

This section describes troubleshooting features and tips for the Cisco SIP proxy server. It provides tips under the following headings:

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## Troubleshooting Tips

When trying to troubleshoot problems with the Cisco SIP proxy server, remember the following:

- Each module with the Cisco SIP proxy server has debugging capabilities that can be set via a debug flag in the sipd.conf file. When these debug flags are set to On, and the server is running in multi-process mode, the debug output is written to the ./logs/error\_log file. When the flags are set to On and single-process mode is enabled, the debug output is written to standard output.
- Changes to the sipd.conf file do not automatically take effect. To have any changes take effect, issue a graceful restart by issuing the following command:

```
./sipdctl graceful
```

## Cisco SIP Proxy Server Does Not Start

If the Cisco SIP proxy server does not start, perform the following tasks as necessary to determine the cause:

- Verify that the /usr/local/sip directory (on Linux) or the opt/local/sip/ directory (on Solaris) has the read and write permissions set that allow you to start the Cisco SIP proxy server.
- Verify that the LD\_LIBRARY\_PATH environment variable has been enabled as defined in the *Cisco SIP Proxy Server Administrator Guide*, version 2.0.
- If using the Linux RPM version of the Cisco SIP proxy server, verify that the software has been correctly installed.

- Verify that an older version of the Cisco SIP proxy server is not still running. Issue the following command:

```
ps -ef | grep -i sip
```

If another version is running, disable these processes by issuing the following command:

```
./sipdctl stop
```

- Verify that the Cisco SIP Proxy Server can resolve its hostname through DNS.

## Cisco SIP Proxy Server Does Not Allow Devices to Register

If the Cisco SIP proxy server does not allow devices to register, perform the following tasks as necessary to determine the cause:

- Verify that registration services are enabled in the `mod_sip_registry` module in the `sipd.conf` file.
- If authentication is required, ensure that the SIP UA and a password are defined in the MySQL database subscriber table and that the Cisco SIP proxy server can connect to the MySQL database.
- Verify which type of HTTP Digest authentication method that the SIP UAs are using.

## Cisco SIP Proxy Server Does Not Route Calls Properly

If the Cisco SIP proxy server does not properly route calls, perform the following tasks as necessary to determine the cause:

- Verify that numbering plan statements are configured correctly in the `mod_sip_numexpand` module in the `sipd.conf` file.
- Verify that the translation modules (`mod_sip_registry`, `mod_sip_enum`, and `mod_sip_gktmp`) are correctly configured and have the correct entries populated.
- Verify that the correct routes exist in the static routing table of the `sipd.conf` file.
- Verify that the DNS server is configured for DNS SRV and DNS A records of the devices to be routed.
- View the `error_log` file for error messages (bad SIP messages, process errors, and so forth.).

## Cisco SIP Proxy Server Reports That SIP Messages Are Bad

If the Cisco SIP proxy server reports SIP messages as bad, enable the `StateMachine` debug flag in the `sipd.conf` file and view the SIP messages in the `error_log` file. The `error_log` file should contain SIP messages that are received in ASCII format. Check the SIP headers of those messages against the headers defined in [RFC 2543](#) or check the SDP information against the information defined in [RFC 2327](#).

## Cisco SIP Proxy Server Farming Does Not Work Correctly

If Cisco SIP proxy server farming does not work correctly, perform the following tasks as necessary to determine the cause:

- Verify that all members of the farm have the same `sipd.conf` file configuration.
- Verify that all members of the farm have an entry for the other farm members defined in the `Cisco_Registry_Farm_Members` directive in their `sipd.conf` file.
- Verify that all members of the farm are running the same version of the Cisco SIP proxy server.

- Verify that all members of the farm are synchronized to the same clock source through Network Time Protocol (NTP).

## **Voice Quality Problems**

SIP uses RTP to transmit media between two endpoints. The Cisco SIP proxy server is only involved with the SIP signaling and not the media. Therefore, voice-quality issues should be determined in the endpoint devices, not the Cisco SIP proxy server, because the media does not pass through it.