Product Bulletin

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Symposium Agent 2.3 Supplementary Technical Information

Introduction

This bulletin provides supplementary information to the current Symposium Agent 2.3 documentation issued with the product on the following items:

- 1) Updated Symposium Agent 2.0 to 2.3 upgrade procedure
- 2) Supplementary Engineering Information
- 3) Sybase 12.0 issues affecting Symposium Agent 2.3 servers
- 4) Win2000 Symposium Agent 2.3 Server with Win95, 98, NT 4.0 Symposium Agent Clients.

It should be used in conjunction with the Symposium Agent 2.3 documentation supplied on the product CD, namely:

Symposium Agent 2.3 Installation Guide
Standard 2.1, February 2001
File name on CD sa2install.pdf

Symposium Agent 2.3 Programmer's Guide
Product Release 2.3 Document Release 2.0 , January 2001
File name on CD SAR2ProgrammerStd.pdf

1) Updated Symposium Agent 2.0 to 2.3 upgrade procedure

The procedures stated in the Symposium Agent 2.3 Installation Guide, Chapter 3 Section B "Upgrade Instructions", Pages 51 to 65 have been found to be difficult to follow.
The following procedure is recommended for Symposium Agent 2.0 to 2.3 upgrades:

- 1.1 Upgrade overview
- 1.2 Backup Symposium Agent 2.0 database
- 1.3 Upgrade Symposium Agent 2.0 Sybase 11.5 database to Sybase 12
- 1.4 Configure Sybase 12 database
- 1.5 Upgrade to Symposium Agent 2.3
- 1.6 Configure Microsoft Transaction Server
- 1.7 Upgrading SA Symposium Agent Clients 2.3

1.1 Upgrade overview

The upgrade from Symposium Agent 2.0 to 2.3 involves upgrading of the Server software, followed by upgrading of the clients.

The procedure for upgrading the server software from Symposium Agent 2.0 to 2.3 allows for the database to be backed up and restored.
Symposium Agent 2.0 uses Sybase 11.5, whereas Symposium Agent 2.3 uses Sybase 12 so the sequence of the procedure should be closely followed.

1.2 Backup Symposium Agent 2.0 database

Backup Sybase Database.

The Sybase database consists of two separate databases. The **master** database which holds information about the database itself and any other databases. And the **sar2** database which holds all the Symposium Agent specific information.

In order to ensure that the complete Sybase environment can be recreated both the databases need to be backed up before you upgrade Sybase.

Note: The backups that are taken at this point will only be valid for a Sybase 11.5 installation. So if it becomes necessary to do a restore you will have to restore Sybase 11.5 before you will be allowed to restore the databases. It should also be noted that Sybase has some over 100 pages of documentation outlining backup and recovery procedures and the information that is contained here is primarily aimed at a user that is familiar with backup/recovery procedures.

Backup Symposium Agent Database

Before you backup the database you should:

- Ensure that the relevant Sybase services are running.
- Ensure that there are no users connected to the database.

Once the above has been checked you will be ready to:

- Backup the Sybase **master** database.
- Backup the Sybase Symposium Agent database (**sar2**).

Ensure Sybase Services are running.

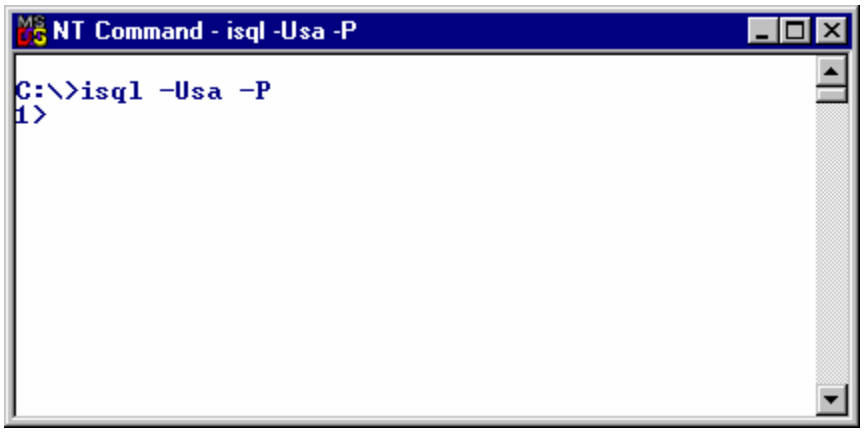
In order to perform a backup in Sybase you will need to have both:

- "Sybase SQLServer_<*computername*>" and
- "Sybase BCKServer_<*computername*> running.

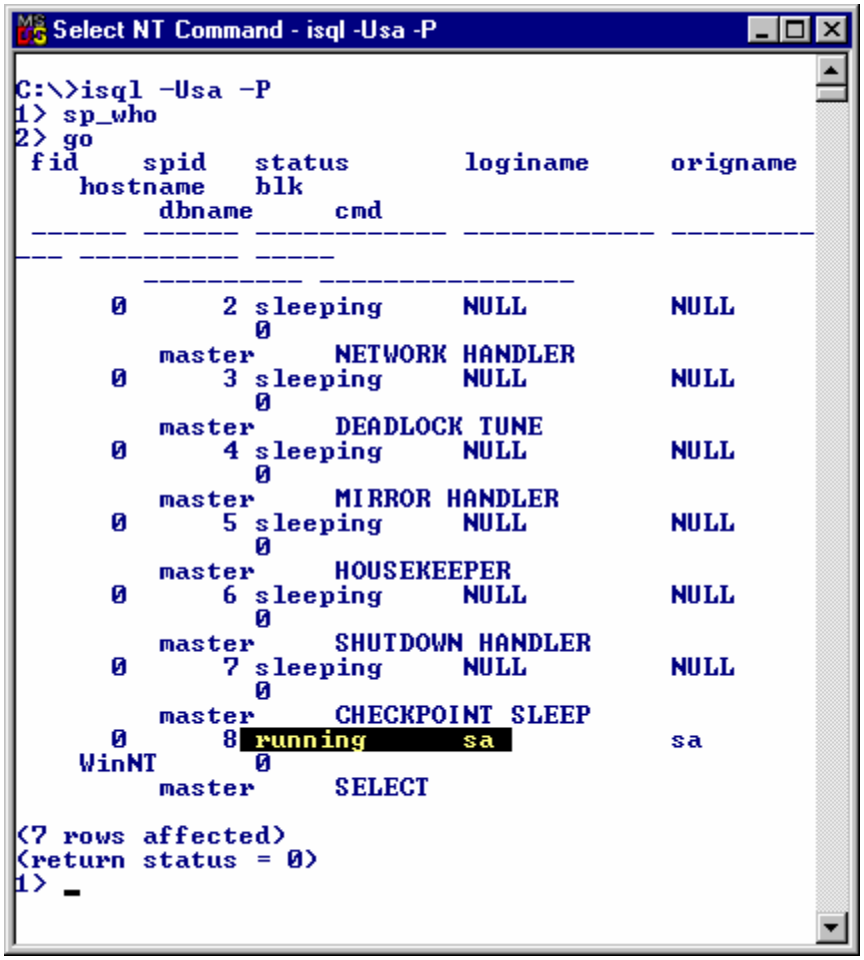
These can be checked using Control Panel – Services. If they are not running then start them. Ensure that there are no users connected.

To ensure that there are no users connected to the database, start up a command prompt and connect to the Sybase database.

You now need to open an isql window (connect to the database). The following command will connect you to the Sybase database as the **sa** user. This user has the correct privileges to perform a backup (dump) of the database.
From the command prompt type: `isql -Usa -P` followed by a carriage return (<CR>). This should present you with the isql 1> prompt.



Once connected type `sp_who` followed by <CR> and then type `go` followed by <CR>, this should show you something like this. But basically it will tell you who is currently connected to the DB.

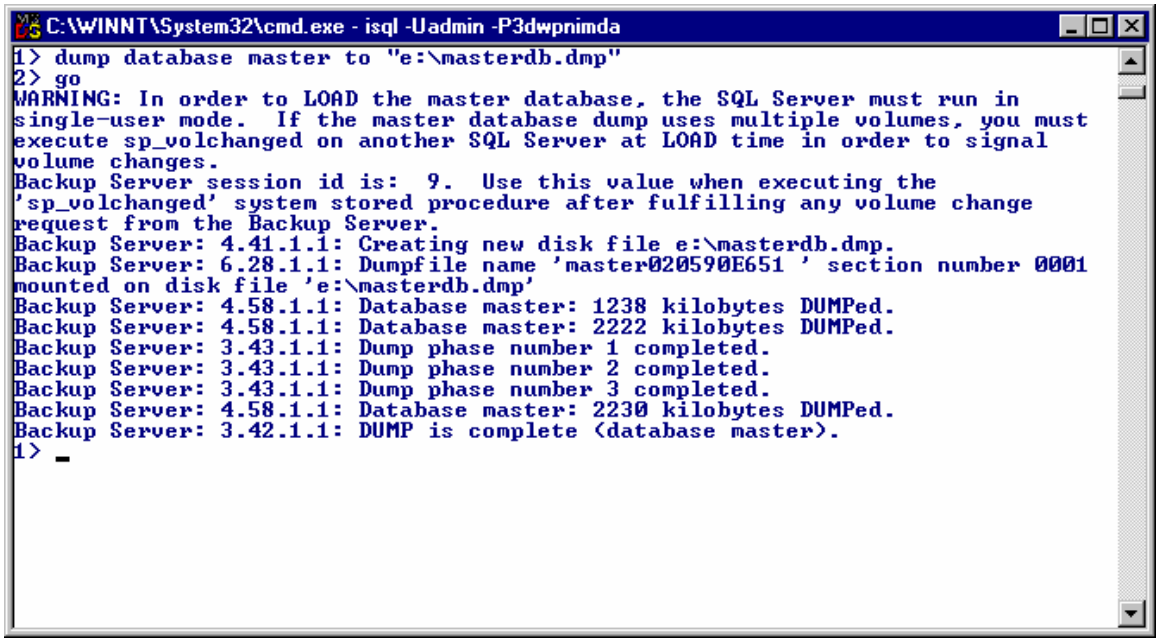


The only user shown as running in the above example is “sa” which is of course the user that we have logged in as, so that is fine.

Backup the master database.

It is safe at this point to backup the **master** database.

Type `dump database master to “file_name”` <CR> followed by `go` <CR>.
file_name being the name of the dump file that you will create.



This should take approximately one minute.

Backup the sar2 database.

You are now ready to backup the Symposium Agent database, this is known as **sar2** within Sybase. So you would type the following command:

`dump database sar2 to "file_name"` <CR> followed by `go` <CR>. *file_name* being the name of the dump file that you will create.

This may take some time, and will depend on the quantity of data that is in the database.
As a guideline, it takes the dump command about 10 minutes to write a 50Mb file.

Once this dump has completed you can exit the isql window by typing `exit` <CR>

1.3 Upgrade Symposium Agent 2.0 Sybase 11.5 database to Sybase 12

Run the pre-upgrade script

Run the Pre-upgrade script
The upgrade script will create a sybsystemdb Database and increase the size of sybsystemprocs database.

In version 12.0, all servers must have a sybsystemdb database. Version 12.0 uses this database for tracking transactions and during recovery.

The minimum size for sybsystemprocs is 80MB. If your sybsystemprocs is smaller than 80MB the upgrade script will increase the size of this database.

The Sybase isql tool will be used to run the upgrade script to create a new sybsystemdb database and increase the size of sybsystemprocs.

Before you run the isql command, you may need to edit the upgrade.sql file to reference the default location for your Sybase database files. If the default drive is not the "c:\" then you will need to edit the upgrade.sql file.

Using notepad, open the upgrade.sql file, located under Nortel\server\nndbcfg
Search for physname="c:/Sybase/data"
Replace the "c" in the pathname with the drive where Sybase is installed. For example, if your Sybase is on the D drive, the above line will look like this physname= "d:/Sybase/data. .."
There are three instances of this line in the file. Update all three lines.

Now run the following command (all on the same line) to execute the upgrade script:

isql-Usa -p -i x:\Nortel\server\nndbcfg\upgrade.sql-o
x: \Nortel\server\nndbcfg\up grade. out

Note: X is the drive on which you have installed your Symposium Agent server files.

Stop the SQL services

From the services control panel applet stop the SQL services. i.e. Sybase SQLSERVER-<COMPUTERNAME>

Run Sybase ASE 12.0 installation

From the SA Server CD-ROM, run the Symposium Agent Software installation menu program, "nnsamenu.exe", and click on the "Install database files" option. You will be prompted for a drive and folder in which to install the new database files. The drive should have at least 500MB of free space. Then, a series of batch files will be started that copy the Sybase ASE v12.0 client and server files. The server will automatically reboot twice during this process.

To complete the upgrade process and convert your existing database to the 12.0 format, use the Sybase Server Config program and execute the following ten steps:

1) Start the Server Config program from Start Menu->Sybase->Server Config

2) Click Configure Adaptive Server in the Configure Sybase Servers window.

3) In the Existing Servers window, select the Adaptive Server or SOL Server.

4) Click Configure Adaptive Server.

5) Click Continue.
When Sybase detects that the selected database needs to be upgraded, it will prompt you with a series of dialogs that will walk you through the rest of the database upgrade process.

6) In the Enter the System Administrator Password window, type the Sybase administrator login name and password.

7) Select continue.

8) If the Adaptive Server is not running, the upgrade program starts it for you.

9) When prompted backup your database and confirm proceeding with the upgrade.
a. If you have not backed-up the existing database, choose "No" in the Upgrade window and use NNDBCFG tool or use dump database command to make backup copies.
b. If you have made the necessary backups, select "Yes". The installer begins the database eligibility test to assure that the Pre-Upgrade steps (above) have been completed.
10) Sybase will now complete the upgrade changes to your database.

Restoring Functionality in ASE

The Sybase isql tool will be used to reset SAR2 database options: .

Bring up a DOS-prompt.
Type l!isql-Usa -pIt.
You will be presented with a 1!>1! prompt.

Use the following commands to reset SAR2 database options:

l>sp-dboption sybsystemprocs, 'trunc log on chkpt', true

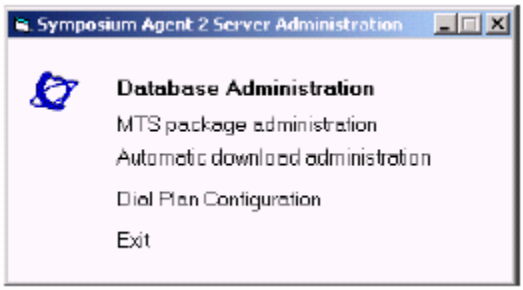
2>go

1.4 Configure Sybase 12 database

The database administration utility configures the Symposium Agent database schema. During the upgrade the Sybase script wizard allows you to make selections to upgrade your database without destroying existing data.

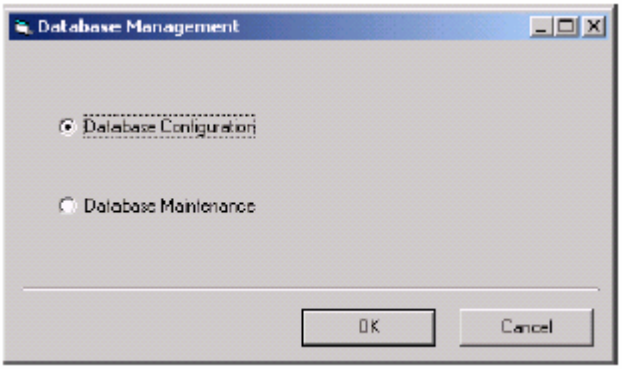
To configure the database:
1) From the Windows Start menu, choose Settings > Control Panel > Symposium Agent Server, or select the Desktop shortcut SA Server Configuration.

Result: The Symposium Agent Server Administration window appears



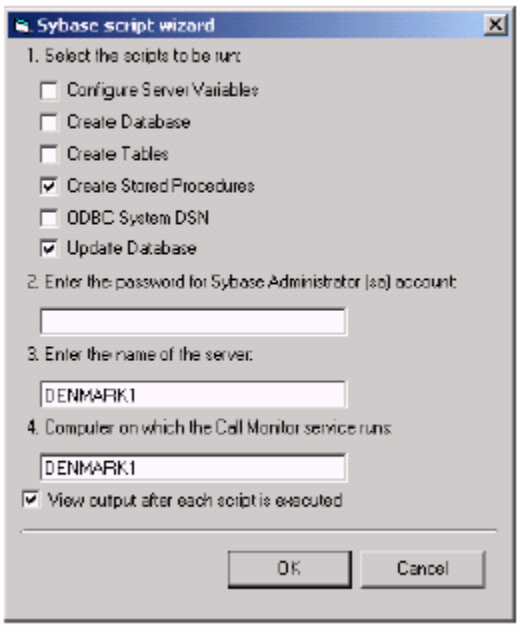
2) Click Database Administration

3) If Sybase Adaptive Server is not running, then click Yes at the prompt.



4) Select Database Configuration, and then click OK

Result: The Sybase script wizard starts.



5) Uncheck all options except “Create Stored Procedures” and “Update Database”.

6) In the SA (Sybase Administrator) account requires a password, then type the password in section 2. By default the password is empty.

7) In Section 2, type the name of the computer that is running Sybase Adaptive Server. By default, it was the name that was previously configured. Select this default.

8) In Section 4, type the name of the computer running the Symposium Agent Call Monitor service. By default, it was the name that was previously configured. Select this default.

9) In you do not want to view the output after the execution of each SQL script, then clear the View output check box.
Note: If you select this option, then you are prompted to review the results of each executed script. Deselect this option for a faster installation.

All script output files are saved in the Symposium Agent directory, in the subdirectory NNDBCfg. By default, this directory is C:\Nortel\Server\NNDBCfg

10) Click OK.

Result: Various dialog boxes are displayed to indicate progress with the updating of the database to the latest schema as well as the creation of the stored procedures. It will update the Application Text Strings as well as the English Strings.

Note: During an upgrade, it is normal for error messages to appear on the screen in the Lang1033.out file. These messages are caused by inserting duplicate language text strings, and are informational only.

1.5 Upgrade Symposium Agent 2.3 Server software

Before upgrading the Symposium Agent Server to 2.3 ensure that all other applications are closed. Stop the SQL service (for example, SQLSERVER_<COMPUTERNAME>). Shutdown the following two services on the services applet in the Control Panel:

- Nortel SA Call Monitor
- Nortel SA Watchdog

Insert the Symposium Agent Rel 2.3 CD-ROM into the CD-ROM drive. If the Symposium Agent install menu does not start automatically choose Start > Run and type d:\nnsamenu.exe, where d: is the letter of the CD-ROM drive, and then click OK.

If you have an older version of Symposium Agent installed, the Installer detects it and automatically removes the old software after prompting the user. If you answer "No" to automatically remove the older version, the installer exits without installing the new system.

Once all previous versions of Symposium Agent Server have been removed from the server, the Install Wizard walks you through the Symposium Agent 2.3 Server installation. For this process please refer to "To install the server software" section on page 32 of the SA 2.3 Installation Guide.

Upgrade Note: If SA Web Admin fails to start after an upgrade.

The older versions of Symposium Agent used "C:\Nortel" as the default installation path for the IIS components. SA 2.3.0.4 uses "C:\Nortel\Server" as the default installation path.

If after an upgrade you attempt to go to http://servername/saadmin in Internet Explorer and get the "Cannot find page" error message then follow these instructions to get around this issue.

1) Go to START>PROGRAMS>Windows NT 4.0 Option Pack>Internet Information Server> Internet Service Manager

2) Under Default Web Site, SAAdmin and SAWebApp should indicate ERROR

3) Right click SAAdmin and select properties

4) On the Virtual Directory Tab, modify the Local Path to the appropriate path
(in this case, it changed from c:Nortel to c:Nortel\Server\SAAdmin)

5) Right click SAWebApp and select properties.

6) On the Virtual Directory Tab, modify the Local Path to the appropriate path
(in this case, it changed from c:Nortel to c:Nortel\Server\ SAWebApp)

1.6 Configure Microsoft Transaction Server

Symposium Agent uses the Microsoft Transaction Server (MTS) to manage database connections between the clients and the server. During the installation, you create MTS packages using the MTS Administration utility. The MTS Administration utility copies the packages to the SASWDIST directory.

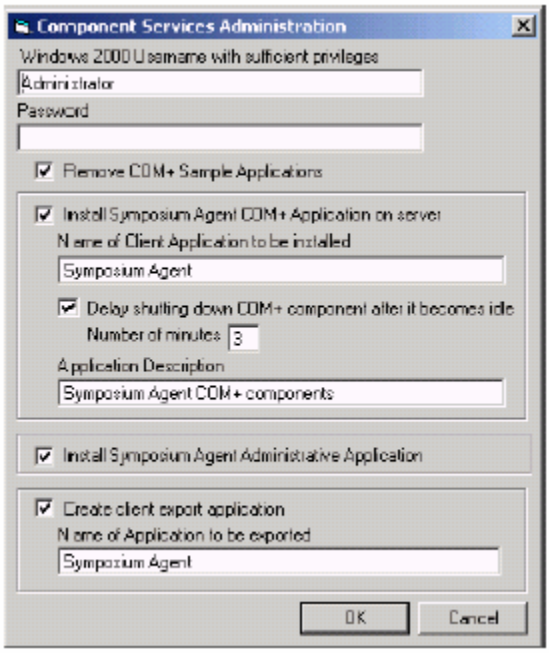
To configure the MTS

From the Windows Start menu, choose Settings > Control Panel > Symposium Agent Server, or select the desktop shortcut SA Server Configuration.

Result: The Symposium Agent Server Administration window appears.

2) Click MTS Package Administration

Result: The MTS Administration window appears.



3) For NT Username with sufficient privilege, enter Administrator.

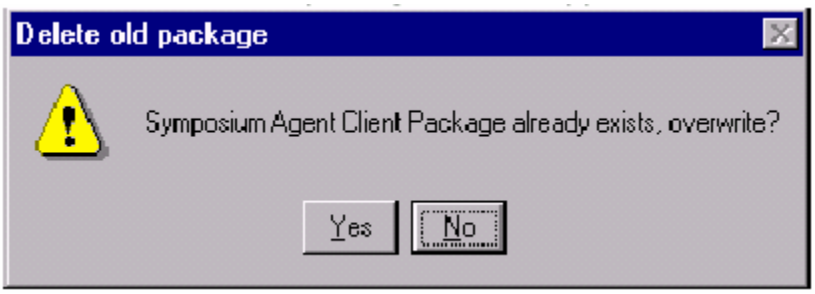
Note: You must use Administrator Configuring the MTS Package. Do not use any other UserID that has Administrator rights

4) In the Password box, type the password for the account

5) Unless you have a reason to change the remaining values, accept the defaults

6) Click OK

Result: The Delete old package window appears



7) Click Yes.

Result: The utility generates the package

9) When the Setup complete message appears, click OK

Result: The MTS export package is automatically placed in the SASWDIST folder.

Upgrade installation: update the Call Rules Explorer

1) From the Windows Start menu, choose Programs > Windows NT Explorer

2) Double click on Winnt. Double click on Downloaded Program Files

3) Right click onNNExWrap.ucExplorer

4) Select Remove

5) Click on Yes to any question asked about removing a file. You may not be prompted to remove individual files.

1.7 Upgrading clients from Symposium Agent 2.0 to 2.3

The Symposium Agent 2.0 Clients must be upgraded to Symposium Agent 2.3 after the Symposium Agent Server has been upgraded to Symposium Agent 2.3 and configured.

Remove the existing Symposium Agent 2.0 Clients by following the instructions in the

"Uninstalling Symposium Agent from the Client" section on page 100 of the current installation Doc.

Install Symposium Agent 2.3 on the Clients by following the instructions in the

"Installing the Client Software" Chapter 5 of the current installation Doc.

Upgrading the SA Server form Windows NT4.0 to Windows 2000

The Symposium Agent 2.3 Clients must be upgraded after the Symposium Agent 2.3 Server has been upgraded from NT4.0 to Windows 2000 and configured.

Remove the existing Symposium Agent 2.3 Clients by following the instructions in the

"Uninstalling Symposium Agent from the Client" section on page 100 of the current installation Doc.

Install Symposium Agent 2.3 on the Clients by following the instructions in the

"Installing the Client Software" Chapter 5 of the current installation Doc.

2) Supplementary Engineering Information

This information is intended to be used in conjunction with the information provided for the following products:

- Symposium Agent 2.3
- Symposium TAPI SP 2.3.1
- Meridian 1 / Succession 1000

Symposium Agent 2.3 Engineering Information

Care must be taken to properly engineer the Symposium Agent, TAPI SP and Meridian 1 and Succession 1000 installation to ensure the product operates to design intent. The guidelines stated here should be used in conjunction with the documentation provided with the products.

Server location

The physical location of your Symposium Agent server depends on the type of connection you require. In a Call Center the TAPI and Symposium Agents servers must have physical proximity to the Symposium Call Center server (SCCS). In a direct connect environment, the servers must have physical proximity to the Meridian 1 switch.

Server platform

Symposium Agent is platform vendor independent (PVI) and can be installed on any PVI server that supports either Microsoft Windows 2000 server, with a minimum of service pack 2 installed, or a Windows NT server, release 4.0 or higher, with a minimum of service pack 6a installed. The servers are pre-loaded with the following Microsoft TAPI software releases:

- Windows NT server, release 4.0, supports Microsoft TAPI, release 2.x
- Microsoft Windows 2000 server and Windows 2000 Advanced Server supports Microsoft TAPI, release 2.x and release 3, while retaining compatibility with earlier releases

Warning: Symposium Agent and TAPI SP is supported only if it is installed in a true Windows environment. Symposium Agent and TAPI SP is not supported if it is installed in a Microsoft Terminal Services environment or terminal services environments from other vendors, such as Citrix.

Note: Nortel Networks supports Symposium Agent and TAPI SP only on English-language software versions.

Note: Symposium Agent 2.3 is only supported on single-CPU servers. It does not operate on dual or multi-CPU servers.

Client PC support

Symposium Agent runs on a PVI client that supports one of the following operating systems:

- Microsoft Windows XP Professional
- Microsoft Windows 2000 Professional
- Microsoft Windows ME
- Windows NT workstation
- Microsoft Windows 98
- Microsoft Windows 95

Telephone set support

Symposium Agent monitors and controls the telephony activities of the following set types:

- M2008
- M2216
- M2616
- M3110
- M3310
- M35xx
- M39xx
- i2002 Internet telephone (requires TAPI 3.0)
- i2004 Internet telephone (requires TAPI 2.3.1)
- i2050 software telephone (requires TAPI 2.3.1)
- Meridian analog telephone set 2500 with certain limitations. For information refer to the *Network Managers Guide for Symposium TAPI Service Provider for Meridian 1*.

Note: Nortel Networks does not support TAPI-compliant applications running on the Microsoft Windows XP operating system, or on the Microsoft Windows.NET operating system.
Note: Refer to the *Network Managers Guide for Symposium TAPI Service Provider for Meridian 1* for information about limitations in the operation of the multiple appearance and DN (MADN) feature on all telephone sets.

Hardware compatibility policy

Symposium Agent can be installed on servers that are included on the Microsoft Compatibility List for the Windows NT 4.0 server or the Microsoft Windows 2000 server, available on the Microsoft Website at
http://www.microsoft.com. The server must also conform to the following guidelines contained in this document:
• minimum hardware specifications
• installation of third-party software as outlined in this document
• any other guidelines specified in this document

The Nortel Networks' position is that the support contract for the PVI server hardware is with the server vendor and not with Nortel Networks. It is the responsibility of the distributor to ensure that the hardware platform is operational and properly prepared and tested prior to installing Symposium Agent.
The distributor/end user must ensure that testing of a PVI server is carried out prior to putting the server into operation in a customer environment. The distributor/end user must attempt to resolve hardware faults before referring them to Nortel Networks. During the course of problem

diagnosis, Nortel Networks Global Networks Technical Support (GNTS) may request that additional tests are carried out on PVI hardware.

Hardware guidelines

This section outlines the recommended server specification for a new installation of Symposium Agent. If you are upgrading from an earlier release of Symposium Agent, and do not want to upgrade your Symposium Agent server, refer to the minimum requirements later in this section.

Recommended server configuration

If you are installing a new Symposium Agent system, Nortel Networks recommends that you provision a server with adequate capacity for future upgrades.

Minimum hardware requirements

If you are upgrading to Symposium Agent release 2.3 from an earlier release of Symposium Agent, it is possible that your Symposium Agent server does not conform to the hardware configurations recommended above. These recommendations ensure that the server has sufficient processing power to run the Symposium Agent 2.3 application while running debug utilities and other approved applications.

Backup, disaster recovery, and solution redundancy

A backup tape drive is not a requirement for Symposium Agent.

You can use a hardware-RAID solution provided it doesn't have a negative impact on Symposium Agent or TAPI SP performance. If you encounter issues with a hardware-RAID solution, refer them to the RAID vendor. Software-RAID solutions, such as the one available from Microsoft, are not supported.

Nortel Networks is unable to guarantee compatibility with any high availability solution because such solutions usually require the installation of additional software or components which may conflict with Symposium Agent or TAPI SP operation.

If you require a hardware redundant solution it must be tested by one of the following:
• verification testing by a Nortel Networks Packaged Services group
• compatibility testing via the Nortel Networks Developer Program
For information refer to your Nortel Networks representative or visit the Nortel Networks developer program Website at http://www.nortelnetworks.com/developer.

Note: Symposium Agent does not support Microsoft clustering because the software is not cluster-aware.

Software guidelines

The real-time processing requirements of Symposium Agent can be significantly impaired if unapproved software applications are running on the server. If you install approved software on the Symposium Agent server, you must adhere to the following installation guidelines:
1) Verify that Symposium Agent is operating correctly.
2) Install a software application.
3) Verify that Symposium Agent is operating correctly.
4) Run the Performance Monitor application on the TAPI server to assess CPU utilization when Symposium TAPI SP, the logger application, and the new software are all running together.
If you want to install multiple applications, install each product separately and apply verification procedures before installing the next product, to ensure that you can eliminate the point of conflict or failure if problems occur.

Symposium TAPI SP can co-reside with Symposium Agent server software, but no other applications can be installed on the server which might impede TAPI performance. Third-party software cannot be installed on the Symposium Agent or TAPI SP servers unless it is on Microsoft's Compatibility List and conforms to the guidelines provided in this section.

Caution: In the event of performance-related issues, any unapproved software must be eliminated as the cause of the problem prior to contacting Nortel Networks GNTS.

Note: The Symposium Agent and TAPI SP servers must never exceed an average of 50% of CPU utilization with debug utilities running. If you install additional software components on the server, you must verify that it does not cause CPU utilization to exceed this capacity when debug utilities are running.

Third-party software guidelines

Application-class software products generally require a level of system resources that can have a negative impact on Symposium Agent and TAPI SP operation. Therefore, Nortel Networks recommends that you do not install any application class software on the Symposium Agent or TAPI SP servers other than Symposium Agent server software and optionally TAPI SP server software. The installation of application-class software products on the Symposium Agent or TAPI SP servers can cause a real-time system to operate outside of known engineering limits and create potential problems such as the following:
• CPU contention
• increased network traffic load
• disk access degradation

Warning: Nortel Networks authorizes the installation of Symposium Agent server software on the TAPI server up to 500 agents. However, due to the mission-critical, real-time processing performed by Symposium TAPI SP, no other *application-class* software can be installed on the TAPI server.

Utility-class software

Certain *utility-class* software products, such as hardware diagnostics or backup utilities, require less system resources and can be installed if they are in strict compliance with the recommendations provided in this document. Utilities that cause system problems and degrade performance must never be installed on the Symposium Agent or TAPI SP servers, including the following:

• Screen savers
• Disk compression utilities
• Memory-saving utilities that "reclaim" memory unused by Microsoft applications.

Utility applications guidelines

You can install utility-class applications on the Symposium Agent or TAPI SP servers when they conform to the following guidelines:

• During run-time, the utility must not degrade the Symposium Agent and TAPI SP systems beyond an average of 50% of CPU usage. The utility must not reduce the minimum amount of free hard disk space required by Symposium Agent and TAPI SP and the Windows operating system.
• The utility must not cause any improper software shutdowns or out-of-sequence shutdowns.
• The utility must not attempt to administer the Symposium TAPI SP software.
• If the utility has its own database, it must not affect the Symposium database.
• The installation or removal of a utility should not impair the operation of Symposium Agent or TAPI SP software. If a conflict occurs, such as can occur between conflicting dll files, it may be necessary to reinstall the server.
• Before you put the Symposium Agent and TAPI SP servers into operation, you must perform tests to ensure that you meet these guidelines. During fault diagnosis Nortel Networks GNTS can ask for the results of these tests and request the removal of third-party software.

Antivirus software guidelines

The risk of virus infection is minimal on the Symposium Agent and TAPI SP servers because support personnel require a minimal level of access, either locally or via remote access. However, if corporate security policies require you to install antivirus software on all servers, you must strictly monitor the installation, and activities of the antivirus application to ensure that Symposium Agent and TAPI SP activities are not impaired.

Note: Nortel Networks is currently testing on industry-standard antivirus software applications, and early results indicate the following generic guidelines for the use of antivirus software, including the following:

• Install Symposium Agent and TAPI SP software before installing antivirus software.
• Set virus scans or log recordings to run on the server during off-peak hours so that CPU utilization does not exceed stated guidelines. Run the Windows Performance Monitor application to verify that CPU usage during scans does not exceed the stated guidelines.
• Disable active virus scans when you run diagnostic traces or log recordings on the Symposium Agent or TAPI SP servers.
• Do not configure the anti-virus software to deal automatically with suspected infected files. In the event that infected files are detected, do not attempt to replace or remove them. Contact your local Nortel Networks support representative for assistance in determining if a suspected file is part of the Symposium application or is a critical system file.

• Under no circumstances configure antivirus software for automatic download of virus definition update files from the Internet. Nortel Networks recommends that you download virus definition update files to another location on the customer network before you manually load them on to the TAPI server. This arrangement restricts access to the Internet, and thus reduces the risk of downloading infected files.

Note: The recommendations provided in this section are intended as guidelines only, and do not constitute a guarantee of compatibility. Nortel Networks does not intend to perform ongoing compatibility testing, or testing on other antivirus packages.
• All CD-ROMs and floppy disks should be scanned prior to installation or uploading to the server to minimize any exposure to infected files from outside sources.
• Nortel Networks has not performed testing of the impact on Symposium Agent and TAPI performance of the Simple Network Management Protocol (SNMP) alert feature on antivirus software. Therefore, Nortel Networks recommends that you do not activate the SNMP alert feature in your antivirus software.

Uninterruptible power supply (UPS) software guidelines

If smart UPS software is installed on the Symposium Agent or TAPI SP servers, it must conform to the general guidelines for installing third party utilities. Nortel Networks only supports the manual shutdown and startup of the Symposium Agent and TAPI SP servers. The provider of the UPS solution must provide documentation, testing, and support of Symposium Agent and TAPI SP prior to installation of the UPS solution.

pcAnywhere guidelines

pcAnywhere *is a remote support software application provided by the Symantec Corporation. Nortel Networks tested the performance of pcAnywhere, release 10.5, with Symposium TAPI SP. The test results indicate that pcAnywhere can be used to connect to the Symposium Agent and TAPI SP servers in the following ways:
• Via Ethernet connection over a LAN
• Via dial-up connection into a primary domain controller (PDC) which provides access to the TAPI server via a LAN

Problems will occur if you attempt to connect directly to the Symposium Agent or TAPI SP servers via a modem due to a potential conflict when a modem driver co-exists with TAPI drivers on the same server.

Warning: Nortel Networks recommends that you do not install a modem driver on the Symposium Agent or TAPI SP servers.

Server Engineering Guidelines

This section provides detailed server engineering guidelines that you must conform to for effective Symposium Agent and TAPI SP operation and describes the technical parameters that can have an impact on performance.

Technical parameters that impact on performance

This section outlines technical parameters that can impact on system performance:

- number of lines/clients
- number and duration of calls
- size and volume of attached data — TAPI and IVR
- TAPI networking
- co-residency with Symposium Agent
- debug/logging activities
- co-residency with other applications

Number of lines/clients

Symposium Agent and TAPI SP will support between 10 and 1200 lines connected simultaneously to a single TAPI server.

Number and duration of calls

Symposium TAPI SP is designed to handle up to 16,000 basic calls per hour. A basic call has the following stages:

- call setup
- talk/hold time
- call tear down

Increasing the complexity or duration of calls will reduce this capacity.

Attached data

The amount of data attached to a call has a significant impact on performance. Attached data that affects performance includes both TAPI data and IVR data. Symposium TAPI SP 2.3.1 will handle a maximum of 4096 bytes of attached data (TAPI + IVR) per call. The default call data size allowed per call is 512 bytes. To optimize performance, use the configuration application to set the call data size to match your actual call data requirements. If the call data size is set higher than your requirements, performance suffers because unnecessary memory is allocated for each call.

TAPI networking

Symposium TAPI SP operates in the following Meridian 1 network environments:

- networked SCCS Call Center
- ESN network

Before you provision a network TAPI environment, estimate the maximum server processing and TCP/IP connectivity requirements of intersite routing activities.

Co-residency with Symposium TAPI SP

Symposium Agent, release 2.3 can co-reside on the TAPI server with Symposium TAPI SP, release 2.3x, subject to the following limitation imposed by Symposium Agent requirements:

• Symposium Agent must only be installed on a single CPU server. It can not be installed on a server with multiple CPUs

• Symposium Agent can not co-reside on a TAPI server that supports more than 500 agents.

Debugging activities

Running the logger application for Symposium TAPI SP places considerable processing load on the CPU. You must provision your server for the use of the logger application at peak times, with all applications running, without exceeding the 50% CPU utilization guideline.

Co-residency with other applications

No third-party applications are supported to co-reside on the TAPI server other than those stated in the software guidelines. Performance of Symposium Agent and TAPI SP is likely to be significantly affected by co-residency with any third-party applications.

Server capacity guidelines

When you are selecting your server allow enough room for future expansion and for the different operating conditions outlined above.

CPU utilization

CPU utilization with all applications running and under peak traffic load must not exceed an average of 50%. In the event that CPU utilization exceeds this limit on a regular basis Nortel Networks recommends that you upgrade the server to one with a higher CPU specification.

Memory

Sufficient memory must be provisioned to minimize the amount of paging-to-disk activities which has a detrimental impact on real-time performance.

LAN traffic guidelines

This section provides guidelines to provision basic LAN capacity for the different types of messaging that occur in the TAPI environment. In all TAPI environments allow sufficient bandwidth for:

- Meridian 1 Link protocol messages
- Microsoft TAPI messages

If your TAPI services include IVR and networking of call data, you must allow additional bandwidth for:

- IVR messages
- Call data networking messages between TAPI servers

Symposium TAPI SP 2.3.1 Server Engineering Information

Care must be taken to properly engineer the Symposium TAPI Server and Meridian 1 installation to ensure the product operates to design intent.

Refer to the Engineering Guidelines and Network Managers Guide supplied with TAPI SP Release 2.3.1 for full details on the following:

- Server Hardware
- Software
- 3rd party software guidelines, including anti-virus and remote access products
- TAPI SP and Symposium Agent
- SAPphone R/3
- LAN traffic

Note: TAPI SP Release 2.3.1 can only be deployed on a server that contains an Integrated IBM compatible, 25 pin, D type parallel port. This port is required to connect the TAPI SP Security device.

Note: TAPI SP Release 2.3.1 is only supported in a true Microsoft Windows environment. TAPI SP 2.3.1 is not supported if it is installed in a Microsoft Terminal Services environment, or terminal services environments from other vendors, such as Citrix.

Meridian 1 Engineering

Refer to the Symposium Agent 2.3 / TAPI SP 2.3 Ordering Guide and Network Managers Guide supplied with TAPI SP Release 2.3.1 for full details on the following:

- X11 requirements
- M1 configuration to support TAPI SP

The minimum release required for Symposium TAPI Service Provider with Link or Link & IVR connectivity is X11 Release 22.
The minimum release for Direct and Direct & IVR connectivity is X11 Release 23.37.

CLAN and ELAN network card settings in TCP/IP binding

There is a known issue with DCOM and servers with two NIC cards, (Microsoft articles Q246038 and Q288886) available at www.microsoft.com.

Symposium Agent server may have two network interface cards, depending on the system configuration.

One of these network cards is configured for the ELAN and the other for the CLAN. This is done to isolate the two LAN networks from each other. The sequence in which the CLAN and ELAN NIC's bind is important to ensure correct performance.

When a DCOM client (Symposium Agent client on the CLAN) tries to access the COM objects on the server it tries to resolve the correct network address. The sequence in which these addresses are checked is determined by the order of the TCP/IP bindings.

The recommended fix from Microsoft is to ensure the listed order of the network interfaces gives the DCOM network preference, i.e. preference is given to the to the CLAN NIC card above the ELAN NIC card.

In Bindings set the CLAN NIC card above the ELAN NIC card.

If the Bindings have been set incorrectly and the preference has been given to the ELAN NIC card above the CLAN NIC card, then there will be a delay of approximately 30 seconds when a Symposium Agent client attempts to register with the Symposium Agent server.

Compatibility

Symposium Agent 2.3 is compatible with TAPI SP 2.3.0 and 2.3.1

Symposium M1 TAPI SP Release 2.3.1 supports the following interfaces:

- Direct Connect
- Meridian Link Release 5(6.03), 5C (6.42)
- Meridian Link Services (MLS) 3.0, 4.0, 4.2.

Symposium M1 TAPI SP Release 2.3.1 is compatible with the following products:

- SWCP 3
- SCCS 3.0, 4.0,4.2
- SECC 2.0,3.0
- IPML 2.0

3) Sybase 12.0 issues affecting Symposium Agent 2.3 servers

There are two known Sybase issues affecting Symposium Agent 2.3 Servers

1) A date related issue that affects Symposium Agent 2.3 in the months of March and April
2) A Pentium 4 related issue with Sybase 12.0

3.1 Sybase 12.0 Date Related Issue

The ASE 12.0 Server Config and Sybatch utilities on Windows NT 4.0 fail when run between March 1 and April 30. This is a known software deficiency with Sybase 12.0, which can prevent Symposium Agent 2.3 from being installed or upgraded during the timeframe indicated. It can also prevent Sybase utilities from running on existing Symposium Agent 2.3 installations.

Problem Description:
Adaptive Server Enterprise includes two utilities, SyConfig and SyBatch respectively, to enable users to build, configure, and upgrade servers. While SyConfig is a graphical user interface (GUI) application, you use SyBatch at the command level through a resource file.

When you run the 12.0 version of SyConfig (by running syconfig.exe at the command prompt or by choosing Server Config from the Sybase program group) or Sybatch (by running sybatch.exe at the command prompt) on Windows NT 4.0 between March 1 and April 30, the utility fails with an error text similar to the following:

access violation
syconfig.exe (or sybatch.exe)
Exception: access violation (0x0000005), Address: 0x10011b88

Problem Resolution for Installation or Upgrade
Prior to installation or upgrade, change the system date to a time before March 1 or after April 30.

Post installation or upgrade, download the Sybase supplied fixes listed from the Product Software subfolder, Symposium Agent 2.3, on the TSC Europe site

(https://www21.nortelnetworks.com/TSC_Europe)

sybatch.exe
syconfig.exe

and overwrite the existing files in \Sybase\ase-12-0\bin. The system date should then be reverted to the correct one.

Problem Resolution for Existing Installation
Download the above files from the TSC Europe site and overwrite the existing files in \Sybase\ase-12-0\bin.

This resolution is also available through Solution Publisher (ref NORT65994).
Further details can be obtained from the Sybase web site using the following link:
http://my.sybase.com/detail?id=1002640

3.2 Installation of Sybase 12.0 on a Pentium 4 Server

To install Sybase 12.0 on a Pentium 4 Server the following instructions must be followed.
For more information on this Sybase issue refer to:
http://my.sybase.com/detail?id=1013241

Instructions:

1) Copy NNSAMenu.exe and the Sybase folder from the install CDROM to the root of C: (for example).

2) Change the attributes of C:\Sybase\SyClient\run.bat and C:\Sybase\SyServ\run.bat by removing their read-only properties (Right-Click on files and select the Properties option, then unselect "Read-Only")

3) Edit the previous two files batch files to include the "-nojit" directly after the "...\bin\jre"

For Example -

Before: ".\jre-1_1-nt386\bin\jre -cp .\jre-1_1-nt386\lib\rt.jar;.\Installer\lib\swingall.jar;.\Installer\lib\SI.jar;.\Installer\lib\xml.jar;.\Installer\lib; -Dlicense.host=noname -DSYBASE="%SYBASE%" Installer %1 %2 %3"

After: ".\jre-1_1-nt386\bin\jre -nojit -cp .\jre-1_1-nt386\lib\rt.jar;.\Installer\lib\swingall.jar;.\Installer\lib\SI.jar;.\Installer\lib\xml.jar;.\Installer\lib; -Dlicense.host=noname -DSYBASE="%SYBASE%" Installer %1 %2 %3"

4) Save and close each file.

5) Execute NNSAMenu.exe from the local hard disk (i.e. not from the CD) and continue the Database install as per usual.

End of procedure.

4 Win2000 SA 2.3 Server with Win95, 98, NT 4.0 SA Clients

There are two known Microsoft issues when using a Windows 2000 Server with Windows 95, 98 or NT 4.0 Clients,

1) Microsoft Windows Installer needs to be installed on the Clients.
2) Windows 2000 SP2 produces an error: "Runtime Error 429, Active X component can't create object". Addressed in Windows 2000 SP3

4.1 Updating Win 95, 98 and NT 4.0 Clients with MS Windows Installer

If you install Symposium Agent 2.3 on a Windows 2000 Server operating system, Nortel Networks recommends that you check the version of Microsoft Windows installer on Windows 95, 98 and NT client machines.

These clients ***must*** have the Windows Installer tool installed to be able to use Microsoft Windows Installer Technology for Symposium Agent 2.3 client installation.

Updating your clients can take place before installing Symposium Agent 2.3 Server on the Windows 2000 Server.

Update your client machine with the appropriate version of Windows Installer

For **Windows 95 & 98 clients**, download Windows Installer from the following URL:
http://www.microsoft.com/downloads/release.asp?ReleaseID=32831

For **Windows NT 4.0 clients**, download Windows Installer from the following URL:
http://www.microsoft.com/downloads/release.asp?ReleaseID=32832

Attention: These links are provided for convenience only and could be changed any time by Microsoft Corporation. You must make sure that you download the ***Microsoft Windows Installer 2.0. for the appropriate operating system.*** If the URLs provided show a version of Windows Installer other than 2.0, do not download it but contact Nortel Networks Support instead for advice.

4.2 Windows 2000 Server SP3

Service Pack 3 for Windows 2000 is now available and should be applied to all Symposium Agent Windows 2000 Servers with Win95, 98, NT 4.0 SA Clients.
It is necessary to apply SP3 for Windows 2000 when using Win95, 98, NT 4.0 Symposium Agent Clients because it addresses a number of known COM+ issues with Windows 2000.

Failure to do so may result in the following error message: "Runtime Error 429, Active X component can't create object". This error message may occur when running SA Launcher (nnlaunch.exe) and it prevents Symposium Agent 2.3 client installation from completing.
This problem only affects Windows 9X and Windows NT clients in conjunction with Symposium Agent Server installed on Windows 2000 Server and is addressed by installing SP3 for Windows 2000 Server.

References and Related Documents

This bulletin should be used in conjunction with the Symposium Agent 2.3 documentation supplied on the product CD, namely:

Symposium Agent 2.3 Installation Guide
Standard 2.1, February 2001
File name on CD sa2install.pdf

Symposium Agent 2.3 Programmer's Guide
Product Release 2.3 Document Release 2.0 , January 2001
File name on CD SAR2ProgrammerStd.pdf

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User Notes:
Trademark can be changed as required for the product referenced in the bulletin.
Any text shown in Italic font style should be removed prior to publication. This text has been added to aid the user in creation of this document.
*The first mention of the words *Meridian 1 in the text should have an asterisk placed in front as shown in this line.*

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