

SIP Phone Support (SPS)

VoIP Media Gateways

SIP Protocol

Configuration Note

SPS Best Practice

Preventative Maintenance and Health Check Procedures



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Related Documentation

Manuals Name
SPS for Microsoft Lync Server 2010 Administrator's Guide Ver. 3.00
SPS Backup Restore Configuration Note Ver. 1.0

Reader's Notes

1 Introduction

This document describes the preventative maintenance and health check procedures to be performed by administrators of the SPS system.

The procedures consist of checking the following:

- Free Disk Space
- CPU Usage
- Memory Usage and Handles Count
- SPS Log Files
- CDR Files
- Windows Events Logs
- Virtual Machine Logs and Events
- Antivirus Software
- System Backup
- SPS License Check
- Database Synchronization Status
- SPS Diagnostics

Reader's Notes

2 Free Disk Space

The following procedure checks the hard drive to ensure there is sufficient disk space.

2.1 Procedure

1. Open the SPS Web interface; the MobilityPLUS For Microsoft® Lync™ Server Home Page appears.
2. Under the **System Status** group, check **C free disk space**.

2.2 Expected Results

- You should expect a minimum free disk space of 10 GB.

Reader's Notes

3 CPU Usage

The following procedure checks the system CPU usage during both idle time and busy hour.

3.1 Procedure

1. Open the SPS Web interface.
2. Open the System Status page (**Status & Diagnostics > System Status > System Status**).
3. Check the CPU usage in the 'CPU' column for the following services:
 - SPS Core
 - SPS Switch
 - SPS Manager
 - TFTP Server
 - FTP Server

3.2 Expected Results

- In idle mode, expect a CPU usage of less than 5%.
- Make sure that during busy hour, the system CPU does not exceed 80%.
- Check the total server CPU load. Make sure other services installed on the same operating system are not performing high CPU loads.



Note: Other services may influence system stability and service reliability.

Reader's Notes

4 Memory Usage and Handles Count

The following procedure checks memory usage and handles count.

4.1 Procedure

1. Open the SPS Web interface.
2. Open the System Status page (**Status & Diagnostics > System Status > System Status**).
3. Check the memory usage in the 'Private Memory/Working Set' column for the following services:
 - SPS Core
 - SPS Switch
 - SPS Manager
 - TFTP Server
 - FTP Server
4. Check the 'Handles' column for the following services:
 - SPS Core
 - SPS Switch
 - SPS Manager
 - TFTP Server
 - FTP Server

4.2 Expected Results

- The maximum memory usage depends on the number of simultaneous calls.
- Compare the memory usage in idle state with the memory usage during busy hour, in order to verify that the memory usage in idle state returns to its normal value.
- In **idle** state, you should expect the following usage values:
 - SPS Core should be less than 2000
 - SPS Switch should be less than 2000
 - SPS Manager should be less than 500
- In **normal** state, the number of handles depends on the number of calls but should not exceed the following values:
 - SPS Core should be less than 5000
 - SPS Switch should be less than 30000
 - SPS Manager should be less than 1000
- Check the total server memory and 'Handles' usage. Make sure other services installed on the same operating system are not using high memory/handles usage,



Note: Other services may influence system stability and service reliability.

Reader's Notes

5 SPS Log Files

The following procedure checks the size of the log files and verifies if there are any errors/warnings in the log files.

5.1 Procedure

1. Open the SPS Web interface.
2. Open the Application Logs page (**Status & Diagnostics > Logs & Alarms > Application Logs**).
3. Click the button on the right side of the appropriate application, to see the contents of the log file; the Application Logs Activity page appears.
4. From the 'activity_log CSV' drop-down list, select **Show last 100 log lines**.
5. Inspect the log file and check for errors and warnings.

5.2 Expected Results

- Make sure there are no special errors or exceptions.
- If there are errors or exceptions, the system tries to provide additional information about the problem cause.
- If a recurring error or exception occurs, contact your Customer Support.
- The system automatically deletes old log files from the system.
- Periodically monitor the system log file size and verify that the log files are not larger than 100 MB.

Reader's Notes

6 CDR Files

The following procedure checks the CDR files.

6.1 Procedure

1. Open the SPS Web interface.
2. Open the SPS CDR Files page (**Status & Diagnostics > CDR > SPS CDR Files**).
3. Click **Download** to display the CDR file.
4. Check the CDR records that appear in the spreadsheet.

6.2 Expected Results

- The CDR records should match the actual calls made (Call Duration, Time of Day).
- Make sure the CDR folder includes no more than 30 records.
- The system automatically deletes old CDR files from the system.

Reader's Notes

7 Windows Events Logs

The following procedure checks the Windows events logs and searches for critical issues.

7.1 Procedure

1. Connect to the SPS server using Remote Desktop.
2. Start the Windows Event Viewer.
3. Click **Windows Logs > Application**.
4. Check the level of events for the SPS task under the 'Source' column. Check for errors, warnings etc.
5. Click on **Windows Logs > System**.
6. Check for exceptions.
7. Click **Applications & Service Logs > Lync**.
8. Check the level of events for the SPS task under the 'Source' column. Check for errors, warnings etc.

7.2 Expected Results

- No errors and exceptions during normal operation.
- If recurring errors or warnings events appear, contact your Customer Support.
- Check the Event Viewer for warnings or errors of other services installed on the same operating system.
- Other services may influence system stability and service reliability.

Reader's Notes

8 Virtual Machine Logs and Events

The following procedure checks the Virtual Machine (VM) logs and events.

8.1 Procedure

Use your virtualization software to check virtual machine logs and events. Use one of the following:

- Microsoft Hyper-V Server
- VMware

8.1.1 Microsoft Hyper-V Server

Microsoft Hyper-V Server logs useful information to diagnose a problem. All Hyper-V event logs are stored in the Event Viewer under 'Applications and Services Logs', 'Microsoft', 'Windows'.

There are then 10 categories of Hyper-V events to look at. First check the **Hyper-V-VMMS** category.

8.1.2 VMware

If you are using a VM other than HyperV, such as VMware, monitor the VM according to the VM tools. You should have these tools at the data center.

8.2 Expected Results

- There should be no errors or exceptions during normal operation.
- If there are recurring errors or warnings events, contact your Customer Support.

Reader's Notes

9 Antivirus Software

The following procedure checks that the antivirus program is up to date and doesn't block the SPS operation.

9.1 Procedure

1. Make sure your antivirus program is up-to-date with the latest updates.
2. Make sure that if the antivirus program is setup to perform a massive scan on all computer folders, it is scheduled for non-working hours or when the system is idle.
3. Verify that the antivirus program installed on the system does not block access to SPS files or main folders.
4. Make sure the antivirus program does not affect the SPS process or slow the performance of the server.

9.2 Expected Results

The antivirus program should consume minimum of CPU resources.

Reader's Notes

10 System Backup

The following procedure describes how to perform the system backup. The backup copy is useful if the system needs to be restored due to a hardware malfunction or as a result of a system settings restore.

10.1 Procedure

1. Perform the system backup according to the procedure detailed in the *SPS Backup Restore Configuration Note Ver. 1.0* document.
2. Perform the backup operation once week if constant changes are made to the system.
3. The backup file should be stored in a safe external storage.
4. Save several historical backup copies (e.g. last 4 backups).
5. If the SPS is installed on a VM, perform a full backup of the VM system.
6. Schedule the backup operation during non-working hours or when the system is in idle mode.
7. If a change is made to the system configuration, perform the backup operation before starting the new change.

10.2 Expected Results

NA

Reader's Notes

11 SPS License

The following procedure checks that the system license is still active. Besides other license information, it displays the Expiration Date and how many days are left before expiration.

11.1 Procedure

1. Open the SPS Web interface.
2. Open the License Information page (**Configuration > License > License Information**).
3. Under the 'License Information' group check the following:
 - Expiration Date
 - Days Left
4. Under the 'Users Information' group, check the following:
 - Maximum users
 - Current registered users

11.2 Expected Results

- If the system is already utilizing 90% of its license, purchase an additional license in order to be able to extend system capacity when needed.
- If the system is running in 'Evaluation Mode' with an expiration date, make sure you purchase a permanent license. The system stops operating when the license expires.

Reader's Notes

12 Database Synchronization Status

The following procedure checks the database synchronization status.

12.1 Procedure

1. Open the SPS Web interface.
2. Open the Database Synchronization page (**Status & Diagnostics > Database > Database Synchronization**).
3. From the **For last synchronization time on server** drop-down list, select the appropriate server.
4. Click **here**.

12.2 Expected Results

- Verify that each synchronization is done at intervals, less than ten minutes.

Reader's Notes

13 SPS Diagnostics

The following procedure describes the SPS diagnostics tests to be performed.

13.1 Procedure

1. Open the SPS Web interface.
2. Open the SPS Diagnosis page (**Status & Diagnostics > System Diagnostic > SPS**).
3. Click **Show Application Endpoint State** to verify the Application Endpoint State.
4. Click **Certificate Expiration Date** to verify the Certificate Expiration Date.

13.2 Expected Results

- For the application endpoint state, the following message is displayed: **Application Endpoint is ready; its state is 'Established'**.
- For the certificate expiration date, verify that there are enough days left to renew the certificate.



Configuration Note