**About the Domino for AS/400 Release Notes**

Domino for AS/400 Release Notes is a Notes Database which provides supplementary information about Domino for AS/400. Choose Help - Using This Database for information on using Domino for AS/400 Release Notes.

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# Domino for AS/400 Release Notes

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Domino for AS/400 Release Notes

These *Domino for AS/400 Release Notes* apply only to Lotus® Domino™ for AS/400®. The information in these *Release Notes* supplements the information in the Lotus *Installing and Managing Domino for AS/400* book and the equivalent Domino for AS/400 help database (AS400HLP.NSF). References to the book in these *Release Notes* also apply to equivalent sections in the help database.

These *Domino for AS/400 Release Notes* describe AS/400-specific changes and considerations for Domino 4.6.4, Domino 4.6.3, Domino 4.6.2, and Domino 4.6.1. For details about the general contents of Domino 4.6.4, 4.6.3, 4.6.2, and 4.6.1, see the *Domino Release Notes*.

**Note**  For details about the contents of Domino 4.6.3, 4.6.2 and 4.6.1, see the section of *Domino Release Notes* called "History of changes."

### What's new for 4.6.4

The following AS/400-specific functions are new with Domino for AS/400 4.6.4:

- New Single Logon support in Domino for AS/400 software
- New setup options for Configure Domino Server (CFGDOMSVR) command
- New setup options for Change Domino Server (CHGDOMSVR) command
- New operations available from Work with Domino Servers display (WRKDOMSVR command)
- Submit Domino Command (SBMDOMCMD) command translated into languages other than English
- Enhancements to Domino plug-in for Operations Navigator

The following additional topics in these *Domino for AS/400 Release Notes* are new or updated for Domino for AS/400 4.6.4:

- AS/400 PTF requirements
- About new Domino terminology
- Installing the Domino for AS/400 4.6.4 software
- Upgrading Domino in Operations Navigator
- Enabling DECS on a Domino server
- Installing Domino for AS/400 Single Logon
- Adding Operations Navigator when using Client Access for Windows 95/NT
- Adding Operations Navigator Plug-in when using Client Access Express
- The section "Additional setup when installing directory synchronization software later" under Directory synchronization

The following problem fixes (SPRs) that are specific to AS/400 are included with Domino for AS/400 4.6.4:

**Problems previously released as hot fixes (included in 4.6.4)**

- SPR RDOR44GMUK - Cannot replicate greater than 2 gigabyte database to AS/400
- SPR DHAR44JJ62 - Notes databases being corrupted with HTML format data written to them
Problems fixed in 4.6.4

- SPR DTW3Y7KXX - With a SHOW TASKS command, the ISESCTL shows invalid port number on Domino console
- SPR RLOH437RQ3 - If we start two servers with SMTPMTA we have to use "IMMED option to end the server
- SPR JBLM44KRRV - CFGDOMSVR Fails - Access Denied MSGID CPFA0B1
- SPR JWOS45GQ9C - Optional code in siregw46.nsf does not work on OS400
- SPR JBRT44GU4U - JAVA vlogs occur when AS/400 Domino Servers are ended
- SPR DJLL42AQJ9 - CHGDOMSVR doesn't allow updates unless the subsystem is ended
- SPR HRON3ZEQDQ - Stored Procedure Call causes exception on Notes 4.62a client
- SPR AFON42QQSM - 4.64/R5:Lotus.ini file is missing when LSX toolkit is installed

Directory synchronization fixes

- ASAM445JFP - Directory synchronization: user in sdd with accented characters will not be synchronized
- GMEN43U8P5 - Name using character Ñ can't be synched from AS/400 to Domino, also char. corruption issue
- SPR JBLM425HHG - Dir Sync after constructing address - address is not unique error not returned as it should

AS/400 software prerequisites

The following functions in Domino for AS/400 are supported in OS/400® Version 4 Release 3 (V4R3), but are not supported in OS/400 Version 4 Release 2 (V4R2).

- Increase of the size limit for Notes/Domino database (.NSF files) to 4 gigabytes.
- Support for running Java agents on the server using new LotusScript and Java methods.
- Support for Java servlets.
Domino for AS/400 requires cumulative PTF packages and individual PTFs for OS/400® Version 4 Release 2 (V4R2) and OS/400 Version 4 Release 3 (V4R3). Other PTF packages are available to support specific types of Domino for AS/400 operations.

**OS/400 V4R2**
- Domino for AS/400 requires the cumulative PTF package C9068420 and the following individual PTFs:
  - 5769SS1 SF45296 - EDTF, DSPSTMF, SQLUTIL and RCLSPACE tools
    - Provides EDTF command.
  - 5769SS1 SF52098 - OSP-CHGDOMSVR DOES NOT SHOW THE PROPER TIMEZONE VALUES
    - Corrects the time zone values provided by the CHGDOMSVR command.

  The cumulative PTF package includes support for DECS.

- If you plan to move data between Domino and DB2 for AS/400 (DB2/400), we recommend that you order DB2/400 group PTF SF99102. This group PTF, which is provided on a CD, contains PTFs related to DB2/400, SQL, and journaling.

  Order group PTF SF99102 through AS/400 electronic customer support. This group PTF is updated once a quarter.

- If you plan to use Java, order group PTF SF99065. This group PTF, which is provided on a CD, contains all Java-related PTFs for licensed internal code, OS/400, and Java.

  Order group PTF SF99065 through electronic customer support. This group PTF is updated once a month.

**OS/400 V4R3**
- Domino for AS/400 requires the cumulative PTF package C9054430.

  The cumulative PTF package includes support for the EDTF command and support for DECS.

- If you plan to move data between Domino and DB2/400, we recommend that you order DB2/400 group PTF SF99103. This group PTF, which is provided on a CD, contains PTFs related to DB2/400, SQL, and journaling.

  Order group PTF SF99103 through AS/400 electronic customer support. This group PTF is updated once a quarter.

- If you plan to use Java, order group PTF SF99066. This group PTF, which is provided on a CD, contains all Java-related PTFs for licensed internal code, OS/400, and Java.

  Order group PTF SF99066 through electronic customer support. This group PTF is updated once a month.
Where to find the latest information

Check the following Web sites for updates and additional information related to Domino for AS/400:

- Lotus support for Domino and Notes™
  http://www.support.lotus.com
- Domino and Domino for AS/400 documentation
  http://notes.net/notesua.nsf
- IBM® AS/400 Technical Studio
  http://www.as400.ibm.com/techstudio
- Domino for AS/400 product information
  http://www.as400.ibm.com/notes
- Domino for AS/400 partner and education information
  http://www.softmall.ibm.com/as400/domino

About new Domino terminology

If you are working in a mixed release environment, be aware that the Public Address Book (or Address Book) in Domino Release 4.6.x is called the Domino Directory in Domino Release 5.

About upgrading to Domino for AS/400 4.6.4

To upgrade your installed Domino for AS/400 software to release 4.6.4, use the same LODRUN command that you used originally to install the software. However, to make sure the installation proceeds smoothly without losing data, you need to take some additional precautions:

- Make sure you have current backup copies of all Domino libraries and the data directory for each Domino server on the AS/400 where you plan to install the new release.
- Make sure you stop all Domino servers and associated AS/400 functions that are used by the servers on the AS/400.
- Make sure you install all of the software options that are currently installed.

If you are using the Domino support in Operations Navigator, you also need to upgrade the Domino plug-in on the workstation running Operations Navigator.

Installing the Domino for AS/400 4.6.4 software

1. Use the Display Software Resources (DSPSFWRSC) command to determine which Domino for AS/400 options you have installed. On the display, locate 5769LNT. The display shows one or more lines for each option of Domino for AS/400 that is installed on your system. (The option numbers appear in the Option column.) Write down each option number for Domino for AS/400 that appears on the display.

2. Back up both the Domino data directories and all the Domino libraries on the AS/400. For information about backing up your Domino for AS/400 servers, see Chapter 5 in Installing and Managing Domino for AS/400.
3. Stop all Domino servers on the AS/400. Use the End Domino Server (ENDDOMSVR) command or Operations Navigator to end the servers.

4. If you use directory synchronization, end the directory synchronization jobs. Enter the following:
   call qnotesint/qnndiend

5. After allowing at least 5 minutes for the servers and directory synchronization to end, use the Work with Domino Servers (WRKDOMSVR) command to verify that no Domino servers are active. Because all Domino-related jobs run under the QNOTES user profile, you can use the following command to determine if any Domino-related jobs are still active:
   wrkusrjob qnotes status(*active)


7. Enter the following AS/400 command:
   lodrun dev(*opt) dir('/os400')

8. If the CD contains more than one language version, you must select a language on the prompt display. Type a "1" next to the language version that you want to install.

9. On the prompt display, type a "1" next to each product option that you want to install. You must select each option that you already have installed on your system. (You determined this in step 1.) You may also choose to install additional options.
   **Note** If you install AS/400 Integration (option 1), the system automatically installs HiTest C API (option 6). The HiTest C API option is needed for some functions in the AS/400 Integration option.

10. Press ENTER. The system loads the updated Domino for AS/400 programs to the appropriate libraries and /QIBM directories. You see status messages as the system installs each option that you selected.
    In addition, the system copies updated data files to the data directory for each Domino server on the AS/400 system. The system requires approximately 3 minutes for this upgrade process per Domino server. During this process, you see a status message for each server that the system upgrades.

11. When the installation process completes, you receive a message indicating whether the LODRUN process completed successfully or encountered errors.
Upgrading Domino in Operations Navigator

If you previously installed the Domino plug-in support for Operations Navigator (part of IBM AS/400 Client Access™), upgrade the plug-in components on the client workstation.

1. Connect the client to the AS/400 on which you installed the 4.6.4 software.

2. From the client, set up this AS/400 as your managing system.
   - If you are using Client Access for Windows 95/NT, choose:
     Click the Service tab and change the Managing system to the AS/400 with the 4.6.4 software. Then click Apply.
   - If you are using Client Access Express, choose:
     Click the Service tab and set the Source Directory to the share that you used to access the AS/400 when you added the Domino plug-in; for example, \myas400\QIBM. Then click Apply.
     If the share does not exist, you must recreate it. For an example, see steps 1 through 5 of the topic "Adding Operations Navigator Plug-in when using Client Access Express."

3. Start the Check Version program. This program may start automatically, depending on the settings on the Service tab of the Client Access Properties (see the previous step).

   To force the Check Version program to run, choose:
   Start - IBM AS/400 Client Access - Service - Check Service Pack Level.

4. When the Check Version program runs, read the messages carefully. Depending on the level of Client Access on the client and level on the current managing server (AS/400), you could receive warnings.
   - You can ignore warnings that the Client Access level on your managing server is at an earlier level than your client.
   - Follow the instructions about updates for Operations Navigator plug-ins. Check Version will copy the plug-in files to your client workstation.

5. Once the updated plug-in is on your client, the plug-in must be applied for each AS/400 in your Operations Navigator tree. To apply the plug-in, open each AS/400 in Operations Navigator. Operations Navigator detects the change and "scans" the AS/400 to automatically apply the change.

Batch installation of Domino for AS/400

Beginning with release 4.6.2, you have the option to install Domino for AS/400 without responding to the prompt display that requires you to select which options to install. This is particularly useful for multiple installations in remote locations that do not have skilled administrators or that require unattended installation during off-hours. Two methods for batch installation are available:

- Local batch, where the installation command is submitted on the same system where the software is to be installed.
- Remote batch, where the installation command is sent to a remote system where the software is to be installed.

Note If you already have Domino servers on your AS/400, do the preliminary tasks described in the procedure for installing the software interactively.
Local batch installation
To install all the options for Domino for AS/400, place the Domino for AS/400 CD in the CD-ROM device for your AS/400. Type the following command or include the following command in a CL program:

```cl
lodrun dev(*opt) dir('/os400/intleng/batch')
```

**Note**  INTLENG is the directory on the CD that contains international English. If desired, replace INTLENG with the name of the directory that contains the language you want to install.

To install only certain options, specify the subdirectory that contains the option you want to install. You need to run the LODRUN command once for each option that you want to install. For example, to install the *BASE option (option 00), option 1, option 4, and option 6, type the following commands or run them from a CL program::

```cl
lodrun dev(*opt) dir('/os400/intleng/batch/opt00')
lodrun dev(*opt) dir('/os400/intleng/batch/opt01')
lodrun dev(*opt) dir('/os400/intleng/batch/opt04')
lodrun dev(*opt) dir('/os400/intleng/batch/opt06')
```

**Note** If you install AS/400 Integration (option 1), the system automatically installs HiTest C API (option 6). Option 6 is needed for some functions in option 1.

Remote batch installation with remote CD
You can also submit commands to install Domino for AS/400 on a remote AS/400 system that is connected to your system. Do the following:

1. Ensure that the Domino for AS/400 CD is in the CD-ROM device on the remote system.

2. Ensure that the Remote Execution (REXEC) TCP/IP server is running on both the source and target systems. To start the REXEC server, type the following command:

   ```cl
   STRTCPSVR SERVER(*REXEC)
   ```

   **Note** For more information about the REXEC server, see the *TCP/IP Configuration and Reference* book (SC41-5420).

3. Use the Run Remote Command (RUNRMTCMD) to submit the installation commands. Following is an example of the command to install all of the options:

   ```cl
   runrmtcmd cmd('lodrun dev(*opt) dir('/os400/intleng/batch')')
   rmtlocname(MYAS400A *IP) rmtuser(myuserid) rmtpwd('password')
   ```

   **Note** The user profile and password must exist on the remote AS/400. The user profile must have the authorities required to install the Domino for AS/400 software.

Remote batch installation without remote CD
Use the following procedure to install Domino for AS/400 at remote locations without requiring the CD at the remote location.

**Note** As of release 4.6.3, the RSTLICPGM command used in this procedure installs the Domino for AS/400 software on the AS/400 system and upgrades each Domino server on the system. At release 4.6.2, the RSTLICPGM command installed the software on the system but did not upgrade the servers.

1. Install Domino for AS/400 on the central system.

2. To create a library for the save files that will contain the Domino software, use the Create Library (CRTLIB) command. Substitute the name of your library for "mylib."

   ```cl
   crtlib lib(mylib)
   ```
3. To create a save file to hold the Domino software, use the Create Save File (CRTSAVF) command. Substitute the name of your save file for "dominob."

   crtsavf file(mylib/dominob)

   **Note** You need a separate save file for each Domino option that you want to save. For example, create save file dominob for the base software. Create save file domino3 for Domino for AS/400 option 3.

4. To save the base Domino for AS/400 software to the save file, use the Save Licensed Program (SAVLICPGM) command. Substitute your library name and save file name for "mylib" and "dominob."

   savlicpgm licpgm(5769LNT) dev(*savf) savf(mylib/dominob)

5. For each additional software option that you want to save, use the SAVLICPGM command and a new save file. For example, to save option 3, use the following command:

   savlicpgm licpgm(5769LNT) option(3) dev(*savf) savf(mylib/domino3)

6. Use the Send Network File (SNDNETF) command or FTP to move a copy of the save files to the remote system where you want to install Domino for AS/400.

7. On the remote system, use the Restore Licensed Program (RSTLICPGM) command to install Domino for AS/400 from the save files. You need to install each Domino option separately. For example, to install the base software, type:

   rstlicpgm licpgm(5769LNT) dev(*savf) savf(mylib/dominob)

8. If necessary, use the Change User Profile (CHGUSRPRF) command to set the locale for the QNOTES user profile:

   chgusrprf usurprf(qnotes) locale(newlocale)

   **Note** For information about setting the locale parameter, see this topic: International language considerations.

**About DECS**

As of release 4.6.3, Domino of AS/400 supports the Domino Enterprise Connection Services (DECS). DECS is a new forms-based technology in Domino that provides the capability to integrate live data from AS/400 into Domino applications. Using DECS, you can build live links from Domino pages and forms to data in the DB2 relational database on AS/400 (DB2/400).

DECS is installed when you use the LODRUN command to install the Domino for AS/400 server software (*BASE option) on your AS/400. The DECS files that are installed include a DECS Administrator database template (DECSADM.NTF) and three documentation databases:

- Domino Connectors Setup Guide (LCCON.NSF)
- Domino Enterprise Connection Services User's Guide (DECSDOC.NSF)
- LotusScript® Extension for Domino Connectors Reference Guide (LSXLC.NSF)

The three documentation databases are installed in the DOC subdirectory of your server's data directory. The User's Guide contains more information about DECS.

Once the DECS files are installed, you must take additional actions to enable DECS on each upgraded Domino server.
Enabling DECS on a Domino server

For release 4.6.4, you can enable DECS on a Domino server when you use the CFGDOMSVR command to set up the server or use the CHGDOMSVR command to reconfigure the server. Specify "DECS in the Connection services option of either command. Then start the server and verify that DECS is operational (see steps 6 and 7 in the procedure below).

For release 4.6.3, use the following procedure to enable DECS on a server:

1. Stop the Domino server if it is running. You can use either the WRKDOMSVR command or Operations Navigator to determine if the server is running and stop it if necessary.

2. Edit the NOTES.INI file using either the EDTF command or the Properties function on Operations Navigator.

3. Add DECS to the server tasks list. For example:
   
   ServerTasks=Replica,Router,Update,Stats,AMgr, . . . ,DECS

4. Add this new entry:
   
   EXTMGR_ADDINS=decsext
   
   If the EXTMGR_ADDINS entry already exists, add "decsext" to the entry.

5. Save the NOTES.INI file.

6. Start the server using the Start option on the WRKDOMSVR display or the Operations Navigator window that you used to stop the server.

7. To verify that DECS is operational, enter the Show Tasks server command at the console for the Domino server. DECS is operational if you see "DECS server" in the task list.

When you restart the server after enabling DECS, the DECS Administrator database (DECSADM.NSF) is created from the DECSADM.NTF template and is available to put on your Notes workspace.

Avoiding DECS problems in connecting to the local Domino server

A DECS connection error could occur under any of the following conditions:

- The Domino server is a partitioned server
- The server is using a port other than the default Domino server port
- The server is using an Internet address other than the Internet address of the AS/400 system

The error is indicated by this message:

   No databases were found on the Notes server "CN=xxxxxxx/O=yyyyy"

If you receive this error message, add a Connection document in the Public Address Book that enables the server to connect to itself. In the Connection document, specify the actual port and Internet address being used by the server.
About Domino for AS/400 Single Logon

As of release 4.6.2, Domino for AS/400 includes a Single Logon capability that provides password synchronization for users of Microsoft Windows, Lotus Notes, and OS/400. This capability allows users to log on once and not have to separately log on to the Notes client or to AS/400 Client Access. The Single Logon support is part of option 1 of the Domino for AS/400 software.

Installing Single Logon is as simple as opening the Lotus Notes database provided with Domino for AS/400, launching the attached install program, and restarting Windows. The Single Logon database is automatically installed on the Domino server when you install the Domino for AS/400 software.

After you install Single Logon on the workstation and log onto Windows, the Windows password is used for authentication so that IBM Client Access for Windows security can automatically connect to AS/400 systems. Single Logon also integrates with the Lotus Notes security to provide the Windows password when opening Notes databases. The user IDs for logging onto Windows, Lotus Notes, and OS/400 do not have to be the same, but the user IDs must all have the same password.

When it is time to change passwords, Single Logon synchronizes Windows, Notes, and selected OS/400 passwords. While changing the Lotus Notes password, the Windows and OS/400 passwords are also synchronized to the same value. This one step process provides easy password management of all passwords and allows the Windows password to be used later for single logon. Windows 95 and 98 users can also elect to change passwords using the Windows password services.

Installing Domino for AS/400 Single Logon

Installing Single Logon requires just a few steps. When you complete the steps, all your user IDs use the same password.

1. Sign onto your Domino server.
2. Use File - Database - Open to find the Domino for AS/400 Single Logon database.
3. Click on the database to open it.
4. Click the slsetup.exe icon to begin the installation.
5. When the installation is complete, restart your computer to begin using the Single Logon capabilities.

Enhancements to Configure Domino Server command

Beginning with Domino for AS/400 4.6.4, the Configure Domino Server (CFGDOMSVR) commands provides new setup options. These new options further simplify the task of setting up a Domino server on AS/400 and enable you to easily set up optional functions, such as DECS. Following is a summary of the new options.

- **Internet password**  In addition to specifying details of the administrator’s name and password, you can specify a separate Internet password for managing the server through the Internet.
- **Directory services**  Enables you to add directory synchronization, LDAP, or both to the server configuration.
- **Connection services**  Enables you to add DECS to the server configuration.
- **Start server**  Enables you to specify whether the system should start or not start the server when setup is finished.
TCP/IP port options Enables you to:

- Specify whether the system should encrypt or not encrypt data that is sent through the server port.
- Specify a separate Internet address for the server port. For example, if the server is a partitioned server, you can use this option to specify a separate Internet address for the server.

Copy administrator ID Enables you to specify where the system should put the administrator ID file for the server:

- In the Public Address Book for the server
- In the data directory for the server
- In both the Public Address Book and the data directory

While you are working with the prompt display for the command, you can press F1 to request more information about these options or any other options of the command.

About the Work with Domino Servers command

Beginning with Domino for AS/400 4.6.2, the Work with Domino Servers (WRKDOMSVR) command is available. This command provides a working display that enhances the ability of an administrator to easily manage multiple Domino servers on the same AS/400. Domino for AS/400 4.6.4 provides additional options for managing servers from the WRKDOMSVR display.

To access the display, enter the following from an AS/400 command line:

```
wrkdomsvr
```

The display lists each Domino server on your system with the name of the associated subsystem and the status of the server. Following are the possible values for the status:

<table>
<thead>
<tr>
<th>Status</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>*STARTING</td>
<td>The server is being started. However, it is not yet available for use by Notes clients.</td>
</tr>
<tr>
<td>*STARTED</td>
<td>The server is active. It is available for use by Notes clients. See Note.</td>
</tr>
<tr>
<td>*ENDING</td>
<td>The server is in the process of ending.</td>
</tr>
<tr>
<td>*ENDED</td>
<td>The server is not active. You must start the server to make it available for use.</td>
</tr>
<tr>
<td>*UNKNOWN</td>
<td>The system cannot determine the status of the server.</td>
</tr>
</tbody>
</table>

Note In the rare instance of a failure that requires restarting the AS/400 system, the previous server status may still appear when the system is started. For example, the status may indicate *STARTED even though the server is not active. To update the status, issue the STRDOMSVR command to start the server or the ENDDOMSVR command to stop the server.

Another version of the display is available that shows the data directory for each Domino server on the system. To toggle between the two versions of the display, press F11. If either the server name or the directory name is too long for the field on the display, the "->" character appears at the end of the name. To see a window with the full name, position the cursor on the truncated field and press F22.
To perform an operation on a server, you specify one of the options that are available from the display. Each option runs a specific AS/400 command to perform the operation. When you specify an option, you can press F4 (Prompt) instead of ENTER if you want the system to prompt you for parameters associated with the option. You can specify an option for more than one Domino server at a time. For example, to start three Domino servers, type a “1” in the option column in front of each server. Then press ENTER.

**Note** To run an option from the display, you must have the authority that the underlying command requires. For example, to run option 1, you must have the authorities required for the STRDOMSVR command.

The following options are available:

**Option 1 - Start server**
This option runs the Start Domino Server (STRDOMSVR) command to start the selected Domino server.

**Option 2 - Change server**
This option runs the Change Domino Server (CHGDOMSVR) command. It allows you to change the configuration of the selected server. This option is new for release 4.6.4.

**Option 5 - Display console**
This option runs the Display Domino Console (DSPDOMCSL) command. It shows the Domino console for the selected Domino server in display mode. No commands can be entered.

**Option 6 - End server**
This option runs the End Domino Server (ENDDOMSVR) command to stop the selected Domino server.

**Option 7 - Submit command**
This option runs the Submit Domino Command (SBMDOMCMD) command. It submits a server command to run on the selected Domino server. This option is new for release 4.6.4.

**Option 8 - Work console**
This option runs the Work with Domino Console (WRKDOMSCL) command. It shows the Domino console for the selected Domino server in update mode. You can enter Domino commands from this console.

**Option 9 - Work server jobs**
This option runs the Work with Active Jobs (WRKACTJOB) command. It shows the jobs that are running in the subsystem for the selected Domino server.

**Option 11 - Change current directory**
This option runs the Change Current Directory (CHGCURDIR) command to set the default AS/400 directory for your job. Unless you specify differently, this option sets the default directory to the data directory for the selected Domino server. You can use the F4 key to specify a different directory.

**Option 12 - Work object links**
This option runs the Work with Links (WRKLNK) command, which displays the objects in the data directory for the Domino server and allows you to perform various operations on those objects. For example, you can create or change the symbolic links that Domino needs to access programs in AS/400 libraries.

**Option 13 - Edit NOTES.INI**
This option runs the Edit File (EDTF) command to edit the NOTES.INI file for the selected Domino server. This option is new for release 4.6.4.
About the Change Domino Server command

Beginning with Domino for AS/400 4.6.3, the Change Domino Server (CHGDOMSVR) command is available for changing the configuration of a Domino server that you previously set up on AS/400. For 4.6.3, the command is not translated into languages other than English. For 4.6.4, the command is translated into languages other than English. The 4.6.4 version of the command also provides additional setup options.

The person who runs this command must have the following AS/400 special authorities: *ALLOBJ, *JOBCTL, *IOSYSCFG, and *SECADM.

To use this command, type CHGDOMSVR on any AS/400 command line and press F4. The system prompts you for the name of the server. You can press F4 again to see a list of Domino servers that are currently set up on your AS/400. When you type the server name and press ENTER, the system shows the server characteristics that you can change:

- **Additional server ID** Used to specify the server password, if the server ID file for the server requires a password.
- **Time zone** Specifies the time zone for the server.
- **Daylight savings time** Specifies whether the server time stamp should be adjusted for daylight savings time or not.
- **Web browsers** Adds HTTP server support or removes it.
- **Internet mail packages** Adds IMAP or POP3 mail support, or removes the support.
- **Directory services** Adds directory synchronization, LDAP, or both to the server configuration.
- **News readers** Adds NNTP support or removes it.
- **Connection services** Adds DECS to the server configuration.
- **Advanced services** Adds partitioned server, server cluster, and billing support or removes the support.
- **TCP/IP port options** As needed, can be used to:
  - Specify a name for the communications port.
  - Specify a name for the server network.
  - Specify whether the system should encrypt or not encrypt data that is sent through the server port.
  - Specify a separate Internet address for the server port. For example, if the server is a partitioned server, you can use this option to specify a separate Internet address for the server.
  - Specify whether the port should be enabled or not.
- **Log replication events** Specifies whether the server should log replication events or not.
- **Log client session events** Specifies whether the server should log client session events or not.

As you work with any of these fields, you can press F4 to request a list of valid values.

When you press ENTER to run the command, the system assumes that any values you did not change are the same as the current configuration.
About running server commands from AS/400

Usually, you issue a Domino server command from the server console. However, there may be situations in which you are not able to or do not want to issue the server command from the console. For example:

- The server console is not available to you because another person is currently using it.
- You want to issue the server command from an AS/400 batch job.
- You want to include a server command in an AS/400 CL program.

Beginning with Domino for AS/400 4.6.3, the Submit Domino Command (SBMDOMCMD) command is available for issuing a server command without entering it on the server console. For 4.6.3, the command is not translated into languages other than English. As of 4.6.4, the command is translated into languages other than English.

**Note** You cannot use the SBMDOMCMD command to submit information other than a server command. For example, you cannot use this command to submit a password to the server.

The person who uses this command must have either of the following AS/400 authorities:

- *USE authority to the QNNINSDC program in the QNOTES library and *USE authority to the SBMDOMCMD command in the QSYS library
- *ALLOBJ special authority

To use the command from any AS/400 command line, type SBMDOMCMD and press F4 to have the system prompt you for the values of the command. There are two fields to fill in:

**Command** The server command to run. For example:

'show tasks'

Any output from the server command is displayed on the server console unless you redirect it. To redirect the output to a file in the server's data directory, type the server command followed by a > and the name of the file. Put a space after the server command, but not after the >. For example, to issue the Show Tasks server command and redirect the output to the CMDOUT file in the server's data directory, type:

'show tasks >cmdout'

If the output file (CMDOUT in this example) does not exist, the system creates it. If the file already exists, the system replaces it.

**Server name** The server on which the server command should run. If you are not sure of the server name, press F4 to display a list of Domino servers on your AS/400.

Press ENTER to run the command when the required information is filled in.

To issue a server command from a batch job, use the Submit Job (SBMJOB) command and specify the SBMDOMCMD command as the value of the Command to run (CMD). You can also include the SBMDOMCMD command as a statement in a CL program. In either case, specify the SBMDOMCMD command in the form:

```
sbmdomcmd cmd('server-command >file-name') server(server-name)
```

where **server-command** is the server command to run, **file-name** is the file, if any, in which any output should be written, and **server-name** is the Domino server on which the server command should run.
The following messages indicate whether the server command was successfully submitted or not:

- **Completion:**
  LNT0905  Domino command submitted for processing on server &1.

- **Escape:**

### Operations Navigator enhancements and restrictions

Operations Navigator provides the AS/400 graphical user interface for managing AS/400 and Domino servers on AS/400 from a workstation. Beginning with Domino for AS/400 4.6.4, The Lotus Domino plug-in for Operations Navigator includes the following updated features:

- Works with AS/400 Client Access Express for Windows (5769XE1) in addition to AS/400 Client Access for Windows 95/NT (5763XD1).

  The procedure for installing Operations Navigator and the Domino plug-in are different, depending on whether you are using Client Access for Windows 95/NT or Client Access Express on the workstation.

- Provides a list of Domino server jobs as a menu selection.

- Provides Web-enabled setup of new servers on AS/400 if Domino for AS/400 Release 5 is installed.

In addition to setting up Domino for AS/400 Release 4.6.x through a setup database, Operations Navigator also provides support for setting up Release 5 through a Web browser. The release of Domino for AS/400 that is installed on your AS/400 determines the method that Operations Navigator uses.

**Known restriction**
The Domino plug-in for Operations Navigator could cause Notes to trap in the following situation:

- A Release 4.6.4 Notes client and a Release 5 Notes client are both installed on the workstation.
- Notes 4.6.4 is running when Operations Navigator is started.

The problem occurs because the Domino plug-in uses the most recently installed release of the Notes client for processing. Notes 4.6.4 and Notes 5 cannot run simultaneously.

### Adding Operations Navigator when using Client Access for Windows 95/NT

Operations Navigator is not automatically added when you set up Client Access on a workstation. You must add the Operations Navigator component and the Lotus Domino plug-in. The following procedure assumes you are using Version 3 Release 2 Modification 0 of Client Access.

1. Install and set up Client Access on your AS/400 and the workstation.

   For more information about Client Access, see one of the following:
   - The Client Access documentation; for example, *Client Access for Windows 95/NT - Setup* (SC41-3512)
   - The EZ Setup CD that is provided with your AS/400
   - The AS/400 Technical Studio Web page at http://www.as400.ibm.com/techstudio

2. Make sure option 1 of the Domino for AS/400 software is installed on your AS/400. This option contains the software for the Domino plug-in.

3. On the workstation, double-click the IBM AS/400 Client Access shortcut.

4. Double-click the Accessories icon.
5. Double-click the Selective Setup icon. The selective setup window appears.
6. Click Next.
7. The Selective Setup Options dialog appears. Choose the Use managing system radio button.
8. Click Next. The message "Checking for components available on managing system" appears.
9. If you are not already signed on to your AS/400, sign on now.
10. The Component Selection panel appears. Select the components you want. Make sure that you choose at least AS/400 Operations Navigator.
11. Select the AS/400 Operations Navigator line and click Details.
   If you already added Operations Navigator, you still need to click the Details button to add the Lotus Domino plug-in.
12. The Select Sub-Components dialog box appears. Select the following:
   - Operations Navigator Base Support (if not already added)
   - Lotus Domino
13. Click Continue.
14. Click Next. Click Next again on the Start Copying files panel.
   The Preparing to Install dialog box appears at the bottom right-hand corner.
15. The Install Completed panel appears. Click Next.
   The Readme - Notepad file appears.
16. The Setup Complete dialog appears. Click the radio button that indicates:
   - Yes, I want to restart my computer now
   If you are installing Operations Navigator for the first time, restart your workstation. You do not need to restart your workstation to use Lotus Domino support in Operations Navigator.
17. Click Finish.

After you restart your workstation and select Operations Navigator, you may see a dialog about scanning for new Client Access components. If this dialog appears, click Scan Now.

Adding Operations Navigator Plug-in when using Client Access Express

Operations Navigator is included when you set up Client Access Express on a workstation. You must add the Lotus Domino plug-in.

1. Install and set up Client Access Express on your AS/400 and the workstation.
   For more information about Client Access Express, see one of the following:
   - The Client Access documentation; for example, Client Access Express for Windows - Setup (SC41-5507)
   - The EZ Setup CD that is provided with your AS/400
   - The AS/400 Technical Studio Web page at http://www.as400.ibm.com/techstudio
2. Make sure option 1 of the Domino for AS/400 software is installed on your AS/400. This option contains the software for the Domino plug-in.
3. Using Operations Navigator on the workstation, verify that the AS/400 NetServer is started. The NetServer enables you to access AS/400 directories from the workstation.
   - Start Operations Navigator by choosing the shortcut on your desktop.
   - Open the AS/400 in the Operations Navigator directory tree; that is, click the + sign next to the AS/400 name.
   - Open Network.
   - Open Servers.
   - Open TCP/IP.
   - The list of servers should include AS/400 NetServer. The AS/400 NetServer status should be started. If the status is not Started, right-click AS/400 NetServer and choose Start.
     If you do not see AS/400 NetServer in the list, see the Client Access Express for Windows - Setup documentation (SC41-5507) for information on configuring the AS/400 NetServer.
   - Determine the name of the AS/400 NetServer. Right-click AS/400 NetServer and choose Properties. Record the name that is shown for Server name. You need this name for step 5.

4. Using Operations Navigator, create an AS/400 NetServer file share for the QIBM directory on your AS/400, or verify that a share exists.
   - Open the AS/400 in the Operations Navigator directory tree.
   - Open File Systems.
   - Open Integrated File System.
   - Open Root.
   - A share already exists for the QIBM folder if you see a hand holding the folder.
   - If a share does not exist, right-click the QIBM folder and choose Sharing - New share. When the AS/400 NetServer File Share dialog box appears, click OK.

5. From Windows, verify that you can access the AS/400 NetServer and the QIBM share.
   - Choose Start - Find - Computer and enter the AS/400 NetServer name that you recorded in step 3.
   - When the computer name appears, double-click the name to display all shares.
   - If Windows cannot find the computer or the QIBM share does not appear in the list of shares, see the Client Access Express for Windows - Setup documentation (SC41-5507) for information on configuring the AS/400 NetServer.

6. Double-click the IBM AS/400 Client Access Express shortcut.

7. Double-click the Selective Setup icon. The selective setup window appears. There may be a delay of 1 or 2 minutes before the window appears.

8. Click Next.

9. The Selective Setup Options dialog appears. Choose Source directory and fill in the network share for QIBM on your AS/400; for example:

   `\myas400\QIBM`

   where myas400 is the name of your AS/400 system as shown in Operations Navigator.

10. Click Next. The message “Checking for components available on managing system” appears.

11. If you are not already signed on to your AS/400, sign on now.
12. The Component Selection panel appears. In the component list, find the AS/400 Operations Navigator component and select the Lotus Domino subcomponent under this component. In addition:
   - If you plan to manage Domino servers, make sure the Network subcomponent is selected.
   - If you plan to register Domino users, make sure the Users and Groups subcomponent is selected.

13. Click Next on this panel and the following panel.

14. Click Next again on the Start Copying files panel.

   The Preparing to Install dialog box appears at the bottom right-hand corner.

15. The Install Completed panel appears. Click Next.

   The Readme - Notepad file appears.


Directory synchronization

Here are some additional considerations for directory synchronization. For details on directory synchronization, see Chapter 4 in Installing and Managing Domino for AS/400.

Software requirements for directory synchronization
For directory synchronization to work properly, you must install Domino software option 1 (AS/400 Integration) and option 6 (HiTest C API). If option 6 is not installed on your AS/400, you see this message on the Domino server console:

File does not exist: QNNDIHK

If you see this message, run the LODRUN command again to install option 6. For details, see “Installing the Domino software” in Chapter 1 of Installing and Managing Domino for AS/400.

Note  Starting with Domino for AS/400 4.6.3, the system automatically installs option 6 if you install option 1.

Additional setup when installing directory synchronization software later
Directory synchronization depends on a hook driver being called when a document is created, changed, or deleted in a Domino address book. If software option 1 is installed, the CFGDOMSVR command defaults to add a statement to the NOTES.INI file that automatically calls the directory synchronization hook driver. However, if you install software option 1 after the server is set up, you must use the CHGDOMSVR command to update the NOTES.INI file so that the hook driver will be called. In the CHGDOMSVR command, specify *SYSDIR for the Directory services option.

If you install software option 1 but do not use directory synchronization, you can gain a performance advantage by using the CHGDOMSVR command to remove *SYSDIR from Directory services for the server.

Additional setup when using directory synchronization to maintain mail information
If you use directory synchronization to maintain mail information, you must configure both directory synchronization and the Domino SMTP/MIME MTA in the same Domino domain. That is, you can configure directory synchronization and the MTA on different Domino servers on the same AS/400, but both servers must be in the same Domino domain.

If you configure the MTA on a different Domino server on your AS/400 than the Domino server that has directory synchronization, you must perform additional steps. Assume for the following steps, that the MTA runs in Domino server MTASRV, and directory synchronization runs in Domino server DIRSYNCSRV.
- Replicate the Public Address Book of the DIRSYNCSRV server with the Public Address Book of the MTASRV server.
- Update the Internet Message Transfer Agent (SMTP MTA) section of the Server document for the DIRSYNCSRV server. Use the same values as the following fields in the Server document for the MTASRV server:
  - Global Domain name
  - Fully qualified Internet host name

**Access control for directory synchronization databases**
Directory synchronization is shipped with three databases: NNDILOG.NSF, NNINSRV.NSF, and NNDIRSYC.NSF. As shipped, these databases allow Manager access except for deleting documents. The Domino administrator should update the access control list for these databases to allow or restrict access as appropriate for individual users or all users. For example, to allow one or more users to delete documents from a database:

1. On your Lotus Notes® client workspace, select the database you want to change.
2. Choose File - Database - Access Control.
3. Select a specific user or select Default for all users.
4. Click the box next to the Delete documents option.

**Ensuring that directory synchronization starts when the server starts**
To make sure that directory synchronization starts each time the Domino server starts, define the QNNDISTJ program that starts directory synchronization as an add-in program for the server. You can define an add-in program by creating a Program document in the Public Address Book for the Domino server. If your AS/400 has multiple (partitioned) servers, create the Program document only for the server that has the enabled directory synchronization configuration.

To create the Program document for the directory synchronization start program:

1. On the Notes administrator workstation for the Domino server, open the Public Address Book.
2. In the navigation pane for the Public Address Book, choose Server and then Programs.
3. Click Add Program.
4. Specify the following:
   - Program name: QNNDISTJ
   - Server to run on: the full hierarchical name of your Domino server
   - Enabled/disabled: STARTUP ONLY
5. Click Save and Close.

For more information about Program documents, see *Getting Started with the Domino Server*.

**Precaution when deleting directory synchronization software**
Make sure you stop all directory synchronization jobs before deleting the Domino software that supports directory synchronization (for example, by using the DLTLICPGM command). To stop all directory synchronization jobs, edit any enabled directory synchronization configuration and change its status to Disabled.

For more information, see “Disabling or suspending directory synchronization” in Chapter 4 of *Installing and Managing Domino for AS/400*.
Restriction on using the + symbol in directory synchronization

Be aware of these restrictions on using the + symbol:

- Do not use a + for the SMTP user ID delimiter on AS/400. That is, if you use the AS/400 CHGSMTPA command to change SMTP attributes, do not specify a + for the value of the User ID delimiter (USRIDDELIM) parameter.

- If you create an AS/400-to-Domino mapping that includes the + literal, make sure the field in the Domino Public Address Book that is the target of the mapping does not have a type of Names. Otherwise, the + will be changed to / when the entry in the Public Address Book is saved by directory synchronization.

Avoiding incorrect results of directory synchronization

Directory synchronization could produce results that do not appear to be correct under either of the following conditions:

- You are synchronizing Notes or cc:Mail™ users that have SMTP addresses in the Short Name or Internet Address (ShortName) field.

- The SMTP MTA is set up to use the short name for constructing SMTP addresses and you are synchronizing Notes, cc:Mail, POP or IMAP, X.400, or Other mail users.

The incorrect results appear in the SMTP user ID and Domain fields of the AS/400 system distribution directory. To avoid these incorrect results, make sure the entries in the Domino Public Address Book are set up as follows:

- The value in the Domain field is the same as the domain of the Domino server on which the SMTP MTA is configured.

- The value for each User Name is unique.

Application development and database integration

Here are some additional considerations for application development and database integration. For details on considerations for application development, see Chapter 7 in Installing and Managing Domino for AS/400.

Using a Program document to schedule programs

You can schedule server programs to run at specific times by creating Program documents in the Public Address Book for the Domino server. To start an add-in program using a Program document, you must create a symbolic link for the program in the /QIBM/UserData/Lotus/Notes directory.

You can create a symbolic link by using the AS/400 Add Link (ADDLNK) command. For examples, see Chapter 7 in Installing and Managing Domino for AS/400.
Running tasks when the Domino server is not running

Often, it is useful to run Domino tasks when the Domino server is not running. For example, you might want to compact the Public Address Book when the server is not running. Because Domino for AS/400 security is integrated with the AS/400 operating system, you must make sure that any Domino tasks you run outside of the Domino server have the proper AS/400 authority. Do the following:

- Set the PATH and NOTESPARTITION environment variables for the server.
- Set the current directory for the job to the data directory for the Domino server.
- Run the job under the QNOTES user profile. Each task runs as an AS/400 job.

Following is an example of the commands to run the FIXUP task against the NAMES.NSF file in the /NOTES/DATA directory for the Domino server that is running in the DOMINO01 subsystem:

**Note** You can also place these commands in a CL program.

1. Use the following command to set the PATH environment variable. If the path name for the data directory of your server is not /notes/data, substitute the actual path name for /notes/data.

   ```
   addenvvar envvar(PATH)
   value('/qibm/proddata/lotus/notes:/qibm/userdata/lotus/notes:/notes/data')
   ```

2. If the Domino server is a partitioned server, set the NOTESPARTITION environment variable.

   **Tip** If you have more than one Domino server on your AS/400, they are partitioned. If you are not sure, use the WRKDOMSVR command to determine whether you have multiple servers. Or, run the Show Tasks server command from the Domino console. The display shows the partition number for a server, if it has one. You can also find the partition number by looking in the file named .SGF.NOTESPARTITION in the data directory of the partitioned server.

   Use the following command. For the value, use the partition number of the Domino server. For example, if the server partition number is 01, use '01' for the value.

   ```
   addenvvar envvar(NOTESPARTITION) value('01')
   ```

3. Use the following command to set the current directory for the job to the data directory of the Domino server. Substitute the actual data directory name for /notes/data.

   ```
   chgcurdir dir('/notes/data')
   ```

4. Submit the job under the QNOTES user profile.

   ```
   sbmjob cmd(call pgm(qnotes/fixup) parm('names.nsf')
   user(qnotes) curlib(*usrprf) inllibl(*none) cpyenvvar(*yes)
   ```

   **Note** To submit this job, you must have *USE authority to the QNOTES user profile. You should grant this authority carefully because the QNOTES user profile has *ALL authority to your entire Domino data directory.
Calling programs from Domino agents

There are several ways for Domino agents to call programs running on the AS/400.

- You can call into C functions within service programs by using the LotusScript "Declare Function" statement. The routines within the service program that you call can call other programs. However, note that the program you are calling is running in a thread-enabled job. Furthermore, if the agent is being initiated through the Web server, the program is running within a thread. There are restrictions on the system regarding what can run in thread-enabled and threaded processes. For example, you cannot call RPG programs from threaded jobs. RPG is not thread-safe. If you can handle these issues, calling C routines gives you the best support for parameter-passing currently. Here is a LotusScript statement that shows how to declare a the routine "runthis" that is in the CmdShell service program (*SRVPGM):

```lotusscript
Declare Function runthis Lib "/qsys.lib/mylib.lib/CmdShell.srvpgm" (Byval cmdstr As String) As Integer
```

The runthis routine takes one parameter, cmdstr. For more information, see the Notes Help database, the Index view, "External declarations".

To call the runthis routine in your LotusScript code, you simply code runthis("parameters_go_here") where "parameters_go_here" are your parameters.

```lotusscript
cmdstring="call mylibr/getjobinf"
rc=runthis(cmdstring)
Print "Cmdstring: ";cmdstring
```

The C program would look like the following:

```c
#include <stdlib.h>
/* This simple program changes the string passed in on cmd to the text 'done calling' */
int runthis(char *cmd)
{
    int rval;
    strcpy(cmd,"done calling");
    return rval;
}
```

As you can see, parameters can be input and output. The string type is unique in that it is passed as a pointer. Make sure you read the related topics under the topic "Calling external C language functions in LotusScript" in Notes™ Help.

For parameters other than pointers, you should indicate _System linkage in your routine. This is only supported by the AS/400 ILE C compiler. Here is an example of the _System linkage statement:

```c
int _System runthis(char *cmd) {
    ... /* your routine code goes here */
}
```
You can also use the LotusScript Data Object (LS:DO) to call code that is not thread-safe. The 4.6b version of the code (the original version for AS/400) had a restriction that prevented output parameters from being returned by the program. As of Domino for AS/400 4.6.2, you can pass both input and output parameters by using a new ExecProcedure Method that was added in the ODBCResultSet object to execute a stored procedure.

The syntax is:

```lotus
status = odbcResultSet.ExecProcedure(procedureName$, [,arg1] [,arg2] ... [,arg30])
```

or

```lotus
status = odbcResultSet.ExecProcedure(procedureName$, DB_PARAM_ARRAY, argArray)
```

The parameters are:

- `procedureName$`:
  - String. The name of the procedure you want to execute.
- `arg1...30`:
  - You can pass up to 30 arguments to a procedure. The arguments can be in any format. An argument can serve as input, output, or both. Argument data types must be consistent with the requirements of the procedure. All arguments are separated by commas. Any missing arguments are treated as NULL values. The 30-argument limit is a LotusScript limitation.
  - To enter over 30 arguments, use the alternate form. The second argument must contain the constant DB_PARAM_ARRAY. The third argument can be an array of any size or type.

The procedure can return values in several forms, depending on the definition of the stored procedure in RDBMS:

- The procedure can return output arguments.
- The procedure can return a result set.
- The procedure can return an execution status, as returned by the back-end RDBMS.
- The Java toolkit for AS/400 also has an interface to call programs. If you are using Java in your agent, see this Web site:
  ```
  http://www.as400.ibm.com/java
  ```
  
  On this Web site, click AS/400 Toolbox for Java for more information.

### Summary of API updates for Domino for AS/400 4.6.3

The table below summarizes the updates to application development tools that are part of 4.6.3:

<table>
<thead>
<tr>
<th>Developer tool</th>
<th>Domino for AS/400 updates</th>
<th>Where to find more information</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPG APIs</td>
<td>New as of 4.6.2</td>
<td>See the following topic &quot;RPG APIs&quot;</td>
</tr>
<tr>
<td>LSX Toolkit</td>
<td>New version V2.2a as of 4.6.3</td>
<td>See the following topic &quot;LSX Toolkit&quot;</td>
</tr>
<tr>
<td>C++ APIs</td>
<td>No updates</td>
<td>See the following topic &quot;Domino for AS/400 C++ API&quot;</td>
</tr>
<tr>
<td>HiTest C APIs</td>
<td>No updates</td>
<td></td>
</tr>
<tr>
<td>C APIs</td>
<td>Updates as of 4.6.2</td>
<td>See the general Domino Release Notes document</td>
</tr>
</tbody>
</table>

---

Domino for AS/400 Release Notes 23
RPG APIs
For programmers who are unfamiliar with C, C++, or Java, a set of RPG APIs is available from the Web. You can use these APIs to access Domino databases from AS/400 RPG applications. These RPG APIs and instructions for using them are available at the following Web site:

http://www.softmall.ibm.com/as400/domino

LS:DO
Following are AS/400-specific LS:DO updates:

- The ODBCResultSet object has a new ExecProcedure method to run a stored procedure. On AS/400, the name of the procedure should contain the name of the library. For example:
  
  odbcResultSet.ExecProcedure(mylib.myproc,inarg1,outart2)

- AS/400 does not support the new property UseRowID in the ODBCQuery object. To ensure that the system updates the correct row, specify the primary key or unique key column on the SQL statement. For example:
  
  Select unique_key,column1,column2 from mylib.mytable

LSX Toolkit
A new version of the LSX Toolkit (V2.2a) is available. For a description of the new functions, see the following file:

/lsx/readme.400

You can download the new version of the LSX Toolkit from the following Web site:

http://www.lotus-developer.com

Choose Downloads, then choose Next, then choose LSX Toolkit.

Refer to this Web site for future updates to the LSX Toolkit.

Domino for AS/400 C++ API
The Domino for AS/400 C++ API Release 4.1 is available. You can download the C++ Release 4.1 from the following Web site:

http://iws.as400.ibm.com/lotus_notes/devtools/cppapi41/cppapi41.htm

For C++ documentation, see this Web site:

http://www.notes.net/notesua.nsf

LIBASCII for ASCII-EBCDIC conversion
The LIBASCII package provides a facility that assists in converting between ASCII and EBCDIC in applications that run on a Domino for AS/400 server. LIBASCII serves as an ASCII-EBCDIC interface layer for commonly used system APIs, such as open() or sprintf(), that take and return EBCDIC strings. You need to use such an interface layer in cases where user-written code is compiled into ASCII, such as when using the Domino C APIs. By using LIBASCII, you can significantly reduce the number of changes required when porting Domino applications to the AS/400.

Currently, LIBASCII includes support for only the most commonly used APIs. For APIs that are not supported, you can use some of the inconv() routines that are built into LIBASCII.

LIBASCII is available at the following Web site:

http://www.as400.ibm.com/notes

Choose Developer tools.
Disabling Java agents
If the AS/400 Developer Kit for Java (5769JV1) is installed on your AS/400, the Domino Agent Manager (AMgr) and HTTP server automatically support running Java agents. You can disable Java agents by adding the following line to the NOTES.INI file for the Domino server:

EnableJavaAgents=0

Running Java agents on the server
Beginning with 4.6.2, you can run Java agents on the server using either of these methods:

- The NotesAgent.RunOnServer method from LotusScript
- The lotus.notes.Agent.runOnServer() method from Java

If the target agent on the server is a Java agent, then you must be running OS/400 V4R3. Otherwise, you receive an error on the Domino console such as:

    JVM: No JNI environment for current thread. Program must link with notes0j to run Java agents.

Scheduled Java agents will run on both V4R2 and V4R3 of OS/400. The table below summarizes the support for running agents on the server:

<table>
<thead>
<tr>
<th>AS/400 and Domino version</th>
<th>Scheduled Java agents</th>
<th>Agents invoked via RunOnServer method (Java or LotusScript)</th>
<th>Agents invoked by Web browsers</th>
</tr>
</thead>
<tbody>
<tr>
<td>V4R2 and Domino 4.6b</td>
<td>Supported</td>
<td>Not supported</td>
<td>Supported</td>
</tr>
<tr>
<td>V4R2 and Domino 4.6.2 or later</td>
<td>Supported</td>
<td>LotusScript only</td>
<td>Supported</td>
</tr>
<tr>
<td>V4R3 and Domino 4.6.2 or later</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Java restrictions
The getUserInfo() method in the lotus.notes.Registration Class (Java BackEnd Class Programming) is not supported on any of the Domino platforms.

The Java method public boolean isCurrencyZero() in class lotus.notes.International will always return false on AS/400.

Java servlets
To run Java Servlets with the Domino HTTP server, you must have the following:

- Domino for AS/400 4.6.2 or a later release
- OS/400 Version 4 Release 3 or a later release

For a description of how to enable Java servlets with Domino, see the following Web site:

    http://notes.net/today.nsf/cbb328e5c12843a9852563dc006721c7/90bdfe8b7d9672b8525659a0051b7a8?OpenDocument

On AS/400, the QNOTES user profile must have *RWX authority to the class files for your servlets.

SQL naming conventions
When you specify SQL statements for the LotusScript ODBCQuery class or in @Db functions, make sure you use the SQL naming convention. That is, use:

collection.table

Not:

collection/table
Limit on number of concurrent SQL statements
DB2/400 limits the number of internal handles that can be used for processing SQL requests. This limit may cause problems with the @Db or LS:DO functions run by the Domino HTTP server.

These problems are indicated by a message in the Domino HTTP server job log, such as:

Error Occurred in SQL Call Level Interface. Reason code of 14.

If you see such a message, change the number of threads that the HTTP server can use to process requests. You can change this number by changing the settings in the Server document in the Public Address Book. In the Number of active threads field, specify a number of threads that is no more than 100.

Note The HTTP server runs multiple threads only if the NOTES.INI file has the following statement:

DominoAsynchronizeAgents=1

The default is:

DominoAsynchronizeAgents=0

Handling prestarted jobs that process SQL requests
DB2/400 uses AS/400 prestarted jobs for processing SQL requests. These jobs are started when the Domino server is started on AS/400 through the STRDOMSVR command. If the Domino server is not started when you run standalone applications that call @Db or LS:DO agents, you may need to explicitly start the prestarted jobs. You need to start the prestarted jobs if you see a message such as the following in the Agent Manager job log:

No authority has been granted to use the command

To start the prestarted jobs, enter this AS/400 command:

strpj sbs(qsyswrk) pgm(qsys/qsqsrvr)

You might also encounter problems if you have altered the subsystem description for the QSYSWRK subsystem and removed the entry for the QSQSRVR prestart job. If a Domino agent requests DB2/400 data and the QSQSRVR job is not running in the QSYSWRK subsystem, the Domino agent job hangs.

An OS/400 fix is available to cause the agent to end with a connect error instead of hanging. The fix is OS/400 SQL/CLI PTF SF46935.

Performance improvements for @Db and LS:DO
As of release 4.6.3, changes to the @Db and LS:DO support provide improved performance when fetching data from relational databases. For the best performance on updates, deletes, and inserts, specify the SQL UPDATE, DELETE, and INSERT statement in the odbcqry.SQL property.
Documentation updates

Here are some updates to specific sections of the *Installing and Managing Domino for AS/400* book.

Required hardware and software for Domino server
Here is some additional information about the hardware and software required for a Domino for AS/400 server.

- The base memory required for Domino for AS/400 is 16MB (not 128MB as stated in the original documentation). Allow 0.5MB to 1.0MB for each active mail user. For more information about sizing an AS/400 for Domino, see the following Web site:
  http://www.as400.ibm.com/notes
- If you plan to develop applications with Notes C or Notes HiTest™ APIs, you must have one of the following compilers:
  
  To compile on the AS/400:
  - AS/400 ILE C Compiler (5769-CX2)
  
  To compile on the workstation:
  - Visual Age C++ for OS/400 (5769-CX4)

Considerations for installing Domino for AS/400 software
The following table shows restrictions when you use the LODRUN command from an asynchronous 5250 console with the Japanese language:

<table>
<thead>
<tr>
<th>Type of connection</th>
<th>Code page 930 (Japan Katakana)</th>
<th>Code page 931 (Japan English)</th>
<th>Code page 939 (Japan Latin extended)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asynchronous console with</td>
<td>Supported</td>
<td>Not supported</td>
<td>Not supported</td>
</tr>
<tr>
<td>5250 emulator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TCP/IP connection with</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
</tr>
<tr>
<td>5250 emulator</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

About the ADDDOMAPP command
Beginning with version 4.6.2, the Add Domino Applications (ADDDOMAPP) command is available for adding Domino applications to your data directory. The installation instructions for applications that use this command describe how and when to use it.

Time to set up the Domino server
The processing to set up a Domino server on AS/400 can take up to 30 minutes. The setup processing takes the same amount of time regardless of whether you use the Configure Domino Server (CFGDOMSVR) command or the Operations Navigator method to set up the server.

For details on setting up a Domino server on AS/400, see Chapter 1 (CFGDOMSVR command) or Appendix A (Operations Navigator method) in *Installing and Managing Domino for AS/400*. 

Domino for AS/400 Release Notes
Considerations for configuring a Domino server

- Beginning with Domino 4.6.2, only one instance of the Configure Domino Server (CFGDOMSVR) command can run at the same time on the same AS/400 system. This restriction was created to avoid possible shared memory conflicts. If a second user attempts to configure a Domino server when the CFGDOMSVR command is already running, the second user receives the following message:

  LNT020D  CFGDOMSVR cannot be run at this time

- Beginning with 4.6.2, the system will not assign a new subsystem number when you change the configuration of a Domino server and specify RPLCFG(*NO).

- When you set up a Domino for AS/400 server at 4.6.3, the setup program puts the Administrator ID file in the administrator's Person document in the Public Address Book as well as the server's data directory.

Installation considerations for Operations Navigator

When you install the additional workstation "plug in" for Domino support in Operations Navigator, ensure that the language version of the plug-in matches the language version of your Domino for AS/400 software. For more information, see this topic: Language requirements for using Operations Navigator

Setting up the SMTP/MIME MTA

The AnyMail function is installed when you install the TCP/IP Connectivity Utilities for AS/400 (5769TC1). AnyMail is not a separate product.

After you set up a Domino server that includes the SMTP/MIME MTA, you must reset the AnyMail function one time by stopping it and then restarting it.

1. Enter the following AS/400 command to stop the AnyMail function:

   endmsf

2. Enter the following AS/400 command to restart the AnyMail function:

   strmsf

Because Domino for AS/400 uses the SMTP support of OS/400 for sending and receiving messages, the SMTP MTA does not have access to host names. As a result, the SMTP log entries have blank host names.

For other details on setting up the SMTP/MIME MTA, see Chapter 2 in *Installing and Managing Domino for AS/400*.

Considerations for setting up SMTP/MIME MTA

If you specify the Internet mail package of SMTP/MIME MTA when you configure a Domino server, the AS/400 creates a default SMTP MTA configuration. However, the system does not automatically activate the values in the following fields in the configuration:

- The Log Level field in the Server document

- The following parts of the SMTP Address Conversion fields in the Global Domain document:
  - Internet address lookup
  - Local part formed from

To activate the configured values for these fields, do the following:

1. Open the Server document and save it.

2. Open the Global Domain document for editing and save it.
3. If you use directory synchronization, stop the directory synchronization jobs. From any AS/400 command line, enter:
   
   call qnotesint/qnndiend

4. Stop the AS/400 QMSF job. From any AS/400 command line, enter:
   
   endmsf

5. Stop the SMTP/MIME MTA. From the Domino server console, enter:
   
   tell smtpmta quit

6. Restart the SMTP/MIME MTA. From the Domino server console, enter:
   
   load smtpmta

7. Restart the AS/400 QMSF job. From any AS/400 command line, enter:
   
   strmsf

8. If needed, restart the directory synchronization jobs. From any AS/400 command line, enter:
   
   call qnotesint/qnndistj

Deleting a Domino server or Domino software
Make sure you stop the Domino server before trying to delete the server or Domino software from AS/400. Beginning with 4.6.2, if you attempt to delete an active Domino server, you receive a warning message.

For more information, see Chapter 3 in Installing and Managing Domino for AS/400.

Stopping a Domino server on AS/400
Beginning with 4.6.2, when you use the ENDDOMSVR command with the default options, the system ends all the server jobs. However, the subsystem for the server remains active. (In earlier releases, the subsystem was also ended.)

Security for Domino console commands
Anyone whose AS/400 user profile has *ALLOBJ special authority can submit a Domino server command from the Domino console for a server. Domino does not log the specific AS/400 user profile that is associated with a server command. Therefore, you will not be able to determine which AS/400 user submitted the command. Follow these recommendations to protect and monitor access to your Domino console:

- First and most important, strictly limit the number of user profiles on your AS/400 that have *ALLOBJ special authority. *ALLOBJ special authority when misused can seriously threaten your Domino servers and any other applications and data on your AS/400 system.

- If you suspect that someone is misusing *ALLOBJ special authority on your system, you can set up security auditing at the user level. For each user profile that has *ALLOBJ special authority, specify *CMD level auditing to log each user's command strings. The system will write an audit journal entry for every AS/400 command the user issues, including the WRKDOMCSL command.

  Note For more information about AS/400 security auditing, see the book AS/400 Security Reference (SC41-5303).
Setting up SSL and X.509 certificates on a Domino for AS/400 server

Setting up Secure Sockets Layer (SSL) security for a Domino server requires the administration of SSL keys rings and X.509 certificates. Domino 4.6 provides two application templates for this purpose:

- **Server Certificate Administration (CERTSRV.NTF)**
  
  Use this template to set up a Server Certificate Administration application (CERTSRV.NSF) for:
  
  - Setting up server key rings
  - Managing the process of requesting certificates
  - Installing signed certificates into key rings

  You must have this application on any Domino server on which you use SSL.

- **Certificate Authority (CERTCA.NTF)**
  
  Use this template to set up a Certificate Authority application (CERTCA.NSF) for signing certificates and registering client certificates in the Public Address Book. You need this application only on the server that is set up as the Certificate Authority. Typically, organizations need only one server as a Certificate Authority.

When you install a Domino server on AS/400, both templates are created on the server. Unlike other Domino platforms, however, the Server Certificate Administration application (CERTSRV.NSF) is not automatically created when you install a Domino server on AS/400. You can create the CERTSRV.NSF application database from the CERTSRV.NTF template when required. To run the CERTSRV.NSF database on the server on AS/400, you must:

- Set up Notes client workstation that is communicating with the AS/400. The workstation must have the Notes 4.6 or later client that includes Notes Designer.
- Map a network drive to the AS/400 data directory for the server.
- Specify the mapped drive when you create the key ring files.

For details on setting up and using the certificate applications, see *Getting Started with the Domino Server*. For details specific to AS/400, see Chapter 2 in *Installing and Managing Domino for AS/400*.

**Backup and recovery tips**

Following is some additional information that might be helpful in planning backup strategies for your Domino for AS/400 servers:

- Options 21, 22, and 23 from the Save menu place the system in a restricted state, which includes stopping all active subsystems with the End Subsystem (ENDSBS) command. The ENDSBS command is not the preferred method for ending Domino servers because it might result in data loss or corruption. Therefore, before you run option 21, 22, or 23 from the Save menu, end all of your Domino servers with the ENDDOMSVR command or by issuing the Quit server command at the Domino console for each server.

- When you run an OS/400 save command with the SAVACT (save while active) option, the system does not save files that are open for write. From an OS/400 perspective, any Domino database that is in use is open for write. Therefore, to ensure that you completely save your Domino databases, you must make sure the databases are not open. Either end the Domino servers or use the Drop All server command followed by the Dbcache Flush server command before saving your Domino databases.

For more information about backup and recovery, see Chapter 5 of *Installing and Managing Domino for AS/400* and the book *AS/400 Backup and Recovery*. 
**Backing up your Domino mail.box database**

*Note*  The topic “Examples: Backing up mail from your Domino server” provides examples of the commands for backing up mail files. The following is a revision to the command for backing up the MAIL.BOX database:

- To back up a specific database, such as the MAIL.BOX database, use the following command:

  ```
  sav dev('/qsys.lib/tap01.devd') obj('/notes/data/mail.box')
  ```

**Considerations for swapping to the QNOTES user profile**

To minimize potential security exposures, the QNOTES user profile provides only *USER level authority to AS/400 functions. Therefore:

- If your program swaps to the QNOTES user profile, the program will not have access to typical programmer functions such as debug commands.
- Your program should include an exception or cancel handler to swap back from the QNOTES profile in the event the program aborts or is canceled.

You should not change the QNOTES user profile.

For more information about the QNOTES user profile, see Chapter 6 in *Installing and Managing Domino for AS/400*.

**Restrictions for thread safety**

*Note*  The topic "Restrictions for thread safety" in Chapter 7 of *Installing and Managing Domino for AS/400* lists programs that can run in secondary threads. The following revision contains an updated list.

The following programs run in processes (jobs) that can have multiple threads:

- Programs that are started as a result of Program documents in the Public Address Book and any programs they call
- Programs that are started as a result of entering the Load command on the Domino server console and any programs they call
- Server-based agents invoked by a Web browser when the NOTES.INI specifies DominoAsynchronizeAgents=1

The following programs run in secondary threads:

- Hook drivers and extension manager applications that run in the Domino server
- C programs called by the LotusScript Declare statement in agents as well as any programs called from those C programs
- Programs specified in the LotusScript Shell statement in agents as well as any programs called by those programs.

The AS/400 operating system (OS/400) has restrictions on jobs capable of running multiple threads and on the use of secondary threads. For details, see the AS/400 books *System API Programming* (SC41-5800) and *System API Reference* (SC41-5801).
Accessing the database that contains the C header files
One way of accessing the header files for C, C++, and HiTest APIs is to detach a zip file from the Domino database named APPDEV.NSF. This database is located in the specific language subdirectory under the OS400 directory on the Domino for AS/400 CD. For example, if the CD is in the CD-ROM drive on a workstation, you can find the US English version of the header files at this location:

d:\os400\useng\appdev.nsf

where \textit{d:} is the drive letter of the CD-ROM drive.

For more information, see "About enabling the C++ compiler to access the header files" in Chapter 7 of Installing and Managing Domino for AS/400.

Compiling and linking the C program on AS/400

Note The topic "Compiling the C program on AS/400" in Chapter 7 of Installing and Managing Domino for AS/400 has a brief description of how to compile a C program. The following updated description provides additional details on creating and linking the C program.

The \textit{ILE C/400 Programmer's Guide} (SC09-2069) describes how to compile a C program using the AS/400 compiler. In using the procedures described in that book, you need to:

1. Put the \textit{QNOTESAPI} library in your library list. For example, enter this AS/400 command:

   \texttt{ADDLIBE QNOTESAPI}

2. Specify a define name of OS400 when you compile the C module on AS/400 (\texttt{CRTCMOD} command). For example:

   \texttt{crtcmod module(ctest/foo) define(os400)}

   This command creates a module called \texttt{FOO.MODULE} in the library \texttt{CTEST} on the AS/400.

3. After compiling the C module, link the module into a program (\texttt{CRTPGM} command) or a service program (\texttt{CRTSRVPGM} command) on the AS/400 on which you compiled the module. When you use either the \texttt{CRTPGM} or the \texttt{CRTSRVPGM} command, bind in the \texttt{LIBNOTES} service program found in the \texttt{QNOTES} library. Here is a link statement that uses \texttt{CRTPGM} to make a program from the above compilation:

   \texttt{CRTPGM PGM(CTEST/FOO) MODULE(CTEST/FOO) BNDSRVPGM(QNOTES/LIBNOTES)}

   The \texttt{CRTPGM} command creates \texttt{FOO.PGM} in the library \texttt{CTEST.LIB}.

   Depending on what type of Notes application is being written, you may need to link in either or both of the \texttt{NOTES0} and \texttt{NOTESAI0} modules. These two modules are in the \texttt{QNOTESAPI} library. To link in either or both of these modules, add the module or modules to the module list of the \texttt{CRTPGM} or \texttt{CRTSRVPGM} command. For example:

   \texttt{CRTPGM PGM(CTEST/FOO) MODULE(CTEST/FOO QNOTESAPI/NOTES0) BNDSRVPGM(QNOTES/LIBNOTES)}

4. If the application is to run under the Domino server, you must manually create a symbolic link from the Domino server UserData directory to the location of the executable:

   \texttt{ADDLNK OBJ('/QSYS.LIB/CTEST.LIB/FOO.PGM')}\texttt{NEWLNK('/Qibm/UserData/Lotus/Notes/foo.pgm') LNKTYPE(*SYMBOLIC)}

   You can run the program by using the AS/400 CALL command. The program must run under the \texttt{QNOTES} user profile and you must set up a Path environment variable to identify the required AS/400 directories.

   You can swap to the \texttt{QNOTES} user profile in your program or you can specify \texttt{QNOTES} when you run the program. For an example of swapping profiles, see Chapter 6 in \textit{Installing and Managing Domino for AS/400}. The AS/400 Submit Job (SBMJOB) command allows you to specify a user profile when you call a program.
Here is an example of using the SBMJOB command to run the FOO program that is in the CTEST library:

```
sbmjob cmd(call pgm(ctest/foo)) user(qnotes) cpyenvvar(*yes)
```

In addition to specifying the QNOTES user profile, this command copies the Path environment variable to the submitted job. For details on setting up the Path environment variable, see Chapter 7 in *Installing and Managing Domino for AS/400*.

**Integrating Domino and DB2/400 data**

**Note** The topic “Remote connection differences” in Chapter 7 of *Installing and Managing Domino for AS/400* describes what to do if the first attempt to access a remote system fails. The following updated description provides additional details.

When you access data from a remote AS/400 for the first time, the request may fail with the following error message:

SQL package QSQCLIPKGN in QGPL not found

**Note** You retrieve messages by using the GetExtendedErrorMessage method.

If the request fails with this error message, you need to create the required SQL package on the remote AS/400.

First, sign onto the remote AS/400 and perform the following operations:

1. Enter the command:
   ```
   wrkobj obj(qgpl/*all) objtype(*sqlpkg)
   ```

2. Look for these two objects:
   ```
   ● QSQCLIPKGC
   ● QSQCLIPKGN
   ```

3. If the object QSQCLIPKGC exists, delete it:
   ```
   dltsqlpkg sqlpkg(qgpl/qsqclipkgc)
   ```

4. If the object QSQCLIPKGN exists, delete it:
   ```
   dltsqlpkg sqlpkg(qgpl/qsqclipkgn)
   ```

Next, use a 4.6 or later version of the Notes client to create and run the following LS:DO script on the local AS/400 or add the script to the beginning of your existing LS:DO script.

**Event Options:**

```
Option Public
Uselsx "*lsqlodbc"
```

**Event Initialize:**

```
Sub Initialize
    Dim con As New ODBCConnection
    con.AutoCommit=False
    If (con.ConnectTo("DataSource","UserID","Password")) Then
        Call con.Disconnect
    End If
End Sub
```

To verify that your script ran successfully, repeat steps 1 and 2 above.

After you successfully run your script, delete the script you added. The added script only needs to run once to create the SQL package on the remote system.
SMTP/MIME MTA restrictions on AS/400

Here are restrictions you should know about when using the Domino SMTP/MIME MTA on AS/400:

- All UNIX SMTP/MIME MTA restrictions apply to AS/400.
- The AS/400 SMTP/MIME support may not recognize some forms of addressing that are used by MTAs on other platforms.
- The AS/400 system distribution directory limits SMTP address User Names to 64 characters. Users can send messages to recipients with larger User Names, but AS/400 will not accept a "replied to" message from those users.
- Do not hold or stop SMTP/MIME MTA tasks by using the AS/400 HLDJOB or ENDJOB command. Stop the MTA by using the Tell server command from the Domino console. For details, see Chapter 3 in *Installing and Managing Domino for AS/400*.
- OfficeVision/400™ does not support the attachment coding method of UUencode. Therefore, you cannot exchange UUencoded messages with OfficeVision/400.
- Messages issued to Domino logs by the SMTP/MIME MTA are not translated.
- You cannot trace the SMTP/MIME MTA protocol drivers, because they do not exist on AS/400.
- Domino for AS/400 does not support character set detection routines.
- The SMTP/MIME MTA on AS/400 does not support Macintosh inbound and outbound mail with Macintosh attachments at this time. Future support is planned.
- The SMTP/MIME MTA tasks run at the job priority of AS/400 interactive users (job priority 20). The e-mail processing could slow processing on other critical jobs.

Starting with release 4.6.3, you can use a new SMTP/MIME MTA function to change the job priority and time slice. This function is provided by SPR JBLM3XKULB. See "Domino for AS/400 4.6.3."

To change the job run-time priority and time slice, use the CRTCLS command to create an AS/400 class with the name SMTPMTAxx in the QUSRNOTES library, where xx is the subsystem number associated with the Domino server. In the CRTCLS command, specify the run priority or time slice, or both. For example:

```
crtcls cls(qusrnotes/smtpmta05) runpry(60) timeslice(1200)
```

The next time you start the SMTP/MIME MTA by using the AS/400 STRDOMSVR command or the Load Smtpmta server command at the Domino server console, the SMTP/MIME MTA job runs with the priority and time slice that are specified in the class; for example, 60 and 1200. If you do not create a class with job priority and time slice values, the system uses an SMTP/MIME MTA job priority of 20 and a time slice of 2000.

The following SMTP/MIME MTA function (available with Domino 4.6.1) is not available on AS/400 because this function requires SMPTP/MTA ETRN. ETRN is not currently supported by OS/400:

Now certified in Release 4.6.1, the new dial-up feature implemented by the Release 4.6.1 Domino SMTP MTA lets organizations use a single dial-up Internet connection to send and receive Internet mail for their entire company. Dial-up features a mode that leverages the new ETRN command. The ETRN command stands for Extended Turn and is an SMTP Service Extension specified by RFC 1985. The ETRN dial-up mode provides a mechanism for the SMTP client host to notify the ISP's SMTP server host that it is ready to accept remotely queued mail for one or more Internet domains.
Remote LAN service

Domino for AS/400 now supports the remote LAN service. This capability allows a Domino server to communicate with a remote Domino server through phone lines. Of course, both servers must be connected to the phone lines through modems. You can use a remote LAN service to perform tasks such as remote Domino server replication or mail routing between two Domino servers. This capability does not affect a remote connection between a Notes client and a Domino server.

For details on setting up a remote LAN service, see Getting Started with the Domino Server or the Notes administrator help database (HELPADMN.NSF). The following information applies only to AS/400.

**AS/400 requirements**

To use a remote LAN service, your AS/400 must have this hardware:

- 2629 IOP
- 2699 IOA
- 2720 PCI WAN/Twinaxial IOA
- 2721 PCI Two-line WAN IOA
- Modems
- Modem cables

You must have this software:

- OS/400 Version 4 Release 2 or later with the latest cumulative PTF package.

  **Note**  The Lotus Domino remote LAN support was not sufficiently tested with the OS/400 Version 4 Release 3 dial-on-demand support at the time these release notes were published. Look for future information on the use of this function on the AS/400 Technical Studio Domino Web site at http://www.as400.ibm.com/tstudio/domino/index.htm.


**Setting up remote LAN service**

Setting up a remote LAN service for AS/400 is similar to Domino on a Windows 95 or Windows NT environment. You need to do these tasks:

- Create the PPP profiles that define the connections for the remote LAN service.
- Add a Connection document in the Public Address Book for the Domino server on the calling system.
- Add a Server document in the Public Address Book for the Domino server on the calling system.

**Creating a PPP profile**

Use the Client Access Operations Navigator on a Windows 95 or Windows NT workstation to create the PPP connection profiles:

- Create a *DIAL profile on the AS/400 that is the calling system. The remote LAN service will start the *DIAL connection.
- If an AS/400 is the receiving system, create an *ANS profile on that AS/400. Also use Operations Navigator to start the *ANS connection.

If an AS/400 is both a calling system and a receiving system, create both a *DIAL profile and an *ANS profile. Here are procedures for using Operations Navigator to create a *DIAL profile and an *ANS profile. For other details on creating a profile, see the Client Access help.
Creating the *DIAL profile
1. Open the IBM AS/400 Client Access folder.
2. Click the Operations Navigator icon.
3. In the Operations Navigator window, find the AS/400 for which you want to create the PPP profile and click the + button to expand the directory.
4. Click the + button next to Network.
5. Click the + button next to Point-to-Point.
6. Right-click Connection Profiles to open a context menu. Choose New Profile.
7. For the General properties, specify a profile name of 10 characters or less. If desired, also provide a description.
   Choose a Mode of Switched line-dial.
8. Click the Connection tab.
9. Click Add and specify the phone number of the remote system.
10. Choose a Line name, if one already exists, and click Open.
   Or add a new line name. To add a line name, type the name in the entry field provided and click New.
11. Either select or specify the name of the communications Hardware resource that you want to use; for example, CMN08.
   Tip You can determine the communications hardware resources by using option 1 on the AS/400 Hardware Resources menu. To request this menu, enter the AS/400 command:
   go hardware
12. If needed, select or specify the Interface type; for example, RS232/V.24.
13. Click the Connection tab and choose Both for the Connections allowed. The Both option allows you to use the line for both dialing and answering. Use the default values for the other fields.
14. Click the Link tab and verify that the line speed matches the capabilities of your communications equipment.
15. Click the Modem tab and select the type of modem that you have on the system. Then click OK.
   You now have set a line description that you can use for both the *DIAL and *ANS profiles.
16. Click the TCP/IP Settings tab and choose Dynamically assign for both the Local IP address and the Remote IP address. On many, if not most, systems, the answering system assigns an IP address to an incoming call.
17. If dialing into a Windows NT system, click the Authentication tab. For the Local system identification:
   - Click Enable local system identification.
   - Choose PAP only.
   - Specify the User name and Password of a "RAS enabled" user on the Windows NT system: for example, the Administrator Password.
18. Click OK to create the *DIAL profile.
Creating the *ANS profile
Use the same procedure that you used to create the *DIAL profile, except:

- For the General profile properties, choose a Mode of Switched line-answer instead of Switched line-dial.
- For the TCP/IP Settings, specify an address for both the Local IP address and the Remote IP address; for example, 199.5.2.1 and 199.5.2.2.

Starting the *ANS profile
Once you have created a PPP profile using Operations Navigator, also use Operations Navigator to start the profile:

1. Right-click the profile.
2. Choose Start.

Adding the Connection document
Use the Notes administrator workstation for the Domino server to add the Connection document for the calling server:

1. From the Notes workspace, choose File - Tools - Server Administration.
2. Click Servers and choose Servers View.
3. Choose Create - Server - Connection.
4. Specify the values shown in the table below.

Note The login name and password are ignored by the remote LAN program on AS/400. The AS/400 system administrator must set up the profiles with the correct user information (usually none) to ensure security of the system. Domino has built-in security that ensures users must have a proper ID to access the server.
5. Enable or Disable Mail Routing and Replication for this connection.

   If the Mail Routing and Replication is enabled, the Domino server automatically loads LIBRAS.SRVPGM. Once loaded, this program tries to connect to the remote system using the *DIAL profile name that is specified for the Remote connection name in the Connection document.

   **Note** If you want to set up a schedule, make sure you set the Schedule field to ENABLED in the Scheduled Connection section.

6. Click Save and Close.

**Entry** | **Value**
--- | ---
Connection type: | Remote LAN service
Remote LAN port | TCPIP
Source server: | Local Domino server name (for example, Server1)
Source domain: | Local Domino domain name (for example, Acme1)
Destination server name: | Remote Domino server name (for example, Server2)
Destination domain name: | Remote Domino domain name (for example, Acme2)
Choose a service type: | Microsoft Remote Access Service (RAS)

   **Note** To see the service types, click Choose a Service Type.

Remote LAN service configuration: | **Note** To see the configuration fields, click Modify Remote LAN Service Configuration.
Remote connection name: | Name of *DIAL profile you created
Login name: | Ignored
Password: | Ignored
Phone number: | Phone number of remote system (overrides the phone number in the *DIAL profile if it is different)
Optional network address: | IP address of remote system (for example, 10.8.4.5)

**Adding a Server document**

Use the Notes administrator workstation for the Domino server to add a Server document for the remote server in the Public Address Book of the calling server:

1. From the Notes workspace, choose File - Tools - Server Administration.
2. Click Servers and choose Servers View.
4. Specify the server settings for a remote server. Make sure you provide information for the Network Configuration. For an example of the Network Configuration settings, see the table below.

5. Click Save and Close.

<table>
<thead>
<tr>
<th>Port</th>
<th>Notes Network</th>
<th>Net Address</th>
<th>Enabled</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCPIP</td>
<td>NETWORK1</td>
<td>10.8.4.5</td>
<td>ENABLED</td>
</tr>
</tbody>
</table>

Errors
The Domino console shows any errors that occur during connection. The errors begin with:

RAS 400: xxx.

International language considerations

Here are some limitations and considerations for using Domino for AS/400 in languages other than English.

Starting a Domino server that runs under a double-byte user profile
Domino server jobs on AS/400 run under the QNOTES user profile. If the locale specified for the QNOTES user profile has a double-byte CCSID, the job from which you start the server (by using the STRDOMSVR command) must also have a double-byte CCSID.

If you start the Domino server from a job that has a single-byte CCSID, the server is started with the single-byte CCSID instead of the double-byte CCSID specified for the QNOTES user profile. The job log of the job running under the Domino server contains a message that indicates the job CCSID was changed from the requested double-byte CCSID to the single-byte CCSID.

Avoiding code page conversion problems for the Domino server console
The Domino console on AS/400 (displayed by using the WRKDOMCSL or DSPDOMCSL command) uses the character identifier (CHRID) of the job's device description to tag data that is entered and displayed on the console. To avoid conversion problems, such as substitution of some characters, make sure the CHRID for the workstation device specifies a code page that matches the code page of the Domino server. The code page used by the Domino server is based on the locale value that is specified for the QNOTES user profile. To determine the locale:

1. Enter this AS/400 command:
   dspusrprf qnotes
2. Press the PAGE DOWN key until you see the line that begins:
   Locale . . . . . . . . :

   **Note** If you are on a non-English system and you are not sure of the translated name for the "Locale" parameter, you can use the CHGUSRPRF command. Press F10 for additional parameters. Then press F11 to display the parameter names. Look for LOCALE.

For information on what CCSID values are used for each locale, see the following description of "International language input and display." For details on how CCSIDs map to code pages and how to change the CHRID of a device description, see the AS/400 International Application Development book (SC41-5603).
Using the Domino server console on double-byte systems
The Domino console on AS/400 has the following limitations on systems using a double-byte character set:

- If the job CCSID is a double-byte CCSID, the F9 key does not perform an action.
- Lowercase single-byte characters may display incorrectly on the Domino console on AS/400 systems that have the Japanese (Katakana) double-byte character set (Feature 2962) as the primary language when some 5250 emulation programs are used. For example, the IBM Personal Communications Workstation Program displays these characters incorrectly when running over a TCP/IP connection. To work around the problem, use one of the following alternatives:
  - Use the remote console either from a Notes client or using the Domino Web Administration tool.
  - Use an SNA APPC (LU 6.2) connection for your Personal Communications Workstation Program and specify a Host Codepage of 5035.
  - Use Graphical Access/400, a part of Client Access for AS/400, and sign on using a user profile that has a CCSID value of 5026.

Restriction on double-byte database file names on AS/400
PC and UNIX platforms support double-byte file names for Domino databases, but Domino for AS/400 does not support double-byte file names. If you replicate a database with a file name that uses a double-byte character set from a PC or UNIX platform to AS/400, you must change the file name to a single-byte character set. Otherwise, full text indexing cannot be created.

Running Domino using a secondary language
If the national language version (NLV) of the Domino for AS/400 software does not match the NLV of your primary language, the Domino for AS/400 language version is installed as a secondary language. To use Domino for AS/400, you must add the secondary language library to the system library list. You need to determine the feature number of the NLV for the primary language and any installed secondary languages on your system:

1. Enter this AS/400 command:
   ```
   go licpgm
   ```
2. On the resulting Work with Licensed Programs menu, enter 20 to display installed secondary languages.
3. On the Display Installed Secondary Languages panel, determine the primary language and the library containing each installed secondary language.

If the primary language of the system does not match the NLV of Domino for AS/400, add the secondary language library to the top of the system part of the user's library list. For details on the steps to ensure that the secondary language can be used, see the AS/400 National Language Support book (SC41-5101).

Language requirements for using Operations Navigator
To use the Operations Navigator support of Domino for AS/400, make sure the national language version (NLV) of Client Access for AS/400 matches the NLV of Domino for AS/400. The same Client Access NLV must be installed on both the AS/400 host and the client workstation.

To determine if the NLV of Client Access on AS/400 matches the NLV of Domino for AS/400:

1. Enter this AS/400 command:
   ```
   dspswfrsc
   ```
2. Press F11 to display the libraries and releases.
3. Verify that the value listed for the Feature of 5769LNT Option 1 with a Feature Type of *LNG matches the value listed for the Feature of 5763XD1 with a Feature Type of *LNG.
**Note** Secondary languages for 5763XD1 must be installed from a separate CD.

To determine the languages that are available on the client, use Windows Explorer to view subdirectories of the Client Access installation. Find the Client Access directory and verify there is a subdirectory MRI xxxx that matches the NLV of Domino for AS/400.

You must use the matching NLV on the client when you run Domino for AS/400. To select a national language on the client, select Client Access Properties in the IBM AS400 Client Access program group and then the Language tab. To install available secondary languages on the client, use Selective Setup in the Accessories folder of the IBM AS400 Client Access program group.

**International language input and display**

To enter and display other languages on North American or International English versions of Domino for AS/400:

1. Stop the Domino server on AS/400.
2. Change the locale value of the QNOTES user profile that is used to run Domino tasks (jobs). The locale name is /QSYS.LIB/QNOTES.LIB/xxxx.locale where xxxx.locale is the value specified in the third column of the table below. Use the AS/400 CHGUSRPRF command to specify that all locale-specific job attributes should be picked up from the specified locale. For example, to set the locale for German, use the following AS/400 command:

   ```as400
   chgusrprf qnotes locale('/qsys.lib/qnotes.lib/de_de.locale')
   setjobatr(*ccsid *datfmt *datsep *decfmt *srtseq *timsep)
   ```

3. Back up the /QIBM/ProdData/Lotus/Notes directory. For details on backing up Domino for AS/400 information, see Chapter 5 in *Installing and Managing Domino for AS/400*.
4. In the table below, find the language that you want to use and copy the .CLS files as indicated. The .CLS files are in the Domino program directory (/QIBM/ProdData/Lotus/Notes).

   **Note** First delete the existing file to which you want to copy the .CLS file. Use the AS/400 CPY command to copy the .CLS file. For example, to copy the .CLS table for German, use the following CPY command:

   ```as400
   cpy obj('/QIBM/ProdData/Lotus/Notes/COLL12DE.CLS')
   toobj('/QIBM/ProdData/Lotus/Notes/COLL1TO2.CLS')
   ```

5. Use the AS/400 CHGOWN command to change the owner of the file to the QNOTES user profile. For example, if you copied the .CLS file for German, use the following CHGOWN command:

   ```as400
   chgown obj('QIBM/ProdData/Lotus/Notes/COLL1TO2.CLS') newown(qnotes)
   ```

   These examples use some uppercase characters to improve clarity. You can enter the commands in either lowercase or uppercase.
Default locale

- For both the North American and the International English versions of Domino for AS/400, the default locale is set to the value listed for "English US."
- For each NLV release of Domino, the default locale should be appropriate to the language. See the following table.

<table>
<thead>
<tr>
<th>To enter and display text in:</th>
<th>Using CCSID:</th>
<th>Change QNOTES locale to:</th>
<th>Copy:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albanian</td>
<td>500</td>
<td>SQ_AL.LOCALE</td>
<td>COLLEE.CLS to COLLSTD.CLS</td>
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<tr>
<td>Belgian English</td>
<td>500</td>
<td>EN_BE.LOCALE</td>
<td></td>
</tr>
<tr>
<td>Belgian French</td>
<td>500</td>
<td>FR_BE.LOCALE</td>
<td>COLL12FR.CLS to COLL1TO2.CLS</td>
</tr>
<tr>
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<td>BG_BG.LOCALE</td>
<td>COLL12FR.CLS to COLL1TO2.CLS</td>
</tr>
<tr>
<td>Canadian French (MNCS)</td>
<td>500</td>
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<td>COLL12FR to COLL1TO2.CLS</td>
</tr>
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<td>935</td>
<td>ZH_CN.LOCALE</td>
<td>COLLG.BIG5.CLS to COLLSTD.CLS</td>
</tr>
<tr>
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<td>937</td>
<td>ZH_TW.LOCALE</td>
<td></td>
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<tr>
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<td>COLLHR.CLS to COLLSTD.CLS</td>
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<td>To enter and display text in:</td>
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<td>Change QNOTES locale to:</td>
<td>Copy:</td>
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<tr>
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<td>--------------</td>
<td>--------------------------</td>
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<td>Latvian</td>
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<td>LV_LV.LOCALE</td>
<td>COLL2LT.CLS to COLLSTD.CLS</td>
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</table>

Domino for AS/400 Release Notes 43
<table>
<thead>
<tr>
<th>To enter and display text in:</th>
<th>Using CCSID:</th>
<th>Change QNOTES locale to:</th>
<th>Copy:</th>
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<tbody>
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<td>1026</td>
<td>TR_TR.LOCALE</td>
<td>COLLTR.CLS to COLLSTD.CLS</td>
</tr>
</tbody>
</table>

**Changing the date format**
The date format for the Domino server is affected by the following:

- The Locale value of the QNOTES user profile
- The Locale Job Attributes values of the QNOTES user profile
- Whether DateOrder is specified in the NOTES.INI file
- The QDATFMT system value

The OS/400 processes that the Domino server runs under have a job attribute for the date format. When *datfmt is specified on the Locale Job Attributes (SETJOBATR) parameter of the QNOTES user profile, the date format job attribute for the job is determined by the locale. Otherwise, the job attribute is determined by the QDATFMT system value. In addition, the Domino server keeps an internal date format setting. If a DateOrder keyword is specified in the NOTES.INI file, the internal setting will be the value specified for the DateOrder. Otherwise, the date format will be determined from the Locale value of the QNOTES user profile.

Normally, the QNOTES user profile has a value of *datfmt in the Locale Job Attributes parameter, and the NOTES.INI file does not contain the DateOrder keyword. Therefore, both the job attribute and the internal Domino date formats have the value specified for the Locale. The table below lists the date formats for each locale shipped with the Domino server.

To specify a different value for the date format for the Domino server and to ensure that the date format for OS/400 interfaces matches, do the following:

1. Set the DateOrder value in the NOTES.INI file for the server. This changes the date format that Domino uses internally. For the DateOrder value in the NOTES.INI file, specify DateOrder=xxx where xxx is one of the following:
   - DMY (day month year)
   - YMD (year month day)
   - MDY (month day year)

2. Use the Work with System Value (WRKSYSVAL) command to change the Date Format (QDATFMT) system value. Set the QDATFMT system value to the same format that you specified for DateOrder.
3. Remove the *datfmt value from the Locale Job Attributes setting on the QNOTES user profile by using the Change User Profile (chgusrprf) command.

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<th>Date Separator</th>
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History of changes

The following changes apply specifically to Domino for AS/400. For details about Domino 4.6.2 and 4.6.1, see the section of Domino Release Notes called "History of changes."

Domino for AS/400 4.6.3

The following AS/400-specific functions are new with Domino for AS/400 4.6.3:

- New support for Domino Enterprise Connection Services (DECS)
- New Change Domino Server (CHGDOMSVR) command
- New Submit Domino Command (SBMDOMCMD) command
- LIBASCII package (ASCII-EBCDIC conversion) available

The following topics in these Domino for AS/400 Release Notes are new or updated for Domino for AS/400 4.6.3:

- AS/400 PTF requirements
- About upgrading to Domino for AS/400
- About DECS
- About the Change Domino Server command
- About running server commands from AS/400
- Calling programs from Domino agents
- Summary of API updates for Domino for AS/400 4.6.3
- LIBASCII for ASCII-EBCDIC conversion
- Running Java agents on the server
- Performance improvements for @Db and LS:DO
- Considerations for configuring a Domino server
- SMTP/MIME MTA restrictions on AS/400
- Remote LAN service
- International language input and display

The following problem fixes (SPRs) that are specific to AS/400 are included with Domino for AS/400 4.6.3:

Problems previously released as hot fixes (included in 4.6.3)

- SPR DBEN3ZRVFQ - CFGDOMSVR doesn't allow '.' in ORG field
- SPR DBER3YVLNP - Addressing Mail using Http not working
- SPR DHAR3YSR27 - HTTP server crashes with MCH3601 in module URLSTR procedure __is__9URLstreamFPc
- SPR DHAR3Z9PEV - CGIBin has intermittent failures
- SPR DHAR3ZY43E - HTTP server leaves TCPIP connections in CLOSED status
- SPR JBLM3XKULB - ISESCTL is using approx 40% of CPU UTIL causing processor utilization to max out
- SPR JWOS3ZHPH - Load Convert with Wildcard characters doesn't work
- SPR RDOR3Y8HTD - Connection reset message when creating memo from browser
- SPR TOBN3YLP7C - Performance bad when processing large (.gt. 500 meg) databases

**Directory synchronization fixes**

- SPR DMER3X5MT4 - Populate from NAB to SDD multiple times
- SPR KEIT3XBJFB - Subsequent dir sync populate creates new SDD entry for shadowed users
- SPR KEIT3YLMFK - RNMDIRE command on AS/400 does not cause NAB mail information to be updated

**Domino for AS/400 4.6.2**

The following AS/400-specific functions are new with Domino for AS/400 4.6.2:

- Maximum size of a Notes/Domino database (.NSF file) increased to 4 gigabytes.
- New Work with Domino Servers (WRKDOMSVR) command
- Support for batch (unattended) installation of Domino for AS/400 software
- Support for running Java servlets on the HTTP server

The following problem fixes (SPRs) that are specific to AS/400 are included with Domino for AS/400 4.6.2:

**Server fixes:**

- SPR BMIN3REH6H - Search condition using TimeDate field not returning correct results
- SPR BMUY3UDGN6 - ccSTRCpyXlateExt fails when using internal allocations
- SPR TACN3V3K5K - Invalid B-tree, or MCH3601/MCH0601 in DPOOL module, and replication

**LotusScript fixes:**

- SPR JWOS3U7P5S - LotusScript dies in OSHeapBlkSubAlloc()
- SPR JWOS3U7NXD - LS randomly dies when a lot of variables are declared in the "Declarations" section of a script
- SPR JWOS3UUKVX - LotusScript iterating through a list of objects with ForAll isn't working correctly

**Directory synchronization fixes:**

- SPR CRYN3U8QHJ - Disable of DirSync causes server to PANIC
- SPR KEIT3UW2GX - Dir sync process ending in error
- SPR JBLM3XGPRA - Directory synchronization used with Dir Shadowing - only local users are pulled during populate

**Problems fixed in 4.6b.01 (included in 4.6.2):**

- SPR JW0S3TBNTK - LotusScript user defined classes not working correctly
- SPR DBER3SXNN4 - Shared Mail is not working
- SPR KEIT3TDL75 - ENDDOMSVR *IMMED can cause directory sync to panic when MTA is running
- SPR NMOS3TTLY9 - ENDDOMSVR OPTION(*CNTRLD) does not end the Domino for AS/400 server
Problems previously released as hot fixes (included in 4.6.2):

- SPR DHAG3VAURY - Incoming mail that contains a colon in the message_id field causes IMSGCNV to PANIC
- SPR WRIS3SMPJX - Documents cannot be edited or created through the Web when enforcing SSL on an individual database
- SPR DCOO3VPRHB - SMTPMTA Restart sometimes causes mail to be BCC'd to other users. Messages without MIME attachment headers were received and the ISESHLR did not clean up properly from this error. The addresses from this message were BCCed to the next message that this handler processed.
- SPR JWOS3VZHUF - The LotusScript memory manager had a problem which was preventing memory from being released. Side effects such as high memory and CPU usage were likely to occur. All agents are affected to some extent. Long running and compute-intensive scripts are highly affected and may exhibit extreme performance improvements with this fix.
- SPR KEIT3VSPS5 - LOAD QNNDIEND from the Domino console causes the server to panic. A message is logged to the directory synchronization logging database indicating that a directory synchronization job was not ended.

The following topics in these Domino for AS/400 Release Notes were new or updated for Domino for AS/400 4.6.2:

- AS/400 software prerequisites
- Batch installation of Domino for AS/400
- About the Work with Domino Servers command
- Additional setup when using directory synchronization to maintain mail information
- Running tasks when the Domino server is not running
- RPG APIs
- LSX Toolkit
- C Programs created before Domino for AS/400 general availability (topic removed)
- Running Java agents on the server
- Java Restrictions
- Java Servlets
- Handling prestarted jobs that process SQL requests
- Required hardware and software for Domino server
- About the ADDDOMAPP command
- Considerations for configuring a Domino server
- Setting up an additional server (topic removed because original documentation is correct)
- Considerations for setting up SMTP/MIME MTA
- Deleting a Domino server or Domino software
- Stopping a Domino server on AS/400
• Security for Domino console commands
• Backup and recovery tips
• Backing up your mail.box database
• SMTP/MTA MIME restrictions on AS/400
• AS/400 requirements for remote LAN services
• Changing the date format