



Troubleshooting Personal Assistant

These topics address problems you might encounter, and provide ways to resolve them; also included are other tasks associated with problem resolution.

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Resolving Problems Using Personal Assistant

These topics provide resolutions to problems users might encounter:

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Unable to Access User Interface

If users cannot log in to the Personal Assistant user interface, verify that they are using the correct log-in name. The log-in name should match the unique user attribute you defined in the Corporate Directory settings. For example, if your company is using the employee e-mail address as the unique user attribute, verify that users are entering their e-mail address and not another attribute, such as their phone number.

Related Topics

- [Configuring the Corporate Directory, page 4-18](#)

Unable to Use Speech Commands

If users cannot use speech commands and are forced to use touch-tone dialing to interact with Personal Assistant:

- Verify that the speech recognition server is up and running. See the [“Starting and Stopping the Servers and License Manager”](#) section on page 6-16.

- Establish whether you have recently added a new speech-recognition server or additional license manager hosts. If you have, you must refresh the servers before they can support users. See the [“Configuring Speech Recognition” section on page 4-5](#).
- Consider whether you have an adequate number of speech-recognition servers to handle the number of users. See the [“Creating Server Clusters” section on page 1-18](#). You might want to add more speech licenses to accommodate your clients’ usage.

Directed to Operator Too Often

If users report that they are being directed to the operator too often when using Personal Assistant, check the speech recognition settings on the Personal Assistant server. See the [“Configuring Speech Recognition” section on page 4-5](#).

Related Topics

- [Speech Services Configuration, page A-2](#)

Too Many Available Options

If users report they are given too many options when using dial-by-name, you should reduce the **Max Disambiguate** parameter of the speech recognition settings on the Personal Assistant server.

Related Topics

- [Configuring Speech Recognition, page 4-5](#)

Calls Transferred to Voice Mail Too Quickly

Using the miscellaneous settings in the Personal Assistant Administration interface, you can designate the call pickup time. This determines how long Personal Assistant waits for a call to be picked up before it moves on to the next defined dial rule.

However, users can also configure the call pickup time (by selecting **Preferences>Settings** from the user interface), and this setting takes precedence. For example, if the server setting is 20 seconds, but a user has set their setting to 10 seconds, Personal Assistant uses 10 seconds as the call pickup time.

If users state that they are being transferred too quickly to voice mail, check the call pickup setting in both the administrator and user interfaces.

Related Topics

- [Miscellaneous Settings, page A-26](#)

Dial Rules Not Working Properly

You can configure dial rules through the Personal Assistant administration and user interfaces. However, rules configured in the administration interface take priority over those configured through the user interface. Therefore, if a user has configured a dial rule that conflicts or produces different results than one you configured as the administrator, their rules are ignored.

Related Topics

- [Creating Dialing Rules, page 4-13](#)

Calls Dropping

Under normal circumstances, users should not experience dropped calls while using Personal Assistant. However, if you have recently changed settings on the Personal Assistant server and saved the settings, the server might have restarted. If you do not have any failover servers, Personal Assistant might have been unavailable during this restart.

If a user is actively interacting with Personal Assistant when the server becomes unavailable, the call will drop. However, if Personal Assistant has already completed its role in the call, such as a successful transfer, the call will not be dropped.

To prevent calls from being dropped while Personal Assistant is being used, limit the changes and restarts to the Personal Assistant server to off-peak or other times of lower demand. Also, if you do not have a failover server, consider adding one in order to more reliably support your users.

Related Topics

- [Setting Up Personal Assistant Server Load Balancing, page 1-23](#)
- [Configuring Personal Assistant Servers, page 4-20](#)

Callers Hear “We Are Experiencing Technical Difficulties, Please Call Back Later”

If users call Personal Assistant and consistently get this message, there are two main problems to check for:

- Problems with the speech recognition subsystem—The speech or license servers are not running, or the speech package is not available in the expected location in `\speech\grammar\static\pa\` in the Personal Assistant installation directory.
 - Use the control center (**System > Control Center**) to see if the speech servers and license managers are running. Try stopping and restarting them to see if this resolves the problem.
 - Refresh the speech grammar by clicking **Refresh** on the Speech Services Configuration page (**System > Speech Services**). If the problem persists, verify that the package was created. Look for xcopy errors in the Personal Assistant log on the primary server. Contact Cisco Technical Support.
- The time changed on the Personal Assistant server, or there is a large time difference between the speech servers and the Cisco CallManager servers. Ensure the times are consistent on these machines, which typically get their time from the domain controller if the servers reside in a Windows domain.

Related Topics

- [Starting and Stopping the Servers and License Manager, page 6-16](#)
- [Control Center, page A-28](#)
- [Speech Services Configuration, page A-2](#)

It Takes Too Long For Personal Assistant to Answer Calls

If it takes a long time for Personal Assistant to answer calls to the Personal Assistant number, it is likely that you are using IP addresses for speech server or license managers in your configuration, and your DNS server is not set up to resolve an IP address to an IP address.

To resolve the problem, either reconfigure your DNS server to add IP address to the same IP address mapping, or change the Personal Assistant configuration to identify the speech servers and license managers using DNS host names.

Callers Hear a Busy Tone When Calling Personal Assistant

When people calling the Personal Assistant number hear a busy tone, you might have these problems:

- Callers always hear busy tone—If callers always get a busy signal, it could mean any of these problems exist:
 - Personal Assistant is not running. Check the status of the servers using the control center (**System>Control Center**).
 - No media ports are defined. Check the server configuration (**Servers>Server Configuration**) and add ports if necessary. You must also create the ports in Cisco CallManager. See the [“Configuring Personal Assistant Servers”](#) section on page 4-20 and the [“Adding Media Ports for Personal Assistant”](#) section on page 3-13 for more information.
 - The Personal Assistant CTI route points are not assigned to the JTAPI user for Personal Assistant. You must assign the route points used for the Personal Assistant number, the automated attendant number (if any), and all route points used as Personal Assistant interceptor ports.
- Callers occasionally hear a busy tone—Either add more media ports or install additional Personal Assistant servers. The call load from your users is heavier than the existing setup can handle.

Related Topics

- [Starting and Stopping the Servers and License Manager, page 6-16](#)
- [Control Center, page A-28](#)
- [Server Configuration, page A-31](#)

Messaging Waiting Indicator Does Not Work

If the message waiting light on the telephones no longer lights when a new message is received, the problem might be in the calling search space configuration.

Do not include the PA partition in the calling search space that you use for voice-mail ports. The calling search space of the voice-mail ports should include the PAManagedEmployee partition, but not the PA partition, or the message waiting indicator will not work. When setting the mwisearchspace for the Messaging interface in Cisco CallManager, make sure it contains PAManagedEmployee but not PA.

Related Topics

- [Updating the Calling Search Space for End-User Phones, page 3-9](#)

All Users Cannot Browse Voice Mail

If users are transferred to the main voice-mail number when they say try to access voice-mail in Personal Assistant, rather than being taken directly to their voice mailbox, check the messaging configuration (**System > Messaging**). Ensure that the voice-mail servers are identified by unqualified DNS name, for example, unity1 rather than unity1.domain.com. Do not use IP addresses.

If that is not the problem, reinstall the Personal Assistant servers and specify a Unity domain and administrative user when asked for Windows domain information.

Some Users Cannot Browse Voice Mail

If users in general can access voice mail, but some users cannot, there is probably a problem with the Unity user setup information, or a consistency problem with Cisco CallManager.

Make sure the user's voice mailbox number matches with the user's extension in Cisco CallManager, and that the user ID is the same in Unity and Cisco CallManager.

If that is not the problem, check the Personal Assistant messaging configuration (**System > Messaging**), and ensure the user's voice-mail server is configured in Personal Assistant.

Finally, if you are using more than one voice-mail server, users can select the voice-mail number when configuring Personal Assistant user settings. Check the user's configuration to ensure they have selected the correct voice-mail number.

Users Cannot Log Into Voice Mail

If users cannot log into the voice-mail system from Personal Assistant, it is likely that the voice-mail profile was not correctly created. Search the registry on the Personal Assistant server for "Unity System Profile." This profile is created the first time someone accesses voice-mail through the Personal Assistant server.

If it is not there, and you are running the Personal Assistant server, create it using PA/bin/PAUnityTmp.prf.

Calendar-Based Call Routing Rules Do Not Work

If a user has set up calendar-based call routing rules, and the rules are not working, you might have an incorrect messaging configuration, or the user's meeting information might not yet be synchronized (making it unavailable for Personal Assistant).

Check the messaging configuration (**System > Messaging**) to ensure the correct server name and mailbox name are configured. See the "[Messaging Configuration](#)" section on page A-12 for information on the correct mailbox name.

If that is not the problem, create a schedule in Outlook for the user and make sure the information is getting published to the Exchange server.

If users are also not able to access voice-mail, see the "[All Users Cannot Browse Voice Mail](#)" section on page 6-7.

Users Hear Text-to-Speech Names Too Often

When a user calls Personal Assistant and tries to dial a party by name, Personal Assistant plays back the recorded name of the party before dialing the party, if a recorded name is available. Otherwise, Personal Assistant uses text-to-speech to generate a spoken version of the name. This text-to-speech version is often not a close pronunciation match to the real name.

To populate the system with recorded names (that is, with names recorded by the parties themselves, so the name is not only pronounced correctly but is spoken in the voice of the party), you have two options:

- If you are using Cisco Unity voice mail, you can synchronize the Unity spoken name with the Personal Assistant spoken name. Select **System > Messaging**, and click the **Synchronize** button in the Synchronize with Unity Spoken Name section. This will take the recording that already exists in Unity and reuse it for Personal Assistant.
- Encourage users to call Personal Assistant. When a user calls Personal Assistant, Personal Assistant checks whether a spoken name exists. If one does not exist, the user is prompted to record one.

Users can erase and rerecord their name at any time using the user interface. You can also erase a user's spoken name by selecting **System > User Settings**, and clicking **Reset** in Reset Spoken Name.

Related Topics

- [Messaging Configuration, page A-12](#)
- [User Settings Administration, page A-24](#)

Resolving Problems Managing Personal Assistant

These topics provide resolutions to problems you might encounter when managing Personal Assistant:

- [Speech Server or License Manager Not Recognized, page 6-10](#)
- [Servers Displaying Connectivity Problem, page 6-10](#)
- [The Server Processor is Running at Maximum, page 6-11](#)
- [Personal Assistant is Not Intercepting Calls, page 6-11](#)

Speech Server or License Manager Not Recognized




If you recently added a new speech recognition server or additional license manager hosts, you must refresh the servers before they can support users. See [“Configuring Speech Recognition” section on page 4-5](#).

Servers Displaying Connectivity Problem

The Personal Assistant Control Center provides you with information about the status of the Personal Assistant servers. To access the Control Center, select **System > Control Center** from the Personal Assistant administration web interface.

[Table 6-1](#) indicates the possible server status. Use this information to determine the current server status and to resolve any problems.

Table 6-1 Server Status

Icon	Explanation	Solution
	Server is stopped.	You or Personal Assistant have stopped the server. Personal Assistant stops the servers during a normal refresh.
	Server is experiencing connectivity or permission errors.	Verify that the Personal Assistant servers are connected and up and running properly. If you have added Personal Assistant to a Windows 2000 domain, ensure that the server has administrator privileges in the domain. This is configured during installation.
	Server is started.	Server is functioning normally.

Related Topics

- [Starting and Stopping the Servers and License Manager, page 6-16](#)
- [Control Center, page A-28](#)

The Server Processor is Running at Maximum

If the Personal Assistant server is running at 100% consistently, where nlm and recserver are consuming all of the CPU cycles, you have a network connection problem. Possible causes include the cable getting unplugged or a DHCP release/renew event.

To resolve the problem, restart all license managers and speech servers from the control center (**System > Control Center**).

If the problem recurs frequently, and you are using DHCP, consider using static IP addresses for the Personal Assistant and speech servers.

Related Topics

- [Starting and Stopping the Servers and License Manager, page 6-16](#)
- [Control Center, page A-28](#)

Personal Assistant is Not Intercepting Calls

If Personal Assistant is not intercepting calls (which means it cannot apply call routing rules), make sure you have created the required interceptor ports and configured the Personal Assistant servers correctly for those ports.

If Personal Assistant never intercepts calls, potential problems might be:

- The CTI route points and translation patterns are not configured with the correct partition or calling search space.
- The calling phone's calling search space might not include the PA partition as the first partition.
- The Personal Assistant server is not configured to intercept calls for the called phone.
- The CTI route points used as interceptor ports are not assigned to the Personal Assistant JTAPI user.

If the problem is intermittent, check to see if call screening is enabled for the user. If it is, it is likely that a media port was not available for the call. Add more media ports or additional Personal Assistant servers.

Monitoring Server Status

You can view the current status of a Personal Assistant server by selecting **Servers>Server Status**. The “[Server Status](#)” section on page A-37 explains how to read the status and includes suggestions on resolving problems that might be displayed.

Monitoring Performance

Personal Assistant uses the Windows Performance Monitor to collect and display performance statistics. You can use these statistics to help identify suspected problems with the system, or to generally view system use.

These statistics are accumulated since the last time the server was restarted.

Procedure

- Step 1** Start Performance Monitor, for example, by selecting **Start>Programs>Administrative Tools>Performance**.
Read the online help for information on using Performance Monitor.
- Step 2** Click the **Add** button.
Performance Monitor opens the Add Counter window.
- Step 3** Select the Personal Assistant server you want to monitor, either by selecting **Use local computer counters** or by selecting **Select counters from computer** and entering the UNC of the server.
- Step 4** Select the CiscoPA performance counter.
- Step 5** Performance Monitor loads the Personal Assistant counters in the Select Counters window.
- Step 6** Either select **All counters** to view statistics for all counters, or use select **Select counters** from list and use Ctrl+click to highlight the counters you want. You can use Shift+click to select a range of counters.
- Step 7** Click **Add**, then **Close**.
Performance Monitor returns to the main window, where it shows a graphical and numeric representation of the counters.

Table 6-2 Personal Assistant Performance Monitor Counters

Counter	Description
Calls Answered	The total number of calls that Personal Assistant answered.
Call Failure	The total number of calls to Personal Assistant that did not succeed in completing a task. If the caller hangs up without completing a task, the call is considered a failure (for example, if the caller could not get Personal Assistant to recognize the name of a party to be called).
Calls to PA	The total number of calls made to Personal Assistant.
Calls Transferred to DTMF	The total number of calls that were transferred from speech recognition to DTMF response.
Call Success	The total number of calls to Personal Assistant that succeeded in completing a task (such as getting Personal Assistant to dial a party by saying the party's name).
Dial-By-Name	The total number of times users tried to dial a party by name.
Dial-By-Name: Disambiguations	The total number of times Personal Assistant found more than one match to the spoken name, and asked the caller to pick from a list of possible parties.
Dial-By-Name: Implicit Confirmations	The total number of times speech recognition confidence was high enough that Personal Assistant did not ask the caller to confirm the name of the party to be dialed.
Dial-By-Name: Operator	The total number of times callers to Personal Assistant explicitly asked to be transferred to the operator while trying to use dial-by-name.
Dial-By-Name: PA Rules Applied	The total number of times call routing rules were applied when a caller was using dial-by-name.

Table 6-2 Personal Assistant Performance Monitor Counters (continued)

Counter	Description
Dial-By-Name: Reconfirmations	The total number of times Personal Assistant asked users to confirm that the party Personal Assistant identified was the intended party.
Dial-By-Name: Speech Help Invoked	The total number of times callers explicitly ask Personal Assistant for help when trying to dial a party by name.
Dial-By-Name: Speech System Error	The total number of errors in the speech system while callers were trying to dial a party by name.
False Acceptance	The total number of times a call was accepted incorrectly.
Incoming Calls	The total number of calls to Personal Assistant, including calls that Personal Assistant did not answer.
PA Login Failure	The total number of times users tried to log into Personal Assistant but failed, for example, because they gave the wrong PIN.
Speech Channel Create Failure	The total number of times Personal Assistant failed to create a speech channel.
Speech Recognition: Total Error	The total number of times the speech recognition software failed to understand a spoken command.
Total Active Sessions	The number of sessions currently active, whether the session is a speech session or a non-speech session.
Total Speech Sessions	The number of currently active speech sessions.
Transfer Failed	The total number of times Personal Assistant tried but failed to transfer a call to another number.
Voice Mail	The total number of times callers asked to access voice mail.

Table 6-2 Personal Assistant Performance Monitor Counters (continued)

Counter	Description
Voice Mail: Disambiguation	The total number of times Personal Assistant found more than one match to the spoken name, and asked the caller to pick from a list of possible parties, while using voice mail.
Voice Mail: Implicit Confirmation	The total number of times speech recognition confidence was high enough that Personal Assistant did not ask the caller to confirm the name of the party to be dialed while using voice mail.
Voice Mail: Login Failure	The total number of unsuccessful attempts to log into the voice-mail system while using Personal Assistant.
Voice Mail: Reconfirmation	The total number of times Personal Assistant asked users to confirm that the party Personal Assistant identified was the intended party while using voice mail.

Collecting Call History Information

Personal Assistant maintains call history logs that you can use to help identify toll fraud. These logs are not to be used for call billing.

If you configure Personal Assistant to use the CiscoWorks2000 Syslog facility, call history information is written to syslog. See the [“Collecting System Logs with Syslog” section on page 6-21](#) for information on using syslog.

If you do not use syslog, Personal Assistant writes call history records to a series of files call PACallHistoryxx.log in the /logs folder on the Personal Assistant server, where xx is a number from 00 to 99. These files are limited to 2MB each, and when all logs are full, Personal Assistant begins reusing the logs.

The first line in the log documents how to read the call history records.

Starting and Stopping the Servers and License Manager

You can start and stop the Personal Assistant servers, speech recognition servers, and license managers through the Personal Assistant administrative web interface. This can help you add or remove servers from the Personal Assistant and speech server clusters in an orderly manner. It can also help you bring down a server that is not functioning properly.

Procedure

Step 1 Select **System > Control Center**.

Personal Assistant opens the control center. The control center is divided into three sections:

- **Personal Assistant Server**—lists the Personal Assistant server systems in the cluster
- **Speech License Manager**—lists the license manager systems in the cluster
- **Personal Assistant Speech Server**—lists the speech server systems in the cluster

The status of one type of server does not affect the status of any other type of server on the same system. For example, you can stop a license manager without stopping the Personal Assistant server on the same system, and vice versa.

Step 2 Find the Personal Assistant server, speech-recognition server, or license manager you want to start or stop, and click the **Start** or **Stop** button that is on the same line as the server.

You can start or stop all of the Personal Assistant servers, speech-recognition servers, or license managers as a group by clicking the **Start All** or **Stop All** button associated with the group.

Tips

- At least one license manager must be started in order for Personal Assistant to use the speech-recognition servers. When you are stopping and starting license managers, start and stop them in an order that ensures that at least one is always active.
- During a refresh, the speech-recognition servers are automatically stopped and started in an order that ensures that at least one is always active.

Related Topics

- [Control Center, page A-28](#)
- [Installing Personal Assistant On a New System, page 2-4](#)
- [Servers Displaying Connectivity Problem, page 6-10](#)

Collecting Trace and Debug Information

When you contact Cisco Technical Support for help with a problem you are having with Personal Assistant, Cisco might request that you collect trace and debug information.

Because collecting trace and debug information will affect Personal Assistant's performance, you should only turn on tracing and debugging at Cisco's request. The generated information is for Cisco's use in resolving product problems.

To collect trace and debug information, perform the following steps.

Procedure

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- Step 1** From the Personal Assistant web interface, select **Servers>Server Configuration**.
Personal Assistant opens the Server Configuration page.
 - Step 2** From the left column, select the server from which you need to collect debug or trace information.
Personal Assistant displays the settings for the server.
 - Step 3** Scroll down to the Personal Assistant Debug Package List and Personal Assistant Trace Package List sections. Select the packages that Cisco Technical Support has requested. The lists in each section are identical; make sure that you select the

package in the list Cisco requested. Packages selected in the Debug list generate trace information plus extra debug data. If Cisco request you select all packages, click **Select All** from the appropriate list.

These settings apply to both the server and user interfaces unless noted otherwise.

The available packages include:

- PASRV—The main Personal Assistant server system. This applies only to the server.
- SS_PA_TEL—The telephony subsystem.
- SS_PA—The Personal Assistant subsystem for LDAP access.
- SS_PA_MAIL—The subsystem that interacts with voice mail and paging.
- PASCCP—The Skinny protocol subsystem.
- PARULES—The rules-based call routing subsystem. This applies only to the user interface.
- PADtmf—The DTMF interface.
- Perfmon—The performance monitoring subsystem.
- PASpeech—The speech recognition subsystem.

Step 4 Click **Save Settings** to save and activate your changes.

Personal Assistant begins generating the requested trace and debug information.

The information is placed in a log file in the /log subdirectory of the Personal Assistant installation directory. Or, if you configured Personal Assistant to use the CiscoWorks 2000 Syslog facility when you installed Personal Assistant, the data is sent to syslog. Send this information to the Cisco Technical Support group with which you are working. See the [“Collecting System Logs with Syslog”](#) section on page 6-21 for information on using syslog.

Step 5 When you have finished generating debug and trace information, turn off debug and trace by clicking **Clear All** for each section in which you have made a selection. Then, click **Save** to complete the change.

Related Topics

- [Collecting System Logs with Syslog, page 6-21](#)
- [Installing Personal Assistant On a New System, page 2-4](#)
- [Server Configuration, page A-31](#)

Integrating with Network Management Systems

You can manage the status of the Personal Assistant server remotely using CiscoWorks2000 or another SNMP-based network management system. CiscoWorks2000 is the standard Cisco network management system, but it is not bundled with Personal Assistant. For more information about CiscoWorks2000, Campus Manager, and Topology Services, refer to the documentation, available at the following URL:

<http://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/cw2000/index.htm>

These topics provide information to assist you in integrating Personal Assistant with network management systems:

- [Understanding CDP Support, page 6-19](#)
- [Monitoring Personal Assistant Subsystem Status, page 6-20](#)
- [Collecting System Logs with Syslog, page 6-21](#)

Understanding CDP Support

Personal Assistant uses the Cisco Discovery Protocol (CDP) to periodically send out CDP messages, on the active interface, to a designated multicast address. These messages contain information such as device identification, interface name, system capabilities, SNMP agent address, and time-to-live. Any Cisco device with CDP support can locate a Personal Assistant server by listening to these periodic messages.

Using information provided through CDP, the CiscoWorks2000 Server can detect the Personal Assistant Server, and the Campus Manager application, Topology Services, can build topology maps displaying the Personal Assistant server.

Monitoring Personal Assistant Subsystem Status

Personal Assistant supports the SYSAPPL-MIB that allows you to use CiscoWorks2000 or a third-party SNMP browser to remotely access information about the following Personal Assistant components:

- Personal Assistant Server
 - PAServer.exe
 - PASPRM.exe
 - PAsPNLM.exe
- Personal Assistant Web Administration
 - PAWebAdmin.exe
- Personal Assistant Speech Recognition
 - PASPREC.exe
 - PASPCS.exe

The SYSAPPL-MIB uses the Simple Network Management Protocol (SNMP). Personal Assistant supports the following SYSAPPL-MIB tables:

- SysApplInstallPkgTable—provides installed application information such as Manufacturer, Product Name, Version installed, Date installed, and Location, which is a partial URL for accessing the associated Application Administration web page (when applicable).
- SysApplRunTable—describes the application starting time and run-time status.
- SysApplInstallElmtTable—describes the individual application elements, or associated executables, which comprise the applications defined in the SysApplInstallPkgTable.
- SysApplElmtRunTable—describes the processes, or executables, that are currently running on the host system.

Collecting System Logs with Syslog

You can configure Personal Assistant to use the Cisco Syslog Collector. Cisco Syslog Collector and Cisco Syslog Analyzer are offered with CiscoWorks2000 as part of the Resource Management Essentials package. You can also adapt Syslog output from Personal Assistant for use with other network management systems.

The Cisco Syslog Collector keeps common system logs of messages reported to the Personal Assistant.

The Cisco Syslog Analyzer controls and displays all events efficiently so they can easily be read, interpreted, and used for system maintenance and problem solving.

Procedure

- Step 1** Select **System > Miscellaneous Settings**.
- Step 2** Personal Assistant opens the Miscellaneous Settings page.
- Step 3** Enter the fully-qualified DNS name of the CiscoWorks2000 server in **CiscoWorks2000 Host Name**, for example, server.domain.com.
- Step 4** Select true in **Write to Syslog**.
- Step 5** Click **Save** to save your changes.

Personal Assistant immediately begins writing messages to syslog.

Tips

- You can change the frequency with which Personal Assistant writes to syslog by changing the number of lines buffered between writes (Number of Buffered Trace Lines). The more lines you buffer, the less frequently data is written to syslog, which improves performance. However, if you buffer too many lines, syslog data might become too out-of-date to be unusable to you.

Related Topics

- [Miscellaneous Settings, page A-26](#)

