



Cisco Tidal Enterprise Scheduler OpenVMS Agent Guide

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Cisco Tidal Enterprise Scheduler OpenVMS Agent Guide
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Preface

This guide describes the installation, configuration, and usage of the OpenVMS Agent with Cisco Tidal Enterprise Scheduler (TES).

Audience

This guide is for administrators who install and configure the OpenVMS Agent for use with TES, and who troubleshoot TES installation and requirements issues.

Related Documentation

See the *Cisco Tidal Enterprise Scheduler Documentation Overview* for your release on cisco.com at:

<http://www.cisco.com/c/en/us/support/cloud-systems-management/tidal-enterprise-scheduler/products-documentation-roadmaps-list.html>

...for a list of all TES guides.



Note

We sometimes update the documentation after original publication. Therefore, you should also review the documentation on Cisco.com for any updates.

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Document Change History

The table below provides the revision history for the Cisco Tidal Enterprise Scheduler OpenVMS Agent Guide.

Version Number	Issue Date	Reason for Change
6.1.0	October 2012	<ul style="list-style-type: none">• New Cisco version.
6.2.1	June 2014	<ul style="list-style-type: none">• Available in online Help only.
6.2.1 SP2	June 2015	<ul style="list-style-type: none">• Configuration provided in the <i>TES Installation Guide</i>; usage provided in online Help only.
6.2.1 SP3	May 2016	<ul style="list-style-type: none">• Consolidated all OpenVMS Agent documentation into one document.



Introducing the OpenVMS Agent

This chapter provides an overview of the OpenVMS Agent and its requirements:

- [Overview](#)
- [Installation Prerequisites](#)

Overview

This guide directs you through the installation, configuration, and use of the OpenVMS Agent with Tidal Enterprise Scheduler. OpenVMS is also referred to as OVMS throughout this guide.

This guide is intended for users with knowledge of the OVMS system from Hewlett-Packard. Basic knowledge of the operation of Enterprise Scheduler components is assumed. If you are planning to use an Oracle or Microsoft SQL database, you will need administrative access to the database or the assistance of your database administrator for your installations.

Installation Prerequisites

The following requirements must be met prior to installation and operation of the agent for OVMS:

- OVMS Alpha 7.2.2 with JVM 1.4.1
OVMS Alpha 7.3.2 with JVM 1.4.2
(Be sure the user has the rights to access the JVM.)
- Agent machines for the OVMS agent require a minimum of:
 - 1 Gig of RAM on the agent machine dedicated to the OVMS agent
 - 100 MB of disk space dedicated to the OVMS agent and its log files
- A user needs the following privileges to run jobs on the OVMS agent:
 - NETMBX
 - TMPMBX

A user needs the following additional privileges to manage the agent:

- CMKRNL
- GRPPRV
- IMPERSONATE NETMBX
- SYSPRV

- TMPMBX
- A license file for the agent should be available to apply after installation.
- A root user account to install the agent with an OVMS user account to own and control the agent. (Be sure the user has the rights to access the JVM.)

Refer to the *Tidal Enterprise Scheduler Compatibility Guide* for a complete list of hardware and software requirements.



Installing the OpenVMS Agent

Overview

You must install the OpenVMS Agent then configure TES to run OVMS jobs before you can start defining and running jobs.

This chapter covers these topics:

- [Installing the Agent](#)
- [Starting and Stopping Agents](#)
- [Uninstalling Agents](#)

Configuration is described in [Configuring the OpenVMS Agent](#).

Installing the Agent

Before installing the Agent for OVMS, backup your files and gather the following information:

- Name of the user who will own the agent
- Port number for the agent
- Directory path for the Java Virtual Machine (JVM)

To install the agent from the command line:

-
- Step 1** If you have not already done so, backup your files before beginning the installation procedure.
- Step 2** Login as system or the account that the account will run as.
- Step 3** Copy the *install.com* and *pduct.bck* files to your system. The two files require different formats when they are FTPed.
- Send the *install.com* file in ASCII format.
 - Send the *pduct.bck* file in binary format.
- Step 4** After downloading the *pduct.bck* file at the OVMS machine, set the Logical Record Length by applying the following command:
- ```
set file/attrib=(lrl:32256) pduct.bck
```
- Step 5** To begin the installation, type the following and press ENTER to display the initial screen:
- ```
$ @install
```

```

$ @install
-----

000000 000000 000000 0000 00
00    00    00 00 00 00 00
00    00    00 00 00 00 00
00    00    00 00 00 00 00
00    00    00 00 000000 00
00    00    00 00 00 00 00
00    000000 000000 00 00 000000

      -> WARNING <-
      Make sure you have a current
      backup before installing any
      new products or upgrades

Options:

1      Exit
2      Begin the installation

-----
* Specify option number [1]:

```

Step 6 To begin the installation process, type **2** and press **Enter**.



Note You can exit the installation program at any time by pressing CTRL + c.

If the installation program cannot find the Java Runtime Engine (JRE), the installation will not proceed and the following message is displayed:

```
"Java Run Time not found. Please install Java Run Time first."
```

If a JRE is not installed on your machine, install one as noted in [Configuring Your OVMS System](#).

```

Options:

1      Exit
2      Begin the installation

-----
* Specify option number [1]: 2
* Specify the disk name to install [dka100]:

```

Step 7 Type the name of the disk of your system where you want to install the agent files and press **Enter**. The default disk is displayed inside of brackets. If you wish to install into the default disk, press **Enter** without typing anything; however, if your system does not have a disk with this name than the installation process will stop.

```

* Specify the disk name to install [dka100]:
* Specify the directory name to install [tidal]:
INSTALLDIR = "dka100:[tidal]"

```

- Step 8** Type the name of the directory where you want to install the agent files and press **Enter**. The default directory is displayed inside of brackets. If you wish to install into the default directory, press **Enter** without typing anything.

The installation procedure will create the OVMS agent files in the designated location.

```
* Specify the directory name to install [tidal]:
```

```
* Who is the agent owner ? [SYSTEM] :
```

- Step 9** Type the name of the user who will own the agent and press **Enter**.

```
* Who is the agent owner ? [SYSTEM] :
```

```
Java version ? [1.4.1] : 1.4.2
```

- Step 10** The installation program prompts for the version of Java being used. If your system is using OVMS alpha version 7.2.2 you need to use JVM 1.4.1. If your system uses OVMS alpha version 7.3, you need to use JVM 1.4.2. Type the JVM version you are using and press **Enter**.

Once the JVM is determined, the installation program starts creating the agent files.

```
Java version ? [1.4.1] : 1.4.2
```

```
INSTALLDIR = "dka100:[tidal]"
```

```
%BACKUP-S-CREATED, created DKA100:[TIDAL.AGENT.BIN]oem.cfg;1
```

```
%BACKUP-S-CREATED, created DKA100:[TIDAL.AGENT.BIN]TAGENT.EXE;1
```

```
%BACKUP-S-CREATED, created DKA100:[TIDAL.AGENT.BIN]tagent.ini;3
```

```
%BACKUP-S-CREATED, created DKA100:[TIDAL.AGENT.BIN]_TAGENT.INI;1
```

```
%BACKUP-S-CREATED, created DKA100:[TIDAL.AGENT.LIB]JOB.EXE;1
```

```
%BACKUP-S-CREATED, created DKA100:[TIDAL.AGENT.LIB]OCSEXIT.EXE;1
```

```
%BACKUP-S-CREATED, created DKA100:[TIDAL.AGENT.LIB.OVMS]JOB.EXE;1
```

```
%BACKUP-S-CREATED, created DKA100:[TIDAL.AGENT.LIB.OVMS]SETEXIT.EXE;1
```

```
%BACKUP-S-CREATED, created DKA100:[TIDAL.AGENT.LIB.OVMS]TJB.EXE;1
```

```
%BACKUP-S-CREATED, created DKA100:[TIDAL.AGENT.LIB]SETEXIT.EXE;1
```

```
%BACKUP-S-CREATED, created DKA100:[TIDAL.AGENT.LIB]TAgent.jar;1
```

```
* Please specify the Agent name: Agent1
```

```
* Please specify the port number: 5912
```

```
*****
Installation completed
*****
```

- Step 11** Type a name for the agent.

- Step 12** Type the number of the port that the OVMS agent should use and press **Enter**. The default port number is **5912**.

The installation of the OVMS files is complete.

Step 13 Run the following command in the directory where the agent was installed:

```
$ @AGENT_SYM.COM
```

Step 14 Verify that the OVMS agent is correctly installed by running the agent in debug mode.



Note The agent can only be started and stopped from its .bin directory. Be sure that you are in the .bin directory when starting and stopping the agent.

Step 15 Type the following, replacing the brackets and the text between them with the name of the agent, and press ENTER.

```
$ tagent <name of OVMS agent> debug
```

Running the Agent in Detach Mode

Usually you will run the OVMS agent in the background or in the detached mode.

To run the agent in the detach mode, type the following at the prompt after running agent_sym.com:

```
$tagentdetach
```

Verifying that the Agent is Running in Detach Mode

You can run the following command to get information about the OVMS system:

```
$ show system
```

A screen like the following example will display information about your system.

```
$ show system
OpenVMS V8.2  on node OVMS01  9-JUN-2005 13:12:14.61  Uptime  8 19:50:26
  Pid    Process Name      State Pri    I/O      CPU      Page flts  Pages
000330C2 INSTALL           LEF    9    4215    0 00:00:01.30    5757    213
000330C6 TIDAL-AGENT       HIB    6     465    0 00:00:00.20     435    478
```

Starting and Stopping Agents

You can start an agent by entering on the command line:

```
$ tagent <agent name> debug (interactive mode)
```

-or-

```
$tagentdetach (detach mode)
```

You stop the agent by entering on the command line:

```
$ tagent <agent name> stop
```

**Note**

You should stop all OVMS agents before rebooting the OVMS system. It is recommended to add the agent stop command to a system shutdown script to be used when restarting an OVMS system.

Uninstalling Agents

The uninstallation procedure will not be successful if the agent is running. Stop the agent before removing the Agent for OVMS.

To uninstall the agent:

-
- Step 1** Check the status of the agent to verify that it is not running by entering:
- ```
$ tagent <agent name> status
```
- Step 2** If the status check shows the agent is not running, proceed to the next step. If the status check shows the agent is running, stop the agent by entering:
- ```
$ tagent <agent name> stop
```
- Step 3** When the agent is stopped, have your OVMS administrator remove the agent directory and its contents.



Configuring the OpenVMS Agent

Overview

After installing the OVMS agent software, you must perform the following steps to license and configure the agent before you can run OVMS jobs. These steps are described in more detail in the following sections.

- [Licensing the OVMS Agent](#)—License the connection(s) to the OVMS machine. You cannot define an OVMS connection until you have applied a license for OVMS from Cisco.
- [Defining an OVMS User](#)—Add a user account to access the OVMS account that the OVMS administrator provided for use by Tidal Enterprise Scheduler. This OVMS user account can be added to the runtime users lists for those users who need to run OVMS jobs.
- [Configuring Your OVMS System](#)—Configure process quotas for optimal system performance.
- [Configuring Agents](#)—Add and delete agent instances using the `tagent.ini` file.
- [Configuring Agent Parameters](#)—Modify certain parameters in the `tagent.ini` file to control how the agent runs.
- [Defining an OVMS Connection](#)—Define an OVMS connection so the master can communicate with an OVMS machine.

Licensing the OVMS Agent

To license the OVMS Agent with a Full license:

-
- Step 1** Rename your Full license file to *master.lic*.
 - Step 2** Place the file in the `master\config` directory.
 - Step 3** Restart the master. The master will read and apply the license when it starts.
 - Step 4** If you do not have a license, call Support.


Defining an OVMS User

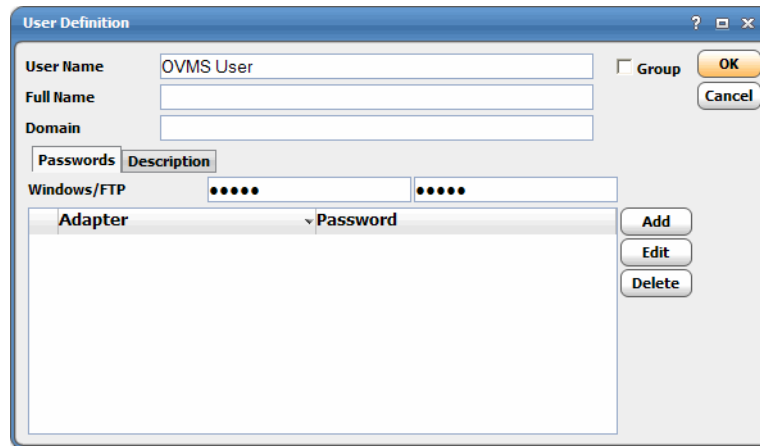
Before you can create OVMS jobs, a user with the necessary privileges to the OVMS server must be defined to TES. This user must have the following privileges: CMKRNL, GRPPRV, IMPERSONATE, NETMBX, SYSPRV and TMPMBX.

TES cannot run any OVMS job unless it knows the user name(s) and password(s) needed for OVMS access. TES then interacts with the OVMS server as that defined user, exchanging information to monitor and control the execution of the OVMS jobs through TES. Other users in TES are authorized to run OVMS jobs on behalf of OVMS runtime users.

Adding an OVMS User to TES

To add an OpenVS user to Enterprise Scheduler:

- Step 1** From the **Navigator** pane, select **Administration>Runtime Users** to display the **Runtime Users** pane.
- Step 2** Click the **Add** button  or right-click and select **Add Users** from the context menu to display the **User Definition** dialog.



The **User Definition** dialog box is shown. It contains the following fields and controls:

- User Name**: Text field with "OVMS User" entered.
- Full Name**: Empty text field.
- Domain**: Empty text field.
- Passwords** tab is selected. It contains:
 - Windows/FTP**: Two password fields, both containing "*****".
 - Adapter**: A dropdown menu.
 - Password**: A text field.
- Description**: Empty text field.
- Group**: A checkbox.
- Buttons**: **OK**, **Cancel**, **Add**, **Edit**, and **Delete**.

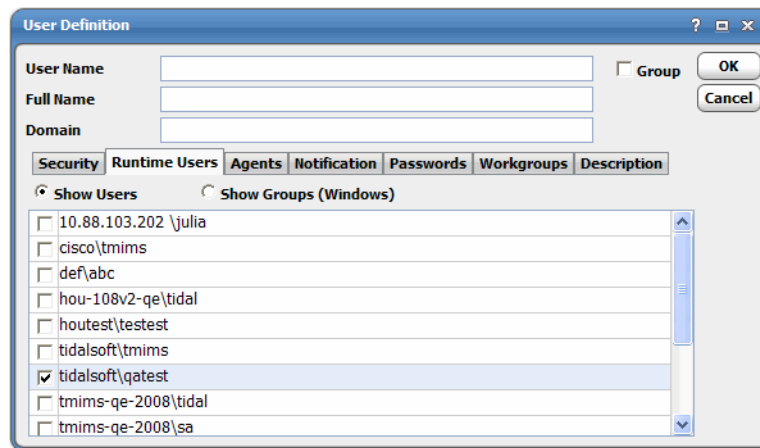
- Step 3** If this is a new user definition, enter the new user name in the **User Name** field.
- Step 4** For documentation, enter the **Full Name** or description associated with this user.
- Step 5** In the **Domain** field, select a Windows domain associated with the user account required for authentication, if necessary.
- Step 6** In the **Windows/FTP Password** field, enter the password for the OVMS user account provided by the OVMS Administrator.
- Step 7** In the **Confirm Password** field, retype the password.
- If the passwords entered in the **Windows/FTP Password** and **Confirm Password** fields do not match, you must re-enter the password in both fields.
- Step 8** Click **OK** to add or save the user record in the Enterprise Scheduler database.

Authorizing Users to Run OVMS Jobs

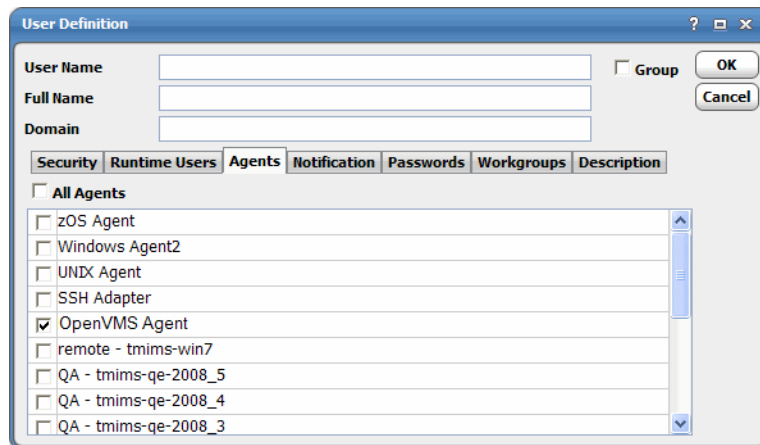
If an Enterprise Scheduler user is to work with OVMS jobs, they must have a defined OVMS user in their authorized runtime user list. If an OVMS user is not added to a TES user's authorized runtime users list, the user has no access to the OVMS server and cannot run OVMS jobs. Similarly, you grant or deny access to specific OVMS servers in the user's authorized agents list.

To add a user to a user's authorized runtime user list:

- Step 1** From the **Navigator** pane, select **Administration>Users** to display the **Users** pane listing all TES users. If the TES users do not appear, you do not have the appropriate rights to view users.
- Step 2** Double-click the name of an user account that you want to be able to run OVMS jobs to display the **User Definition** dialog.
- Step 3** Click the **Runtime Users** tab in the **User Definition** dialog.
- Step 4** On the **Runtime Users** tab, select the check box(es) beside the name(s) of the OVMS user(s) you want to include in this TES user's authorized user list.



- Step 5** If you wish to restrict this user's access to specific OVMS servers, click on the **Agents** tab and make the appropriate selections.



- Step 6** Click **OK**.

Configuring Your OVMS System

By default, a process running in the Java runtime environment on a Unix system has a large quota. In contrast, to ensure that many processes can run concurrently, OVMS assigns a lower quota to a process. These conflicting quotas for a process must be reconciled. To get optimal system performance, Hewlett-Packard recommends that the process quotas with OVMS be set to those used for a typical Unix system. The *minimum* quota configuration should use the following settings:

UAF Parameters

Parameter	Value
Fillm	4096
Wsdef	2048
Wsquo	4096
Wsextent	16384
Pgflquo	2097152
bytlm	400000
biolm	150
tqelm	150

Sysgen parameters

Parameter	Value
Channelcnt	4096
Wsmax	16384
Wsquo	4096
Wsextent	16384
(Continued)	
PQL_DBIOLM	150
PQL_MBIOLM	150
PQL_DBYTLM	400000
PQL_DDIOLM	150
PQL_MDIOLM	150
PQL_DFILLM	4096
PQL_MFILLM	4096

Parameter	Value
PQL_DPGFLQUOT A	2097152
PQL_MPGFLQUO TA	2097152

Configuring Agents

You can configure OVMS agents (add and delete agent instances) by using your editor to open the *tagent.ini* file and making changes as needed.

Configuring Agent Parameters

Certain parameters of the OVMS agent can be configured for the convenience of users. You modify the parameters of an agent by changing the parameter values in the *tagent.ini* file. The *tagent.ini* file is located in the OVMS agent directory. Stop the agent before modifying any of the agent's parameters as described in [Starting and Stopping Agents](#). The agent parameters below can be modified.

homedir=y

The **homedir** parameter specifies the agent's home directory.

A **y** value means that the starting path will be the runtime user's home directory instead of the agent's home directory.

Leaving the parameter value blank (the default value) or specifying a **n** value means that the home directory remains the directory where the agent is installed.



Note

This parameter will override the working directory setting in the master for all jobs to the user's home directory.

minmem=x and maxmem=x

The **minmem** and **maxmem** parameters control how many MB of memory should be allocated to the agent processes. These memory parameters can be adjusted as individual needs warrant. Your system may need more or less than the default memory allotments.

The **minmem** parameter specifies that at least the amount of RAM specified should be available. The default value is 16 MB of RAM.

The **maxmem** parameter specifies that no more than the amount of RAM specified should be available for the agent processes. The default value is 32 MB of RAM.

Jobstopwait=n seconds

The **Jobstopwait** parameter specifies the time interval between sending a SIGTSTP warning that a job is about to be put on hold and actually sending the SIGSTOP signal to pause the job.

The default value is 1 second before pausing the job but the number of seconds between the warning and the actual pausing of the job can be modified from this parameter.

Jobkillwait=n seconds


The **Jobkillwait** parameter specifies the time interval between sending a SIGTERM warning that a job is about to be aborted/cancelled and actually sending the SIGKILL signal to abort/cancel the job.

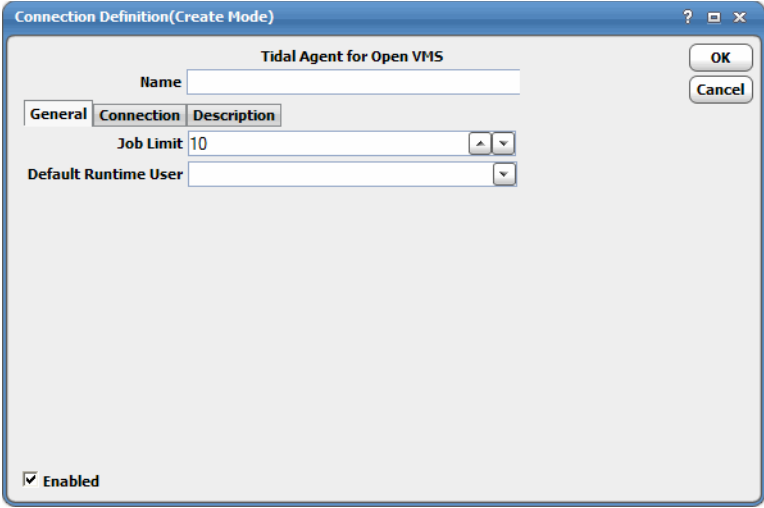
The default value is 5 seconds before cancelling the job but the number of seconds between the warning and the actual cancelling of the job can be modified from this parameter.

Defining an OVMS Connection

You must create a connection to the OVMS machine before TES can run your OVMS jobs. These connections also must be licensed before TES can use them.

To add an OVMS connection to Enterprise Scheduler:

-
- Step 1** From the **Navigator** pane, select **Connections>Administration** or click the **Connections** button  on the **TES** toolbar.
- Step 2** Right-click and select **Add Node>Tidal Agent for OVMS** from the context menu to display the **TIDAL Agent for OVMS Connection Definition** dialog.



Connection Definition(Create Mode)

Tidal Agent for Open VMS

Name

General Connection Description

Job Limit

Default Runtime User

OK Cancel

☒ Enabled

- Step 3** In the **Name** field, enter a name for your OVMS connection. This is the name that will be used by TES to identify your OVMS connection. It does not have to correspond to the actual name of the OVMS server.
- Step 4** In the **Job Limit** field, enter a number to limit how many jobs can run at once.

- Step 5** From the list of users in the **Default Runtime User** list, select the runtime user that was defined for access to the OVMS server. This is used to designate a default runtime user when defining a new job for OVMS.
- Step 6** Click the **Connection** tab to enter information needed to create a connection to the OVMS machine.

The screenshot shows a dialog box titled "Connection Definition(Create Mode)". It has three tabs: "General", "Connection", and "Description". The "Connection" tab is selected. The "Name" field has a dropdown arrow. The "Machine Name" field is empty. The "Master-to-Agent Port" field contains the value "5912". There are "OK" and "Cancel" buttons at the top right. At the bottom left, there is a checked checkbox labeled "Enabled".

- Step 7** In the **Machine Name** field, enter the name of the OVMS machine.
- Step 8** If you wish, click the **Description** tab and enter a description about the OVMS connection. Verify that the **Enabled** option is selected and click **OK**.

OVMS Connection Status Light

If the TES master cannot connect or loses its connection to the OVMS server, you will see a red status light next to your OVMS connection in the Connections pane. The status light should be green for a healthy network connection.



Using the OpenVMS Agent

Overview

Once you have completed the configuration of the OVMS agent, you can create, run and monitor OVMS jobs from Enterprise Scheduler. Every OVMS job that is created is assigned a unique ID number by Enterprise Scheduler. This number is called the Job Number and is assigned as soon as Enterprise Scheduler includes an OVMS job in the schedule.



Note

This identification number differs from the job number that OVMS assigns to each job.

The OVMS job number is called the External ID in Enterprise Scheduler and is displayed in the **Ext ID** column of the **Job Activity** pane. The Job Number is also displayed in the **Job Activity** pane under the **Job No.** column.

This chapter covers these topics:

- [Defining a Job](#)
- [Monitoring OVMS Jobs](#)
- [Controlling Adapter and Agent Jobs](#)

Defining a Job

Defining OVMS jobs in Enterprise Scheduler is very similar to creating other jobs in Enterprise Scheduler. There is a specific menu option in the **Job** pane context menu that pertains to OVMS. In the context menu, select **Add Job>OVMS Job**.

There are three types of OVMS executables that can run as Enterprise Scheduler jobs:

- **Command files** (xxx.com) – similar to shell scripts in UNIX or .bat files in Windows
- **Compiled files** (xxx.exe) – binary executable files that have been compiled/assembled
- **Commands** – system type of commands like “show time” or “show system”

The three types of Enterprise Scheduler OVMS jobs—Batch(JobQ), job, and command jobs—relate to specific executable types and how they are presented to OVMS to run:

- [Defining an OVMS Batch Job](#)—*.com* files and *.exe* files can run as ‘Batch(JobQ)’ jobs.
- [Defining an Executable Job](#)—*.com* files and *.exe* files can run as ‘job’ jobs.
- [Defining a Console Command Job](#)—system commands and *.com* files can run as ‘command’ jobs.

The job definition dialogs for these three types of OVMS jobs may share some of the same or similar text fields but each type has its own definition to define the unique characteristics of each type and control how it is presented to OVMS for execution.

Defining an OVMS Batch Job

To run a batch job, select **Add Job>OVMS Job>Batch(JobQ)** from the context menu of the **Jobs** pane to display an **OVMS Job Definition** dialog with a **Batch(JobQ)** tab. Batch jobs in OVMS require parameters that are not used by other types of OVMS jobs. The options on the **Batch(JobQ)** tab used to define a batch job are very different from the other two types.

The screenshot shows the 'OpenVMS Job Definition' dialog box with the 'Batch (JobQ)' tab selected. The 'Job Name' field is 'ocsexit3-OVMS batch'. The 'Job Class' is a dropdown menu. The 'Parent Group' is a dropdown menu. The 'Owner' is 'Schedulers'. The 'Command' field contains 'sys\$sysdevice:[rdbuild.myjobs]ocsexit3.com'. The 'Parameters' section has 'Job Name' as 'tdltst3', 'Job Queue' as 'SYS\$BATCH', 'Log File' as a dropdown menu, and 'CLI' as a text field. The 'Job Arguments' section has an 'Add...' button, an 'Edit...' button, and a 'Delete' button. The 'Capture Alternate Output File (created by command or script)' checkbox is checked and labeled 'Enabled'. The 'WSDEFAULT', 'WSEXTENT', and 'WSQUOTA' fields are empty.

The **Batch(JobQ)** tab contains the following elements for defining a batch job in OVMS.

- **Job Name** – The name of the job (and possibly its log file). The job name can contain up to 39 alphanumeric characters. By default, the job name will be the name of the first file in the job. Ensure that the job name is a valid file name as it may be used as the log file name if nothing is specified in **Log File** field.
- **Job Queue** – The batch queue to which the job will be submitted. The default queue is **SYS\$BATCH**.
- **Log File** – The name of the log file. The output of the batch job is written to this file. If not specified, the log file is automatically created in the **SYS\$LOGIN** directory and given the same name as the batch job. A log file has a **.log** file extension added to the file name. To prevent any log file from being created, select the **No Log File** option from the list.
- **CLI** – The command language interpreter to use when processing the job.
- **WSDEFAULT** (Working Set Size Default) – The number of physical pages that the job can use.
- **WSEXTENT** (Working Set Extent) – The maximum physical memory that the job can use.
- **WSQUOTA** (Working Set Quota) – The amount of physical memory that the job is guaranteed.
- **Job Arguments** – In this field, up to eight optional parameters can be entered to be used by the batch job.

- **Capture Alternate Output File** – If a file is specified in this field, the agent looks for the output file in the location specified and reads it as text, returning that text as the output of the job instead of gathering the job process’s standard output. A job process’s “standard output” is the text that would be returned to the screen if you were to run the process manually via a command line interface. However, some applications do not return any “standard output,” resulting in a blank **Output** tab in the **Job Detail** dialog if run by Enterprise Scheduler.

For example, if your job produces a small report in plain text format, you can specify that file’s pathname here. (Refer to the **Load URL** feature on the **Runbook** or **Notes** tab for details on presenting a non-text file for viewing via Enterprise Scheduler. If this field is not used, Enterprise Scheduler provides the default standard output file produced by the process launched on the agent.

- **Variables** – This button displays a context menu of variables categorized according to job, system, public or specific to a remote master that can be used with the command. There may be several remote masters with their own variables.

Defining an Executable Job

To run any other type of job that is not under the control of the Batch (JobQ) system of OVMS, select **Add Job>OVMS Job>Job** from the context menu of the **Jobs** pane to display an **OVMS Job Definition** dialog with a **Job** tab. The **Job** tab looks very much like the **Program** tab of a normal Enterprise Scheduler job definition.

Refer to the explanation of options for the Command job provided in the next section for information about the options on the **Job** tab. The options are the same for both types of OVMS jobs.

Defining a Console Command Job

To run a command in OVMS, define a command type of job. Select **Add Job>OVMS Job>Command** from the context menu of the **Jobs** pane to display an **OVMS Job Definition** dialog with a **Console Command** tab.

The **Console Command** tab looks very much like the **Program** tab of a job definition. The following figure shows an example defining an OVMS command job.

- **Command** – The absolute path and filename of the command, script, batch file or executable that you want the job to run, from the perspective of the agent that runs it. Be sure to specify the full path to the file you want to run when typing the filename.

To insert a variable into your path specification, click the **Variables** button and select the variable you want to use.

- **Command Parameters** – Command parameters allow a single command file to be used for multiple purposes. For example, a command that processes data from a certain file could be given the file's name as a command parameter. You can enter all your parameters on a single line.

Enterprise Scheduler wraps the text display so that it is easier to read. This text field accepts up to 1,024 characters.

The following example shows how parameters are specified in OVMS and referenced in a `.com` file:

```
$ @passparam.com "P1" "P2"
$ type passparam.com
$write sys$output P1
$write sys$output P2
```

You can type in command parameters or specify job, system, public or user defined variables.

Since the variable values are determined as when the command runs, do not use job runtime variables in the command parameters. The true value for variables like Start Time and Finish Time cannot be determined until after the job completes.

- **Env File** – Enter the directory path to a text file containing a list of environment variables and their values for the job. The format of the file must be specified in name=value pairs. For example, variable1=<its value>, variable2=<its value>. This text field is optional.
- **Capture Alternate Output File** – If a file is specified here, the agent looks for the output file in the location specified and reads it as text, returning that text as the output of the job instead of gathering the job process's standard output.

A job process's "standard output" is the text that would be returned to the screen if you were to run the process manually via a command line interface. However, some applications do not return any "standard output," resulting in a blank **Output** tab in the **Job Detail** dialog if run by Enterprise Scheduler.

For example, if your job produces a small report in plain text format, you can specify the pathname of the file here. (Refer to the **Load URL** feature on the **Runbook** or **Notes** tab for details on presenting a non-text file for viewing via Enterprise Scheduler. If this text field is not used, Enterprise Scheduler provides the default standard output file produced by the process launched on the agent.

- **Variables** – This button displays a context menu of variables categorized according to job, system, public or specific to a remote master that can be used with the command. There may be several remote masters with their own variables.

Defining Exit Codes

The only other differences between defining a regular Enterprise Scheduler job and an OVMS job occurs on the **Run** tab of the **Job Definition** dialog.

As with any other job when defining an OVMS job, you must specify where the job will run—either on an OVMS agent from the **Agent Name** field or an OVMS agent list from the Agent List. Once an OVMS agent is selected, new options become available in the **Exit Codes** list of the **Tracking** section. These options are only available with OVMS jobs. Two additional values, **odd** and **even**, can be used to determine that the OVMS job completed normally if its exit code value is either an odd or even integer.

Monitoring OVMS Jobs

You can monitor OVMS jobs as you would any other type of job in Enterprise Scheduler using the **Job Details** dialog. You can also use the Business view to monitor job activity and view when the jobs are active (see the *Tidal Enterprise Scheduler Reference Guide* for instructions on using Business Views).

To monitor job activity:

- Step 1** In the **Navigator** pane, select **Operations>Job Activity** to display the **Job Activity** console.
- Step 2** Right-click job and select **Details** from the context menu.

The **Job Details** dialog displays.

Job Details [OVMS Command (1)]

Job Name: OVMS Command (1) Job No.: 11155

Buttons: OK, Cancel

Tabs: Status, Audit Log, Output, Dependencies, Resources, Override, Runbook, Notes, History

Current Status

Status	Completed Normally	Reruns	0
Est. Start Time	12:15 AM (1/7/10)	Disable Carryover	<input type="checkbox"/>
Act. Start Time	12:15 AM (1/7/10)		
Est. Duration	13 min 42 s		
Act. Duration	13 min 42 s		
Job Owner	Schedulers		
Scheduled By	Calendar		
Exit Code	0		
External ID			

Buttons: Print, Defaults

The **Status** page displays by default. You can view the status of the job, the start and end time, how long it ran, and how it was scheduled.

- Step 3** Click the **Output** tab to view a task summary.
- Step 4** When you have completed viewing the job activity details, click **OK** to close the dialog.

Controlling Adapter and Agent Jobs

Scheduler provides the following job control capabilities for either the process currently running or the job as a whole:

- **Holding a Job**—Hold a job waiting to run.
- **Aborting a Job**—Abort an active job.
- **Rerunning a Job**—Rerun a job that completed.
- **Making One Time Changes to an Adapter or Agent Job Instance**—Make last minute changes to a job.

- [Deleting a Job Instance before It Has Run](#)—Delete a job instance before it has run.

Holding a Job

Adapter/agent jobs are held in the same way as any other Scheduler jobs.

Adapter/agent jobs can only be held before they are launched. Once a job reaches the Adapter/Agent system, it cannot be held or suspended.

To hold a job:

-
- Step 1** From the **Job Activity** pane, right-click on the job.
- Step 2** Select **Job Control>Hold/Stop**.

Aborting a Job

Adapter/agent jobs are aborted in the same way as any other Scheduler jobs.

To abort a job:

-
- Step 1** From the **Job Activity** pane, right-click on the job.
- Step 2** Select **Job Control>Cancel/Abort**.

Rerunning a Job

On occasion, you may need to rerun an Adapter/Agent job. You can override parameter values first, if necessary, from the Adapter/Agent tab.

To rerun a job:

-
- Step 1** From the **Job Activity** pane, right-click the Adapter/Agent job you need to rerun.
- Step 2** Select **Job Control>Rerun** option from the context menu.

Making One Time Changes to an Adapter or Agent Job Instance

Prior to a run or rerun, you can edit data on the specific **Adapter/Agent** tab. To ensure that there is an opportunity to edit the job prior to its run, you can set the **Require operator release** option on the **Options** tab in the Adapter **Job Definition** dialog. Use this function to make changes to an Adapter job after it enters Waiting on Operator status as described in the following procedure.

To make last minute changes:

-
- Step 1** From the **Job Activity** pane, double-click the Adapter/Agent job to display the **Job Details** dialog.
- Step 2** Click the Adapter tab.

- Step 3** Make the desired changes to the job and click **OK** to close the **Job Details** dialog.
- Step 4** If this job is Waiting on Operator, perform one of the following tasks:
- To release the job, select **Job Control->Release**.
 - To rerun the job with changes, select **Job Control->Rerun**.

Deleting a Job Instance before It Has Run

Adapter/Agent job instances are deleted in the same way as any other Scheduler job.

Deleting a job from the **Job Activity** pane removes the job from the Scheduler job activity only. The original definition is left in tact.

To delete a job instance:

-
- Step 1** From the **Job Activity** pane, right-click the Adapter/Agent job to be deleted.
- Step 2** Select **Remove Job(s) From Schedule**.