



Sun Java™ System

Access Manager 6 Performance Tuning Guide

2005Q1

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Preface

The *Sun Java™ System Access Manager Performance Tuning Guide* describes how to tune Access Manager 6 2005Q1 (formerly Sun Java System Identity Server) and its related components to improve performance and reliability.

This preface contains the following sections:

- “Who Should Use This Guide” on page 8
- “Before You Read This Guide” on page 8
- “How This Guide Is Organized” on page 9
- “Conventions Used in This Guide” on page 9
- “Related Documentation” on page 12
- “Accessing Sun Resources Online” on page 14
- “Contacting Sun Technical Support” on page 14
- “Related Third-Party Web Site References” on page 15
- “Sun Welcomes Your Comments” on page 15

Who Should Use This Guide

The *Access Manager Performance Tuning Guide* is intended for system administrators, network administrators, and software developers who are tuning Access Manager or its related components. Readers should be familiar with Access Manager, as well as the following:

- Web container that is running Access Manager: Sun Java System Application Server, Sun Java System Web Server, BEA WebLogic, or IBM WebSphere Application Server.
- Solaris™ or Linux operating system concepts
- Lightweight Directory Access Protocol (LDAP) directory server concepts
- Java™ technology
- JavaServer Pages™ (JSP) technology
- HyperText Transfer Protocol (HTTP)
- HyperText Markup Language (HTML)
- eXtensible Markup Language (XML)

Before You Read This Guide

Access Manager is a component of the Sun Java Enterprise System, a software infrastructure that supports enterprise applications distributed across a network or Internet environment. You should be familiar with the documentation provided with Sun Java Enterprise System, which you can access online at:

<http://docs.sun.com/prod/entsys.05q1>

Because Sun Java System Directory Server is used as the data store in an Access Manager deployment, you should be familiar with the Directory Server documentation, which you can access online at:

http://docs.sun.com/coll/DirectoryServer_05q1

How This Guide Is Organized

The following table summarizes the content of this guide:

Table 1 Organization of the Access Manager Performance Tuning Guide

Chapter or Appendix	Description
Chapter 1, "Introduction"	Provides an introduction to the Access Manager performance tuning.
Chapter 2, "Access Manager Tuning Scripts"	Describes how to run the Access Manager tuning scripts.
Glossary	Provides a link to the latest <i>Sun Java™ Enterprise System Glossary</i> .

Conventions Used in This Guide

The tables in this section describe the conventions used in this guide.

Typographic Conventions

The following table describes the typographic changes used in this guide.

Table 2 Typographic Conventions

Typeface	Meaning	Examples
AaBbCc123 (Monospace)	API and language elements, HTML tags, web site URLs, command names, file names, directory path names, onscreen computer output, sample code.	<p>Edit your <code>.login</code> file.</p> <p>Use <code>ls -a</code> to list all files.</p> <p>% You have mail.</p>
AaBbCc123 (Monospace bold)	What you type, when contrasted with onscreen computer output.	<p>% su</p> <p>Password:</p>
<i>AaBbCc123</i> (Italic)	<p>Book titles, new terms, words to be emphasized.</p> <p>A placeholder in a command or path name to be replaced with a real name or value.</p>	<p>Read Chapter 6 in the <i>User's Guide</i>.</p> <p>These are called <i>class</i> options.</p> <p>Do <i>not</i> save the file.</p> <p>The file is located in the <i>install-dir/bin</i> directory.</p>

Symbols

The following table describes the symbol conventions used in this guide.

Table 3 Symbol Conventions

Symbol	Description	Example	Meaning
[]	Contains optional command options.	ls [-l]	The -l option is not required.
{ }	Contains a set of choices for a required command option.	-d {y n}	The -d option requires that you use either the y argument or the n argument.
-	Joins simultaneous multiple keystrokes.	Control-A	Press the Control key while you press the A key.
+	Joins consecutive multiple keystrokes.	Ctrl+A+N	Press the Control key, release it, and then press the subsequent keys.
>	Indicates menu item selection in a graphical user interface.	File > New > Templates	From the File menu, choose New. From the New submenu, choose Templates.

Default Paths and File Names

The following table describes the default paths and file names used in this guide:

Table 4 Default Paths and File Names

Term	Description
<i>AccessManager-base</i>	Represents the base installation directory for Access Manager. The Access Manager default base installation and product directory depends on your specific platform: Solaris™ systems: /opt/SUNWam Linux systems: /opt/sun/identity
<i>DirectoryServer-base</i>	Represents the base installation directory for Sun Java System Directory Server. Refer to the product documentation for the specific path name.
<i>ApplicationServer-base</i>	Represents the base installation directory for Sun Java System Application Server. Refer to the product documentation for the specific path name.

Table 4 Default Paths and File Names

Term	Description
<i>WebServer-base</i>	Represents the base installation directory for Sun Java System Web Server. Refer to the product documentation for the specific path name.

Shell Prompts

The following table describes the shell prompts used in this guide.

Table 5 Shell Prompts

Shell	Prompt
C shell on UNIX or Linux	<i>machine-name%</i>
C shell superuser on UNIX or Linux	<i>machine-name#</i>
Bourne shell and Korn shell on UNIX or Linux	\$
Bourne shell and Korn shell superuser on UNIX or Linux	#
Windows command line	C:\

Related Documentation

To access Sun technical documentation online, go to <http://docs.sun.com>.

You can browse the documentation archive or search for a specific book title, part number, or subject.

Books in This Documentation Set

Table 6 Access Manager 6 2005Q1 Documentation Set

Title	Description
<i>Technical Overview</i> http://docs.sun.com/doc/817-7643	Provides a high-level overview of how Access Manager components work together to consolidate identity management and to protect enterprise assets and web-based applications. Explains basic Access Manager concepts and terminology.
<i>Deployment Planning Guide</i> http://docs.sun.com/doc/817-7644	Provides information about planning a deployment within an existing information technology infrastructure.
<i>Administration Guide</i> http://docs.sun.com/doc/817-7647	Describes how to use the Access Manager console as well as manage user and service data via the command line.
<i>Migration Guide</i> http://docs.sun.com/doc/817-7645	Describes how to migrate existing data and Sun Java System product deployments to the latest version of Access Manager. (For instructions about installing and upgrading Access Manager and other products, see the <i>Sun Java Enterprise System 2005Q1 Installation Guide</i> .)
<i>Performance Tuning Guide</i> (this guide) http://docs.sun.com/doc/817-7646	Describes how to tune Access Manager and its related components.
<i>Federation Management Guide</i> http://docs.sun.com/doc/817-7648	Provides information about Federation Management, which is based on the Liberty Alliance Project.
<i>Developer's Guide</i> http://docs.sun.com/doc/817-7649	Offers information on how to customize Access Manager and integrate its functionality into an organization's current technical infrastructure. Contains details about the programmatic aspects of the product and its API.
<i>Developer's Reference</i> http://docs.sun.com/doc/817-7650	Provides summaries of data types, structures, and functions that make up the Access Manager public C APIs.

Table 6 Access Manager 6 2005Q1 Documentation Set (*Continued*)

Title	Description
<i>Release Notes</i> http://docs.sun.com/doc/817-7642	Available after the product is released. Contains last-minute information, including a description of what is new in this current release, known problems and limitations, installation notes, and how to report issues with the software or the documentation.

Access Manager Policy Agent Documentation

Documentation for the Access Manager Policy Agents is available on the following documentation Web site:

http://docs.sun.com/coll/S1_IdServPolicyAgent_21

Policy Agents for Access Manager are available on a different schedule than the server product itself. Therefore, the documentation set for the policy agents is available outside the core set of Access Manager documentation. The following titles are included in the set:

- *Policy Agents For Web and Proxy Servers Guide* documents how to install and configure an Access Manager policy agent on various web and proxy servers. It also includes troubleshooting and information specific to each agent.
- *J2EE Policy Agents Guide* documents how to install and configure an Access Manager policy agent that can protect a variety of hosted J2EE applications. It also includes troubleshooting and information specific to each agent.
- The *Release Notes* are available online after a set of agents is released. The *Release Notes* include a description of what is new in the current release, known problems and limitations, installation notes, and how to report issues with the software or the documentation.

Other Server Documentation

For other server documentation, go to the following:

- **Directory Server documentation**
http://docs.sun.com/coll/DirectoryServer_05q1
- **Web Server documentation**
http://docs.sun.com/coll/WebServer_05q1
- **Application Server documentation**
http://docs.sun.com/coll/ApplicationServer8_ee_04q4
- **Web Proxy Server documentation**
<http://docs.sun.com/prod/s1.webproxys#hic>

Accessing Sun Resources Online

For product downloads, professional services, patches and support, and additional developer information, go to the following:

Download Center

<http://www.sun.com/software/download/>

Sun Java System Services Suite

<http://www.sun.com/service/sunjavasystem/sjsserviceessuite.html>

Sun Enterprise Services, Solaris Patches, and Support

<http://sunsolve.sun.com/>

Developer Information

<http://developers.sun.com/prodtech/index.html>

Contacting Sun Technical Support

If you have technical questions about this product that are not answered in the product documentation, go to:

<http://www.sun.com/service/contacting>.

Related Third-Party Web Site References

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For example, the title of this guide is *Sun Java System Access Manager 6 2005Q1 Performance Tuning Guide*, and the part number is 817-7646.

Introduction

This guide provides performance tuning information for Sun Java™ System Access Manager 6 2005Q1, including running the Access Manager tuning scripts. See [Chapter 2, “Access Manager Tuning Scripts”](#) on page 19.

Before you use this guide, Access Manager and other Sun Java Enterprise System component products such as Directory Server, Web Server, or Application Server must be installed.

If you need to install these products, refer to the *Sun Java Enterprise System Installation Guide* (<http://docs.sun.com/doc/819-0056>).

Access Manager Tuning Scripts

The Sun Java™ System Access Manager 6 2005Q1 tuning scripts allow you to tune Access Manager as well as other components of your deployment, including Directory Server, the web container running Access Manager, and the Solaris™ Operating System.

Topics in this chapter include:

- [“Access Manager Tuning Scripts” on page 20](#)
 - [Tuning Modes](#)
 - [Tuning Scripts Syntax](#)
- [“Access Manager amtune-env File Parameters” on page 24](#)
 - [Access Manager Tuning Parameters](#)
 - [Installation Environment Tuning Parameters](#)
- [“Directory Server Tuning” on page 31](#)

Access Manager Tuning Scripts

The Access Manager tuning scripts are non-interactive. To run a script, you first edit the parameters in the `amtune-env` configuration file to specify the tuning you want to perform for your specific environment. Then, you run either the `amtune` script, which calls other scripts as needed, or a specific script (for example, `amtune-os` to tune only the Solaris Operating System).

The Access Manager tuning scripts and `amtune-env` file are installed in the following directory, depending on your platform:

- Solaris systems: *AccessManager-base*/SUNWam/bin/amtune
- Linux systems: *AccessManager-base*/identity/bin/amtune

where *AccessManager-base* is the Access Manager 6 2005Q1 base installation directory. The default base installation directory is `/opt` on Solaris systems and `/opt/sun` on Linux systems.

[Table 2-1](#) describes the tuning scripts available in the Access Manager 6 2005Q1 release.

Table 2-1 Access Manager Tuning Scripts

Script	Description
<code>amtune</code>	Wrapper script that calls other scripts based on values in the <code>amtune-env</code> file.
<code>amtune-identity</code>	Tunes the installed instance of Access Manager.
<code>amtune-os</code>	Tunes the Solaris Operating System kernel and TCP/IP parameters.
<code>amtune-ws61</code>	Tunes the Sun Java System Web Server 2005Q1 (6.1) web container.
<code>amtune-as8</code>	Tunes the Sun Java System Application Server Enterprise Edition 8 2004Q4 (8.1) web container.
<code>amtune-as7</code>	Tunes the Sun Java System Application Server 7 web container.
<code>amtune-preparedSTuner</code>	Generates the <code>amtune-directory</code> script, which tunes the Directory Server that supports Access Manager. For information see Directory Server Tuning .

Tuning Modes

You can run the Access Manager tuning scripts in two modes, as determined by the `AMTUNE_MODE` parameter in the `amtune-env` file:

- **REVIEW mode (default)** – The scripts return tuning recommendations for an Access Manager deployment, but they do not make any actual changes to the environment.
- **CHANGE mode** – The scripts make all of the tuning modifications that are defined in the `amtune-env` file, except for [Directory Server Tuning](#).

In either mode, the scripts return a list of tuning recommendations to the `amtune debug` log file and the terminal window. The location of the log file is determined by the `com.ipplanet.services.debug.directory` parameter in the `AMConfig.properties` file. On Solaris systems, the default directory is `/var/opt/SUNWam/debug`.

CAUTION Tuning is an iterative process that can vary for different deployments. The Access Manager tuning scripts try to apply the optimal tuning parameter settings; however, each deployment is unique and might require further customization to suit specific requirements.

Therefore, use **CHANGE** mode only after you have reviewed and understand the tuning changes that will be applied to your deployment.

Tuning Scripts Syntax

To run a tuning script, use the following syntax:

```
amtune-script admin_password dirmanager_password [ as8_admin_password ]
```

where:

amtune-script is one of the tuning scripts: *amtune*, *amtune-identity*, *amtune-os*, *amtune-ws61*, *amtune-as7*, *amtune-as8*, or *amtune-prepareDSTuner*.

admin_password is the Access Manager Admin password.

dirmanager_password is the Directory Manager (cn=Directory Manager) password.

as8_admin_password is the admin password that is required if you are tuning Application Server 8 2004Q4 (WEB_CONTAINER = AS8).

To run a tuning script

1. Log in as or become superuser (`root`).
2. If you have not run the scripts in REVIEW mode, make sure that `AMTUNE_MODE` is set to REVIEW (which is the default value) in the `amtune-env` file.
3. Edit other parameters in the `amtune-env` file, depending on the components you want to tune:
 - [Access Manager amtune-env File Parameters](#)
 - [Installation Environment Tuning Parameters](#)
 - [Application Server 8.x Tuning Parameters](#) (if Application Server 8.x is the web container)

To tune the Directory Server that supports Access Manager, see [Directory Server Tuning](#).

4. In REVIEW mode, run either the `amtune` script, which calls other scripts based on values in the `amtune-env` file or one of the component scripts shown in [Access Manager Tuning Scripts](#).

5. Review the tuning recommendations in the debug log file, and if needed, make changes to the `amtune-env` file based on this run.
6. If you are satisfied with the tuning recommendations from the REVIEW mode run, set `AMTUNE_MODE` to `CHANGE` in the `amtune-env` file.
7. In `CHANGE` mode, run either the `amtune` script, which calls other scripts based on values in the `amtune-env` file or one of the component scripts.

For example, to tune the Solaris OS, run `amtune-os`:

```
# ./amtune-os admin_password dirmanager_password
```

8. Check the debug log file for the results of the run.

NOTE In `CHANGE` mode, `amtune` might need to restart the web container and Access Manager. Also, `amtune` might recommend a system restart.

Access Manager amtune-env File Parameters

The `amtune-env` file contains the following parameters to define the tuning options for an Access Manager deployment:

- [Access Manager Tuning Parameters](#)
- [Installation Environment Tuning Parameters](#)
- [Application Server 8.x Tuning Parameters](#)

For the Directory Server parameters, see [Directory Server Tuning](#).

Access Manager Tuning Parameters

[Table 2-2](#) describes the specific parameters for tuning Access Manager.

Table 2-2 Access Manager Tuning Parameters

Parameter	Description
AMTUNE_MODE	<p>Sets the tuning mode:</p> <ul style="list-style-type: none"> • REVIEW - The scripts return tuning recommendations for an Access Manager deployment but do not make any actual changes to the deployment environment. • CHANGE - The scripts make all of the tuning modifications that you have defined in the <code>amtune-env</code> file, except for Directory Server Tuning. <p>Default: REVIEW</p>
AMTUNE_TUNE_OS	<p>Tunes the Solaris OS kernel and TCP/IP settings.</p> <p>Default: true</p>
AMTUNE_TUNE_DS	<p>Generates a script to tune the Directory Server that supports Access Manager.</p> <p>Default: true</p>
AMTUNE_TUNE_WEB_CONTAINER	<p>Tunes the Access Manager web container: Web Server or Application Server.</p> <p>Default: true</p>
AMTUNE_TUNE_IDENTITY	<p>Tunes the installed instance of Access Manager.</p> <p>Default: true</p>

Table 2-2 Access Manager Tuning Parameters (*Continued*)

Parameter	Description
AMTUNE_DEBUG_FILE_PREFIX	<p>Identifies the debug file-name prefix. If this is set to a non-empty value, then all of the operations performed by the amtune scripts are logged. The location of the log file is set in the <code>com.ipplanet.services.debug.directory</code> parameter in the <code>AMConfig.properties</code> file.</p> <p>If no value is specified, debugging information is not recorded and all output is sent to the <code>/dev/null</code> directory.</p> <p>Default: amtune</p>
AMTUNE_PCT_MEMORY_TO_USE	<p>Specifies the percent of available memory used by Access Manager.</p> <p>Currently, Access Manager can use a maximum of 4 GB, which is the per process address space limit for 32-bit applications.</p> <p>Access Manager requires a minimum of 256 MB RAM.</p> <p>When you set <code>AMTUNE_PCT_MEMORY_TO_USE</code> to 100, the maximum space allocated for Access Manager is the minimum between 4 GB and 100% of available RAM.</p> <p>When you set <code>AMTUNE_PCT_MEMORY_TO_USE</code> to 0, Access Manager is configured to use 256 MB RAM</p> <p>Default: 75</p> <p>The following values are derived from this parameter setting:</p> <ul style="list-style-type: none"> • JVM memory usage - Heap sizes, NewSizes, PermSizes • Thread pool sizes - Web Server RqThrottle, Authentication LDAP connection pool, SM LDAP connection pool, Notification thread pools • Access Manager caches - SDK caches and session caches • Maximum sizes - Maximum number of sessions and maximum number of cache entries <p>AMConfig.properties Settings</p> <ul style="list-style-type: none"> • Notification thread pool settings: <code>com.ipplanet.am.notification.threadpool.size</code> <code>com.ipplanet.am.notification.threadpool.threshold</code> • SDK cache maximum size setting: <code>com.ipplanet.am.sdk.cache.maxsize</code> • Session settings: <code>com.ipplanet.am.session.httpSession.enabled</code> <code>com.ipplanet.am.session.maxSessions</code> <code>com.ipplanet.am.session.invalidsessionmaxtime</code> <code>com.ipplanet.am.session.purgedelay</code>

Table 2-2 Access Manager Tuning Parameters (*Continued*)

Parameter	Description
AMTUNE_PER_THREAD_STACK_SIZE	<p>Sets the available stack space per thread in Java (web container). The per thread stack size is used to tune various thread-related parameters in Access Manager and the web container.</p> <p>Default: 128 KB</p> <p>Note: Do not change this value unless absolutely necessary.</p>
AMTUNE_DONT_TOUCH_SESSION_PARAMETERS	<p>Specifies whether session time-out tuning using the next three parameters is enabled. To enable, set to false.</p> <p>Default: true</p>
AMTUNE_SESSION_MAX_SESSION_TIME_IN_MTS	<p>Sets the maximum session time in minutes.</p> <p>Default: 60</p> <p>However, the default value might be different for your installation. If the session service is registered and customized at the any other level, the tuning will not apply.</p> <p>Setting this parameter to very high or very low values affects the number of active user sessions an Access Manager deployment can support, so this parameter is optional for tuning purposes.</p> <p>In order to use this parameter, you must ensure that AM_TUNE_DONT_TOUCH_SESSION_PARAMETERS is set to false.</p>
AMTUNE_SESSION_MAX_IDLE_TIME_IN_MTS	<p>Sets the maximum idle time for a session in minutes.</p> <p>Default: 10</p> <p>However, the default value might be different for your installation. If the Session service is registered and customized at the any other level, the tuning will not apply.</p> <p>Setting this parameter to very high or very low values affects the number of active user sessions an Access Manager deployment can support, so this parameter is optional for tuning purposes.</p> <p>In order to use this parameter, you must ensure that AM_TUNE_DONT_TOUCH_SESSION_PARAMETERS is set to false.</p>
AMTUNE_SESSION_MAX_CACHING_TIME_IN_MTS	<p>Sets the maximum session cache time in minutes.</p> <p>Default: 2</p> <p>However, the default value might be different for your installation. If the Session service is registered and customized at the any other level, the tuning will not apply.</p> <p>Setting this parameter to very high or very low values affects the number of active use sessions an Access Manager deployment can support, so this parameter is optional for tuning purposes.</p> <p>In order to use this parameter, you must ensure that AM_TUNE_DONT_TOUCH_SESSION_PARAMETERS is set to false.</p>

Installation Environment Tuning Parameters

Table 2-3 Installation Environment Tuning Parameters

Parameter	Description
HOSTNAME	<p>Specifies the host name of the system where Access Manager is deployed.</p> <p>If the host name for your environment cannot be obtained using the <code>hostname</code> command, comment the following line:</p> <pre>HOSTNAME='/bin/hostname /bin/cut -f1 -d"."'</pre> <p>Then, add a line setting the correct host name. For example:</p> <pre>HOSTNAME=myhost</pre>
DOMAINNAME	<p>Specifies the domain name of the system where Access Manager is deployed.</p> <p>If the domain name for your environment cannot be obtained using the <code>domainname</code> command, comment the following line:</p> <pre>DOMAINNAME='/bin/domainname'</pre> <p>Then, add a line setting the correct domain name. For example:</p> <pre>DOMAINNAME=example.com</pre>
IS_CONFIG_DIR	<p>Specifies the Access Manager configuration directory.</p> <p>Default: <code>/etc/opt/SUNWam/config</code>.</p> <p>Note: Do not change this parameter.</p>
WEB_CONTAINER	<p>Specifies the name of the web container on which Access Manager is deployed, as follows:</p> <ul style="list-style-type: none"> • WS61 specifies Web Server 6.1 as the web container. • AS8 specifies Application Server 8.x as the web container • AS7 specifies Application Server 7.x as the web container. <p>Any other value returns a validation error.</p> <p>Default: AS8</p>
CONTAINER_BASE_DIR	<p>Specifies the base directory for the web container that is running Access Manager. If you installed the web container in a non-default location, change this value before running <code>amtune</code>.</p> <p>Defaults:</p> <ul style="list-style-type: none"> • Web Server 6.1 or later: <code>/opt/SUNWwbsvr</code> • Application Server 7.x: <code>/var/opt/SUNWappserver7</code> • Application Server 8.x: <code>/var/opt/SUNWappserver</code>

Table 2-3 Installation Environment Tuning Parameters (*Continued*)

Parameter	Description
WEB_CONTAINER_INSTANCE_NAME	<p>Specifies the instance name of the Access Manager web container.</p> <p>Defaults:</p> <ul style="list-style-type: none"> • Web Server 6.1 or later: <code>\${HOSTNAME}</code> • Application Server 7.x: <code>domains/server1</code> • Application Server 8.x: <code>domains/domain1</code> <p>Typically, this value is the host name where Access Manager is deployed. If you have multiple instances for the web container, this value might be different from the host name, and you must set it to the correct instance name.</p>
IS_INSTANCE_NAME	<p>Specifies the Access Manager instance names. IS_INSTANCE_NAME is used to determine the properties file names for the Access Manager installation.</p> <p>Default: none</p> <p>Multiple instances of Access Manager can be deployed in the same machine, but generally, there is one set of properties files per Access Manager instance, and the instance name is appended to the file names.</p> <p>If there is only one instance of Access Manager on a machine, the instance name is not appended to the file name.</p> <p>For example, there might be a single instance of Access Manager running under the default instance of Web Server web container.</p> <p>If Access Manager is installed on a machine named <code>server.example.com</code>, typically the first instance of Web Server is <code>https-server.example.com</code>. The properties files for the first Access Manager instance will not have the instance name appended (for example, <code>AMConfig.properties</code>).</p> <p>Multiple Instances</p> <p>Multiple instances will have different names. For example, if there ate three instances of Web Server, the Web Server instances might be <code>server.example.com-instance1</code>, <code>server.example.com-instance2</code>, and <code>server.example.com-instance3</code>.</p> <p>If three instances of Access Manager are deployed (one per web container instance), the primary properties file names for Access Manager (typically, <code>AMConfig.properties</code>) might be named as:</p> <ul style="list-style-type: none"> • <code>AMConfig-instance1.properties</code> • <code>AMConfig-instance2.properties</code> • <code>AMConfig-instance3.properties</code>.

Table 2-3 Installation Environment Tuning Parameters (*Continued*)

Parameter	Description
IS_INSTANCE_NAME (continued)	<p>You can specify IS_INSTANCE_NAME=<i>instance1</i>. The amtune script resolves the properties file names in the following order:</p> <ol style="list-style-type: none"> 1. AMConfig-IS_INSTANCE_NAME 2. AMConfig-WEB_CONTAINER_INSTANCE_NAME 3. AMConfig.properties <p>The script uses the first available properties file in the list.</p> <p>The amadmin utility should also point to the correct server name: (java option -Dserver.name=<IS_INSTANCE_NAME>)</p> <p>AMTune automatically tries to associate the instance names with the Access Manager properties files using this parameter. Currently, only these files are based on this instance name:</p> <ul style="list-style-type: none"> • AMConfig.properties • serverconfig.xml
CONTAINER_INSTANCE_DIR	<p>Specifies the base directory for the Access Manager web container instance. If you have installed the web container in a non-default location, change this value before running amtune.</p> <p>Defaults:</p> <ul style="list-style-type: none"> • Web Server 6.1 or later: \$CONTAINER_BASE_DIR/https-$\{$WEB_CONTAINER_INSTANCE_NAME$\}$ • Application Server 7.0 or later: \$CONTAINER_BASE_DIR/$\{$WEB_CONTAINER_INSTANCE_NAME$\}$

Application Server 8.x Tuning Parameters

[Table 2-4](#) describes the tuning parameters that you can set when you are using Application Server 8.x as the Access Manager web container.

Table 2-4 Application Server 8.x Web Container Tuning Parameters

Parameter	Description
ASADMIN	Specifies the Application Server 8.x admin utility location. Default: <code>\$CONTAINER_BASE_DIR/bin/asadmin</code>
ASADMIN_USER	Specifies the Application Server 8.x administrator user account. Default: <code>admin</code>
ASADMIN_PASSFILE	Specifies the temporary password file location used by the ASADMIN utility. The <code>amtune-as8</code> script creates this file and then deletes it after use. Default: <code>/tmp/passfile</code>
ASADMIN_HOST	Specifies the Application Server 8.x admin host name. Default: <code>localhost</code>
ASADMIN_PORT	Specifies the Application Server 8.x admin port. Default: <code>4848</code> Note: Application Server Enterprise Edition might use port 4949.
ASADMIN_SECURE	Specifies whether the ASADMIN_PORT is secure" <ul style="list-style-type: none"> <code>--secure</code> specifies that ASADMIN_PORT is secure. Blank specifies that Application Server 8.xASADMIN_PORT is not secure. Default: <code>""</code>
ASADMIN_TARGET	Specifies whether this Application Server 8.x installation is exclusively used for Access Manager/Portal Server. Default: <code>server</code> , indicating that Application Server 8.x installation is exclusively used for Access Manager/Portal Server
ASADMIN_INTERACTIVE	Specifies whether Application Server 8.x admin operates interactively. Default: <code>false</code> Caution: Do not change this parameter.
AMTUNE_WEB_CONTAINER_JAVA_POLICY	Specifies whether Application Server 8.x evaluates Java security descriptors, as specified in the <code>server.policy</code> file. Default: <code>false</code> Caution: Do not change this parameter. Evaluating Java security descriptors can add a significant performance overhead.

Directory Server Tuning

You can run the tuning scripts to tune the Directory Server that supports Access Manager for your deployment. Access Manager should use an existing Directory Server (local or remote) in non-exclusive mode.

CAUTION If you are working with a production Directory Server or a Directory Server that has not been adequately backed up (both the data and the configuration), it is recommended that you do not run the `amtune-directory` script in **CHANGE** mode to apply to the tuning changes.

After you run the `amtune-directory` script in **REVIEW** mode, review the tuning recommendations and apply them manually, if they meet your deployment needs.

Also, make sure you back up both your Directory Server data and configuration before you make any changes.

The `amtune` script and `amtune-prepareDSTuner` scripts do not actually tune Directory Server. However, you must run one of these scripts to generate the `amtune-directory` script, which you can then use to tune Directory Server.

Before making the tuning changes, the `amtune-directory` script stops and backs up Directory Server.

[Table 2-5](#) describes the Directory Server tuning parameters in the `amtune-env` file.

Table 2-5 Directory Server Tuning Parameters

Parameter	Description
AMTUNE_TUNE_DS	Generates a script to tune the Directory Server that supports Access Manager. Default: true
DIRMGR_UID	Specifies the user ID of the Directory Manager. If your deployment uses a user ID other than the default value (<code>cn=Directory Manager</code>), you must set this parameter with that value. Default: <code>cn=Directory Manager</code>
RAM_DISK	Specifies the location of the RAM disk. Default: <code>/tmp</code>

Table 2-5 Directory Server Tuning Parameters (*Continued*)

Parameter	Description
DEFAULT_ORG_PEOPLE_CONTAINER	<p>Specifies the Access Manager instance's default people container location below the top-level organization.</p> <p>This value is used to tune the search base for the LDAP authentication service. The search scope is also modified to the object level and the default search scope is in the subtree level. This parameter is useful when there are no suborganizations in the default organization. If no value is specified, the tuning is skipped.</p> <p>Default: none</p>

To Tune Directory Server

1. Log in as or become superuser (`root`).
2. Make sure that the following parameter is set in the `amtune-env` file:


```
AMTUNE_TUNE_DS=true
```
3. Run the `amtune` script or `amtune-prepareDSTuner` script. The script generates the following tar file:


```
/tmp/amtune-directory.tar
```
4. Copy the `amtune-directory.tar` file to a temporary location on the server that is running Directory Server.
5. Untar the `amtune-directory.tar` file in the temporary location.
6. In the `amtune-directory` script, make REVIEW mode is set:


```
AMTUNE_MODE="REVIEW"
```
7. Set these parameters, if you prefer values other than the default (`amtune`):
 - `DEBUG_FILE_PREFIX` is a prefix that will be suffixed with the timestamp to specify the filename of the log file where the script writes the recommended tuning changes.
 - `DB_BACKUP_DIR_PREFIX` is a prefix that will be suffixed with the timestamp to specify the name of the Directory Server backup directory.

8. Run the `amtune-directory` script in REVIEW mode. For example:

```
# ./amtune-directory dirmanager_password
```

where *dirmanager_password* is the Directory Manager password.

9. Review the recommended tuning settings for Directory Server in the debug log file. The script creates the log file automatically in the debug directory based on the `com.iplanet.services.debug.directory` attribute in the `AMConfig.properties` file. On Solaris systems, the default debug log file directory is:

```
/var/opt/SUNWam/debug
```

Caution: If you are working with a production Directory Server or a Directory Server that has not been adequately backed up (both the data and the configuration), it is recommended that you do not run the `amtune-directory` script in CHANGE mode to apply to the tuning changes. Review the tuning recommendations from REVIEW mode and apply the changes manually, if they meet your deployment needs.

To have the `amtune-directory` script make the tuning changes, see the following steps.

CHANGE Mode

If you are working with a pilot or prototype Directory Server and you are sure you want to apply the tuning changes, follow these steps:

1. Back up both your Directory Server data and configuration.
2. Set the following parameter in the `amtune-directory` script:

```
AMTUNE_MODE="CHANGE"
```

3. Run the `amtune-directory` script in CHANGE mode. For example:

```
# ./amtune-directory dirmanager_password
```

where *dirmanager_password* is the Directory Manager password.

4. Check the debug log file for the results of the run.

Glossary

For a list of terms that are used in this documentation set, refer to the *Sun Java™ Enterprise System Glossary* (<http://docs.sun.com/doc/816-6873>)

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