

Platform Run Book (Solaris)



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Platform Run Book (Solaris)

This document covers basic system-administration commands for managing the platform.

Use the information here for tasks that an average system administrator would need to perform without familiarity of the actual functionality of the system. This guide assumes a basic understanding of common operating system commands and concepts. You'll find the application management commands mentioned here documented in *Application Management Commands*.

The Jive SBS Solaris platform includes three services. Each service is installed as an SMF-managed (Solaris Management Facility) service. The following table describes the service title, name and role within the Jive SBS architecture.

Service	SMF Name	Purpose
Jive HTTPD	application/jive/httpd	HTTP server for static resources, reverse proxy for cache control and compression.
Jive Application	application/jive/application	Aggregation of one or more managed applications on a Jive SBS-managed host.
Jive Database	application/jive/database	Optional local database for use in exploratory or trial environments.

For a higher-level look at the platform, be sure to see the *Platform Overview*.

Jive HTTPD

The Jive HTTPD service is the main access point for HTTP and HTTPS access to the Jive SBS system by web browser.

Start Jive HTTPD

To start the jive-httpd service, execute the following command as root:

```
bash-3.00# svcadm -v start application/jive/httpd
Action start set for svc:/application/jive/httpd:default.
```

Stop Jive HTTPD

To stop the jive-httpd service, execute the following command as root:

```
bash-3.00# svcadm -v stop application/jive/httpd
Action stop set for svc:/application/jive/httpd:default.
```

Restart Jive HTTPD

To restart the jive-httpd service, execute the following command as root:

```
bash-3.00# svcadm -v restart application/jive/httpd
Action restart set for svc:/application/jive/httpd:default.
```

Monitoring Jive HTTPD

You can check the status of the jive-httpd service. Here's an example:

```

bash-3.00# svcs -l application/jive/httpd
fmri          svc:/application/jive/httpd:default
name         Jive SBS HTTPD Service
enabled      true
state        online
next_state   none
state_time   Thu Jun 11 11:08:58 2009
logfile      /var/svc/log/application-jive-httpd:default.log
restarter    svc:/system/svc/restarter:default
contract_id  31205
dependency   optional_all/none svc:/milestone/multi-user-server (online)
dependency   optional_all/none svc:/application/jive/application (online)

```

In addition to the status script, it is possible to check the status of the jive-httpd daemon using standard Unix commands. For example, the following ps command will list all jive-httpd processes running on the host:

```

bash-3.00# ps -ef | grep jive-httpd | grep -v grep
root      2393      1  0 14:41 ?        00:00:00 /usr/local/jive/httpd/bin/jive-httpd -f /usr/
local/jive/etc/httpd/conf/httpd.conf -k start
jive      2395  2393  0 14:41 ?        00:00:00 /usr/local/jive/httpd/bin/jive-httpd -f /usr/
local/jive/etc/httpd/conf/httpd.conf -k start
jive      2396  2393  0 14:41 ?        00:00:00 /usr/local/jive/httpd/bin/jive-httpd -f /usr/
local/jive/etc/httpd/conf/httpd.conf -k start
jive      2397  2393  0 14:41 ?        00:00:00 /usr/local/jive/httpd/bin/jive-httpd -f /usr/
local/jive/etc/httpd/conf/httpd.conf -k start
jive      2398  2393  0 14:41 ?        00:00:00 /usr/local/jive/httpd/bin/jive-httpd -f /usr/
local/jive/etc/httpd/conf/httpd.conf -k start
jive      2399  2393  0 14:41 ?        00:00:00 /usr/local/jive/httpd/bin/jive-httpd -f /usr/
local/jive/etc/httpd/conf/httpd.conf -k start

```

Jive HTTPD Networking

The jive-httpd server by default listens for connections on port 80, on all available network interfaces. If configured for SSL (see the *Operations Cookbook*), the server will also listen for connections on port 443. The following commands will show if the jive-httpd service is listening on the designated ports.

```

bash-3.00# lsof -n -i TCP:80 -i TCP:443
COMMAND  PID USER  FD  TYPE DEVICE SIZE NODE NAME
jive-http 3094 root   3u  IPv6 30661    TCP *:http (LISTEN)
jive-http 3098 jive   3u  IPv6 30661    TCP *:http (LISTEN)
jive-http 3099 jive   3u  IPv6 30661    TCP *:http (LISTEN)
jive-http 3100 jive   3u  IPv6 30661    TCP *:http (LISTEN)
jive-http 3101 jive   3u  IPv6 30661    TCP *:http (LISTEN)
jive-http 3102 jive   3u  IPv6 30661    TCP *:http (LISTEN)
jive-http 3104 jive   3u  IPv6 30661    TCP *:http (LISTEN)
jive-http 3105 jive   3u  IPv6 30661    TCP *:http (LISTEN)
jive-http 3273 jive   3u  IPv6 30661    TCP *:http (LISTEN)
jive-http 3274 jive   3u  IPv6 30661    TCP *:http (LISTEN)
jive-http 3275 jive   3u  IPv6 30661    TCP *:http (LISTEN)

```

In the above example, multiple jive-httpd processes are providing the "http" service. If listening for SSL or TLS connections, the "https" service will also be present.

Jive HTTPD Log Files

All log files for jive-httpd are stored in the standard platform log directory - /usr/local/jive/var/logs. The following command illustrates how to view the available logs.

```

bash-3.00# ls -l /usr/local/jive/var/logs/*http*
-rw-r--r-- 1 root root  224 Feb 23 16:12 /usr/local/jive/var/logs/httpd-error.log
-rw-r--r-- 1 root root 19454 Feb 26 08:25 /usr/local/jive/var/logs/jive-httpd-access.log
-rw-r--r-- 1 root root  854 Feb 23 16:13 /usr/local/jive/var/logs/jive-httpd-error.log
-rw-r--r-- 1 root root  854 Feb 23 16:13 /usr/local/jive/var/logs/jive-httpd-ssl-access.log
-rw-r--r-- 1 root root  854 Feb 23 16:13 /usr/local/jive/var/logs/jive-httpd-ssl-error.log

```

In the above example, startup logs are captured to the "httpd-error.log" file. Requests handled by the standard jive-httpd server are maintained in "jive-httpd-access.log" file while errors during normal runtime are captured to "jive-httpd-error.log". Likewise, SSL or TLS encrypted requests are captured to the corresponding log files with "ssl" appended to the name of the file.

Jive-Managed Applications

An installation of the Jive SBS platform will host one or more distinct applications. All managed applications have system-level scripts that are invoked at system startup and shutdown. The following operations are available for managing and monitoring managed applications.

Start Jive-Managed Applications

To start all Jive-managed applications, use the following command. This script is invoked at system boot to start all managed applications.

```
bash-3.00# svcadm -v enable -st application/jive/application
svc:/application/jive/application:default temporarily enabled.
```

Stop Jive-Managed Applications

To stop all Jive-managed applications, execute the system script.

```
bash-3.00# svcadm -v disable -st application/jive/application
svc:/application/jive/application:default temporarily disabled.
```

Restart Jive-Managed Applications

To restart all Jive-managed applications, execute the system script.

```
bash-3.00# svcadm -v restart application/jive/application
Action restart set for svc:/application/jive/application:default.
```

Monitoring Jive-Managed Applications

To show all running Jive-managed applications, execute the *appls* command with the "--running" flag as the jive user as in the following example.

```
bash-3.00# appls --running
      stage      running (pid=2799)
```

In this example, the "stage" application is currently running with a process ID of 2799. To monitor the individual process, standard tools like the "ps" command can be used with the process ID from *appls* output as in the following example.

```
bash-3.00# ps -ef | grep 2799 | grep -v grep
jive      2799      1  0 15:06 pts/0    00:00:16 /usr/local/jive/java/bin/java -XX:
+PrintClassHistogram -XX:+PrintTenuringDistribution -XX:+UseParNewGC -XX:+UseConcMarkSweepGC
-Djava.awt.headless=true -Djava.net.preferIPv4Stack=true -Xloggc:/usr/local/jive/var/
logs/stage-gc.log -Xmx2048m -Xms2048m -XX:MaxPermSize=512m -Djive.home=/usr/local/jive -
Djive.instance.home=/usr/local/jive/applications/stage/home -Djive.name=stage -Djive.context=/
stage -Djive.logs=/usr/local/jive/var/logs -Djive.application=/usr/local/jive/applications/
stage/application -Djive.work=/usr/local/jive/var/work/stage -Djive.app.cache.ttl=10000
-Djive.app.cache.size=10240 -Dserver.port=9500 -Dhttp.addr='127.0.0.1' -Dhttp.port=9502
-Dajp.addr=127.0.0.1 -Dajp.port=9501 -Dajp.buffer.size=4096 -Dajp.max.threads=50 -
Dlog4j.configuration=file:///usr/local/jive/applications/stage/conf/log4j.properties -
Dtangosol.coherence.clusteraddress='224.224.224.224' -Dtangosol.coherence.clusterport=9503
-Dcatalina.base=/usr/local/jive/applications/stage -Dcatalina.home=/usr/local/jive/tomcat -
Djava.io.tmpdir=/usr/local/jive/var/work/stage -classpath /usr/local/jive/applications/stage/
```

```
bin//bootstrap.jar:/usr/local/jive/applications/stage/bin/tomcat-juli.jar::/usr/local/jive/
java/lib/tool.jar org.apache.catalina.startup.Bootstrap start
```

Alternatively, the following example combines both operations into a single command.

```
bash-3.00# ps -ef | grep 'appls --running | awk -F=' '{print $2}' | tr -cd '[:digit:]'
jive      2799      1  0 15:06 pts/0    00:00:16 /usr/local/jive/java/bin/java -XX:
+PrintClassHistogram -XX:+PrintTenuringDistribution -XX:+UseParNewGC -XX:+UseConcMarkSweepGC
-Djava.awt.headless=true -Djava.net.preferIPv4Stack=true -Xloggc:/usr/local/jive/var/
logs/stage-gc.log -Xmx2048m -Xms2048m -XX:MaxPermSize=512m -Djive.home=/usr/local/jive -
Djive.instance.home=/usr/local/jive/applications/stage/home -Djive.name=stage -Djive.context=/
stage -Djive.logs=/usr/local/jive/var/logs -Djive.application=/usr/local/jive/applications/
stage/application -Djive.work=/usr/local/jive/var/work/stage -Djive.app.cache.ttl=10000
-Djive.app.cache.size=10240 -Dserver.port=9500 -Dhttp.addr='127.0.0.1' -Dhttp.port=9502
-Dajp.addr=127.0.0.1 -Dajp.port=9501 -Dajp.buffer.size=4096 -Dajp.max.threads=50 -
Dlog4j.configuration=file:///usr/local/jive/applications/stage/conf/log4j.properties -
Dtangosol.coherence.clusteraddress='224.224.224.224' -Dtangosol.coherence.clusterport=9503
-Dcatalina.base=/usr/local/jive/applications/stage -Dcatalina.home=/usr/local/jive/tomcat -
Djava.io.tmpdir=/usr/local/jive/var/work/stage -classpath /usr/local/jive/applications/stage/
bin//bootstrap.jar:/usr/local/jive/applications/stage/bin/tomcat-juli.jar::/usr/local/jive/
java/lib/tool.jar org.apache.catalina.startup.Bootstrap start
```

List Jive-Managed Applications

A list of all managed applications can be obtained by executing the `appls` command as the `jive` user as shown in the following example.

```
bash-3.00# appls
          stage      running (pid=2799)
          development  stopped (pid=None)
```

In the output above, the "stage" application is running with process ID 2799, the "development" application is not running.

Jive-Managed Application Networking

The network ports and addresses used by a managed Jive application will vary depending on usage. The default Jive SBS application will work on the following addresses and ports.

Service	Protocol	Address
Application server management	TCP	127.0.0.1:9000
HTTP	TCP	127.0.0.1:9001
AJP	TCP	127.0.0.1:9002
Multicast Cluster	UDP/Multicast	224.224.224.224:9003

Note that managed applications should not be accessed directly via the HTTP 9001 port and it is recommended that a firewall prevent access to that port. Its existence is for troubleshooting and support purposes only and is not intended for production use.

To validate that the TCP services are present for a default install, execute the following command.

```
bash-3.00# lsof -n -P | grep jive | grep java | grep LISTEN
java      3204      jive   30u    IPv6     31631          TCP 127.0.0.1:9001 (LISTEN)
java      3204      jive   31u    IPv4     31632          TCP 127.0.0.1:9002 (LISTEN)
java      3204      jive   39u    IPv4     38046          TCP 127.0.0.1:9000 (LISTEN)
```

Jive-Managed Application Logs

Log files for Jive-managed applications are located in the `var/logs` directory of the `jive` user's home directory (`/usr/local/jive/var/logs`). The following log files can be consulted for further information on the

status of individual applications. Each file will be prefixed with the name of the corresponding application. For example, for the "stage" application, the container log file will be named "stage-container.log".

- <name>.log - Primary log file for a managed application; most log entries will be located here.
- <name>-container.log - Early bootstrap log file for the application server container hosting the web application.
- <name>-session.log - Log file capturing creation and eviction of user session data.
- <name>.out - Redirection of standard out and standard error for the application process; may contain data not in the main log file.
- <name>-gc.log - Java garbage collection logs for the application.

Jive Database Server

The Jive SBS platform ships with a local PostgreSQL database server. The following operations are available for the database server.

Start Jive Database Server

To start the database server, execute the following system command as the root user.

```
bash-3.00# svcadm -v start -s application/jive/database
svc:/application/jive/database:default started.
```

Stop Jive Database Server

To stop the database server, execute the following system command as the root user.

```
bash-3.00# svcadm -v stop -s application/jive/database
svc:/application/jive/database:default stopped.
```

Note that stopping the database while managed applications are using the database will result in applications that cannot service requests. Additionally, stopping the database while applications are connected may result in a lengthy shutdown time or a failed shutdown.

Monitoring Jive Database Server

Monitoring the database server can be done as the root user with system scripts, or with traditional Unix commands.

To check the status of the jive database, execute the following command as the root user.

```
bash-3.00# svcs -l application/jive/database
```

A healthy, running database system will have multiple processes. The following command will show all running database processes on the system:

```
bash-3.00# ps -ef | grep post | grep -v grep
jive      3211      1  0 17:13 ?        00:00:00 /usr/local/jive/postgres/bin/postgres -D /usr/
local/jive/var/data/postgres-8.3
jive      3214    3211  0 17:13 ?        00:00:00 postgres: writer process
jive      3215    3211  0 17:13 ?        00:00:00 postgres: wal writer process
jive      3216    3211  0 17:13 ?        00:00:00 postgres: autovacuum launcher process
jive      3217    3211  0 17:13 ?        00:00:00 postgres: archiver process
jive      3218    3211  0 17:13 ?        00:00:00 postgres: stats collector process
```

Jive Database Server Networking

In the default configuration, the included database service listens for connections on TCP address 127.0.0.1 port 5432. To verify that the database is listening for connections, execute the following command.

```
bash-3.00# lsof -n -P | grep jive | grep postgres | grep LISTEN
                postgres  2990      jive    3u      IPv4        21499             TCP
127.0.0.1:5432 (LISTEN)
```

Jive Database Server Logs

Logs for the database server are maintained in the platform log directory at "/usr/local/jive/var/logs/postgres.log".