

AVATAR QUEUEING SERVER

VERSION 4.0

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DOCUMENT REVISION 1.0

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1 Introduction

What is Avatar? Avatar is a sophisticated, yet simple to use, batch processing client/server application. Avatar is designed to bridge the gap between what standard Unix based systems provide for batch scheduling (*cron*) and the requirements of most (if not all) Unix based information technology companies. Avatar provides features for reporting on success or error, creating windows of time for commands, system load balancing, dynamic module loading and a highly designed extensible framework.

1.1 Purpose and Scope of this document

This document is for those who have just installed Avatar for the first time. The topics covered in this document address the configuration of the server and users of Avatar.

1.2 Document Conventions

In order to keep the documentation as consistent as possible The following table outlines the conventions that are used in this document.

TABLE 1.1 DOCUMENT CONVENTIONS

TYPE	PURPOSE
Bold Courier Font	A command to be typed in/Text to be types in.
Courier Font	Output of a command.
Bold dollar sign. (\$)	Bourne shell prompt. (Not to be typed in).
Bold percent sign (%)	C shell prompt (Not to be typed in).
Bold pound sign. (#)	Root shell prompt. (Not to be typed in).
<i>Italic Courier Font</i>	A filename or directory name.
CAPITALIZED BOLD	Environment variable names.

1.3 Documents Related

TABLE 1.2 RELATED DOCUMENTS

DOCUMENT	DESCRIPTION
Avatar Installation Guide	This document provides the information to install the license and install both the client and the server.
Avatar Command File Guide	This document outlines the syntax of the Avatar Command File.
Avatar Administration Interface	This document provides all the information required to use administration interface.
Avatar Client Interface	This document provides all the information required to use client interface.

1.4 Contacting Us

To ask any pre-sales or post-sales questions, please use one of the following methods.

TABLE-1.3 CONTACT INFORMATION

METHOD	ADDRESS
World Wide Web	http://www.vexus.ca
E-mail	sales@vexus.ca

2 Installing the Queue Server

Before continuing with this document Avatar must have been properly installed and configured. If you are unsure this has been done refer to the document “Avatar Installation Guide”. If you are sure you have successfully installed Avatar you may proceed.

2.1 Shutting Avatar Down

Shut Avatar down. Refer to the document “Avatar Installation Guide” for technical details. Validate that the version of Avatar you have is at least version 4.3.0. If it's not the queuing server will not be packaged with your copy. Pick up a copy from www.vexus.ca.

2.2 Installing the License File

Install the license file provided as the filename `/etc/avatar/avatarqs.license`.

2.3 Starting Avatar

Start Avatar. Refer to the document “Avatar Installation Guide” for technical details.

2.4 Validating Installation

To validate that the queuing server is currently running check the process list and look for a process called **avatarqs**.

EXAMPLE 1: VALIDATING QUEUE SERVER INSTALLATION

```
# ps -el | grep avatar
0 S      0 13114      1 0 69    0 -   7428  00:00:00 avatarqs
0 S      0 13115      1 0 69    0 -   3317  00:00:00 avatarcs
0 S      0 13116      1 0 69    0 -   3341  00:00:00 avatarbs
0 S      0 13117      1 0 69    0 -   8824  00:00:00 avatared
1 S      0 13120 13114    0 69    0 -   7428  00:00:00 avatarqs
1 S      0 13128 13120    0 69    0 -   7428  00:00:00 avatarqs
1 S      0 13129 13115    0 69    0 -   3317  00:00:00 avatarcs
1 S      0 13131 13117    0 69    0 -   8824  00:00:00 avatared
1 S      0 13132 13116    0 69    0 -   3341  00:00:00 avatarbs
1 S      0 13133 13129    0 69    0 -   3317  00:00:00 avatarcs
1 S      0 13134 13131    0 69    0 -   8824  00:00:17 avatared
1 S      0 13135 13132    0 69    0 -   3341  00:00:00 avatarbs
```

3 Creating a Queue

To create a queue use the command **avqcreate**. The create queue command takes the following arguments.

TABLE-3.1 AVQCREATE COMMAND LINE OPTIONS

OPTION	PURPOSE	REQUIRED	DEFAULT VALUE
-q	The queue server hostname.	Y	-
-n	The name of the queue being created.	Y	-
-d	The description of the queue.	Y	-
-c	The number of channels for the queue.	N	1
-m	The maximum number of history records to keep.	N	200
-M	The maximum number of commands which can be queued.	N	0 (no limit)
-h	Help	N	-
(servers...)	A space separated list of servers which this queue will run commands. Providing more than one will cause the queue to load balance between the servers provided.	Y	-

As an example, the following command will create a queue on elmo which runs commands on server1.

```
$ avqcreate -q elmo -n "Test Queue" -d "A test queue" server1
Queue [Test Queue] created on server [elmo].
```

A queue name has to be unique. Running the above command again will produce the following output:

```
$ avqcreate -q elmo -n "Test Queue" -d "A test queue" server1
Error: This rule conflicts with another rule which restricts or
allows the same type of record.
```

4 Modifying a Queue

To modify a queue use the command **avqmodify**. The modify queue command takes the following arguments.

TABLE-4.1 AVQCREATE COMMAND LINE OPTIONS

OPTION	PURPOSE	REQUIRED	DEFAULT VALUE
-q	The queue server hostname.	Y	-
-i	The queue id.	Y	-
-n	The name of the queue being created.	N	-
-d	The description of the queue.	N	-
-c	The number of channels for the queue.	N	1
-m	The maximum number of history records to keep.	N	200
-M	The maximum number of commands which can be queued.	N	0 (no limit)
-h	Help	N	-
(servers...)	A space separated list of servers which this queue will run commands. Providing more than one will cause the queue to load balance between the servers provided.	N	-

Any option provided will be set on the server. If an option is not provided, the field will not change values. To determine the queue id, you can run the command **avqquery**.

5 Deleting a Queue

To delete a queue use the command **avqdelete**. The delete queue command takes the following arguments.

TABLE-5.1 AVQDELETE COMMAND LINE OPTIONS

OPTION	PURPOSE	REQUIRED	DEFAULT VALUE
-q	The queue server hostname.	Y	-
-i	The numeric queue id.	Y	-
-h	Help	N	-

To determine the queue id, you can run the command **avqquery**. The following demonstrates deleting a queue.

```
$ avqdelete -q elmo -i 3
Queue ID [3] removed from server [elmo].
```

6Queue Details

To view all of the defined queues or inspect a queue run the command **avqquery**. The query queue command takes the following arguments.

TABLE-6.1 AVQUERY COMMAND LINE OPTIONS

OPTION	PURPOSE	REQUIRED	DEFAULT VALUE
-q	The queue server hostname.	Y	-
-i	The numeric queue id.	N	-
-h	Help	N	-

6.1 Listing All Defined Queues

When running the **avqquery** command without the queue id, all of the queues defined on the server will be displayed. The following demonstrates the output of the **avqquery** command.

```
$ avqquery -q elmo
    Queue ID: [1]
    Queue Host: [elmo]
    Queue User: [glover]
    Queue Name: [Test Queue]
    Description: [Test Queue]
    Command Servers: [elmo]
    Channels: [2]
    Activte Channels: [0]
    Creation Date: [Tue May 25 18:03:08 2004 EDT]
    Last Modification Date: [Fri May 28 17:19:18 2004 EDT]
    Maximum History Records: [200]
    Queued Commands: [0]
    Maximum Queued Commands: [10]
    Suspend Queue Until: [--]
    Queue Status: [Idle]
-----
    Queue ID: [2]
    Queue Host: [elmo]
    Queue User: [glover]
    Queue Name: [Q2]
    Description: [Queue 2]
    Command Servers: [elmo]
    Channels: [1]
    Activte Channels: [0]
    Creation Date: [Wed May 26 13:03:05 2004 EDT]
    Last Modification Date: [--]
    Maximum History Records: [200]
    Queued Commands: [0]
    Maximum Queued Commands: [0]
    Suspend Queue Until: [--]
    Queue Status: [Idle]
```

6.2 Inspecting A Queue

To inspect a queue and see how many commands are running and queued you call **avquery** with the queue id. In the following example the queue id 2 will be inspected.

```
$ avquery -q elmo -i 2
      Queue ID: [2]
      Queue Host: [elmo]
      Queue User: [glover]
      Queue Name: [Q2]
      Description: [Queue 2]
      Command Servers: [elmo]
      Channels: [1]
      Active Channels: [1]
      Creation Date: [Wed May 26 13:03:05 2004 EDT]
      Last Modification Date: [--]
      Maximum History Records: [200]
      Queued Commands: [2]
      Maximum Queued Commands: [0]
      Suspend Queue Until: [--]
      Queue Status: [Idle]

#      ID Queue Time                               Status Command
0      80 Sun May 30 21:59:12 2004 EDT             R      [sleep 500]
1      81 Sun May 30 21:59:21 2004 EDT             Q      [ls]
2      82 Sun May 30 21:59:24 2004 EDT             Q      [date]
```

This example shows there are 3 commands in the queue, 1 which is running (as signified by the R in the status column) and 2 of which are queued.

7 Submitting a Command to a Queue

To submit a command to a queue, the command `avqsubmit` is used. The queue submit command takes the following arguments.

TABLE-7.1 AVQSUBMIT COMMAND LINE OPTIONS

OPTION	PURPOSE	REQUIRED	DEFAULT VALUE
-q	The queue server hostname.	Y	-
-i	The numeric queue id.	Y	-
-c	The command to run.	Y	-
-h	Help	N	-

The following demonstrates submitting a command to a queue.

```
$ avqsubmit -q elmo -i 2 -c "uname -a"
Command submitted to queue ID [2] on server [elmo].
```

8 Removing a Command from a Queue

To submit a command to a queue, the command `avqremove` is used. The queue remove command takes the following arguments.

TABLE-8.1 AVQREMOVE COMMAND LINE OPTIONS

OPTION	PURPOSE	REQUIRED	DEFAULT VALUE
-q	The queue server hostname.	Y	-
-i	The numeric queue id.	Y	-
-c	The command id.	Y	-
-h	Help	N	-

To determine the command id, run the command `avqquery` with the queue id to see all of the currently queued commands. The following demonstrates removing the date command from the queue id 2.

```
$ avqremove -q elmo -i 2 -c 82
Command ID [82] removed from queue ID [2] on server [elmo].
```

9 Disabling a Queue

When a queue is not in use, the queue can be removed or disabled. Removing the queue means the queue is gone as is its history. Disabling a queue allows the queue to remain, plus its history, but just not get used. To disable a queue the command **avqdisable** is used.

The disable queue command takes the following arguments.

TABLE-9.1 AVQDISABLE COMMAND LINE OPTIONS

OPTION	PURPOSE	REQUIRED	DEFAULT VALUE
-q	The queue server hostname.	Y	-
-i	The numeric queue id.	Y	-
-h	Help	N	-

The following demonstrates disabling queue id 2.

```
$ avqdisable -q elmo -i 2
Queue ID [2] disabled.
```

10 Enabling a Queue

To enable a disabled queue, run the command **avqenable**. The enable queue command takes the following arguments.

TABLE-10.1 AVQENABLE COMMAND LINE OPTIONS

OPTION	PURPOSE	REQUIRED	DEFAULT VALUE
-q	The queue server hostname.	Y	-
-i	The numeric queue id.	Y	-
-h	Help	N	-

The following demonstrates enabling queue id 2.

```
$ avqenable -q elmo -i 2
Queue ID [2] enabled.
```