Job names field to include all jobs scheduled to run in the report period.

   d. Click the Save icon.

   The forecast report is saved on the server.

Generate a Forecast Report

You can generate a forecast report to view the output of the report immediately.

Note: You can generate a default report of the workload scheduled in the next 24 hours or 7 days using the default forecasts FORECAST24HOUR and FORECAST7DAY respectively.

Follow these steps:

1. List forecast reports (see page 63).
2. Right-click the forecast you want to run, and select Generate Forecast Report from the pop-up menu.

   A dialog appears to indicate that the report is being generated.

   Notes:

   - To run this dialog in the background so that it does not block your GUI, click Run in Background. To always run the progress dialogs in the background, from the main menu select Windows, Preferences, Workbench, General, and select the Always run in Background check box. To see the report execution status of all running forecasts, in the status bar double-click the icon beside the progress bar; the progress view opens.
   - Generating a forecast report can take several minutes, depending on the number of jobs included in the report. If you select the Always run in Background check box, a temporary warning message appears to indicate that the forecast report can take several minutes to generate. To deactivate this warning message, from the main menu select Windows, Preferences, Desktop Client, Server Response and clear the Show warning message check box.

   The output of the forecast report appears in a view.

View the Output of a Scheduled Forecast Report

You can view the output of a scheduled forecast report saved on the server.

Note: To view the output of a scheduled forecast report, you must be the execution user for the forecast report Event or be granted permission to read the report in the Event definition.

Follow these steps:

1. List forecast reports (see page 63).

   A list of forecast reports appears along with the results for each report.

2. Right-click the output of a forecast report, and select View Report from the pop-up menu.

   The output of the scheduled forecast report appears in a view.

More information:

Schedule a Forecast Report (see page 53)

Export a Forecast Report

You can export the output of a forecast report to your local computer and save it in the following formats:

- Word
- PowerPoint
- PDF
- PostScript
- Excel

Follow these steps:

1. Generate a forecast report or view the output of a scheduled forecast report.

   The output of the forecast report appears in a view.

2. Click the Export report icon from the toolbar of the report.

   The Export Report dialog opens.

3. Select the output format in the Export Format drop-down list.

4. Modify the other fields as appropriate, and click OK.

   The File Download dialog opens.

5. Click Save to save the file to the local computer.

   Note: To open the file immediately, click Open.

   The Save As dialog opens.

6. Select a folder in the Save in drop-down list, specify a file name in the File name field, and click Save.

   The file is saved to your local computer.

Export Data from a Forecast Report

You can export the raw data of a forecast report to your local computer as a .csv file.

Follow these steps:

1. Generate a forecast report or view the output of a scheduled forecast report.

   The output of the forecast report appears in a view.

2. Click the Export data icon from the toolbar of the report.

   The Export Data dialog opens.

3. Select a result set from the Available result sets drop-down list.

4. Select columns from the Available Columns section and click > to move them to the Selected Columns section.

5. Modify the other fields as appropriate, and click OK.

   The File Download dialog opens.

6. Click Save to save the file to the local computer.

   Note: To open the file immediately, click Open.

   The Save As dialog opens.

7. Select a folder in the Save in drop-down list, specify a file name in the File name field, and click Save.

   The .csv file is saved to your local computer.

View a Forecast Report Gantt Chart

You can view a Gantt chart of all the jobs in the forecast report relative to the start of the report period.

Follow these steps:

1. Generate a forecast report or view the output of a scheduled forecast report.

   The output of the forecast report appears in a view.

2. Click the Open Gantt chart for all jobs from report icon from the toolbar of the view.

   The Gantt chart opens in a graphical view. On the left side of the view, a table displays the expected start time, end time, and duration of each job in the report. On the right side of the view, bars representing each of the jobs in the report show when each job is expected to start and end relative to the start of the report period. Arrows between the bars indicate predecessor dependencies.

3. (Optional) Enter a filter in the Filter chart by Name field to limit the jobs displayed.

   Note: You can use the asterisk (*) as a wildcard for zero or more characters and the question mark (?) as a wildcard for a single character. For example, to limit the Gantt chart to jobs that start with Linux, enter **Linux***. The filter is not case-sensitive.

   The Gantt chart displays the jobs that match your filter.

Hide the Output of a Forecast Report

You can hide the output of a forecast report if you no longer need to view the results. Hiding the output of a forecast report does not delete the report output from the server, so other users can still the view the forecast results.

Note: The execution user of the Forecast Event cannot hide the output of the forecast report.

Follow these steps:

1. List forecast reports (see page 63).

   A list of forecast reports appears along with the results for each report.

2. Right-click the output of a forecast report, and select Hide Report from the pop-up menu.

   Note: To hide the output of multiple forecast reports at once, hold the Ctrl key and select the forecast results you want to hide, right-click one of the selected forecast results, and select Hide Report from the pop-up menu.

   The output of the forecast report is removed from the view.

More information:

Schedule a Forecast Report (see page 53)

Delete the Output of a Forecast Report

If you no longer want users to view the output of a forecast report, you can delete the forecast results from the server.

Note: To delete the output of a forecast report, you must be the execution user for the Forecast Event or have Allow access to the FORECAST_RESULT_DELETE permission.

Follow these steps:

1. List forecast reports (see page 63).

   A list of forecast reports appears along with the results for each report.

2. Right-click the output of a forecast report, and select Delete from the pop-up menu.

   Note: To delete the output of multiple forecast reports at once, hold the Ctrl key and select the forecast results you want to delete, right-click one of the selected forecast results, and select Delete from the pop-up menu.

   A confirmation dialog opens.

3. Click Yes.

   The forecast results are deleted from the server.

More information:

Schedule a Forecast Report (see page 53)

Delete a Forecast Report Definition

You can delete a forecast report definition from the server if you no longer need to schedule or generate the forecast report.

Follow these steps:

1. List forecast reports (see page 63).

   A list of forecast reports appears along with the results for each report.

2. Right-click the definition of a forecast report, and select Delete from the pop-up menu.

   If the forecast report being deleted is associated with any Events, the Affected Artifacts dialog opens and lists the Events that are affected by the deletion. Otherwise, a confirmation dialog appears, and you can skip the next step.

3. Selection one of the following, if applicable:

   - Yes—Proceeds with the deletion.

     The forecast report definition is deleted from the server.

   - No—Cancels the deletion request.

     Note: To avoid the warning, you can update the forecast report specified in the Event definition.

4. Click Yes in the confirmation dialog, if applicable.

   The forecast report definition is deleted from the server.

   Note: The results of the forecast report are not deleted. When you refresh the view, the forecast results reappear under the forecast report. However, you can no longer open, schedule, or generate the forecast report as the definition no longer exists.

More information:

Schedule a Forecast Report (see page 53)

Chapter 5: Working with Global Variables

This section contains the following topics:

Global Variables

Global variables let you store information that you can reuse across Applications. Global variables save time: you do not have to enter specific information, such as job names or argument values, each time you want to perform the same kind of processing. When you use global variables, you also reduce the possibility of coding errors.

To create, modify, and delete global variables, you can use the Services perspective in CA WA Desktop Client, the CLI (Command Line Console), or JavaScript functions. Global variables are stored in the relational database for CA Workload Automation DE. Each global variable belongs to a context, which is a group of related variables. Contexts help you avoid naming conflicts. For example, you can create two variables named deptname, each in a different context. By default, all global variables are defined in the DEFAULT context.

You can use global variables when you define jobs. The %VAR statement lets you specify a global variable name in supported job definition fields. When an Event is triggered, the server substitutes the current value of that global variable. You can also define jobs that have a dependency on global variables. The job is submitted after all of the job's dependencies (time, predecessor, variable, and resource dependencies) are met.

Global Variables Compared to Symbolic Variables

Although both global variables and system-level symbolic variables let you store information that you can reuse across Applications, they are created and managed differently. Understanding these differences can help you decide which type of variables to use in your Applications.

A symbolic variable is a JavaScript variable whose value can be accessed outside the context of the JavaScript script. All symbolic variables are stored in built-in JavaScript host objects. Unlike symbolic variables, global variables are not dependent on JavaScript. Instead, global variables are stored in the relational database for CA Workload Automation DE.

You can specify both types of variables in supported job definition fields and use them in JavaScript scripts. When the server encounters a symbolic variable or the global variable %VAR statement in a job definition field, it substitutes the current value of that variable.

You manage both types of variables by using CA WA Desktop Client, the CLI (Command Line Interface), or JavaScript functions. However, there are more ways to manage global variables because global variables are not dependent on JavaScript. For example, you can create, modify, and delete global variables directly by using the Services perspective or CLI commands in CA WA Desktop Client.

Another difference between the two types of variables is that global variables support variable dependencies. Whereas symbolic variables only let you substitute values in job definition fields, global variables let you define jobs that run when their global variable expressions are satisfied. For example, you can define a job that only runs when a global variable named quota is assigned a value greater than or equal to 1000.

List the Global Variables

To view, modify, or delete a global variable, you must first list the global variables that are available.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Global Variables under your server connection, and click Open from the pop-up menu.

   The Global Variables view opens.

3. Complete the following fields as appropriate:

   Global Variable context

   Defines a filter to limit the contexts searched. You can use the asterisk (*) as a wildcard for zero or more characters and the question mark (?) as a wildcard for a single character. This filter is not case sensitive.

   Default: All contexts

   Example: s* searches all contexts that begin with s

   Global Variable name

   Defines a filter to limit the variables displayed. You can use the asterisk (*) as a wildcard for zero or more characters and the question mark (?) as a wildcard for a single character. This name is not case sensitive.

   Default: All variables

   Example: b* searches all variable names that begin with b

4. Click the arrow next to the Variable context drop-down list.

   A list of global variables that match your filter criteria is displayed.

Note: To refresh the list, right-click the list and select Refresh from the pop-up menu.

Create a Global Variable

You can create a global variable to store information that you can reuse across Applications.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Global Variables under your server connection, and click New from the pop-up menu.

   The New Global Variable view opens.

3. Complete the following required field:

   Variable name

   Defines the name of the global variable. This name must be unique in its variable context. This name is not case sensitive.

   Limits: 1-128 alphanumeric or underscore characters. The first character cannot be a number.

4. (Optional) Complete the following additional fields as appropriate:

   Variable context

   Defines the name of the context that the global variable belongs to.

   Limits: 0-128 alphanumeric or underscore characters

   Default: DEFAULT context

   Note: If the context does not exist, it will be created.

   Value

   Defines the value of the global variable.

   Limits: 0-1024 characters

   Default: Empty string

5. Click the Save icon.

   The global variable is created.

Modify a Global Variable

You can modify an existing global variable if you need to change its details.

Follow these steps:

1. List the global variables.
2. Right-click the global variable that you want to modify, and click Open from the pop-up menu.

   The Global Variable view opens.
3. Modify the following field as appropriate:

   Value

   Defines the value of the global variable.

   Limits: 0-1024 characters

   Default: Empty string
4. Click the Save icon.

   The global variable is modified.

Delete a Global Variable

You can delete a global variable if it is no longer in use.

Note: If you delete a global variable that is specified in a %VAR statement in a job definition field, the server submits the job with the %VAR statement unresolved.

Follow these steps:

1. List the global variables.
2. Right-click the global variable that you want to delete, and click Delete from the pop-up menu.

   Note: To delete multiple global variables at once, keep the Ctrl key pressed and select each variable you want to delete, right-click one of the selected variables, and click Delete.

   The confirmation dialog opens.
3. Click OK.

   The global variable is deleted. If all of the global variables in a context are deleted, the context is removed from the list of global variables.

Delete a Global Variable Context

You can delete a global variable context if it is no longer in use. Deleting a context also deletes all of its global variables.

Note: If you delete a global variable that is specified in a %VAR statement in a job definition field, the server submits the job with the %VAR statement unresolved.

Follow these steps:

1. List the global variables.
2. Right-click the variable context that you want to delete, and click Delete from the pop-up menu.

   The confirmation dialog opens.
3. Click OK.

   The variable context and its global variables are deleted.

Copy an Existing Global Variable

You can copy a global variable in the Services perspective and save it with a different name to create a new global variable.

Follow these steps:

1. List the global variables.
2. Right-click the global variable that you want to copy, and select Open from the pop-up menu.

   The Global Variable view opens.
3. Click the Copy icon.

   The New Global Variable view opens.

4. Modify the following field:

   Variable name

   Defines the name of the global variable. This name must be unique in its variable context. This name is not case sensitive.

   Limits: 1-128 alphanumeric or underscore characters. The first character cannot be a number.

5. (Optional) Modify the following additional fields as appropriate:

   Variable context

   Defines the name of the context that the global variable belongs to.

   Limits: 0-128 alphanumeric or underscore characters

   Default: DEFAULT context

   Note: If the context does not exist, it will be created.

   Value

   Defines the value of the global variable.

   Limits: 0-1024 characters

   Default: Empty string

6. Click the Save icon.

   The new global variable is saved.

Chapter 6: Working with JavaScripts

This section contains the following topics:

JavaScripts

You can use a JavaScript script within an Application or Alert to perform many types of operations.

Some common uses for a script include the following:

- Using conditional logic to specify a variation in the schedule
- Defining symbolic variables
- Using server built-in functions

You can use a script to perform an operation within the Application definition or within one or more jobs. Before the script can be available to the Application or job, you must first store it in the Application that will use the script or in the JavaScript repository.

You can also use a script to perform an operation within the Alert definition. You can define the script in the Alert definition or store it in the JavaScript repository.

The name of each script must be unique for every instance of the server.

List the Scripts in the JavaScript Repository

The JavaScript repository provides a common storage location on the server for your JavaScript scripts. To open, edit, or delete a script in the JavaScript repository, you must first list your scripts.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click JavaScripts under your server connection, and click Open from the pop-up menu.

   The JavaScript view opens.

3. Enter a filter in the JavaScript name field to limit the scripts displayed or leave the field blank to display all scripts.

   For example, to display all scripts that begin with s, type s*.

4. Click the arrow next to the JavaScript name field.

   A list of scripts that match your filter criteria is displayed.

Store a Script in the JavaScript Repository

If the script is used in multiple Applications or Alerts, store the script in the JavaScript repository on the server. In the JavaScript repository, you can list, create, edit, and delete scripts used in your Applications and Alerts.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click JavaScripts under your server connection, and click New from the pop-up menu.

   The New JavaScript view opens.

3. Do *one* of the following:

   - To import a script from your local computer or a network drive, click Import, browse to the script, and click Open.

     The imported script appears in the editor. If the JavaScript name field was empty when you imported the script, the name of the imported script (without the file extension) is set as the script name.

   - To define a script, define a meaningful name for the script in the JavaScript name field, and type the script content in the editor.

4. (Optional) Press Ctrl+spacebar in the editor to invoke content assist.

   A pop-up displays the built-in JavaScript variables and functions that you can use in the script. The pop-up also displays the native JavaScript functions and objects.

   Notes:

   - You can filter the variables, objects, and functions that appear in the pop-up. For example, if you type **file** and invoke content assist, the pop-up displays all server built-in functions that begin with file. You can further filter the list in the pop-up by typing additional text, for example, **_l**.
   - To display the description of a built-in JavaScript variable or function, select the variable or function in the pop-up. You cannot display the description of a native JavaScript function or object. For more information about the native JavaScript functions and objects, visit the ECMA International website (www.ecma-international.org) and search for the ECMA-262 Standard for scripting languages.
   - The pop-up displays all global variables and functions. To display all variables and functions that belong to an object or context, type the object or context name followed by a period in the editor. For example, if you type **APPL.**, a pop-up displays all the APPL built-in variables and functions.

5. Select a variable or function in the list and press Enter to insert it in the script.

   The selected variable or function appears in the editor.

6. (Optional) Click Check Syntax to validate the syntax of the script.

   Errors and warnings, if any, are displayed in a dialog. The errors are also highlighted in the editor.

   Note: After you correct the script, click Check Syntax again. Repeat until you do not receive any errors or warning messages. Click OK to close the dialog.

7. (Optional) Click Export to save the script on your local computer or a network drive. Browse to the location where you want to save the script, enter a file name, and click Save.

8. Click the Save icon to save the script.

   The script is stored in the JavaScript repository.

Note: For more information about JavaScript expressions and built-in functions, see the *Programming Guide*.

Import Scripts to the JavaScript Repository

You can import multiple scripts from a directory on your local computer or a network drive to the JavaScript repository. After importing the scripts to the JavaScript repository, you can use them in your Applications and Alerts.

Follow these steps:

1. List the scripts in the JavaScript repository.
2. Right-click the listing, and select Import JavaScripts from the pop-up menu.

   The JavaScripts Import dialog opens.
3. Complete the following fields in the dialog:

   Select import directory

   Specifies the directory that contains the scripts you want to import. You can click Browse to select the import directory.

   Note: The drop-down list preserves the last 10 used values.

   JavaScript file extension

   Indicates the file extension of the scripts. The following extensions are supported:

   - *.js—Selects files in the import directory with a .js extension.
   - *.txt—Selects files in the import directory with a .txt extension.
   - *.*—Selects all files in the import directory.

   Default: *.js

   The JavaScripts text box displays a list of scripts in the import directory with the specified file extension. If a script contains a syntax error, an error icon appears to the left of the name, and the script is not selectable in the list. If the script does not contain a syntax error, the script is selected to be imported.
4. (Optional) Clear the check boxes of the selected scripts that you do not want to import.
5. (Optional) Select the following options in the dialog:

   Overwrite existing JavaScripts with the same name without warning

   Overwrites scripts with the same name in the JavaScript repository without a confirmation.

Include file extension in the JavaScript name

Includes the file extension in the name of the script in the JavaScript repository.

Note: If you do not select this option, the file extension will be removed from the name, for example, test.js will be stored as test.

6. Click Finish.

   If any of the selected scripts already exist in the JavaScript repository and the Overwrite existing JavaScripts with the same name without warning option is not selected, a confirmation dialog opens. Otherwise, the selected scripts are uploaded to the JavaScript repository.

7. Right-click in the listing, and select Refresh from the pop-up menu.

   The imported scripts are included in the listing.

Export Scripts from the JavaScript Repository

You can export multiple scripts from the JavaScript repository to a directory on your local computer or a network drive.

Follow these steps:

1. List the scripts in the JavaScript repository.
2. Select the scripts in the listing that you want to export.

   Note: Press the Ctrl key while making your selections to select multiple scripts at once.

3. Right-click one of the selected scripts, and select Export JavaScripts from the pop-up menu.

   The JavaScripts Export dialog opens. The JavaScripts text box displays a list of the selected scripts.

4. Complete the following fields in the dialog:

   Export to

   Specifies the directory that you want to export your scripts to. You can click Browse to select the export directory.

   Note: The drop-down list preserves the last 10 used values.

JavaScript file extension

Indicates the file extension of the scripts. The following extensions are supported:

- *.js—Saves the selected scripts with a .js extension.
- *.txt—Saves the selected scripts with a .txt extension.
- *.*—Saves the selected scripts with their current extension.

Default: *.js

Overwrite existing files without warning

(Optional) Overwrites scripts with the same name in the export directory without a confirmation.

5. Click Finish.

If any of the selected scripts already exist in the export directory and the Overwrite existing files without warning option is not selected, a confirmation dialog opens. Otherwise, the selected scripts are saved in the export directory with the specified file extension.

Delete a JavaScript Script

You can delete a JavaScript script if it is not longer in use.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click JavaScript under your server connection, and click Open from the pop-up menu.

   The JavaScript view opens.

3. Right-click the script that you want to delete, and click Delete from the pop-up menu.

   If the script being deleted is associated with any Applications, Events, or Alerts, the Affected Artifacts dialog opens and lists the Applications, Events, or Alerts that are affected by the deletion. Otherwise, a confirmation dialog appears, and you can skip the next step.

   Note: If you selected multiple scripts, the Affected Artifacts dialog lists all of the Applications, Events, or Alerts that are affected by the deletion of the selected scripts.

4. Select one of the following, if applicable.

   - Yes—Proceeds with the deletion.

     The JavaScript script is permanently deleted.

   - No—Cancels the deletion request.

     Note: To avoid the warning, you can update the JavaScript scripts specified in the Application, Event, or Alert definition.

5. Click Yes in the confirmation dialog, if applicable.

   The JavaScript script is permanently deleted.

Chapter 7: Working with Reports

This section contains the following topics:

Predefined Reports

You can run predefined (canned) reports from CA WA Desktop Client. Predefined reports reside on the server. You can run predefined reports, but you cannot download or modify them. You can run the predefined reports to view the output of the report immediately or schedule predefined reports using Events to save the output on the server for viewing later.

Important! If you are using a Microsoft SQL Server database with Windows authentication, the domain user of the computer that launches CA WA Desktop Client must have read access to the database. Otherwise, you will not be able to run or preview reports from CA WA Desktop Client.

The predefined reports provide data from the server database tables and use SQL queries to retrieve the data. Several predefined reports present historical information regarding job execution and a security report that presents information on user access and permissions. You can run and view the output of the reports from the Services perspective and export the output in different formats including CSV and HTML.

When scheduling predefined reports, you can also specify a list of users to notify by email when the predefined report execution is complete. You can also grant permission to a list of users to view the report output.

You can run the following predefined reports:

Failed Jobs

Displays the jobs that started running within a specified time period and ended in a FAILED, SUBERROR, SYSERROR, or DBERROR state.

Jobs by Application

Displays the jobs that were run in the Applications specified. It does not include bypassed jobs.

Jobs by State

Displays the jobs that were ready to run within a specified time period, grouped by state.

Jobs by Type

Displays the jobs that were ready to run within a specified time period, grouped by job type.

Jobs Run for Time Period

Displays the jobs that started running within a specified time period.

Jobs Run on Agent

Displays the jobs that started running within a specified time period, grouped by agent.

Long Running Jobs

Displays the jobs that started running within a specified time period and ran for more than a specified number of minutes.

Security

Displays information about all users, groups, and permissions defined on the server.

Summary Jobs Run

Summarizes the jobs that started running within a specified time period, grouped by day.

More information:

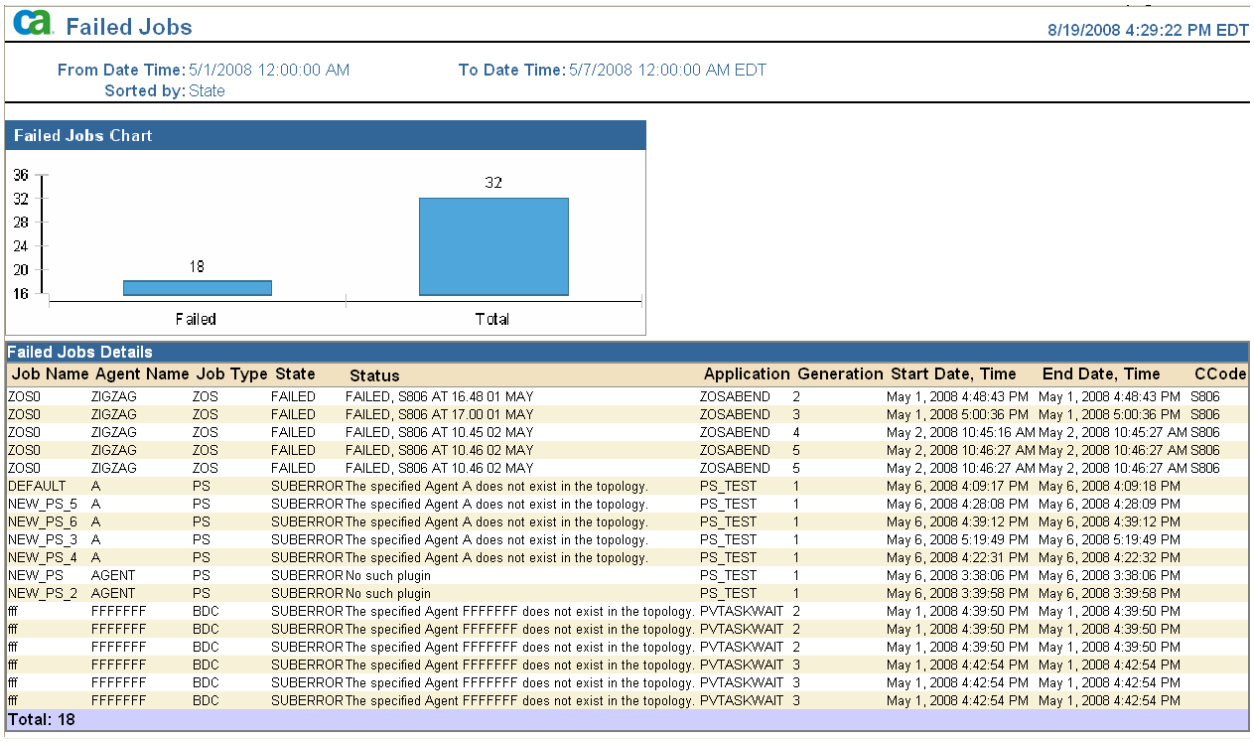
Schedule a Report (see page 56)

Failed Jobs Report

The report displays the jobs that started running within a specified time period and ended in a FAILED, SUBERROR, SYSERROR, or DBERROR state. The report contains the following:

- A chart that shows the number of failed jobs and the total number of jobs.
- The Failed Jobs Details table that displays the details of each failed job. It also displays the total number of failed jobs at the bottom of the table.

The following illustration displays a sample Failed Jobs report:



Failed Jobs 8/19/2008 4:29:22 PM EDT

From Date Time: 5/1/2008 12:00:00 AM To Date Time: 5/7/2008 12:00:00 AM EDT
Sorted by: State

Failed Jobs Chart

Failed Jobs Details

Job Name	Agent Name	Job Type	State	Status	Application	Generation	Start Date, Time	End Date, Time	CCode
ZOS0	ZIGZAG	ZOS	FAILED	FAILED, S806 AT 16.48 01 MAY	ZOSABEND	2	May 1, 2008 4:48:43 PM	May 1, 2008 4:48:43 PM	S806
ZOS0	ZIGZAG	ZOS	FAILED	FAILED, S806 AT 17.00 01 MAY	ZOSABEND	3	May 1, 2008 5:00:36 PM	May 1, 2008 5:00:36 PM	S806
ZOS0	ZIGZAG	ZOS	FAILED	FAILED, S806 AT 10.45 02 MAY	ZOSABEND	4	May 2, 2008 10:45:16 AM	May 2, 2008 10:45:27 AM	S806
ZOS0	ZIGZAG	ZOS	FAILED	FAILED, S806 AT 10.46 02 MAY	ZOSABEND	5	May 2, 2008 10:46:27 AM	May 2, 2008 10:46:27 AM	S806
ZOS0	ZIGZAG	ZOS	FAILED	FAILED, S806 AT 10.46 02 MAY	ZOSABEND	5	May 2, 2008 10:46:27 AM	May 2, 2008 10:46:27 AM	S806
DEFAULT	A	PS	SUBERROR	The specified Agent A does not exist in the topology.	PS_TEST	1	May 6, 2008 4:09:17 PM	May 6, 2008 4:09:18 PM	
NEW_PS_5	A	PS	SUBERROR	The specified Agent A does not exist in the topology.	PS_TEST	1	May 6, 2008 4:28:08 PM	May 6, 2008 4:28:09 PM	
NEW_PS_6	A	PS	SUBERROR	The specified Agent A does not exist in the topology.	PS_TEST	1	May 6, 2008 4:39:12 PM	May 6, 2008 4:39:12 PM	
NEW_PS_3	A	PS	SUBERROR	The specified Agent A does not exist in the topology.	PS_TEST	1	May 6, 2008 5:19:49 PM	May 6, 2008 5:19:49 PM	
NEW_PS_4	A	PS	SUBERROR	The specified Agent A does not exist in the topology.	PS_TEST	1	May 6, 2008 4:22:31 PM	May 6, 2008 4:22:32 PM	
NEW_PS	AGENT	PS	SUBERROR	No such plugin	PS_TEST	1	May 6, 2008 3:38:06 PM	May 6, 2008 3:38:06 PM	
NEW_PS_2	AGENT	PS	SUBERROR	No such plugin	PS_TEST	1	May 6, 2008 3:39:58 PM	May 6, 2008 3:39:58 PM	
fff	FFFFFFF	BDC	SUBERROR	The specified Agent FFFFFFF does not exist in the topology.	PVTASKWAIT	2	May 1, 2008 4:39:50 PM	May 1, 2008 4:39:50 PM	
fff	FFFFFFF	BDC	SUBERROR	The specified Agent FFFFFFF does not exist in the topology.	PVTASKWAIT	2	May 1, 2008 4:39:50 PM	May 1, 2008 4:39:50 PM	
fff	FFFFFFF	BDC	SUBERROR	The specified Agent FFFFFFF does not exist in the topology.	PVTASKWAIT	2	May 1, 2008 4:39:50 PM	May 1, 2008 4:39:50 PM	
fff	FFFFFFF	BDC	SUBERROR	The specified Agent FFFFFFF does not exist in the topology.	PVTASKWAIT	3	May 1, 2008 4:42:54 PM	May 1, 2008 4:42:54 PM	
fff	FFFFFFF	BDC	SUBERROR	The specified Agent FFFFFFF does not exist in the topology.	PVTASKWAIT	3	May 1, 2008 4:42:54 PM	May 1, 2008 4:42:54 PM	
fff	FFFFFFF	BDC	SUBERROR	The specified Agent FFFFFFF does not exist in the topology.	PVTASKWAIT	3	May 1, 2008 4:42:54 PM	May 1, 2008 4:42:54 PM	

Total: 18

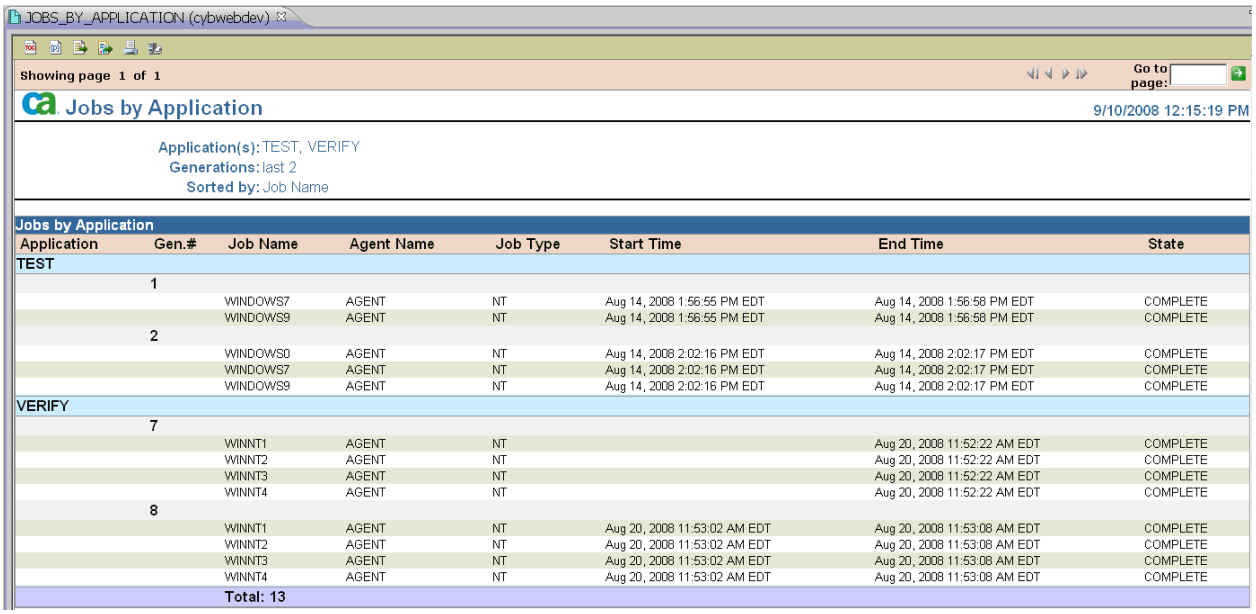
More Information:

Run the Failed Jobs Report (see page 107)

Jobs by Application Report

The report displays the jobs that were run in the Applications specified. It does not include bypassed jobs.

The following illustration displays a sample Jobs by Application report:



JOBS_BY_APPLICATION (cybwebdev)

Showing page 1 of 1 — Go to page:

Jobs by Application — 9/10/2008 12:15:19 PM

Application(s): TEST, VERIFY
Generations: last 2
Sorted by: Job Name

Jobs by Application

Application	Gen.#	Job Name	Agent Name	Job Type	Start Time	End Time	State
TEST							
	1						
		WINDOWS7	AGENT	NT	Aug 14, 2008 1:56:55 PM EDT	Aug 14, 2008 1:56:58 PM EDT	COMPLETE
		WINDOWS9	AGENT	NT	Aug 14, 2008 1:56:55 PM EDT	Aug 14, 2008 1:56:58 PM EDT	COMPLETE
	2						
		WINDOWS0	AGENT	NT	Aug 14, 2008 2:02:16 PM EDT	Aug 14, 2008 2:02:17 PM EDT	COMPLETE
		WINDOWS7	AGENT	NT	Aug 14, 2008 2:02:16 PM EDT	Aug 14, 2008 2:02:17 PM EDT	COMPLETE
		WINDOWS9	AGENT	NT	Aug 14, 2008 2:02:16 PM EDT	Aug 14, 2008 2:02:17 PM EDT	COMPLETE
VERIFY							
	7						
		WINNT1	AGENT	NT		Aug 20, 2008 11:52:22 AM EDT	COMPLETE
		WINNT2	AGENT	NT		Aug 20, 2008 11:52:22 AM EDT	COMPLETE
		WINNT3	AGENT	NT		Aug 20, 2008 11:52:22 AM EDT	COMPLETE
		WINNT4	AGENT	NT		Aug 20, 2008 11:52:22 AM EDT	COMPLETE
	8						
		WINNT1	AGENT	NT	Aug 20, 2008 11:53:02 AM EDT	Aug 20, 2008 11:53:08 AM EDT	COMPLETE
		WINNT2	AGENT	NT	Aug 20, 2008 11:53:02 AM EDT	Aug 20, 2008 11:53:08 AM EDT	COMPLETE
		WINNT3	AGENT	NT	Aug 20, 2008 11:53:02 AM EDT	Aug 20, 2008 11:53:08 AM EDT	COMPLETE
		WINNT4	AGENT	NT	Aug 20, 2008 11:53:02 AM EDT	Aug 20, 2008 11:53:08 AM EDT	COMPLETE
		Total: 13					

More Information:

Run the Jobs by Application Report (see page 108)

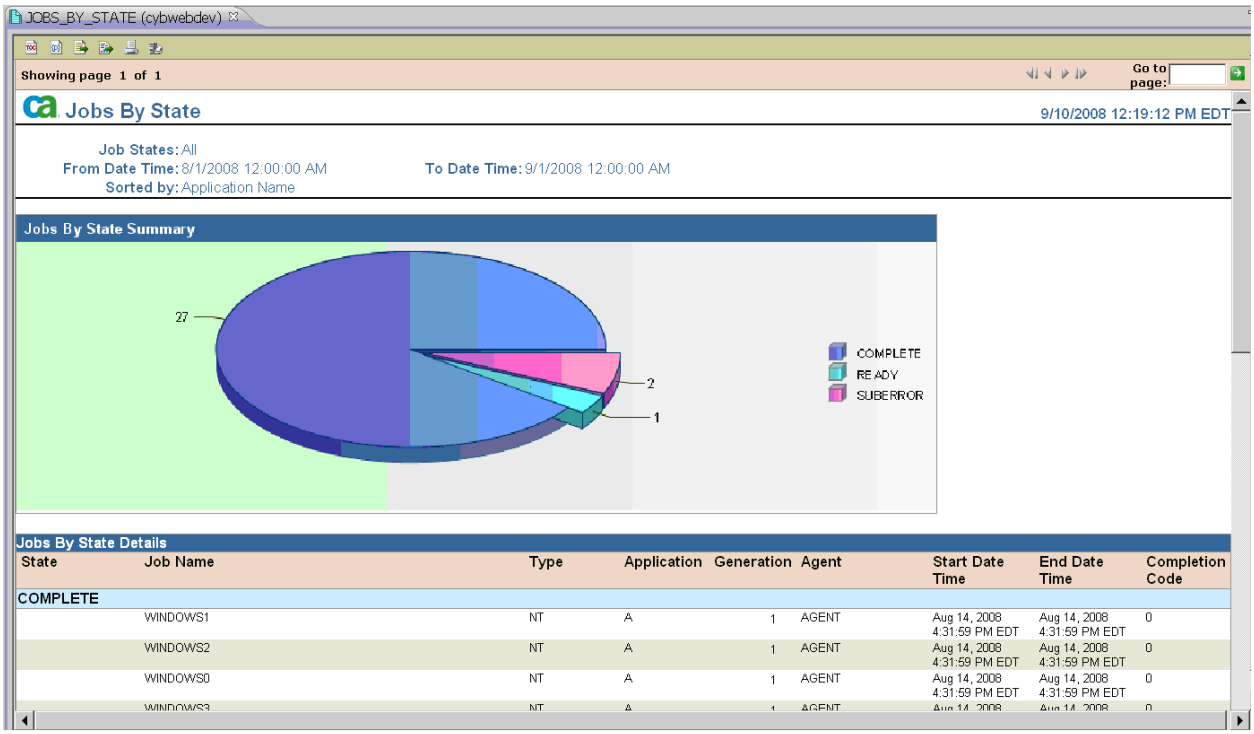
Jobs by State Report

The report displays the jobs that were ready to run within a specified time period, grouped by state. The report contains the following:

- A pie chart that summarizes the total number of jobs for each state.
- The Jobs By State Details table that displays the details of each job. The data in the Jobs By State Details table is grouped by state and by default is sorted by Application name and generation. The total number of jobs is shown for each group.

Note: Jobs that have passed through the READY and EXEC states are shown in their final states, for example, COMPLETE or FAILED. Only jobs that are currently in the READY or EXEC states will show in these states.

The following illustration displays a sample Jobs by State report:



More Information:

Run the Jobs by State Report (see page 109)

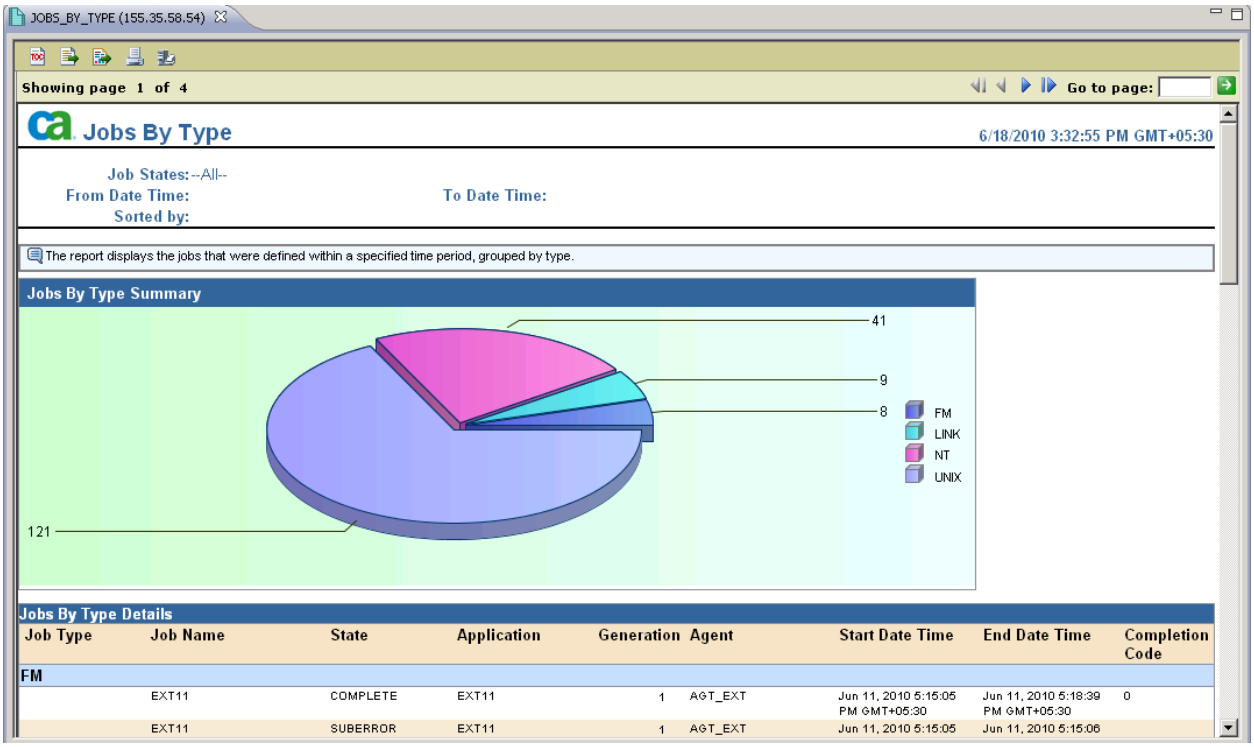
Jobs by Type Report

The report displays the jobs that were ready to run within a specified time period, grouped by job type. The report contains the following:

- A pie chart that summarizes the total number of jobs for each job type.
- The Jobs by Type Details table that displays the details of each job. The data in the Jobs by Type Details table is grouped by type and by default is sorted by Application name and generation.

Note: The EXT (External-Same Scheduler) and EXTMON (External-Other scheduler) job types are not listed in the report.

The following illustration displays a sample Jobs By Type report:



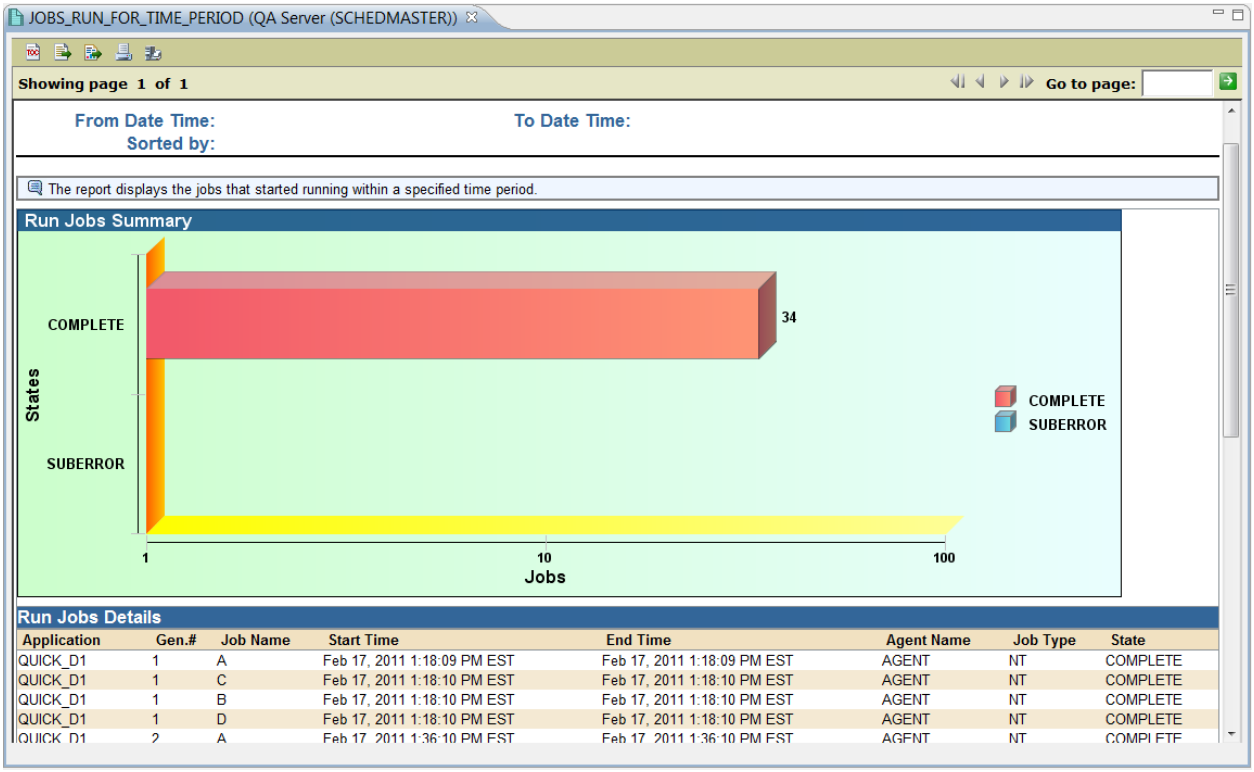
More information:

Run the Jobs by Type Report (see page 111)

Jobs Run for Time Period Report

The report displays the jobs that started running within a specified time period.

The following illustration displays a sample Jobs Run for Time Period report:



More Information:

Run the Jobs Run for Time Period Report (see page 112)

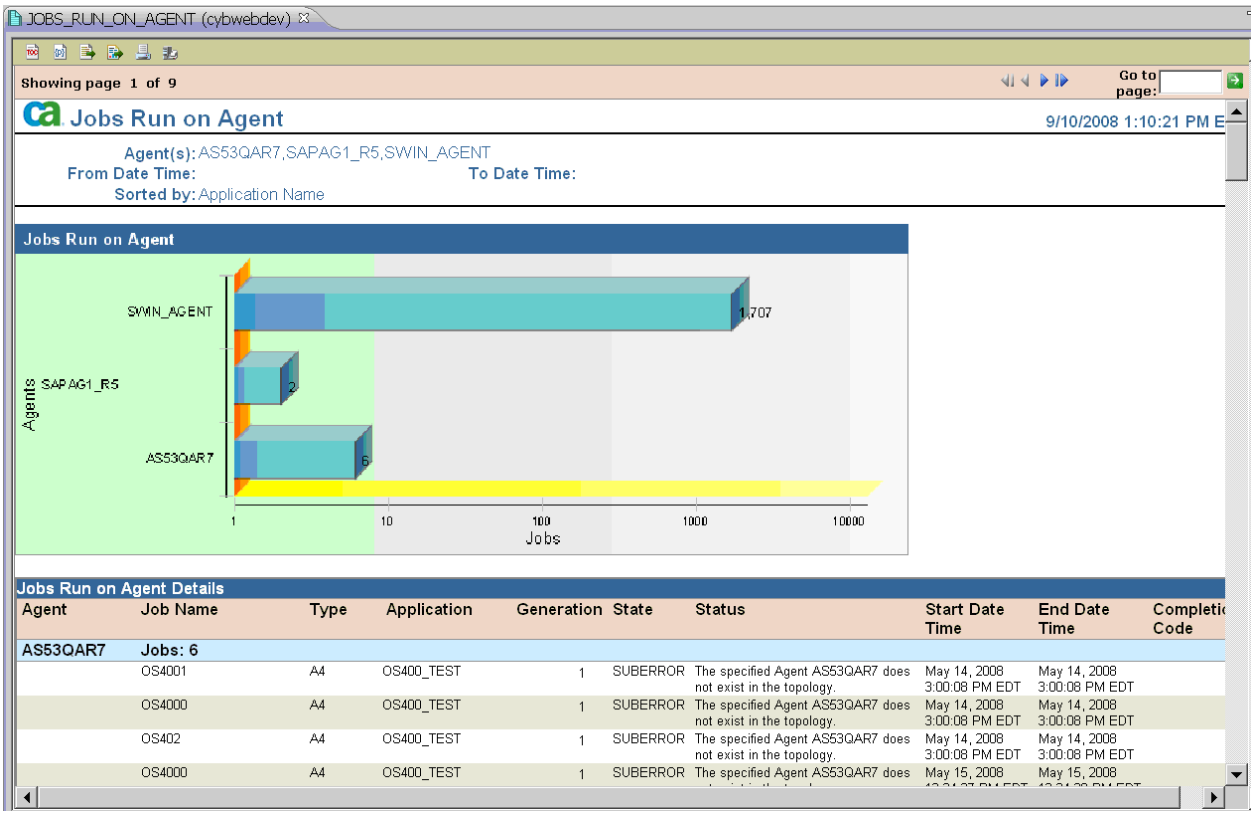
Jobs Run on Agent Report

The report displays the jobs that started running within a specified time period, grouped by agent. The report contains the following:

- A chart that summarizes the number of jobs run on each agent. Agent names are on the Y axis and the number of jobs are on the X axis.
- A table that displays the number of jobs run on each agent and the state of the jobs.

Note: This report is based on all agents with history data in the database. You can filter the agents included in the report.

The following illustration displays a sample Jobs Run On Agent report:



More Information:

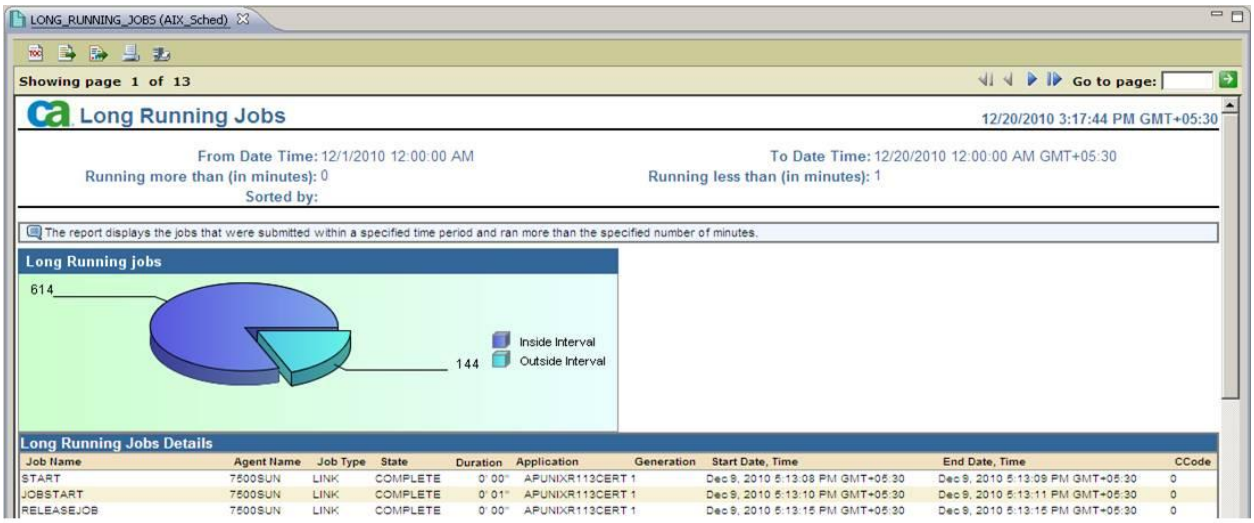
Run the Jobs Run on Agent Report (see page 114)

Long Running Jobs Report

The report displays the jobs that started running within a specified time period and ran for more than specified number of minutes. The report contains the following:

- A chart that shows the number of long running jobs and the total number of jobs.
- A table that displays the details of each long running job.

The following illustration displays a sample Long Running Jobs report:



More information:

Run the Long Running Jobs Report (see page 115)

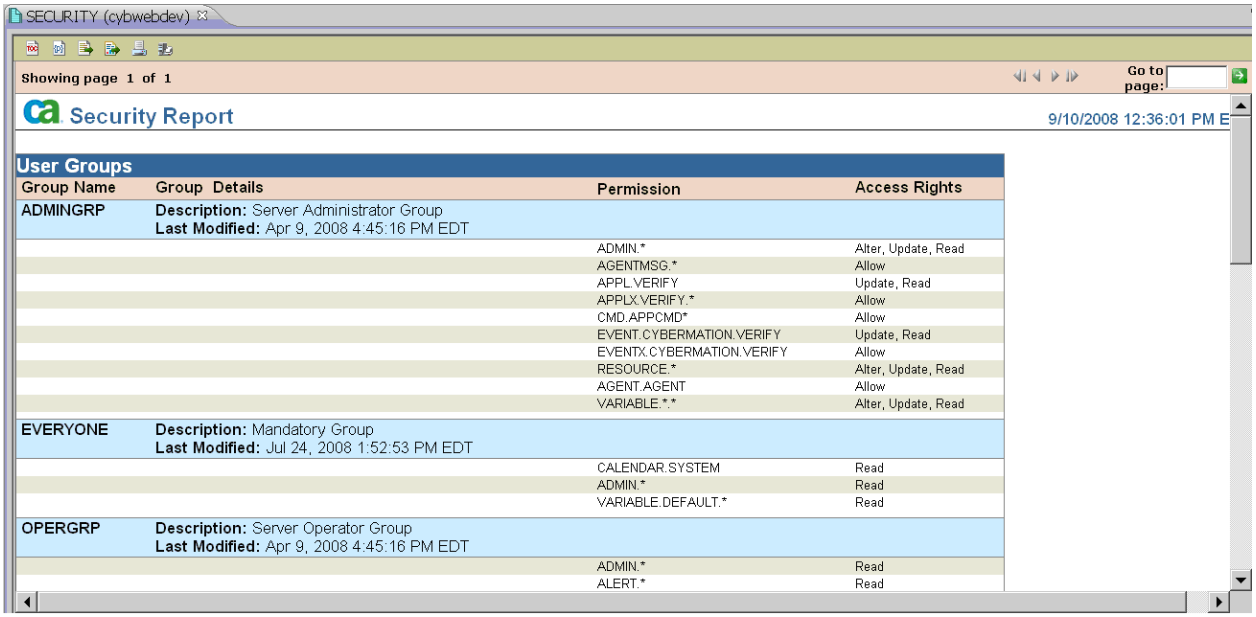
Security Report

The report displays information about all users, groups, and permissions defined on the server. You must have administrator privileges to run the Security report.

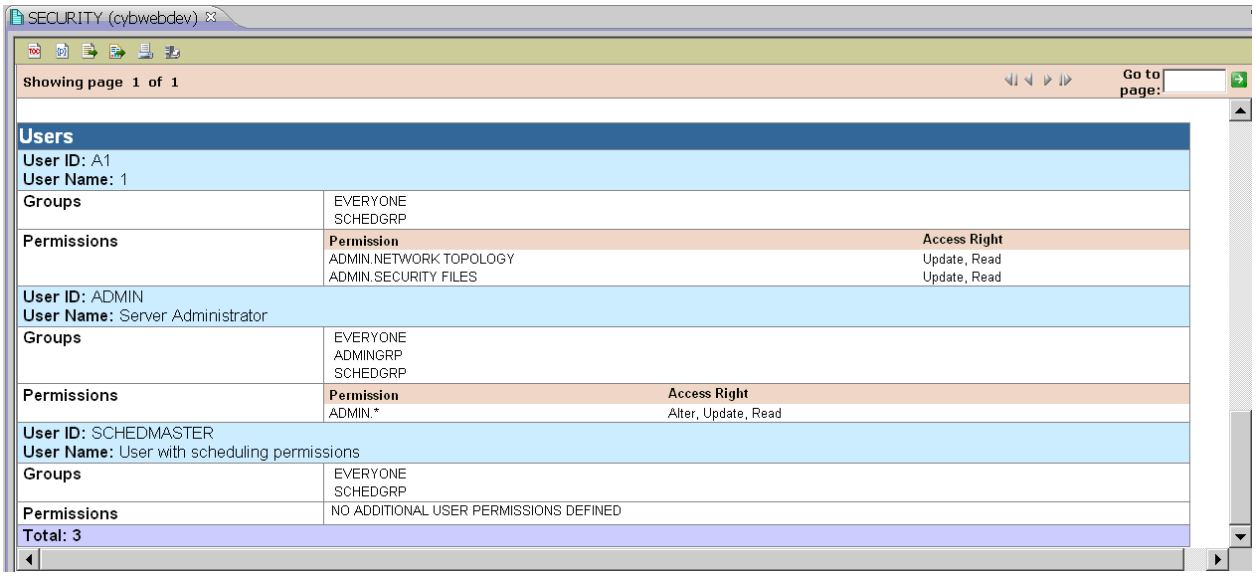
The report contains the following:

- The User Groups table that displays the defined user groups, permissions, and access rights within each group.
- The Users table that lists all the defined users. It displays the groups assigned to each user and the user-specific permissions and access rights.

The following illustration displays a sample Security report with user groups information:



The following illustration displays a sample Security report with user information:



More Information:

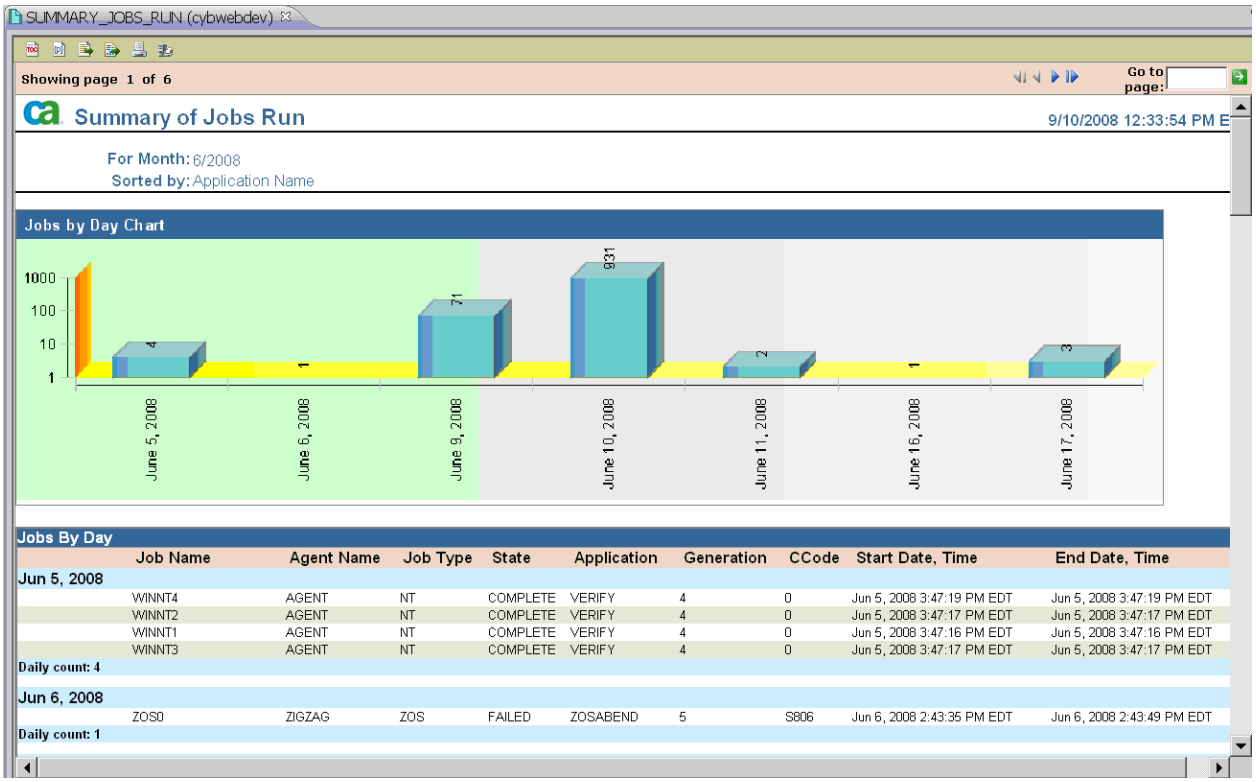
Run the Security Report (see page 117)

Summary Jobs Run Report

The report summarizes the jobs that started running within a specified time period, grouped by day. It contains the following:

- A bar graph that shows the number of jobs that ran every day in the specified month.
- The Jobs by Day table that shows the details of each job. This table is grouped by date and the total number of jobs shown for each group. It also displays the total number of jobs that ran in the specified month at the bottom of the table.

The following illustration displays a sample Summary Jobs Run report:



More Information:

Run the Summary Jobs Run Report (see page 118)

List Reports

You can list the reports defined on the server. For scheduled reports, you can also view the output of each scheduled report.

Note: To view the output of a scheduled report, you must be the execution user for the Report Event or be granted permission to read the report in the Event definition.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Reports under your server connection, and select Open from the pop-up menu.

   The Reports view opens and displays a list of reports along with the results of each report.

   Note: To refresh the list, right-click in the listing, and select Refresh from the pop-up menu.

More information:

Schedule a Report (see page 56)

View the Output of a Scheduled Report

The results of the scheduled Report Events are saved on the server. You can view these reports as required.

Note: To view the output of a scheduled report, you must be the execution user for the Report Event or be granted permission to read the report in the Event definition.

Follow these steps:

1. List reports (see page 103).

   A list of reports appears along with the results for each report.

2. Right-click the output of a report, and select View Report Result from the pop-up menu.

   The output of the scheduled report appears in a new view.

More information:

Schedule a Report (see page 56)

Hide the Output of a Report

You can hide the output of a report if you no longer need to view the results. Hiding the output of a report removes you from the list of users allowed to view the selected report result. It does not delete the report output from the server, so other users can still the view the report results.

Note: The execution user of the Report Event cannot hide the output of the report.

Follow these steps:

1. List reports (see page 103).

   A list of reports appears along with the results for each report.

2. Right-click the output of a report, and select Hide Report Result from the pop-up menu.

   Note: To hide the output of multiple reports at once, hold the Ctrl key and select the report results you want to hide, right-click one of the selected report results, and select Hide Report Result from the pop-up menu.

   The output of the report is removed from the view.

More information:

Schedule a Report (see page 56)

Delete the Output of a Report

If you no longer want users to view the output of a report, you can delete the report results from the server.

Note: To delete the output of a report, you must be the execution user for the Report Event or have Allow access to the REPORT_RESULT_DELETE permission.

Follow these steps:

1. List reports (see page 103).

   A list of reports appears along with the results for each report.

2. Right-click the output of a report, and select Delete from the pop-up menu.

   Note: To delete the output of multiple reports at once, hold the Ctrl key and select the results you want to delete, right-click one of the selected results, and select Delete from the pop-up menu.

   A confirmation dialog opens.

3. Click Yes.

   The report output is deleted from the server.

More information:

Schedule a Report (see page 56)

Delete a Report Definition

You can delete a report definition from the server if you no longer need to schedule or run the report.

Follow these steps:

1. List reports (see page 103).

   A list of reports appears along with the results for each report.

2. Right-click the definition of a report, and select Delete from the pop-up menu.

   If the report being deleted is associated with any Events, the Affected Artifacts dialog opens and lists the Events that are affected by the deletion. Otherwise, a confirmation dialog appears, and you can skip the next step.

3. Select *one* of the following, if applicable:

   - Yes—Proceeds with the deletion.

     The report definition is deleted from the server.

   - No—Cancels the deletion request.

     Note: To avoid the warning, you can update the report specified in the Event definition.

4. Click Yes in the confirmation dialog, if applicable.

   The report definition is deleted from the server.

   Note: The results of the report are not deleted. When you refresh the view, the results reappear under the report. However, you can no longer open, schedule, or run the report as the definition no longer exists.

More information:

Schedule a Report (see page 56)

Run the Failed Jobs Report

You can run the Failed Jobs report to view the jobs that started running within a specified time period and ended in a FAILED, SUBERROR, SYSERROR, or DBERROR state.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Reports under your server connection, and select Open from the pop-up menu.

   The Reports view opens.

3. Right-click the FAILED JOBS report, and select Run from the pop-up menu.

   The Parameter dialog opens.

4. Complete the following fields as appropriate and click OK.

   From Date Time

   Defines the starting date and time of the report's period in the format MM/DD/YYYY [hh:mm:ss AM|PM]. The time is optional.

   Example: 02/03/2010 03:30:46 AM for February 3, 2010 at 3:30:46 a.m.

   Note: You can also select the Null Value option button if you do not want to filter by date and time.

   To Date Time

   Defines the ending date and time of the report's period in the format MM/DD/YYYY [hh:mm:ss AM|PM]. The time is optional.

   Example: 03/22/2010 4:45:32 PM for March 22, 2010 at 4:45:32 p.m.

   Notes:

   - You can also select the Null Value option button if you do not want to filter by date and time.
   - If you specify an end date without a starting date, the report displays all the jobs that ran before the end date.

   Show Details table

   Indicates that you want to display the details table. If you do not select this option, the report provides only a summary of processed records.

   The report displays the number of jobs that failed in the specified time period in a chart and the details of the failed jobs in a table.

5. (Optional) Click Print to print this report.

More Information:

Failed Jobs Report (see page 93)

Run the Jobs by Application Report

You can run the Jobs by Application report to view the jobs that were run in the Applications specified. It does not include bypassed jobs.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Reports under your server connection, and select Open from the pop-up menu.

   The Reports view opens.

3. Right-click the JOBS BY APPLICATION report, and select Run from the pop-up menu.

   The Parameter dialog opens.

4. Complete the following fields as appropriate and click OK.

   Application(s)

   Specifies the Applications to include in the report.

   Note: You can select multiple Applications by holding the Ctrl key. You can select all the Applications by selecting All from the drop-down list.

   Last # of generations

   Specifies the total number of last Application generations to include in the report. For example, if you enter 3, the last 3 Application generations would be displayed.

   Note: You can select the Null Value option button to display all the generations.

   Select sorting column

   Specifies additional criteria to sort the report on within each Application generation grouping. For example, if you select Job Name, the jobs within each Application generation are sorted in ascending order.

Show Details table

Indicates that you want to display the details table. If you do not select this option, the report provides only a summary of processed records.

The report displays all the jobs that ran in the specified Application generations.

5. (Optional) Click Toggle table of contents to display the table of contents for this report.
6. (Optional) Click Print to print this report.

More Information:

Jobs by Application Report (see page 94)

Run the Jobs by State Report

You can run the Jobs by State report to view the jobs that were ready to run within a specified time period, grouped by state.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.
2. Right-click Reports under your server connection, and select Open from the pop-up menu.

   The Reports view opens.
3. Right-click the JOBS BY STATE report, and select Run from the pop-up menu.

   The Parameter dialog opens.
4. Complete the following fields as appropriate and click OK.

   Job State(s)

   Specifies the job states to include in the report.

   Note: You can select multiple states by holding the Ctrl key. You can select all the job states by selecting All from the drop-down list.

   From Date Time

   Defines the starting date and time of the report's period in the format MM/DD/YYYY [hh:mm:ss AM|PM]. The time is optional.

   Example: 02/03/2010 03:30:46 AM for February 3, 2010 at 3:30:46 a.m.

   Note: You can also select the Null Value option button if you do not want to filter by date and time.

To Date Time

Defines the ending date and time of the report's period in the format MM/DD/YYYY [hh:mm:ss AM|PM]. The time is optional.

Example: 03/22/2010 4:45:32 PM for March 22, 2010 at 4:45:32 p.m.

Notes:

- You can also select the Null Value option button if you do not want to filter by date and time.
- If you specify an end date without a starting date, the report displays all the jobs that ran before the end date.

Select sorting column

Specifies additional criteria to sort the report on within each job state grouping. For example, if you select Job Name, the jobs within each job state are sorted in ascending order.

Show Details table

Indicates that you want to display the details table. If you do not select this option, the report provides only a summary of processed records.

The report displays all the jobs in the specified states that ran in the specified time period.

Note: You can navigate to the corresponding state group by double-clicking on a pie area in the chart.

5. (Optional) Click Toggle table of contents to display the table of contents for this report.
6. (Optional) Click Print to print this report.

More Information:

Jobs by State Report (see page 95)

Run the Jobs by Type Report

You can run the Jobs by Type report to view the jobs that were ready to run within a specified time period, grouped by job type.

Follow these steps:

1. List reports (see page 103).

   A list of reports appears along with the results for each report.

2. Right-click the JOBS BY TYPE report, and select Run Report from the pop-up menu.

   The Run Report dialog opens.

3. Complete the following fields as appropriate and click OK.

   Job Type(s)

   Specifies the job types to include in the report.

   Default: ALL (All job types)

   Note: The EXT (External-Same Scheduler) and EXTMON (External-Other scheduler) job types are not listed.

   From Date Time

   Defines the starting date and time of the report's period in the format MM/DD/YYYY [hh:mm:ss AM|PM]. The time is optional.

   Example: 02/03/2010 03:30:46 AM for February 3, 2010 at 3:30:46 a.m.

   Note: You can also select the Null Value option button if you do not want to filter by date and time.

   To Date Time

   Defines the ending date and time of the report's period in the format MM/DD/YYYY [hh:mm:ss AM|PM]. The time is optional.

   Example: 03/22/2010 4:45:32 PM for March 22, 2010 at 4:45:32 p.m.

   Notes:

   - You can also select the Null Value option button if you do not want to filter by date and time.
   - If you specify an end date without a starting date, the report displays all the jobs that ran before the end date.

   Select sorting column

   Specifies additional criteria to sort the report on within each job type grouping. For example, if you select Job Name, the jobs within each job type are sorted in ascending order.

Show Details table

Indicates that you want to display the details table. If you do not select this option, the report provides only a summary of processed records.

The report displays all the jobs in the specified job types that ran in the specified time period.

Note: You can navigate to the corresponding job type group by double-clicking on a pie area in the chart.

4. (Optional) Click the Toggle table of contents icon from the toolbar of the report to display the table of contents for this report.
5. (Optional) Click the Print report icon from the toolbar of the report to print this report.

More information:

Jobs by Type Report (see page 96)

Run the Jobs Run for Time Period Report

You can run the Jobs Run for Time Period report to view the jobs that started running within a specified time period.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.
2. Right-click Reports under your server connection, and select Open from the pop-up menu.

   The Reports view opens.
3. Right-click the JOBS RUN FOR TIME PERIOD report, and select Run from the pop-up menu.

   The Parameter dialog opens.
4. Complete the following fields as appropriate and click OK.

   From Date Time

   Defines the starting date and time of the report's period in the format MM/DD/YYYY [hh:mm:ss AM|PM]. The time is optional.

   Example: 02/03/2010 03:30:46 AM for February 3, 2010 at 3:30:46 a.m.

   Note: You can also select the Null Value option button if you do not want to filter by date and time.

To Date Time

Defines the ending date and time of the report's period in the format MM/DD/YYYY [hh:mm:ss AM|PM]. The time is optional.

Example: 03/22/2010 4:45:32 PM for March 22, 2010 at 4:45:32 p.m.

Notes:

- You can also select the Null Value option button if you do not want to filter by date and time.
- If you specify an end date without a starting date, the report displays all the jobs that ran before the end date.

Select sorting column

Specifies the criteria to sort the report on. For example, if you select Job Name, the report would be sorted by job name.

Show Details table

Indicates that you want to display the details table. If you do not select this option, the report provides only a summary of processed records.

The report displays all the jobs that ran in the specified time period.

5. (Optional) Click Print to print this report.

More Information:

Jobs Run for Time Period Report (see page 97)

Run the Jobs Run on Agent Report

You can run the Jobs Run on Agent report to view the jobs that started running within a specified time period, grouped by agent.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Reports under your server connection, and select Open from the pop-up menu.

   The Reports view opens.

3. Right-click the RUN ON AGENT report, and select Run from the pop-up menu.

   The Parameter dialog opens.

4. Complete the following fields as appropriate and click OK.

   Agent Name

   Specifies the names of the agents to include in the report.

   Note: All agents with history data in the database are listed. You can select multiple agents by holding the Ctrl key. You can select all the agents by selecting All from the drop-down list..

   From Date Time

   Defines the starting date and time of the report's period in the format MM/DD/YYYY [hh:mm:ss AM|PM]. The time is optional.

   Example: 02/03/2010 03:30:46 AM for February 3, 2010 at 3:30:46 a.m.

   Note: You can also select the Null Value option button if you do not want to filter by date and time.

   To Date Time

   Defines the ending date and time of the report's period in the format MM/DD/YYYY [hh:mm:ss AM|PM]. The time is optional.

   Example: 03/22/2010 4:45:32 PM for March 22, 2010 at 4:45:32 p.m.

   Notes:

   - You can also select the Null Value option button if you do not want to filter by date and time.
   - If you specify an end date without a starting date, the report displays all the jobs that ran before the end date.

Select sorting column

Specifies additional criteria to sort the report on within each agent grouping. For example, if you select Job Name, the jobs within each agent grouping are sorted in ascending order.

Select summary data format

Specifies the format (chart, table, or both) of the report summary.

Show Details table

Indicates that you want to display the details table. If you do not select this option, the report provides only a summary of processed records.

The report displays all the jobs that ran on the specified agents in the specified time period.

5. (Optional) Click Toggle table of contents to display the table of contents for this report.
6. (Optional) Click Print to print this report.

More Information:

Jobs Run on Agent Report (see page 98)

Run the Long Running Jobs Report

You can run the Long Running Jobs report to view the jobs that started running within a specified time period and ran for more than a specified time.

Follow these steps:

1. List reports (see page 103).

   A list of reports appears along with the results for each report.
2. Right-click the LONG RUNNING JOBS report, and select Run Report from the pop-up menu.

   The Run Report dialog opens.
3. Complete the following fields as appropriate and click OK.

   From Date Time

   Defines the starting date and time of the report's period in the format MM/DD/YYYY [hh:mm:ss AM|PM]. The time is optional.

   Example: 02/03/2010 03:30:46 AM for February 3, 2010 at 3:30:46 a.m.

   Note: You can also select the Null Value option button if you do not want to filter by date and time.

To Date Time

Defines the ending date and time of the report's period in the format MM/DD/YYYY [hh:mm:ss AM|PM]. The time is optional.

Example: 03/22/2010 4:45:32 PM for March 22, 2010 at 4:45:32 p.m.

Notes:

- You can also select the Null Value option button if you do not want to filter by date and time.
- If you specify an end date without a starting date, the report displays all the jobs that ran before the end date.

Lower Time Limit (in minutes)

Specifies the minimum run time of jobs to include in the report in minutes.

Default: 10

Upper Time Limit (in minutes)

Specifies the maximum run time of jobs to include in the report in minutes.

Select sorting column

Specifies additional criteria to sort the report on. For example, if you select Job Name, the jobs are sorted in ascending order.

Show Details table

Indicates that you want to display the details table. If you do not select this option, the report provides only a summary of processed records.

The report displays all jobs jobs that started running within a specified time period and ran for more than a specified time.

4. (Optional) Click the Toggle table of contents icon from the toolbar of the report to display the table of contents for this report.
5. (Optional) Click the Print report icon from the toolbar of the report to print this report.

More information:

Long Running Jobs Report (see page 99)

Run the Security Report

You can run the Security report to view about all users, groups, and permissions defined on the server.

Note: You must have administrator privileges to run this report.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Reports under your server connection, and select Open from the pop-up menu.

   The Reports view opens.

3. Right-click the SECURITY report, and select Run from the pop-up menu.

   The report displays the details, permissions, and access rights of all users and groups.

4. (Optional) Click Toggle table of contents to display the table of contents for this report.

5. (Optional) Click Print to print this report.

More Information:

Security Report (see page 100)

Run the Summary Jobs Run Report

You can run the Summary Jobs Run report to view the jobs that started running within a specified time period, grouped by day.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Reports under your server connection, and select Open from the pop-up menu.

   The Reports view opens.

3. Right-click the SUMMARY JOBS RUN report, and select Run from the pop-up menu.

   The Parameter dialog opens.

4. Complete the following fields as appropriate and click OK.

   Month

   Specifies the month to include in the report.

   Example: May

   Year

   Defines the year to include in the report in the format YYYY.

   Example: 2008

   Select sorting column

   Specifies additional criteria to sort the report on within each month and year grouping. For example, if you select Job Name, the jobs within each month and year grouping are sorted in ascending order.

   Show Details table

   Indicates that you want to display the details table. If you do not select this option, the report provides only a summary of processed records.

   The report displays all the jobs that ran in the specified month and year by day.

5. (Optional) Click Toggle table of contents to display the table of contents for this report.

6. (Optional) Click Print to print this report.

More Information:

Summary Jobs Run Report (see page 102)

Rerun a Report with Different Parameters

You can rerun a report with different parameters to create a new report.

Follow these steps:

1. Run a report in the Services perspective.
2. Click the Run Report icon from the toolbar of the Reports view.

   The Run Report dialog opens.
3. Update the parameters as appropriate and click OK.

   The report is rerun based on the specified parameters.

Export a Report

You can export the output of a report to your local computer and save it in the following formats:

- Word
- PowerPoint
- PDF
- PostScript
- Excel

Follow these steps:

1. Run a report or view the output of a scheduled report.

   The output of the report appears in a view.
2. Click the Export report icon from the toolbar of the report.

   The Export Report dialog opens.
3. Select the output format in the Export Format drop-down list.
4. Modify the other fields as appropriate, and click OK.

   The File Download dialog opens.
5. Click Save to save the file to the local computer.

   Note: To open the file immediately, click Open.

   The Save As dialog opens.
6. Select a folder in the Save in drop-down list, specify a file name in the File name field, and click Save.

   The file is saved to your local computer.

Export Data from a Report

You can export the raw data of a report to your local computer as a .csv file.

Follow these steps:

1. Run a report or view the output of a scheduled report.

   The output of the report appears in a view.

2. Click the Export data icon from the toolbar of the report.

   The Export Data dialog opens.

3. Select the sorting criteria for the parameters to be exported from the Available result sets drop-down list.

4. Select columns from the Available Columns section and click > to move the selected parameters to the Selected Columns section.

5. Modify the other fields as appropriate, and click OK.

   The File Download dialog opens.

6. Click Save to save the file to the local computer.

   Note: To open the file immediately, click Open.

   The Save As dialog opens.

7. Select a folder in the Save in drop-down list, specify a file name in the File name field, and click Save.

   The .csv file is saved to your local computer.

Chapter 8: Working with Resources

This section contains the following topics:

Resources

A job can have different types of dependencies including time, predecessor, and resource. A job runs when it meets all of its dependencies. A job that waits for resources is in the RESWAIT state.

A resource is a job dependency that can be quantified by specifying its availability count. Resource dependencies affect a job's ability to run successfully. The server submits only jobs that have met all their resource requirements.

For example, if a job needs three units of a resource and only two units of the resource are available, the job cannot run (RESWAIT) until all three units of the resource are available.

Each resource is associated with a resource type that determines the resource's properties and behavior.

The following resource types are available:

Depletable resources

A depletable resource is a consumed resource. When the server submits a job, the job permanently removes the consumed units of the depletable resource from the resource pool. When the resource depletes, it can be replenished for other jobs to use. For example, you can use a depletable resource to represent disk space.

Renewable resources

A renewable resource is a borrowed resource. When the server submits a job, the job removes the borrowed units of the renewable resource from the resource pool. The resource units are not permanently used up. The resource units return to the resource pool when the job completes or fails. The job borrows the resource units so it can execute successfully. For example, you can use a renewable resource to control concurrent write access to a database.

Threshold resources

A threshold resource is a sizing resource. A job does not consume or borrow resource units from the resource pool while it runs. For example, if the resource quantity is set to two, the server submits all jobs that require two or fewer units. The server does not submit any job requiring three or more units. It sizes the job against the threshold resource's current level. For example, you can use a threshold resource to represent a period when you run low-priority jobs.

Create a Resource

You must create the resource before you can set up a resource dependency in a job.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Resources under your server connection and click New from the pop-up menu.

   The New Resource view opens.

3. Enter the appropriate information.

   Note: The maximum availability count applies to renewable resources only. The availability count cannot exceed the maximum availability count.

4. Click the Save icon.

   The resource is created.

Example: Create a Renewable Resource

You can create a renewable resource named RESREN with an initial availability of 1 and a maximum availability of 3.

To create a renewable resource

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Resources under your server connection and click New from the pop-up menu.

   The New Resource view opens.

3. Enter RESREN as the resource name.

4. Enter 1 as the availability count and 3 as the maximum availability count.

5. Click the Save icon.

   The renewable resource is created.

View or Modify a Resource

You can modify an existing resource in the Services perspective if you need to change its details.

Note: You must cold start the server for the new value to take effect.

Follow these steps:

1. Open the Services perspective.

   A list of server connections is displayed in the Services view.

2. Right-click Resources under your server connection and click Open from the pop-up menu.

   The Resources view opens.

3. Enter the complete or partial resource name in the Resource name field to limit the resources displayed, and click the arrow next to the Resource name field.

   Note: You must include a wildcard for a partial name. For example, RES* displays all the resources whose names start with RES.

   You can leave the Resource name field blank to display all resources.

   A list of the resources matching your criteria is displayed.

4. Right-click the resource you want to view and click Open from the pop-up menu.

   The details for the specified resource appear.

5. (Optional) Modify the details as appropriate, and click the Save icon.

   The modified resource is saved.

Copy an Existing Resource

You can copy a resource in the Services perspective and save it with a different name to create a new resource.

Follow these steps:

1. Open the resource you want to copy.
2. Right-click the resource you want to copy and click Open from the pop-up menu.

   The resource definition details appear.
3. Click the Copy icon.

   The New Resource view opens.
4. Enter a new resource name and modify the remaining fields as appropriate.
5. Click the Save icon.

   The new resource is saved.

Delete a Resource

You can delete a resource from the server if it is no longer in use.

Follow these steps:

1. List the resources.
2. Right-click the resource that you want to delete, and click Delete from the pop-up menu.

   If the resource being deleted is associated with any Applications, the Affected Artifacts dialog opens and lists the Applications that are affected by the deletion. Otherwise, a confirmation dialog appears, and you can skip the next step.

   Note: If you selected multiple resources, the Affected Artifacts dialog lists all of the Applications that are affected by the deletion of the selected resources.
3. Select one of the following, if applicable.
   - Yes—Proceeds with the deletion.

     The resource is permanently deleted.
   - No—Cancels the deletion request.

     Note: To avoid the warning, you can update the resource dependencies specified in the Application definition.
4. Click Yes in the confirmation dialog, if applicable.

   The resource is permanently deleted.

   Note: If a job requires the resource, the job goes into a RESWAIT state. The job remains in the RESWAIT state until the resource dependency is dropped or a new resource is created with the same name as the deleted resource.

Display Resource Status

You can view the status of a resource and the number of times it has been used, reserved, or needed.

Follow these steps:

1. List the resources.
2. Right-click the resource that you want to display the status of, and select List Resource Status from the pop-up menu.

   A dialog opens and displays the status of the resource.

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