



# Troubleshooting

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Following is a list of trouble symptoms and error messages that might arise as you configure and use Cisco SIP proxy server (Cisco SPS), with possible causes and recommended actions.

Also helpful for troubleshooting problems is the list of call flows in [Appendix F, “SIP Call-Flow Scenarios.”](#)

**Symptom** The error\_log file contains the following line, and users can no longer register:

```
ACE_INET_Addr::ACE_INET_Addr: localhost: Invalid argument send_n failed: Broken pipe,
expected len = 4, actual len = -1.
```

**Possible Cause** A farm member is configured whose name or IP address cannot be resolved.

**Recommended Action** Determine why the machine cannot resolve the name or address and fix that problem.

**Symptom** Cisco SPS does not start.

**Recommended Action**

1. Verify that the ./sip directory has the proper read-write permissions so that you can start sipd.
2. Verify that the proper environment variables are enabled.
3. Verify that the Linux RPM Package Manager (rpm) is correctly installed.
4. Verify that an old version of SIP proxy server (sipd) is not still running (enter **ps -ef | grep sps**). If necessary, kill the old-version processes.
5. Verify that Cisco SPS can use Domain Name System (DNS) to resolve its hostname.
6. Verify that your system has enough shared memory (at least the amount specified during installation).

**Symptom** Cisco SPS takes a long time to start.

**Possible Cause** A DNS is used before local files. Cisco SPS times out attempting to resolve DNS.

**Recommended Action** To override this behavior, create /etc/irs.conf:

```
#####
# /etc/irs.conf
#####
```

```

# Get password entries from local file
passwd local
# Build group membership from local file
group local
# Services comes from just the local file
services local
protocols local
# Hosts comes first from local, failing that, DNS
hosts local continue
hosts dns
# Networks comes first from the local file, and failing # that the, irp daemon
networks local continue
networks irp
netgroup local

```

**Symptom** Cisco SPS does not allow devices to register.

**Possible Cause** Registration might be disabled in the GUI or the sipd.conf file.

**Possible Cause** If authentication is required, one of the following might be the problem:

- The SIP-UA and password might not be defined in MySQL or the RADIUS server.
- Cisco SPS might be unable to connect to the MySQL database or RADIUS server.

**Possible Cause** The type of authentication that the SIP-UA is trying to use might be set incorrectly. Cisco SPS supports only HTTP Basic and Digest authentication locally for SIP user agents; Challenge-Handshake Authentication Protocol (CHAP) is also supported on RADIUS.

**Possible Cause** Access control lists prevent SIP user agents from registering.

**Symptom** Cisco SPS routes calls improperly.

**Recommended Action**

- Verify that the num-expansion statements are configured correctly.
- Verify that the various translation mechanisms (Static Registry, Dynamic Registry, ENUM, GKTMP) are configured correctly and are populated correctly.
- Verify that the Static Routing table shows correct routes.
- Verify that the DNS server is provisioned correctly for DNS SRV and DNS A records of the devices to be routed.
- Check the error\_log to see what errors are reported (example: bad SIP messages, process errors).

**Symptom** Cisco SPS farming works improperly.

**Recommended Action**

- Verify that farm members have the same GUI or sipd.conf file configuration.
- Verify that each farm member contains an entry for the other farm member in its GUI or sipd.conf file configuration.
- Verify that both farm members are running the same version of Cisco SPS.

- Verify, using Network Time Protocol (NTP), that both farm members are synchronized to the same clock source.

**Symptom** The GUI-based provisioning system cannot connect to pserver.

**Recommended Action** Change the debug level in <ServerRoot>/sip/conf/prov/ps.conf to LOG\_DEBUG. Then do the following.

- Verify that the pserver process is running. If it is not, restart it with `./sip restart`.
- Verify that the pserver port is not used by another process.
- Verify that your session has not timed out. Log back in to the GUI and reauthenticate.
- Verify that the database information in ps.conf is correct. It should look like the following.

```
#####
# Provisioning Server (ps) Configuration File
#####

DebugLevel      string      LOG_ERR
LogFilename     string      /usr/local/sip/logs/pserver_log
LocalPort       int         26005
DaemonMode      bool        True
NumThreads      int         1
DataStoreDir    string      /usr/local/sip/conf/prov/newdata
WebStoreDir     string      /usr/local/sip/conf/prov/www
Authentication   bool        True
UserAccountName string      csps
GroupAccountName string      csps

#
# DB info
#

# DB Backend
DBConnection    string      MYSQL

#MySQL info sample
database        string      sip
host            string      localhost
user            string      guest
password        string      nobody
```

**Symptom** pserver cannot connect to MySQL.

**Recommended Action**

1. Manually attempt to connect to MySQL:

```
Login: mysql -h<host> -u<user> -p<password>
show databases;
use sip; (sip should be listed as an option)
show tables;
select * from <table>;
```

2. If you can log in manually, verify that the correct MySQL IP address is configured.
3. Verify the permission (that is, the MySQL password).

**Symptom** SIP provisioning agent (spa) does not receive updates from pserver.

**Recommended Action**

1. Check error logs for any issues.
2. Log in to MySQL manually to confirm that the changes are present.
3. If changes are in MySQL, do the following:
  - a. Change the log level in <ServerRoot>/sip/conf/prov/spa.conf to LOG\_DEBUG.
  - b. Stop and restart spa.
  - c. Tail -f spa\_log.
  - d. Verify that spa receives the update.
  - e. If spa receives the update but problems persist, contact the Cisco Technical Assistance Center.
4. If changes are not in MySQL, verify that the tables are set up correctly and that the data is not corrupted.

**Symptom** SIP provisioning agent (spa) cannot write to the sipd.conf file.

**Possible Cause** The sipd.conf file may have been modified by a different user (such as root) so that, when spa tries to write to the file, it lacks the correct permissions.

**Recommended Action**

1. Save the sipd.conf file under a different name.
2. Use the GUI-based provisioning system to apply the changes again so that spa writes a new sipd.conf file.
3. Restart Cisco SPS so that it picks up the changes.

**Symptom** The error message sps\_setup:not found appears when you attempt to run the SPS setup (sps\_setup) script after successful installation of Cisco SPS on a Solaris machine.

**Possible Cause** Bash needs to be installed.

**Recommended Action** Install Bash.

**Symptom** You are unable to invoke the csps\_provision provisioning application.

**Recommended Action** Verify that MySQL is up and running (use the **ps -ef | grep mysql** command). If command output indicates that MySQL is running, do the following:

1. Raise the debug level on the GUI and pserver by going to the sip/conf/prov/www directory and editing the log configuration (logConfig) file to uncomment the following line:
 

```
log4j.category.org.vovida.prov.psLib.HttpPSConnection=DEBUG
```
2. Change the log level in sip/conf/prov/ps.conf to LOG\_DEBUG.
3. Perform a sip restart.
4. Run the sysadmin\_csps\_provision script and check the contents of both sysadmin\_csps\_provision\_log and pserver\_log for helpful information.

**Symptom** When you start the provisioning server and enter the default password, the system rejects you.

**Recommended Action**

1. Verify that pserver is running.
2. Verify that you are running the GUI-based provisioning system on the same box where pserver is running (use the **ps -ef | grep pserver** command).
3. Check the `./logs/pserver_log` file for helpful information. If there is none, change the log level of pserver by editing `./conf/prov/ps.conf`. Change the log level to `LOG_DEBUG` and then perform a `./sip restart`. Afterwards, try opening the GUI again and see if more useful debugging information appears in the `pserver_log` file.

**Symptom** Bulk import of data into MySQL stops before anything is written to the database.

**Possible Cause** The pserver, upon checking the imported information, finds fields or values other than what it expects. When importing through the GUI-based provisioning system, the pserver checks the number of fields and some of the values. For example, it checks whether the port is within the correct range of values. If it finds a problem, it stops the import before writing anything to the database.

**Recommended Action** Fix any problems and then import the data again.

**Symptom** Error 2002: Can't connect to local MySQL server through socket....

**Possible Cause** The MySQL database is not installed.

**Recommended Action** Install the database before running the tool.

**Symptom** Error 1045: Access denied for user.... Operation failed.

**Possible Cause** Your MySQL username and password are invalid or have insufficient permission to access the database.

**Recommended Action** Enter the correct or properly enabled username and password. If you have forgotten your password, assign a new one.

**Symptom** Error 1116: Table 'sip.subscriber...' doesn't exist. Operation failed.

**Possible Cause** The database whose name you entered does not exist.

**Recommended Action** Enter a valid name or reinstall the database.

**Symptom** ERROR: Invalid user\_id syntax.

**Possible Cause** Your subscriber ID has invalid syntax.

**Recommended Action** Check your subscriber ID and reenter it with valid syntax.

**Symptom** ERROR: Invalid dest\_url\_cfna syntax.

**Possible Cause** Your call-forwarding destination URL has invalid syntax.

**Recommended Action** Check the URL and reenter it with valid syntax.

**Symptom** When you use the regroute tool to list everything in the registry database, you get a segmentation fault.

**Possible Cause** Your registration database might contain some garbage that the regroute tool cannot parse, causing the tool to crash, possibly due to a power outage or some other hard reset of the machine.

**Recommended Action** If you can tolerate losing the data in your registration and route databases, create a new (empty but not corrupted) database by entering the following commands on each Cisco SPS in the farm:

1. `./bin/sip stop`
2. `rm ..data/*_db`
3. `./bin/sip start`

Then refresh registrations and add routes again.

**Symptom** When you use the regroute tool, writes to MySQL fail.

**Possible Cause** The regroute tool and the MySQL database might be from different Cisco SPS releases.

**Recommended Action** Upgrade the earlier-release component.

**Symptom** The regroute tool is unable to push a registration into MySQL.

**Possible Cause** The regroute tool works under the assumption that the subscriber table is named “subscriber.”

**Recommended Action** Rename the subscriber table to the default “subscriber.”

**Symptom** The SIP proxy server (sipd) process stops and cannot be restarted. Or, when you start the server, the provisioning GUI works fine and then gets blocked after an update (particularly an update of a subscriber profile) or after waiting for awhile.

**Possible Cause** You might have changed the IP address for one of your proxy servers. The new information displays in the GUI, but the old information remains in MySQL in addition to the new information, causing an IP address mismatch between what you set with the GUI (which updates sipd.conf) and what appears in the spa.conf file. (The GUI changes only certain things such as

sipd.conf, subscriber data, static routes, and static registries; it does not change other things such as spa.conf, ps.conf, and dynamic registries.) The pserver tries to contact a SIP provisioning agent (spa) that no longer exists, and then hangs.

**Recommended Action** Check the SPS setup log (sps\_setup\_log) to see which IP address you set up during installation. Use the **ifconfig -a** command to see what the IP address is now. If a mismatch exists, update both the GUI and the <server\_root>/sip/conf/prov/spa.conf file and do a graceful restart.

**Recommended Action** Check that any directives that contain IP addresses are set correctly. As necessary, modify them with the GUI. IP addresses appear in the following places:

- sipd.conf farm directives
- sipd.conf MySQL host directive on the secondary server
- spa.conf pointer to PServerHost on the secondary server
- spa.conf (if your system runs on a server with two NIC cards)
- The following MySQL tables: Seeding, License, TempLicense, and DBSubscriberTable

**Symptom** Call forwarding does not configure properly.

**Possible Cause** You might need to define the corresponding subscribers.

**Recommended Action** Rather than editing an existing subscriber, add a new one:

```
user --> 5100
domain --> cisco.com
```

Add a call-forwarding URL for the new user and enable the corresponding call-forwarding feature in the sipd.conf file.

**Symptom** When you add a static route, an error message states “Could not find out how many accounts are stored on the server.” Static routes disappear from the page after system reboot.

**Possible Cause** MySQL might be having problems accessing the data file for the routes.

**Recommended Action** Try the following:

1. Check the MySQL file permissions in /opt/sip/data/sip. The files there should have MySQL read-write permission. If they do not, something went wrong with the MySQL installation.
2. Check to see if the CspsStaticRoute.MYD MySQL file is present. If it is not, some type of corruption may have occurred.
3. Log in to MySQL directly using the command line and grab all static routes that are stored in MySQL using the following commands:

```
% mysql -hlocalhost -uguest -pnobody sip;
mysql> select * from CspsStaticRoute;
```

If the command line fails, the problem is with the MySQL tables.

4. Get more logging information from the pserver by changing the LOG\_LEVEL in /opt/sip/conf/prov/ps.conf from LOG\_ERR to LOG\_DEBUG and restart the pserver.

**Symptom** You experience a delay of several seconds from when Cisco SPS sends a 100 trying message to when it processes an INVITE message. If you disable the access-control list (ACL), the delay goes away.

**Possible Cause** The delay might be caused by the Cisco SPS trying to match the caller's IP address with a hostname listed in the ACL.

**Recommended Action** Use IP addresses rather than hostnames in the ACL.