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The Release Notes contain information about Release 5.0.12 of the Lotus Domino™ for iSeries software product. Release Notes documentation contains the following chapters:

**What's new?** introduces you to Lotus Domino for iSeries, tells you about the new features and enhancements in this release, and points you to further information.

**Things you need to know** describes supported platforms and environments and other information that you need to know before installing this release.

**Troubleshooting** describes limitations and issues associated with this release Lotus Domino for iSeries.

**Documentation updates** describes last-minute information and corrections that are not included in the Lotus Domino for iSeries Help databases and printed documentation.

**Interoperability** describes known restrictions or potential incompatibilities between different versions of Lotus Domino for iSeries.

**History of changes** contains information about enhancements and new features introduced in the software in previous R5 releases.

You can edit the documents in the online version of the Release Notes database to suit the particular needs of your site. However, if you do edit the contents of the database, it must be strictly for the sole use of users within your organization. You cannot resell or otherwise distribute this documentation, modified or unmodified, to anyone outside your organization. Lotus® and IBM assume no responsibility for the technical accuracy of any modifications made to this documentation.
Chapter 1 - What's new?

Welcome

Domino for iSeries documentation available online and in print
The Lotus Installing and Managing Domino for AS/400 book provides details on the installation, setup, and administration of Domino on the iSeries platform, including:

- Procedures for installing the Domino software and setting up Domino servers on iSeries
- Procedures for managing Domino servers and users on iSeries
- Procedures for backing up and restoring Domino-related data on iSeries
- Security aspects of Domino on iSeries
- iSeries aspects of Domino-related application development

This book is available in a variety of formats and locations:

Notes/Domino database format (AS400HLP.NSF)
AS400HLP.NSF is available:

- In the /OS400/<language>/ directory of your Domino for iSeries CD-ROM.
- After installation in the HELP subdirectory of your Domino data directory.
- For download or browsing at the Lotus Developer Domain Documentation Library at http://www.lotus.com/ldd/doc. This is always the most up-to-date version of the Domino documentation. Lotus recommends you check here to ensure you have the latest version.

Portable Document Format (AS400HLP.PDF)

AS400HLP.PDF is available:

- In the /OS400/<language>/ directory of your Domino for iSeries CD-ROM.

Printed Lotus documentation
You can order printed documentation from Lotus Education as part of the Yellowbooks program. For more information visit the Lotus Education Store at http://www.ibm.com/lotus/educationstore.

Related documentation
The IBM Up and Running with Domino for AS/400 book provides simplified installation and setup instructions for those who are installing Domino on iSeries for the first time and do not need to know about alternative setup methods. An English version of this book (UPANDRUN.PDF) is available:

- In the root directory of your Domino for iSeries CD-ROM.
Server

Release Notes available online and in print

These release notes are available in a variety of formats and locations:

Notes/Domino database format

(READAS4.NSF)

READAS4.NSF is available:

- In the root directory of your Domino for iSeries CD-ROM.
- After installation in the HELP subdirectory of your Domino data directory.
- For download or browsing at the Lotus Developer Domain Documentation Library at http://www.lotus.com/ldd/doc. This is always the most up-to-date version of the release notes. Lotus recommends you check here to ensure you have the latest version.

Portable Document Format (READAS4.PDF)


READAS4.PDF is available:

- In the root directory of your Domino for iSeries CD-ROM.

Printed release notes

You can order printed Release Notes from Lotus Education as part of the Yellowbooks program. For more information visit the Lotus Education Store at http://www.ibm.com/lotus/educationstore.

Server

Welcome to Lotus Domino for iSeries Release 5

Welcome to Release 5.0.12 (R5.0.12) of Lotus® Domino™ for iSeries. R5.0.12 is the latest version of the world’s leading products for information management, messaging, collaboration and Web application development. The R5 product line, conceived with the qualities and capabilities of the Internet, delivers on the promise of enabling users to find, act upon and share information, further improving communication among groups, organizations and people everywhere.

These Release Notes contain iSeries-specific information on the new features and enhancements included in Domino for iSeries R5.0.12. Be sure to read the topics in the “Things you need to know” chapter before installing the software. For general information on installing and using Domino for iSeries, see the Installing and Managing Domino for AS/400 book or the equivalent Domino for iSeries Help database (AS400HLP.NSF).

For an overview of the features in this release, see the “What’s New in Domino for iSeries 5.0.12?” chapter. Refer also to the Notes/Domino 5.0.12 Release Notes for platform-independent features and enhancements.

Server

Where to find the latest information

The Domino for iSeries Help database (AS400HLP.NSF) contains some updates that are not in the Installing and Managing Domino for AS/400 book.

Online Release Notes (available online and in Notes database format):

- (Browsable over the Internet): View the release notes online using live Web browsing (using any browser) at the Lotus Developer Domain Documentation Library Web site. This is always the most up-to-date version of the Release Notes, which occasionally contains content not prepared in time for the product install packs. Lotus recommends you check here to ensure you have the latest version:

  http://www.lotus.com/ldd/doc

- (Notes Database format): You can also connect to http://www.lotus.com/ldd/doc to download the latest version in Notes Database format (readme.nsf), for later viewing in a Notes client. This is always the most up-to-date version of the Release Notes available, which occasionally contains content not prepared in time for the product install packs.
Check the following Web sites for updates and additional information related to Domino on iSeries:

- Lotus support for Domino and Notes: http://www.ibm.com/software/lotus/support
- The latest Domino and Domino for iSeries documentation: http://www.lotus.com/ldd/doc
- Domino for iSeries product information: http://www.ibm.com/eserver/iseries/d Domino
- Notes/Domino Fix list http://www.lotus.com/ldd/r5fixlist.nsf
- Domino for iSeries partner and education information: http://www.ibm.com/eserver/iseries/developer/d Domino
- IBM "redbooks," including iSeries and Domino information: http://www.ibm.com/redbooks

New Enhancements

Server

What's new in Domino for iSeries 5.0.12

In addition to the platform-independent features and fixes provided with Lotus Notes and Domino Server R5.0.12, the following iSeries-specific enhancements are included with Domino for iSeries R5.0.12. Refer to the Notes/ Domino R5.0.12 release notes for additional information on platform-independent features and changes.

- Installed OS/400 Domino version is V5R1M2
  The installed version, release and modification level of the Domino for iSeries product, 5769LNT, is V5R1M2.

- Supported OS/400 releases
  Lotus Domino for iSeries release 5.0.12 can only be installed on OS/400 V5R1 and V5R2. Support for OS/400 release V4R5M0 ended on December 31, 2002.

- Directory Synchronization Configuration Default
  The default value for enabling Directory Synchronization (DIRSRV) on the Configure Domino Server (CFGDOMSVR) CL command and Web Setup is changed from DIRSRV(*SYSDIR) to DIRSRV(*NONE).

- iSeries Navigator plug-in for Domino 5.0.12 enhancements:
  
  - The list of Domino servers can be sorted by either name or by the date the server was created. To toggle between displaying the servers by date created or alphabetically by name, click on the Server Name title bar. This feature is similar to that provided by F10 (Sort by name/Sort by date) on the WRKDOMSVR (Work with Domino Servers) display.
  
  - You can start or stop all Domino servers (except the *HTTPSETUP server) with new options now available when you right-click the Domino server icon. You can Start All Servers, End All Servers or End All Servers immediately from the context menu that is displayed when you right-click the Domino server icon.
The installed iSeries Navigator Domino plug-in level can be displayed by selecting the new option "Display Plug-In Version" from the Domino context menu. The display will show the Domino release associated with the plug-in that is installed on your workstation. Please install the latest available iSeries Navigator Domino plug-in to ensure that you have the latest fixes and features available.

- **System Operator Notification of unexpected server errors**
  The message LNT099C will be sent to the QSYSOPR message queue when a fault condition is detected on a Domino server. The Domino server name and job in which the condition occurred will be contained in the message description.

- **DECS (Domino Enterprise Connection Services)**
  The DB2 connector is updated in Domino release 5.0.12 to support large binary objects from SQL and also includes several SPR fixes.

- **New API Programs**
  - QnninSetDominoEnv will set the current job's environment to a state that will allow the NotesInitExtended API to be called for a specific Domino server.
  - QnninGetDominoEnv will retrieve information about the current job's Domino server environment. The server for the current environment is determined by searching for the notes.ini file in the PATH environment variable.
  - QnninGetIniValue will retrieve a value from a Domino server's notes.ini file.
  - QnninSetIniValue will set or remove a value in the Domino server's notes.ini file.
  - QnninGetServerDocItem will retrieve an item value from a Domino server's server document found in the Domino directory (names.nsf file).
  - QnninSetServerDocItem will set or remove an item value in a Domino server's server document found in the Domino directory (names.nsf file).
  - QnninListDominoRlsl will retrieve a list of installed Domino releases and related information.
**Server**  
**Attachments larger than 16MB are supported for web mail users**  
As of Domino 5.0.8, HTTP supports attachments larger than 16MB.

In previous releases, web mail users could not send mail or use other save functions with attachments that contain a total of more than 16MB of data. This restriction applied to sending one attachment that contains more than 16MB of data or to sending multiple attachments that total more than 16MB from the web mail interface.

As of Domino for iSeries 5.0.8, this restriction has been removed for all applications that upload data using the Domino HTTP server. In addition to web mail, this includes QuickPlace and Domino.Doc.

Domino allows you to limit the attachment size via the Maximum Post Data setting in the Internet Protocols -> Domino Web Engine page of the server document. The default is 0 which means no limit is defined. In practice however, the new upper limit on attachment sizes is approximately 2GB.

Attachments greater than 16MB have been and continue to be supported using the Notes client.

**Server**  
**Ichitaro Filter**  
As of Release 5.0.8 of Domino for iSeries, Full Text Search supports attachments in the Ichitaro file format.

To enable Ichitaro attachment document full text search, set the following NOTES.INI variable:

```plaintext
ft_use_altfltr=1
```

In addition, the user must also set two values in the ftaf.ncf file: aftaro6 and aftaro9. The ftaf.ncf file is automatically installed with the Japanese version of Domino for iSeries or the Japanese language pack. For other language versions of Domino for iSeries, the file will not exist unless the user or administrator has created it in the server’s /data directory. The file ftaf.ncf must be owned by the QNOTES user profile.

An example of the content of the ftaf.ncf file follows:

```plaintext
aftaro6
aftaro9
```

**Server**  
**New function key in WRKDOMSVR panel for sorting servers by name**  
A new function key (PF10) has been added to the "Work with Domino Servers" (WRKDOMSVR) panel for sorting the list of Domino servers by name in alphabetical order or by date from the first to the last created.

**Server**  
**Starting and ending all the Domino servers**  
A new keyword special value, SERVER (*ALL), has been added to the "Start Domino Server" (STRDOMSVR) and "End Domino Server" (ENDDOMSVR) commands to start/end all the Domino servers configured on the iSeries server except for the *HTTPSETUP server.
Chapter 2 - Things you need to know

Home Directory for QNOTES user profile
Starting with Domino for iSeries 5.0.11, the QNOTES user profile home directory is set to /home/QNOTES.

Requirements

Server

iSeries PTF requirements
Domino for iSeries requires cumulative PTF packages and individual PTFs for OS/400 Version 5 Release 1 (V5R1), and OS/400 Version 5 Release 2 (V5R2). Other PTF packages, also known as group PTFs, are available to support specific types of Domino for iSeries operations. Each cumulative PTF package or individual PTF includes installation instructions.

Note For the most up-to-date list of PTFs required for OS/400, see the following Web site:

OS/400 V5R1
Domino for iSeries requires the lastest OS/400 V5R1 cumulative PTF package and the individual PTFs identified at:
http://www.ibm.com/eserver/iseries/domino/v5r1ptfs.htm

- If you are using Domino for iSeries R5.0.5 or R5.0.6, you must also install a QMU PTF that is required for V5R1.
  Domino for iSeries 5.0.5 requires QMU PTF SF65505 (5.0.5.02) and Domino for iSeries 5.0.6a requires QMU PTF SF65363 (5.0.6a.01). See the release note “Domino for iSeries QMUs available from IBM” in the “Installation and Setup” section of “Things you need to know” or the web page http://www.ibm.com/eserver/iseries/domino/support/qmulist.htm for more information.

- EZ Setup users whose iSeries server and Domino language versions do not match are advised to obtain the V5R1M0 Client Access Express Service Pack 2 available as of August/2001. This will resolve an issue where message D0112 is sent and the installation of Domino is not allowed to proceed.

- If you are using BACKUP RECOVERY AND MEDIA SERVICES FOR iSeries (BRMS), order the group PTF SF99078. This group PTF contains updates to the BRMS product. See the BRMS web site for additional information regarding the latest PTFs available at the following Web site: http://www.ibm.com/eserver/iseries/service/brms/.

Client Access service pack requirement
If you use IBM Client Access™, make sure to install the current level of the Client Access service pack. You could encounter problems if you do not have the current service pack installed.

Java software requirement for OS/400 V4R5 or later
To use the Java support on an iSeries running OS/400 Version 4 Release 5 (V4R5) or later, you must install not only the base 5769-JV1 software but also one of the 1.1.x JDK software options. Domino will not work using just the base 5769-JV1 software without one of its 1.1.x options. Domino does not support the 1.2.x or 1.3 JDK option.

After installing the Java base software and one of its options, make sure you also load the Java group PTF (SF99068 for V4R5). See the following web page for more information:

For more information about PTFs required for OS/400, see “iSeries PTF requirements” in these release notes.
Platforms and Requirements

Installing QuickPlace as a standalone server
QuickPlace for iSeries releases are supported as noted in the tables below. QuickPlace for iSeries Release 2 supports standalone and overlay server configurations. QuickPlace Release 3 supports only overlay configurations that must be added to an existing Domino server. Refer to the following QuickPlace for iSeries Web site for the latest support information:
http://www.ibm.com/eserver/iseries/quickplace

The following QuickPlace R3 versions are compatible with Domino R5.

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The following QuickPlace R2 versions are compatible with Domino R5.

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<tr>
<th>QuickPlace Release</th>
<th>works as an overlay on top of Domino Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>5.0.9</td>
</tr>
<tr>
<td>2.0.8</td>
<td>5.0.8</td>
</tr>
<tr>
<td>2.0.7</td>
<td>5.0.7 or 5.0.7a</td>
</tr>
<tr>
<td>2.0.6a</td>
<td>5.0.6a</td>
</tr>
<tr>
<td>2.0.5</td>
<td>5.0.5</td>
</tr>
<tr>
<td>2.0</td>
<td>5.0.4</td>
</tr>
</tbody>
</table>

Note: There is no QuickPlace release 2.0.9 that runs with Domino release 5.0.9. Customers who have QuickPlace 2.0.8 and Domino 5.0.8 installed are advised that an upgrade to Domino 5.0.9 will render their existing QuickPlaces inoperable.

Restrictions

Domino use of iSeries Dial on Demand not supported
iSeries supports Dial on Demand in V4R3 and later versions of OS/400. This function allows use of a specific TCP/IP route to signal to OS/400 to initiate a dial connection over that route automatically. Domino for iSeries is not enabled to use this feature. The Domino Dialup Network capability is supported using PPP dial connections. For more information on PPP configuration and use, see Chapter 13 of the Lotus Domino for AS/400 R5: Implementation (SG24-5592) redbook. Redbooks are available from the IBM Redbooks Web site at http://www.redbooks.ibm.com.
Server

**Full text indexing of EBCDIC files**

Domino for iSeries does not support full text indexing of EBCDIC file systems. The full text search engine assumes the files in the file system are single-byte ASCII. All other server platforms only support single-byte ASCII files.

Server

**Full text searching of databases with attachments**

Domino for iSeries supports indexing of attachments for single-byte plain 7-bit ASCII text files. As of R5.0.10, Domino for iSeries also supports binary file type attachments (such as MS Word documents, PDF documents, etc) for indexing and searching using the Verity Keyview filter.

For more information, refer to the section "Using the Verity Keyview filter for indexing binary attachments."

Server

**Internet mail address supported in US ASCII only**

Be aware that only US ASCII characters are supported for an Internet mail address. There is no support for accented characters. Therefore, users who are registered as Notes users using accented characters must have an equivalent Internet address using only US ASCII characters.

If the Internet address contains accented characters that do not have US ASCII equivalents (such as Greek or Cyrillic), the Internet address is left blank. The Domino administrator must manually enter a US ASCII Internet address.

Server

**Cannot retrieve ODBCResult result sets from remote systems**

The ExecProcedure method of ODBCResultSet can be used to retrieve a result set from a **local** system. However, the ExecProcedure method cannot retrieve a result set from a **remote** system. This is a DRDA limitation. Since the Lotus Connector for DB2 also uses the DB2 for iSeries interface and DRDA, LSXLC, LEI, and DECS users are all affected by this DRDA limitation.

It is possible to get the result set from a remote system if using Java instead of LotusScript. The JDBC driver included with the iSeries Toolbox for Java can be used to accomplish this. For more details on the iSeries Toolbox for Java, see the following web site: http://www.ibm.com/eserver/iseries/java.

Installation and setup

Server

**iNotes Web Access**

As of Domino 5.0.8, iNotes Web Access is supported on iSeries.

Overview

iNotes Web Access is a Web client for access to Domino-based mail, calendar, scheduling, and collaboration services. The client uses the latest Domino Server and DOLS (Domino Offline Services). It's based on the latest browser technologies to ensure a highly functional and robust product. It offers a subset of the functionality found in the current Notes client with the convenience of the Web. With iNotes Web Access, you can walk up to a Web browser anywhere to send and receive mail, view your calendar, invite people to a meeting, create a task for your to do list, access your contact list, or work offline.

For more information on this new feature, refer to the Notes/Domino 5.0.8 Release Notes.
iNotes Web Access on iSeries differs from iNotes Web Access on other platforms in the following ways:

- **Sametime Chat**
  iNotes Web Access users can get instant messages or chat with others with iNotes Web Access. To use chat with iNotes Web Access, you must install Sametime 2.5 for iSeries. For more information on obtaining Sametime see the following Web page:
  http://www.ibm.com/servers/eserver/iseries/sametime/

  After installing Sametime, open a user's personal document and add the Sametime server name on the Sametime server field.

- **Setting up iNotes Web Access and Offline Services**
  Be sure to enable DOLS (Domino Offline Services) for users to download and subscribe to mail files on the server. You can enable DOLS during initial server setup or by changing the server configurations. Configure DOLS as documented in the Administrator's documentation by creating an Offline Security document.

**Upgrading Existing Users' mail files**

From the Domino server console, use the mail convert utility to convert mail files to the new iNotes Web Access design.

Syntax:

```
load convert [-r ] filename OldDesignName NewTemplateName
```

the `-r` switch indicates the change should be done recursively in subdirectories

Example syntax: `load convert mail/*.nsf  * iNotes5.ntf`

**Server**

**DOLS incorporated into Domino for iSeries**

Domino Off-Line Services (DOLS) 1.0.1 has been incorporated into the base option of Domino for iSeries as of 5.0.5. DOLS enables Web browser users to use Domino applications while disconnected from the network. These applications can be replicated later, either on-demand or on a scheduled basis. To enable a Domino for iSeries server for DOLS, the following user interface changes have been provided:

- A new parameter, DOLS, has been added to the CFGDOMSVR and CHGDOMSVR commands. You can either select *YES or *NO, with the default value being *NO. Specifying DOLS(*YES) will add LIBDOLEXTN.SRVPGM to the DSAPI flier file names field in the Server document, thus enabling Domino off-line services for the server. When the Domino Server Administrator configures a new or existing DOMINO server with DOLS(*YES), the server is configured to allow end users to use a browser to download and run the Domino Web application locally on a client machine. This off-loads processing to the client and even allows for fully disconnected or "offline" use.

- The Domino for iSeries web setup database, setupwe4.nsf, includes an option for configuring DOLS.

- Operations Navigator for Domino allows DOLS to be enabled from the Properties panel.

**Server**

**WebSphere and Domino integration**

WebSphere Application Server for iSeries V3.5.1 supports Lotus Domino for iSeries as an HTTP server. The Domino HTTP server can be used for serving both Domino and WebSphere Application Server web content. For information on configuration and usage, refer to the WebSphere for AS/400 Domino HTTP Server Support documentation found following the Documentation and Version 3.5 links at www.ibm.com/eserver/iseries/products/websphere
Lotus has introduced several improvements in Release 5.0.5 to enhance integration with IBM WebSphere software.

- Single sign-on across Domino Web servers
- Single sign-on with WebSphere Application Server 3.5
- New Java API options for authenticated invocation

See the Lotus Domino 5.0.5 release notes for more information on these features.

Since the availability of WebSphere Application Server 3.5 for iSeries coincides with the availability of Domino for iSeries 5.0.5, only the single sign-on across Domino Web servers feature is currently available. Additional information regarding the availability of the other two features will be posted at http://www.ibm.com/eserver/iseries/domino/QMR505.htm as it becomes available.

Server

**Before upgrading to R5 (4.6.x to 5.x only)**

**Note** The following information does not apply if you are currently running R5 and are upgrading to 5.0.1 or later (unless you did not perform these operations when you originally upgraded from 4.6.x to R5).

Before you install the Domino for iSeries R5 software to upgrade existing Domino 4.6.x servers, read the information about upgrading the Domino server in the Lotus *Moving to Notes and Domino R5* book or the Domino 5 Administration Help database (HELP5_ADMIN.NSF).

After installing the software, compact the Domino Directory file (NAMES.NSF). You must run the compact operation while the Domino server is down. For an example, see "Example: Running tasks when server not running" in the "Documentation updates" chapter of these release notes. Compacting the database will convert it to the new R5 ODS format, which offers performance and functional enhancements. After the initial compaction, you can compact the Domino Directory file while the server is active.

You should also upgrade the Domino Directory (Address Book) template to R5. See "Optional template update for R4 to R5 upgrade" in these release notes.

Server

**Cautions on specification of Domino data directory**

When configuring multiple Domino for iSeries servers, each server requires a unique data directory. Also, to avoid potential problems in the case where a Domino server may need to be removed, make sure that the data directory specified for a server is not in the path of another Domino server's data directory. When a Domino server is removed from the iSeries, the data directory and all subdirectories are deleted. If you remove a server that has another server's data directory lower in its data directory path, then both server's data directories will be deleted.

For example, if you have a Domino server (Domino1) that uses data directory '/domino/data' and another Domino server (Domino2) that uses data directory '/domino/data/domino2/data' and you remove server Domino1, then data directory for Domino2 will also be removed.

Server

**Changing date and time format for international users**

International users may need to add the following entries into the NOTES.INI file to have Domino display the date and time format correctly for their locale.

**Date format**

The International English version of Domino sets the date order to DMY (Day Month Year) and sets the date separator to a "/" (forward slash).

To override the default date order, specify one of the following in the NOTES.INI file:

- `dateorder=DMY`
- `dateorder=YMD`
- `dateorder=MDY`

To override the default date separator, specify:

- `dateseparator=x`

where *x* is any character. For example, to set the date separator to a "." (period), specify:

- `dateseparator=.`
Time format
The International English version of Domino sets the time format to a 24-hour clock and sets the time separator to a "::" (colon).

To override the default time format, specify one of the following in the NOTES.INI file:

- `ClockType = 24_HOUR`
- `ClockType = 12_HOUR`

To override the default time separator, specify the following:

- `timeseparator=`

where `x` is any character. For example, to set the time separator to a "." (period), specify:

- `timeseparator=.`

Server
Domino for iSeries QMUs available from IBM
Lotus fix packages for Domino are called Quarterly Maintenance Updates (QMUs). Domino QMUs for iSeries are typically distributed as OS/400 PTFs. You can obtain these PTFs in one of two ways:

- From Lotus and IBM through QMU download files from this Web page:

- Beginning with QMR 5.0.1 and QMR 4.6.6, from IBM through the IBM OS/400 PTF distribution process. The IBM OS/400 PTF distribution process allows PTFs to be obtained individually or as part of cumulative PTF packages. Refer to the instructions on the following Web site for more details and cumulative PTF package installation considerations.

At the time of this writing, the following Domino for iSeries QMUs are currently available or under development:

- **5.0.9a**
  **Note** The Domino for iSeries 5.0.9a QMU is not available as a PTF, but rather as a full refresh of the product. See the following Web site for details and availability.

- **5.0.8.01 (PTF SF66559)**
  **Note** This MU is required for Domino for iSeries 5.0.8 customers who plan to configure Lotus QuickPlace 2.0.8 over Sametime 2.5 for iSeries. It is also required for any Sametime 2.5 for iSeries customer using Domino for iSeries 5.0.8. See the following Web site for details and availability.

- **5.0.7a**
  **Note** The Domino for iSeries 5.0.7a QMU is not available as a PTF, but rather as a full refresh of the product. See the following Web site for details and availability.

- **5.0.6a.01 (PTF SF65363)**
  **Note** This QMU is required for customers running Domino for iSeries 5.0.6a on OS/400 V5R1. The 5.0.6a.01 QMU PTF is available in the following cumulative PTF packages:
  - V5R1 cumulative package C1163510 or later
  - V4R5 cumulative package C1100450 or later

- **5.0.5.02 (PTF SF65505)**
  **Note** This QMU is required for customers running Domino for iSeries 5.0.5 on OS/400 V5R1. The 5.0.5.0.2 QMU PTF is available in the following cumulative PTF packages:
  - V5R1 cumulative package C1163510 or later
  - 5.0.5.01 (PTF SF64481)
  **Note** The QMU is superceded by PTF SF65505.

The 5.0.5.01 QMU PTF is available in the following cumulative PTF packages:

- V4R5 cumulative package C1100450 or later
- V4R4 cumulative package C or later
For the information on the latest QMUs and PTFs for Domino for iSeries, see this Web page:
http://www.ibm.com/erserver/iseries/dominos/support

Information on cumulative packages and QMUs can be found under the links from this Web page that list the PTFs related to Domino for iSeries.

All Domino servers on your iSeries must be stopped while you apply a Domino PTF.

**Note**  If you have version 5.0.1 or later or 4.6.6 or later of Domino for iSeries installed and have any interim fixes (also known as hot fixes) for Domino on your system, you must remove these fixes from your iSeries before installing the cumulative PTF package. Failure to do so will result in permanent application of the existing hot fixes for Domino.

To determine if any hot fixes might be installed on your system for Domino, enter this OS/400 command:

dspptf licpgm(5769lnt)

If no hot fixes or prior QMUs are applied, the message will read:

**No PTF activity exists for product 5769LNT**

If there are any fixes applied, they may be either hot fixes or a prior QMU. Display the PTF symptom string to determine if the applied fix is a hot fix or a QMU. The symptom string for hot fix PTFs will describe a particular problem, whereas QMU PTFs will contain text such as:

**DOMINO QMU V.R.M**

If you find that any of the PTFs are hot fixes, use the RMVPTF command to remove them from the system before applying the cumulative PTF package. Prior QMU PTFs can remain installed. The Domino servers must be stopped during the removal of hot fix PTFs.

**Server**

**Domino server must be stopped while installing software**

If you already have any Domino servers on your iSeries, make sure you stop those servers before installing the Domino for iSeries software.

For details on stopping a Domino for iSeries server, see Chapter 3 in *Installing and Managing Domino for AS/400* and the Domino for iSeries Help database (AS400HLP.NSF).

**Server**

**Enabling DECS**

You enable DECS for a Domino server by specifying DECS in the Connection services option when you set up the server (using Web-based setup or the CFGDOMSVR command). You can also enable DECS for an existing server by running the CHGDOMSVR command and specifying *DECS in the Connection services option.

When you restart the server after enabling DECS, the DECS Administrator database (DECADM.NSF) is created from the DECSADM.NTF template the first time DECS server task is loaded. The DECS Administrator database is then available to put on your Notes workspace. You use the DECS Administrator database to define connections and real-time relationships.

For additional information about setting up a Domino server and DECS, see Chapter 1 and Chapter 2 in *Installing and Managing Domino for AS/400* or the Domino for iSeries Help database (AS400HLP.NSF).

**Server**

**Locales for QNOTES now in QUSRNOTES library**

Starting with release 5.0.2, the locales used by the QNOTES user profile are shipped in the library QUSRNOTES. If you modify the locale setting of the QNOTES user profile, use a path such as:

'/QSYS.LIB/QUSRNOTES.LIB/xxxxx.LOCALE'

During installation, the locales that had been in the QNOTES library are copied to the QUSRNOTES library. If you install the software from the Domino for iSeries software CD-ROM (by using the LDRUN command), the QNOTES user profile is modified to point to the locale in QUSRNOTES that matches the language installed from the CD-ROM. If you install the software from a tape or a save file (by using the RSTLICPGM command), the locale is set to match the language of the MRI being installed. In either case, any locale that you previously set is overridden.

This change was made to enable shared use by Lotus QuickPlace for iSeries and other future Domino-related products on iSeries.
Optional template update for 5.0 to 5.0.x upgrade

The Domino Directory template PUBNAMES.NTF is updated as of 5.0.1. When upgrading a Domino for iSeries server from 5.0 or 5.0a to 5.0.1 or later, the process for updating the Domino Directory design with the new template differs from other platforms. When you start a Domino server after upgrading from Domino 5.0 or 5.0a to Domino 5.0.1 or later, Domino for iSeries does not prompt you to update the Domino Directory file (NAMES.NSF). The first time you start the server, the server shows a message "Do you want to upgrade the design of your Address Book?" on the server console. Domino for iSeries automatically supplies a "No" response to the message. Otherwise, the server startup would not complete unless you open a console session (WRKDOMCSL command) and respond to the message.

You can manually update a database to the new template by either of the following methods:

- Choose File - Database - Refresh Design.
- Run the Design task by entering the following command on the server console:
  ```
  load design
  ```

Note that the Design task is automatically added to the server task list. It will update the templates the next time it runs. By default, the Design task runs at 1 AM. To prevent the Design task from updating the templates, edit the NOTES.INI file for the server and remove the Design task from the "ServerTasks= . . . " statement.

Optional template update for R4 to R5 upgrade

When upgrading a Domino for iSeries R4 server to R5, the process for updating the Domino R4 Address Book design to the R5 Domino Directory design differs from other platforms. When you start a Domino server after upgrading from Domino R4 to Domino R5, Domino for iSeries does not prompt you to update the Domino Directory file (NAMES.NSF). The first time you start the server, the server shows a message "Do you want to upgrade the design of your Address Book?" on the server console. Domino for iSeries automatically supplies a "No" response to the message. Otherwise, the server startup would not complete unless you open a console session (WRKDOMCSL command) and respond to the message.

You can manually update a database to the new template by either of the following methods:

- Choose File - Database - Refresh Design.
- Run the Design task by entering the following command on the server console:
  ```
  load design
  ```

Make sure you read the information about upgrading the Domino server in the Moving to Notes and Domino R5 book or the Domino 5 Administration Help database (HELP5_ADMIN.NSF).

Note that the Design task is automatically added to the server task list. It will update the templates the next time it runs. By default, the Design task runs at 1 AM. To prevent the Design task from updating the templates, edit the NOTES.INI file for the server and remove the Design task from the "ServerTasks= . . . " statement.

Passwords not encrypted during Web setup

When setting up a Domino server from a Web browser on a workstation, the user enters passwords in the Web browser. Those passwords are sent to the server without encryption.

Server data directory should not be in QIBM directory

When setting up a Domino server, do not specify the Domino product directory (/QIBM/ProdData/...) or the Domino user directory (/QIBM/UserData/...) for the location of the server data directory. Putting the server data directory within the product directory could cause problems when operating the server, especially if you run more than one Domino server on your iSeries.

A commonly used location for the server data directory is:

```
lotus/domino/data
```

If you have more than one Domino server on your iSeries, you could specify a location such as:

```
/lotus/domino/servername/data
```

where `servername` is the name you specify for each server.
Note: In 5.0.3 and later versions, use of the Domino product directory (/QIBM/ProdData/...), the Domino user directory (/QIBM/UserData/...) or the root directory in the Data Directory parameter (DTADIR) on the Configure Domino Server (CFGDOMSVR) command will be checked. If found, a failure of the command with message LNT0102 (Path specified not valid) will occur. This will also cause Web Setup (whether invoked from a browser or from Operations Navigator) to fail if the Domino product directory (/QIBM/ProdData/...), the Domino user directory (/QIBM/UserData/...) or the root directory is specified. Web Setup also invokes the CFGDOMSVR command.

Server

Setting up Domino for iSeries 4.6.x through Operations Navigator

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

However, if you run Operations Navigator under Client Access for Windows, you must manually copy the ID files between the workstation and iSeries. Use any method that you typically use to copy files between systems. For example:

- You can use Operations Navigator on a workstation to create an iSeries NetServer file share for the server data directory on your iSeries. Then, copy (or drag) the ID files to the desired directory. Chapter 2 in the Installing and Managing Domino for AS/400 book includes an example of creating a file share. See the second procedure in the topic "Setting up Operations Navigator for Domino on a workstation."

- You can use the TCP/IP File Transfer Protocol to copy the files. For an example, see Chapter 1 in Installing and Managing Domino for AS/400.

  When copying the ID files to iSeries, you should change the OS/400 authorities to secure the file but still allow the Domino server to access the file:

  - Change the public authority (*PUBLIC) for the file to *EXCLUDE. Use the Work with Object Links command to find the file path and then use option 9 to work with authorities for the file (press F23 to display option 9).
  - Change the owner of the file to QNOTES. Use the Change Owner (CHGOWN) command to change the owner.

TCP/IP recommendation for non-DNS users

If you are not using a DNS for iSeries, we recommend that you add the server name and Internet address of all Domino servers to the host table to ensure successful TCP/IP connections; for example, to ensure that failover works in a server cluster environment. To add server names and addresses, enter the OS/400 command:

cfgtcp

Then use option 10 on the Configure TCP/IP menu.

Server

Upgrade information for QuickPlace for iSeries users

If you are using QuickPlace for iSeries on your Domino for iSeries servers, at the time you upgrade your Domino for iSeries product you must also upgrade your QuickPlace for iSeries product. If the installed Domino and QuickPlace releases are not compatible, your QuickPlaces will not be operational. See the QuickPlace for iSeries publication or the following QuickPlace web site for more information about Domino and QuickPlace release compatibility:


Server

Upgrading the Administration Requests database

When you upgrade to Domino for iSeries R5, follow the steps below to upgrade the Administration Requests (ADMIN4.NSF) database:

- Upgrade the design of the ADMIN4.NSF database to R5.
- Compact the database to move it to the R5 format.

For details on upgrading the database, see the upgrade information in the Moving to Notes and Domino R5 book or the Domino 5 Administration Help database (HELP5_ADMIN.NSF).
Web-based setup now uses port 8585 instead of port 8081

Beginning in Domino for iSeries version 5.0.3, web-based setup will now expect to use port number 8585 instead of the previously expected port number 8081. This change was made to avoid potential conflicts with other Lotus products. The impact to Domino for iSeries administrators depends upon which administrative interface to web-based setup they use today: Operations Navigator or direct URL invocation from a browser. Refer to the related sections below for more details.

Note: If you have installed QuickPlace for iSeries on any of your existing Domino servers, the rules below apply. Refer to the QuickPlace for iSeries documentation for more information.

Operations Navigator

- If you install or upgrade Operations Navigator administrative clients to the 5.0.3 version of Operations Navigator for Domino, web-based setup will determine the correct port number to use when accessing any R5 Domino for iSeries server.
- If you do not install or upgrade Operations Navigator administrative clients to the 5.0.3 version of Operations Navigator for Domino, then web-based setup will not be able to successfully setup a new 5.0.3 Domino server from Operations Navigator. However, web-based setup will be able to continue to setup Domino for iSeries R5 servers that are version 5.0.2 or earlier.

To avoid the problems cited in the second bullet above, it is strongly recommended that you install or upgrade any Operations Navigator for Domino administrative clients to version 5.0.3 after you upgrade your Domino for iSeries servers to version 5.0.3. For more information on adding Operations Navigator for Domino to your administrative clients, see Chapter 2: Extending Domino for iSeries, in the Installing and Managing Domino for AS/400 book.

Direct URL invocation

When invoking web-based setup directly from a browser URL line:

- To an iSeries that has Domino for iSeries version 5.0.3 or later installed, the port number specified must be 8585. For example:
  
  http://<youras400name>:8585

- To an iSeries that has Domino for iSeries R5 servers that are version 5.0.2 or earlier, the port number specified must be 8081. For example:

  http://<youras400name>:8081

Web setup: Clarification for additional server

When using a Web browser to set up an additional server, make sure you specify the server name correctly in the following two fields:

- Server name
  Specify the full hierarchical name of the Domino server; for example:
  Server2/Chicago/Acme

- Get Domino Directory from which server?
  Specify the name of the registration server; for example:
  Server1

For more information about Web setup, see Chapter 1 in Installing and Managing Domino for AS/400 or the Domino for iSeries Help database (AS400HLP.NSF).
Server

**Web setup: Displaying error message**

If you use a Web browser to set up a Domino server and the last Web page indicates an error was detected, but the error message text field is blank, you can display the message by using the OS/400 DSPJOB command.

1. Enter this command on an OS/400 command line:
   ```
   dspjob qnninwsu
   ```
   1. Use option 4 to display spooled files.
   2. Use option 5 to display each file named QPRINT.

The QPRINT files contain the text of error messages.

Server

**Web setup: Internet Explorer message**

If you use Internet Explorer as the browser for Web setup, you may see the following message after you click Finish from the setup panels:

- The page you are looking for is currently unavailable. The Web site might be experiencing technical difficulties, or you may need to adjust your browser settings.

You can ignore the message. The setup processing continues to run in the background.

Server

**Domino for iSeries QMU 5.0.4a template files**

**5.0.4a QMU Templates**

The following files will exist in server data directories if a server had been configured while the 5.0.4a QMU was installed. These templates can be removed from your server's data directory. The installation of 5.0.5 or a later QMR or increment will remove them from the product directory, but not from each server's data directory.

- mail50.en.ntf
- mail50ex.en.ntf
- perweb50.en.ntf
- mail50.pt.ntf
- mail50ex.pt.ntf
- perweb50.pt.ntf
- mail50-fr.ntf
- mail50ex-fr.ntf
- perweb50-fr.ntf
- mail50-it.ntf
- mail50ex-it.ntf
- perweb50-it.ntf
- mail50-de.ntf
- perweb50-de.ntf
- mail50-es.ntf
- perweb50-es.ntf
- mail50-ja.ntf
- perweb50-ja.ntf
- mail50-ko.ntf
- perweb50-ko.ntf
Object Signing and OS/400 V5R1

When installing Domino for iSeries R5.0.9 or R5.0.9a on OS/400 V5R1 or V5R2 using either LODRUN (CD install) or RSTLICPGM (SAVF install), the installation may fail with the following error messages:

```
RSTLICPGM LICPGM(5769LNT) DEV(*SAVF) RSTOBJ(*LNG) SAVF(MYLIB/QNOTES)
Object has a signature that is no longer valid.
CMD CFGDOMSVR in library QNOTES not restored.
Object has a signature that is no longer valid.
CMD CHGDOMSVR in library QNOTES not restored.
16 objects restored. 2 not restored to QNOTES.
Product 5769LNT option *BASE release *FIRST processing not complete.
*LNG objects for NLV 2924 for product 5769LNT option *BASE release *FIRST not restored.
Objects for product 5769LNT option *BASE release *FIRST not restored.
```

With OS/400 V5R1 and later releases, the policy to be used for object signature verification during a restore operation (for example, product installation) is controlled by the QVFYOBJ RST system value which has a default value of 3.

When installing Domino for iSeries Release 5.0.8, 5.0.9 or 5.0.9a on OS/400 V5R1, the system value QVFYOBJ RST must be set to a value of 3 or lower prior to installing Domino.

When installing Domino for iSeries Release 5.0.8, 5.0.9 or 5.0.9a on OS/400 V5R2, the system value QVFYOBJ RST must be set to a value of 1 prior to installing Domino.

After installation of Domino for iSeries 5.0.8, 5.0.9 or 5.0.9a has completed, the system value may be changed back to a more restrictive setting.

Additionally, during a SAVLICPGM or CHKPRDOPT operation on Domino for iSeries 5.0.8, 5.0.9 or 5.0.9a on OS/400 V5R2 only the command keyword CHKSIG(*NONE) must also be specified.

An example of changing the system value QVFYOBJ RST is provided below:

```
CHGSYSVAL SYSVAL(QVFYOBJRST) VALUE('1')
```

Domino for iSeries Release 5.0.10 and later may be installed on OS/400 V5R2 without changing the QVFYOBJ RST system value if it is set to its default value (3).
The difference in behavior between OS/400 V5R1 and V5R2 occurs because command (CMD) objects were added to object verification in V5R2 and two Domino command objects (CFGDOMSVR and CHGDOMSVR) that are shipped prior to Domino 5.0.10 fail verification on OS/400 V5R2 with QVFYOBJ RST set to its default value.

To determine which releases of Domino R5 are supported on OS/400 V5R1 and V5R2, refer to the following web pages:

http://www.ibm.com/servers/eserver/iseries/domino/lotusv5r2.htm

Server

Language dictionary files

Language dictionary files are used for spell-checking within Notes and Domino. The Global English national language version of Domino for iSeries R5.0.8 (and later) installs the following language dictionary files.

- canadien.dic
- uk.dic
- us.dic
- wpdic.dic

Domino for iSeries installs these files in the product directory /QIBM/ProdData/Lotus/Notes/shared/<dict-name>.dic along with symbolic links to the these dictionary files in each server's data directory:

Different language versions of Domino for iSeries R5 may install different dictionaries, depending on the language.

Additional dictionary files are contained in the dctions.exe or dictionaries.exe file which may be obtained from one of the following sources:

- Notes.net - download the iNotes Web Access Dictionaries Win95/98/NT, OS/2, Mac English (dictions.exe file).
- The \APPS\DICTIONARIES directory of the Notes or Notes/Domino Designer CD ROM.

If you want to use one of the dictionary files listed in the table below and find that it has not been installed automatically by Domino, decompress the contents of the self extracting file to a temporary directory on your PC's hard drive. End your Domino server(s) and then transfer the dictionary file(s) using FTP (or another file transfer method) to your Domino server's data directory. The owner of the file should be changed to QNOTES as shown:

```
CHGOWN OBJ('<server-data-directory-path>'/<dict-name>.dic') NEWOWN(QNOTES)
```

The dictionary file must be added to the data directory of each server that should have access to the dictionary. Then restart your Domino server(s).

As always, if you add dictionary files to customize your Domino installation, you should save (backup) your Domino server(s) after the dictionary file(s) have been added.

If spell check for International languages does not work, check for the following conditions:

- Ensure you have the appropriate language dictionaries in either the product directory (with a SYMBOLIC link in your server's data directory for dictionaries installed by Domino) or each server's data directory (for dictionaries installed manually).
- Check your International User Preferences (choose File->Preferences->User Preferences->International) to ensure you are using the correct international spelling dictionary.

<table>
<thead>
<tr>
<th>Language</th>
<th>Dictionary File Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afrikaans</td>
<td>AFRIKAAN.DIC</td>
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<td>Catalan</td>
<td>CATALA.DIC</td>
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<tr>
<td>Czech</td>
<td>CZECH.DIC</td>
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<tr>
<td>Danish</td>
<td>DANSK.DIC</td>
</tr>
<tr>
<td>Language</td>
<td>Dictionary File Name</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Dutch</td>
<td>NEDERLND.DIC</td>
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<tr>
<td>Dutch Belgian</td>
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<tr>
<td>Dutch Preferred</td>
<td>NEDPLUS.DIC</td>
</tr>
<tr>
<td>English (Australia)</td>
<td>AUS.DIC</td>
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<tr>
<td>English (Canada)</td>
<td>US.DIC</td>
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<tr>
<td>English (Caribbean)</td>
<td></td>
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<tr>
<td>English (Jamaica)</td>
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<tr>
<td>English (New Zealand)</td>
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<td>English (United States)</td>
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<td>English (Ireland)</td>
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<td>French (Switzerland)</td>
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<td>CANADIEN.DIC</td>
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<td>DEUTSCH.DIC</td>
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<td>German (Reform)</td>
<td>DEUTSCH2.DIC</td>
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<td>Italian (Switzerland)</td>
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<td>Medical (American)</td>
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<td>Spanish (Mexico)</td>
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<td>Spanish (Modern Sort)</td>
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<td>Spanish (Panama)</td>
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</tr>
<tr>
<td>Swedish</td>
<td>SVENSK.DIC</td>
</tr>
<tr>
<td>Turkish</td>
<td>TURKIYE.DIC</td>
</tr>
</tbody>
</table>

**Server LDAP port conflict considerations with OS/400 V5R1**

With OS/400 V5R1, system directory services (LDAP) is always started by default when TCP is started and will bind port 389 to all configured IP addresses. Starting a Domino server that also has LDAP configured (DIRSRV(*LDAP)) will result in a port conflict and the following message will be shown on the Domino server's console:

**LDAP Server: Listener failure: The requested TCP/IP port is in use on this system.**

In order to allow the Domino server's LDAP task to serve LDAP client requests, the OS/400 administrator must end the system directory services (ENDTCPSVR SERVER(*DIRSRV)) and configure the system, using Operations Navigator, to not automatically start the OS/400 *DIRSRV service.

If the OS/400 system directory services (LDAP) is required in addition to running the Domino LDAP task, then one of the following steps will be necessary:

1. Change the port number used for the Domino server's LDAP support (in the server document) to another unused IP port

2. End OS/400 system directory services (ENDTCPSVR SERVER(*DIRSRV)) and change the port number used from 389 to another unused IP port using Operations Navigator Directory ‘properties’) and then restart system directory services (STRTCPSVR SERVER(*DIRSRV)).

Changing the default LDAP port number to a value other than 389 also requires that all LDAP clients configured to connect via port 389 must also be reconfigured to use the new IP port number in order to allow their LDAP requests to be served via the new port.
Server

**Domino for iSeries Version/Release/Modification (VRM)**

The OS/400 version/release/modification (VRM) values for the Domino for iSeries product are as follows:

<table>
<thead>
<tr>
<th>Domino release</th>
<th>OS/400 version/release/modification level (VRM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domino 5.0.12</td>
<td>V5R1M2</td>
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<tr>
<td>Domino 5.0.11</td>
<td>V5R1M1</td>
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<tr>
<td>Domino 5.0.10</td>
<td>V5R1M0</td>
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<tr>
<td>Domino 5.0.9 &amp; Domino 5.0.9a</td>
<td>V5R0M9</td>
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<tr>
<td>Domino 5.0.8</td>
<td>V5R0M8</td>
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<td>Domino 5.0.7</td>
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<tr>
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<td>Domino 5.0.2a</td>
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</tr>
<tr>
<td>Domino 5.0</td>
<td>V5R0M0</td>
</tr>
</tbody>
</table>

Server

**Single Logon: attachment file for installation is not included**

In Domino for iSeries release 5.0.11, the Notes database Single Logon file NNSLINST.NSF did not include the SLSETUP.EXE attachment which supports installation of Domino for iSeries Single Logon. Any Domino server created in release 5.0.11 will include the NNSLINST.NSF file with the missing attachment in its server data directory and will continue to retain this file even when release 5.0.11 is upgraded to a later release.

The corrected, and most recent, NNSLINST.NSF database with the SLSETUP.EXE attachment may be obtained manually from the following Web site:


Domino servers created after release 5.0.11 will include the corrected NNSLINST.NSF database with the SLSETUP.EXE attachment.

SMTP mail

Server

**Additional Global Domain document for AnyMail Integration setup**

When the AnyMail Integration SMTP support is set up for an R5 server, as a result of either SMTP MTA migration or a new server setup for AnyMail Integration, an additional Global Domain document could be created for the server. Whether a Global Domain document is created or not depends on the Global domain name field in the Server document.

- If this field has a value of MTAGlobal, Domino for iSeries does not create a Global Domain document.
- If this field is blank or has a value other than MTAGlobal, Domino for iSeries resets the field to MTAGlobal and creates a Global Domain document, regardless of whether a Global Domain document already exists or not.

The server uses all of the Global Domain documents.

The Global domain name field is under the R4.x SMTP MTA tab in the Server document.
How R5 replaces the MTA
When you enable an R5 server to send messages over SMTP outside the local Internet domain (configured in the Server Configuration document), the server no longer needs to use the Foreign SMTP Domain and SMTP Connection documents.

If the server is configured for the Domino R5 SMTP support, the server can connect via TCP/IP and route mail via SMTP. The server can use a relay host as needed and can make connections using DNS or using a hosts file. The server uses the router to route mail over SMTP and to perform conversion between Notes format messages and MIME format messages.

When you enable an R5 server to listen for inbound SMTP connections (configured in the Server document), the server performs the same functions as the inbound MTA services. Inbound messages are stored in MAIL.BOX and transferred or delivered by the router. MIME messages are stored in that format and routed over either Notes RPC or SMTP to their destination. If needed, the router converts between MIME and Notes format messages.

If the server is configured for the AnyMail Integration SMTP support, the server uses the router to retrieve SMTP mail from MAIL.BOX and hands it to the Mail Server Framework via the QTMMSNDMAIL API. The Mail Server Framework then gives the mail to the iSeries SMTP server to be delivered to the message destination.

When mail comes into the server, it goes through the iSeries SMTP server and into the Mail Server Framework. An MSF Exit Point Program then processes the mail and places it into MAIL.BOX for the Domino R5 router to process and deliver.

Server change creates new Configuration document
Each time you set up a server or change the server setup to use either the built-in Domino SMTP mail support or the AnyMail Integration SMTP mail support, the setup processing creates a new Configuration document. For example, if you use the Web-based setup or the CFGDOMSVR command to set up a Domino server and later use the CHGDOMSVR command to change the server configuration, you could have two Configuration documents for the server. The server uses the first (oldest) document in the list of documents.

Using an older version of the Configuration document is not a problem for Domino for iSeries R5 mail setup because the SMTP-related settings in the Configuration document are the same, regardless of whether you use the built-in Domino SMTP mail support or the AnyMail Integration SMTP mail support. However, if you manually updated settings in the older Configuration document, the server will continue to use those settings instead of those in the new Configuration document.

For details on the SMTP mail options provided by Domino for iSeries Release 5, see the following topics in Installing and Managing Domino for AS/400 or the Domino for iSeries Help database (AS400HLP.NSF):

- “Deciding what to specify for server characteristics” in Chapter 1
- “About setting up Domino for iSeries mail support” in Chapter 2
- "About managing Domino for iSeries mail support" in Chapter 3

Supported R5 Domino for iSeries mail features
Domino R5 includes many new features to improve the security and performance of your Internet and Notes mail. With Domino R5 for iSeries, you have the flexibility of selecting the SMTP support that best fits the needs of your organization. There are two types of SMTP support available in Domino R5:

- Native Domino SMTP, which uses the SMTP support built into each Domino server
- iSeries AnyMail Integration, which uses AnyMail/400 Mail Server Framework (MSF) in combination with the iSeries SMTP support
AnyMail Integration provides most of the capabilities of the Native Domino support plus the ability to exchange mail with iSeries mail applications, such as OfficeVision/400TM. The following summary of Native Domino features indicates which features are not supported by AnyMail Integration.

**Internet mail routing controls**
- Reverse host IP lookup
- Control relay by destination domain
- Control relay by sending host
- Verify mail sending domain
- Control SMTP inbound mail by sending user or sending host
- Allow or deny SMTP mail based on sender's address or recipient's address

**Authentication mechanisms**
These mechanisms are only supported by Native Domino SMTP, not AnyMail Integration:
- Simple Authentication and Security Layer (SASL) using AUTH=LOGIN
- Transport Layer Security (TLS)
- Secure Sockets Layer (SSL) Port

**Extended SMTP (ESMTP)**
- Performance improvements with 8-bit MIME and command pipelining -- not supported by AnyMail Integration
- Delivery status notifications -- not supported by AnyMail Integration
- Inbound and outbound message size controls

**Router performance**
- Multi-threaded delivery
- Multiple MAIL.BOX databases

**Security**
- Secure MIME (S/MIME) using X.509 certificates for encryption and digital signatures
- Mail file access protection -- all protocols support one or more login authentication mechanisms

**Message fidelity**
- Native MIME
- Native HTML
- Native SMTP

**International features**
- Multiple character sets per server -- set a primary character set and secondary character sets

**More details**
For general information about setting up and managing the R5 Domino for iSeries SMTP mail support, see Chapter 2 and Chapter 3 in Installing and Managing Domino for AS/400 or the Domino for iSeries Help database (AS400HLP.NSF). For details on upgrading a server that uses the Domino 4.6.x SMTP/MIME MTA, see "Upgrading a server that uses the SMTP/MIME MTA to Release 5" in these release notes.
Upgrading a server that uses the SMTP/MIME MTA to Release 5

Upgrading a Domino 4.6.x server that uses the SMTP/MIME Message Transfer Agent (MTA) to Release 5 involves a sequence of operations. Some of these operations are unique to Domino for iSeries; in particular, operations that depend on the type of SMTP mail support that you decide to use for the server. There are two types of SMTP support available in Domino for iSeries R5:

- Native Domino SMTP, which provides all of the capabilities of the SMTP support that is built into each Domino server
- iSeries AnyMail Integration, which uses the iSeries SMTP server and AnyMail/400 Mail Server Framework to support both Domino and OS/400 mail, but does provide a few of the enhanced capabilities provided by the Native Domino SMTP support

For details on specific capabilities that are provided by both types of R5 mail support, see “Supported R5 Domino for iSeries mail features” in these release notes.

Consider conducting a pilot project to test your plans for upgrading your Internet mail servers before you begin moving your organization to Release 5. A pilot project lets you refine your plans and deal with any issues that arise on a smaller scale.

To upgrade a Release 4 MTA to a Release 5 mail server, perform the following steps in order:

1. Back up important files.
2. Disable the SMTP/MIME MTA housekeeping.
3. End the iSeries TCP/IP SMTP server.
4. Shut down the inbound transport of messages.
5. Shut down the router.
6. Shut down the outbound transport.
7. End the AnyMail/400 Mail Server Framework.
8. Clear SMTP.BOX.
9. Clear messages from the outbound MTA queue.
10. Clear messages from the inbound MTA queue.
12. Shut down the MTA server.
13. Install the Domino for iSeries Release 5 software.
14. Select the type of SMTP support for your organization.
15. Configure your SMTP server.

Note: Given the time it may take to clear messages from the inbound and outbound queues, Lotus recommends you upgrade an MTA server at nonpeak times, such as early mornings or on weekends. The MTA is unavailable while you clear the queues and upgrade it, affecting Internet mail delivery, routing, and performance.

Note: Domino automatically upgrades MAIL.BOX to the R5 database format and design. Any messages in MAIL.BOX are preserved.

For related information, see “How R5 replaces the MTA” in these release notes and the following topics in Chapter 2 in Moving to Notes and Domino R5 or in the Domino 5 Administration Help database (HELP5_ADMIN.NSF).

- Replacing the SMTP/MIME MTA
  - Configuration in R4 vs. R5
  - MTA upgrade scenarios
  - Replacing R4 MTAs with R5 mail servers
  - Using a third-party relay host with an R5 mail server
  - Using the cc:Mail and X.400 MTAs with Domino R5
- Internet mail
  - Internet mail routing in mixed-release environments
  - Encrypted messages in mixed environments
Sending mail in Notes format to Internet users
- Internet mail addresses in Domino Release 5
- Internet mail storage format in Domino Release 5

Upgrade changes
- Upgrading an MTA server and NOTES.INI parameters
- IMAP and POP conversion changes in Release 5
- Relay host changes in Domino Release 5
- Using dial-up with Domino Release 5

Performance improvements
- Upgrading an Internet mail server to use multiple threads
- Multiple MAIL.BOX databases on a mail server

**Backing up files on an MTA server**
Back up important Domino server files in case you encounter errors during upgrading. If you have problems during upgrading, you can use the backed-up copies to restore your files.

1. Back up the data directory on your server (for example, /NOTES/DATA). This backs up DESKTOP.DSK, all ID files (including the server ID and certifier IDs), LOG.NSF, NAMES.NSF, MAIL.BOX, and any other Public Address Books located on the server.
2. Back up the contents of any directories or databases pointed to by links (.DIR files) from your data directory.
3. Back up the NOTES.INI file for the server.
4. Back up any other Notes databases (.NSF) or Notes templates (.NTF).
   - Go to "Disabling SMTP/MIME MTA housekeeping."

**Disabling SMTP/MIME MTA housekeeping**
Before upgrading an R4 MTA server, disable MTA housekeeping. If you do not disable housekeeping and you clear the message queues during a time when the Compact task is set to run (2 AM by default), the MTA turns itself off, performs housekeeping tasks, and then turns itself on. This enables inbound and outbound transport, undoing the work of clearing the queues.

1. Make sure you backed up the MTA server files. See "Backing up files on an MTA server."
2. Launch the Lotus Notes client from which you administer the MTA server.
3. Choose File - Database - Open.
4. In the Server field, type the name of the SMTP/MIME MTA server and click Open.
5. Select the Public Address Book for the MTA server's domain and click Open.
6. In the Public Address Book, open the Server/Servers view by expanding the views under Server in the left pane and clicking Servers or by choosing View - Servers - Other, selecting Server/Servers, and clicking OK.
7. Select the Server document for the MTA server.
8. Click the Edit Server button on the Action bar.
9. Expand the Internet Message Transfer Agent (SMTP MTA) section.
10. Under Control, click the down arrow next to the field "Enable daily housekeeping."
11. Select Disable and click OK.
12. Click the Save and Close button on the Action bar.
13. Close the Public Address Book.
   - Go to "Ending the iSeries TCP/IP SMTP server."
Ending the iSeries TCP/IP SMTP server

End the iSeries TCP/IP SMTP server to prevent inbound messages from coming into the system.

1. Make sure you disabled MTA housekeeping. See "Disabling SMTP/MIME MTA housekeeping."
2. Go to an OS/400 command line.
3. Type the following command and press Enter:
   ```bash
   endtcpsvr *smtp
   ``
   The system displays the following message:
   ```plaintext
   SMTP server ended
   ``
   Go to "Shutting down the inbound transport."

Shutting down the inbound transport

Shutting down the inbound transport prevents the MTA from receiving SMTP messages addressed to recipients in your organization. This allows you to clear the Inbound and Outbound Work Queues.

1. Make sure you end the iSeries TCP/IP SMTP server. See "Ending the iSeries TCP/IP SMTP server."
2. Go to the Domino server console.
3. Type the following server command and press Enter:
   ```bash
   tell smtpmta stop inbound transport
   ``
   The server shows the open Inbound Session Controllers and the Inbound Session Controller task (ISESCTL) shutting down:
   ```plaintext
   > tell smtpmta stop inbound transport
   12/14/98 06:03:36 AM SMTPMTA: isesctl Shutting down
   12/14/98 06:03:36 AM SMTPMTA: iseshlr0 Shutting down
   12/14/98 06:03:36 AM SMTPMTA: iseshlr0 Shutdown complete
   12/14/98 06:03:36 AM SMTPMTA: isesctl Shutdown complete
   12/14/98 06:03:47 AM SMTPMTA: Reloading configuration
   12/14/98 06:03:47 AM SMTPMTA: osegcnv Reloading configuration
   12/14/98 06:03:47 AM SMTPMTA: osesctl Reloading configuration
   12/14/98 06:03:47 AM SMTPMTA: oseshlr0 Reloading configuration
   The inbound transport moves messages into the Inbound Work Queue (SMTPIBWQ.NSF). Stopping inbound transport prevents the MTA from accepting inbound SMTP connections.

   Go to "Shutting down the router."

Shutting down the router

Shut down the router to keep other servers from routing outbound messages to the MTA.

1. Make sure you shut down the inbound transport. See "Shutting down the inbound transport."
2. Go to the Domino server console.
3. Type the following server command and press Enter:
   ```bash
   tell router quit
   ``
   The server shows the router task shutting down:
   ```plaintext
   > tell router quit
   12/14/98 06:04:47 AM Router: Shutdown is in progress
   12/14/98 06:04:48 AM Mail Router shutdown
   ``
   Shutting down the router prevents it from transferring more messages to SMTP.BOX and lets the MTA empty the outbound queue by processing existing messages. Incoming messages are held in MAIL.BOX and processed by the server after you upgrade it to Release 5.

   Go to "Shutting down the outbound transport."
Shutting down the outbound transport
Shutting down the outbound transport prevents the MTA from sending SMTP messages. This allows you to clear the Outbound Work Queues.

1. Make sure you shut down the router. See "Shutting down the router."
2. Go to the Domino server console.
3. Type the following server command and press Enter:
   
   tell smtpmta stop outbound transport

   The server shows the open Outbound Session Controllers and the Outbound Session Controller task (OSESCTL) shutting down.

   Go to "Ending the AnyMail/400 Mail Server Framework."

Ending the AnyMail/400 Mail Server Framework
Ending the AnyMail/400 Mail Server Framework (MSF) prevents MSF from processing inbound and outbound messages.

1. Make sure you shut down the outbound transport. See "Shutting down the outbound transport."
2. Go to an OS/400 command line.
3. Type the following command and press Enter:
   
   endmsf

   The system displays the following message:

   ENDMFS completed successfully.

   Go to "Clearing SMTP.BOX."

Clearing SMTP.BOX
After shutting down the router, the inbound transport, the outbound transport, and the Mail Server Framework, wait for the MTA to process all messages in SMTP.BOX before proceeding. If you do not have the database icons for SMTP.BOX, the SMTP Outbound Work Queue (SMTPOBWQ.NSF), and the SMTP Inbound Work Queue (SMTPIBWQ.NSF) on your workspace, add them.

Adding MTA server system database icons to the workspace
1. Switch to the Lotus Notes client.
2. Choose File - Database - Open.
3. In the Server box, type the name of the MTA server and click Open.
4. In the Filename field, type SMTP.BOX.
5. Click Add Icon.
6. In the Filename field, type SMTPOBWQ.NSF.
7. Click Add Icon.
8. In the Filename field, type SMTPIBWQ.NSF.
9. Click Add Icon.
10. Click Done.

The icons for SMTP.BOX, the Inbound Work Queue, and the Outbound Work Queue are now on your Notes workspace.
Verifying that SMTP.BOX has no active messages
1. Make sure you shut down the inbound transport and the router. See “Shutting down the inbound transport” and “Shutting down the router.”
2. Double-click the SMTP.BOX icon on your Notes workspace. If this is the first time you have opened the database, you see the “About This Database” document. Press ESC.
3. If there are any messages marked Pending Conversion or Pending Transmission, wait for them to be processed and cleaned up by the Delivery Report Task (DRT).
4. Verify message processing by pressing F9 or choosing View - Refresh; processed messages are removed from the view.
5. Once the view is empty, or contains only documents marked Dead, SMTP.BOX is clear.
6. Press ESC to close SMTP.BOX.
   There may be some delay between message processing and the DRT removing the message from the view due to the cycle time of the DRT.
   Go to "Clearing the Outbound Work Queue."

Clearing the Outbound Work Queue
Clearing the Outbound Work Queue routes all remaining outbound SMTP messages to their destinations.
1. Make sure SMTP.BOX is clear. See "Clearing SMTP.BOX."
2. Double-click the SMTP Outbound Work Queue (SMTPOBWQ.NSF) icon on your Notes workspace. If this is the first time you have opened the database, you see the "About This Database" document. Press ESC.
3. Wait until all messages in the Outbound Work Queue are successfully processed by the MTA. There should be either no messages in the view or only messages marked Dead.
4. Verify that all messages except those marked Dead are processed by pressing F9 or choosing View - Refresh. Processed messages are removed from the view by the DRT.
5. Press ESC to close the Outbound Work Queue.
   There may be some delay between message processing and the DRT removing the message from the view due to the cycle time of the DRT.
   Go to "Clearing the Inbound Work Queue."

Clearing the Inbound Work Queue
Clearing the Inbound Work Queue moves all SMTP messages addressed to recipients in your organization out of the Inbound Work Queue so they can be delivered. Messages in MAIL.BOX are delivered after the server is upgraded and restarted.
1. Make sure you cleared the Outbound Work Queue. See "Clearing the Outbound Work Queue."
2. Change to the Lotus Notes client.
3. Double-click the SMTP Inbound Work Queue (SMTPIBWQ.NSF) icon on your Notes workspace. If this is the first time you have opened the database, you see the "About This Database" document. Press ESC.
4. Wait until all messages marked Pending Conversion are processed. Verify that all messages except those marked Dead are processed by pressing F9 or choosing View - Refresh. Processed messages are removed from the view by the DRT.
5. Press ESC to close the Inbound Work Queue.
   There may be some delay between message conversion/transmission and the DRT removing the message from the view due to the cycle time of the DRT.
   Go to "Clearing messages from the /QIBM/UserData/Lotus/SMTPMTA/TMP directory."
Clearing messages from the /QIBM/UserData/Lotus/SMTPMTA/TMP directory

You must clear messages from the /QIBM/UserData/Lotus/SMTPMTA/TMP directory if you select AnyMail Integration as the type of SMTP support for your organization. AnyMail Integration uses the AnyMail/400 Mail Server Framework in combination with the iSeries SMTP server.

The directory structure has changed with Domino Release 5. When you set up the Domino server, change the server setup, or start the server for the first time after installing the Release 5 software, Domino for iSeries prepares the new directory structure, but only if the /TMP directory can be removed. The /TMP directory cannot be removed if it contains messages.

Typically, messages are not left in the /QIBM/UserData/Lotus/SMTPMTA/TMP directory unless the Mail Server Framework cannot process a message. There may or may not be messages in the directory.

1. Go to an OS/400 command line.
2. Type the following command and press Enter:
   ```
   wrklnk '/qibm/userdata/lotus/smtpmta/tmp'
   ```
   On the resulting display:
   1. Use the 5=Next level option to display possible message objects. That is, type a 5 in the Option field beside the /TMP directory and press Enter.
   2. If there are messages in the /TMP directory, use the 4=Remove option to remove each message.

Shutting down the SMTP/MIME MTA

After clearing messages from the MTA, shut it down and upgrade the server.

1. Switch to the Domino server console.
2. Type the following server command and press Enter:
   ```
   quit
   ```
   Also shut down the Lotus Notes client. For example, choose File - Exit Notes.

Installing Domino Release 5 on an MTA server

1. Make sure you backed up all important Domino files. See "Backing up files on an MTA server."
2. Make sure you followed the procedures to clear messages from the MTA, beginning with "Disabling the SMTP/MIME MTA housekeeping."
3. Install the Domino for iSeries Release 5 software. For details, see Chapter 1 in *Installing and Managing Domino for AS/400* or the Domino for iSeries Help database (AS400HLP.NSF).

Selecting the type of SMTP support for your organization

Take care in selecting the type of SMTP support for your organization. There are distinct differences between the two types of SMTP support available with Domino for iSeries Release 5. It is important that you understand these differences before continuing.

Domino for iSeries Release 5 provides two types of SMTP mail support:

- **Domino SMTP** supports Domino mail only. It uses the SMTP function that is built into the Domino R5 server and communicates through the iSeries TCP/IP support.

  This type of SMTP support allows you to take advantage of the extended SMTP support, which is not available with the iSeries SMTP support. It does not allow you to exchange mail with other OS/400 mail applications that reside on the same iSeries server as the Domino server. However, you can exchange mail with other iSeries servers that are using OS/400 mail applications. This is the same as sending mail to another location across the Internet.

- **AnyMail Integration** supports Domino mail in addition to OS/400 mail applications, such as OfficeVision/400. It uses the iSeries SMTP server in combination with the AnyMail/400 Mail Server Framework (MSF) and communicates through the iSeries TCP/IP support.
This type of SMTP support allows you to take advantage of being fully integrated with other OS/400 mail applications that reside on the same iSeries server as the Domino server.

Go to "Configuring your SMTP server."

**Configuring your SMTP server**

Before proceeding, make sure you understand the differences between the two types of SMTP support. See the previous section, "Selecting the type of SMTP support for your organization."

Domino for iSeries R5 provides a simplified process for configuring the SMTP support and makes it much easier to perform. The following sections explain what takes place when configuring your SMTP server for either of the two types of SMTP support or for migrating your SMTP server from a previous release.

**Domino SMTP**

There are two scenarios for configuring your Domino server to use the R5 SMTP support:

- Configuring a new server for the R5 SMTP support
- Migrating your Release 4.6.x SMTP/MIME MTA server to Domino R5 SMTP support

**Configuring a new server for the Domino R5 SMTP support**

In the simplified setup process, all you need to do is specify the Domino SMTP when you set up the Domino server using either Web-based setup or the OS/400 Configure Domino Server (CFGDOMSVR) command:

- For Internet mail packages, specify SMTP (*SMTP if using the CFGDOMSVR command).
- For SMTP services, specify Domino (*DOMINO if using the CFGDOMSVR command). Note that the setup program uses Domino as the default if you do not specify a different value.

For details on setting up a Domino server, see Chapter 1 in *Installing and Managing Domino for AS/400* or the Domino for iSeries Help database (AS400HLP.NSF).

When you set up a Domino server to use the built-in Domino SMTP mail support, the setup program includes the necessary values for the Domino SMTP support in the Server document that it creates for the server. The setup program also creates a Configuration document with the necessary values for the SMTP support. The specific values for the Server document and Configuration document are listed in the tables below.

The setup program also adds the SMTP_VERSION variable in the NOTES.INI file for the server. The variable is set to: SMTP_VERSION=0.

These are the only values required to make the Domino R5 SMTP support work. Your network topology may require other settings in these documents or other documents to make SMTP support work in your organization. Therefore, make sure you carefully plan your migration or installation. In addition, you may need to update your iSeries TCP/IP configuration.

**Migrating a 4.6.x SMTP/MIME SMTP server to the Domino R5 SMTP support**

In Domino Release 4.6.x, there was only one type of SMTP support available, AnyMail/400 Mail Server Framework with the iSeries SMTP support (also known as the SMTPMTA). Once you have completed the previous migration steps in this release note, run the OS/400 Change Domino Server (CHGDOMSVR) command to specify the Domino SMTP support:

- For Internet mail packages, specify *SMTP.
- For SMTP services, specify *DOMINO. Note that the value *MSF may appear as the default on the prompt display for the command. This occurs because the command prompt override program has determined that the previous configuration of the server was SMTPMTA, which translates to *MSF for Domino R5.

When you run the CHGDOMSVR command, the system updates the Server document with the necessary values for the Domino SMTP support and creates a Configuration document with the necessary values for SMTP support. The specific values for the Server document and Configuration document are listed in table below.

The server also adds or changes the SMTP_VERSION variable in the NOTES.INI file for the server. The variable is set to: SMTP_VERSION=0.

These are the only values required to make the Domino R5 SMTP support work. Your network topology may require other settings in these documents or other documents to make SMTP support work in your organization. Therefore, make sure you carefully plan your migration or installation. In addition, you may need to update your iSeries TCP/IP configuration.
Settings for Domino SMTP
The Server document and Configuration document contain the following settings to enable the Domino R5 SMTP support.

**Server document**

<table>
<thead>
<tr>
<th>Tab</th>
<th>Field</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basics</td>
<td>Routing tasks</td>
<td>SMTP Mail Routing is added</td>
</tr>
<tr>
<td>Basics</td>
<td>SMTP Listener task</td>
<td>Set to Enabled</td>
</tr>
<tr>
<td>Basics</td>
<td>Fully qualified Internet host name</td>
<td>Set to the fully qualified Internet host name, which is retrieved from the system TCP/IP configuration settings.*</td>
</tr>
</tbody>
</table>

* You can see iSeries server TCP/IP settings by entering `cfgtcp` and then specifying option 12.

**Configuration document**

<table>
<thead>
<tr>
<th>Tab</th>
<th>Field</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basics</td>
<td>Group or Server name</td>
<td>Set to server name that was specified in the server setup.</td>
</tr>
<tr>
<td>Router/SMTP</td>
<td>SMTP used when sending messages outside of the local Internet domain</td>
<td>Set to Enabled.</td>
</tr>
</tbody>
</table>

**Note** When your server is configured for the Domino R5 SMTP support, the Domino SMTP Listener Task is set to Enabled. This means that you will see a job in the Domino server subsystem called SMTP. Make sure that the iSeries SMTP server is not running. Before starting your Domino server, enter the following command from an OS/400 command line:

```plaintext
endtcpsvr *smtp
```

If the iSeries SMTP TCP server is running when you start your Domino server, you will see SMTP Listener errors on the Domino server console.

**AnyMail Integration**

There are two scenarios for configuring your Domino server to use the iSeries AnyMail Integration support:

- Configuring a new server for the AnyMail Integration support
- Migrating your Release 4.6.x SMTP/MIME MTA server to Domino R5 with AnyMail Integration support

**Configuring a new server for the AnyMail Integration support**

In the simplified setup process, all you need to do is specify AnyMail Integration when you set up the Domino server using either Web-based setup or the OS/400 Configure Domino Server (CFGDOMSVR) command:

- For Internet mail packages, specify SMTP (*SMTP if using the CFGDOMSVR command).
- For SMTP services, specify MSF (*MSF if using the CFGDOMSVR command). Note that the setup program uses Domino as the default if you do not specify a different value.

For details on setting up a Domino server, see Chapter 1 in *Installing and Managing Domino for AS/400* or the Domino for iSeries Help database (AS400HLP.NSF).

When you set up a Domino server to use the AnyMail Integration mail support, the setup program includes the necessary values for the AnyMail Integration support in the Server document that it creates for the server. The setup program also creates two additional documents with the necessary values for AnyMail Integration: a Configuration document and a Global Domain document that is named MTAGlobal. The specific values for the Server document, Configuration document, and Global Domain document are listed in the tables below.

The setup program also adds the SMTP_VERSION variable in the NOTES.INI file for the server. The variable is set to: SMTP_VERSION=1.

These are the only values required to make the AnyMail Integration support work. Your network topology may require other settings in these documents or other documents to make AnyMail Integration work in your organization. Therefore, make sure you carefully plan your migration or installation. In addition, you may need to update your iSeries TCP/IP configuration.
Migrating a 4.6.x SMTP/MIME SMTP server to the AnyMail Integration support

In Domino Release 4.6.x, there was only one type of SMTP support available, AnyMail/400 Mail Server Framework with the iSeries SMTP support. Migrating your 4.6.x SMTP server is easy. Once you have completed the previous migration steps in this release note, start the server. For example, enter the following command on an OS/400 command line:

```
strdomsvr server-name
```

Substitute the actual server name for `server-name` in the example. The startup processing determines if your SMTP server has been migrated to R5. If not, it will determine that your previous configuration was for the R4.6.x SMTPMTA and will configure your Domino R5 server for AnyMail Integration. The following steps are performed during the migration of your R4.6.x server to R5:

- Remove the /INBOUND directory and all subdirectories from the /QIBM/UserData/Lotus/SMTPMTA/ path.
- Remove the /TMP directory from the /QIBM/UserData/Lotus/SMTPMTA/ path if it is empty. If the directory is not empty, it is not removed and the migration process for this server is stopped. The server will start, but a message in the job log indicates that an IFS directory could not be removed. You will also see a message on the Domino server console that job SMTPMTA could not be found. This is because the SMTPMTA program does not exist in R5 and was not removed from the server task list in the NOTES.INI file. If this occurs, you will need to run the Change Domino Server (CHGDOMSVR) command to complete the migration of your SMTP server. In the CHGDOMSVR command, specify a value of *SMTP for Internet packages and a value of *MSF for SMTP services. These values may already appear on the CHGDOMSVR prompt display, but you must type over them.
- Remove the SMTPMTA job from the server task list.
- Update the Server document.
- Create the Configuration document.
- Create a Global Domain document if the Global domain name field is blank in the Server document. The Global domain document name is set to MTAGlobal.

**Note** If the name MTAGlobal does not exist in the Global domain name field in the Server document, the migration program assumes that the Global Domain document does not exist and creates the document. The MTA tab of the Server document is updated with the name of the global domain. The name for the global domain will be the same as in R4.6.x and set to MTAGlobal. If there is more than one Global Domain document, the new document is placed at the bottom of the list of Global Domain documents in the Domino Directory.

The migration program only checks for the MTAGlobal value in the Server document, not for the existence of a Global Domain document named MTAGlobal. Therefore, another Global Domain document named MTAGlobal could be created if an MTAGlobal document already exists but is not listed in the Server document.

- Add or change the SMTP\_VERSION variable in the NOTES.INI file for the server. The variable is set to: SMTP\_VERSION=1.

These are the only values required to make the AnyMail Integration support work. Your network topology may require other settings in these documents or other documents to make AnyMail Integration work in your organization. Therefore, make sure you carefully plan your migration or installation. In addition, you may need to update your iSeries TCP/IP configuration.

**Settings for AnyMail Integration**

The Server document and Configuration document contain the following settings to enable the AnyMail Integration support.

**Server document**

<table>
<thead>
<tr>
<th>Tab</th>
<th>Field</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basics</td>
<td>Routing tasks</td>
<td>SMTP Mail Routing is added</td>
</tr>
<tr>
<td>Basics</td>
<td>SMTP Listener task</td>
<td>Set to Disabled</td>
</tr>
<tr>
<td>Basics</td>
<td>Fully qualified Internet host name</td>
<td>Set to the fully qualified Internet host name, which is retrieved from the system TCP/IP configuration settings.*</td>
</tr>
</tbody>
</table>

* You can see iSeries server TCP/IP settings by entering `c f g t c p` and then specifying option 12.
Configuration document

<table>
<thead>
<tr>
<th>Tab</th>
<th>Field</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basics</td>
<td>Group or Server name</td>
<td>Set to server name that was specified in the server setup.</td>
</tr>
<tr>
<td>Router/SMTP</td>
<td>SMTP used when sending messages outside of the local Internet domain</td>
<td>Set to Enabled.</td>
</tr>
</tbody>
</table>

If an MTAGlobal domain document is created, it has the following settings.

MTAGlobal domain document

<table>
<thead>
<tr>
<th>Tab</th>
<th>Field</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basics</td>
<td>Domain type</td>
<td>Set to Global Domain</td>
</tr>
<tr>
<td>Basics</td>
<td>Global domain name</td>
<td>Set to MTAGlobal</td>
</tr>
<tr>
<td>Basics</td>
<td>Global domain role</td>
<td>Set to R5 Internet Domino or R4.x SMTPMTA</td>
</tr>
<tr>
<td>Restrictions</td>
<td>Notes domains and aliases</td>
<td>Set to the domain name that is retrieved from the NOTES.INI</td>
</tr>
<tr>
<td>Conversions</td>
<td>Local primary Internet domain</td>
<td>Set to the fully qualified Internet host name, which is retrieved from the system TCP/IP configuration settings.*</td>
</tr>
<tr>
<td>Conversions</td>
<td>Internet address lookup</td>
<td>Set to Enabled</td>
</tr>
<tr>
<td>Conversions</td>
<td>Local part formed from</td>
<td>Set to Common name</td>
</tr>
<tr>
<td>Conversions</td>
<td>Notes domain(s) included</td>
<td>Set to None</td>
</tr>
<tr>
<td>Conversions</td>
<td>Notes domain separator</td>
<td>Set to period (&quot;&quot;)</td>
</tr>
</tbody>
</table>

* You can see iSeries server TCP/IP settings by entering `cf gTCP` and then specifying option 12.

Note When your server is configured for the AnyMail Integration support, the Domino SMTP Listener Task is set to Disabled. This means that you will not see a job in the Domino server subsystem called SMTP. Make sure that the iSeries SMTP server is running. Before starting your Domino server, enter the following command from an OS/400 command line:

```
strtcpsvr *smtp
```

If the iSeries SMTP server is not running when you start your Domino server, your SMTP mail stays in the `/QIBM/UserData/Lotus/SMTPTMA/Outbound` directory.

Server administration

Server

Search engine enhanced

Domino for iSeries included an alternate search engine, designated GTR-34, in Release 5.0.5, 5.0.6a and 5.0.7 in addition to the engine that originally shipped with Domino R5. The GTR-34 engine was not turned on by default in these releases because the maximum document size that could be indexed with the new search engine in R5.0.5/R5.0.6a/R5.0.7 would be reduced to approximately 5.3MB, versus a maximum of about 8MB with the original search engine. Also, documents that are too large would be excluded from the database's index.

Beginning with Domino for iSeries R5.0.8, the maximum document size limit has been raised to approximately 2GB for both search engines. However, the default document size limit is 6MB. This limit can be changed by setting the notes.ini variable `FTG_INDEX_LIMIT=<number of bytes>` to the desired limit. Documents that are larger than this size will be excluded from the index.

In addition, the GTR-34 search engine has become the default search engine as of R5.0.8. It is automatically turned on as of R5.0.9. With the new search engine, you may see improvements in index creation and search response time, particularly with large databases or databases containing a mixture of different languages.
Note that Domino will re-build indices for all databases that are currently indexed (unless your administrators already activated the GTR-34 engine and allowed it to rebuild all indices when GTR-34 was first released in R5.0.5/R5.0.6a/R5.0.7). Domino will rebuild indices on both the 5.0.9 server and on Notes client machines which access the 5.0.9 server.

The original search engine can be retained by placing the following parameter in your NOTES.INI file. The parameter must be present on any client or server where you want to retain the old search engine and prevent the rebuilding of indices:

```
FT_LIBNAME = ftgtr
```

**Note:** If you activate the original search engine using this .ini parameter, Domino will re-build the indices for all databases that are currently indexed. If the parameter is later removed from the notes.ini file, all indices will again be rebuilt using the GTR-34 format.

**Server**

**Domino plug-in for iSeries HTTP Server**

The Domino plug-in for iSeries HTTP Server allows you to perform iSeries web serving of Domino and non-Domino content using a single web server. With this support, Domino can be set up to use the iSeries HTTP Server instead of its internal web server. This can result in simpler administration and a reduction in the number of internet ports required. This section describes, by example, the steps to enable Domino to use the iSeries HTTP Server. You will need to define a one-to-one relationship between an existing Domino server and an existing iSeries HTTP server. If you do not already have these set up, see the *Lotus Domino for AS/400 R5: Implementation* (SG24-5592) and *HTTP Server for AS/400 Webmaster's Guide* (GC41-5434) books for more information.

**Prerequisites**

1. Review the information provided in this section.
2. Your iSeries server must be running V4R4 or later.
3. 5769-DG1 must be installed with the latest PTFs.
4. PTF SA89753 must be applied to 5769-LNT.

**Restrictions**

- This support is similar to Domino for Microsoft Internet Information Server. See the "Features supported by Domino for Microsoft IIS" topic in the Administering the Domino System book for information on running in this environment. The details in the section also apply to iSeries implementation. Performing Web administration via the WebAdmin application (WebAdmin.NSF) is not supported.
- Automatic restart of Domino following an abnormal termination is not supported. It must be restarted manually.
- The iSeries HTTP Server should be ended before ending the associated Domino server.
- In the event of an abnormal termination of the Domino server, the associated iSeries HTTP Server must be ended before attempting to restart the Domino server.
- Client authentication using SSL is not supported.
- Applications that generate URLs that reference a Domino databases by its UNID instead of its file name (for example, my_db.nsf) are not supported. Domino.Doc is an example of an application that generates URLs in this non-supported format.
- The Domino Plug-in for iSeries HTTP Server has not been tested with QuickPlace.
- The Domino server must be active when using this support.
Enabling Domino to use the iSeries HTTP Server

To enable Domino to use the iSeries HTTP Server:

- Using the table below, determine your corresponding values.

<table>
<thead>
<tr>
<th>Example tag</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;my iSeries HTTP server name&gt;</code></td>
<td>The name of the iSeries HTTP Server instance to be associated with the Domino server (for example, mywebsvr)</td>
</tr>
<tr>
<td><code>&lt;my Domino server name&gt;</code></td>
<td>The name of the Domino server to be associated with the iSeries HTTP Server (for example, mydomsvr)</td>
</tr>
<tr>
<td><code>&lt;my Domino server data directory&gt;</code></td>
<td>The name of the Domino server's data directory (for example, /mydomsvr/domino/data)</td>
</tr>
<tr>
<td><code>&lt;my system name&gt;</code></td>
<td>The internet host name of your iSeries</td>
</tr>
</tbody>
</table>

- In the following example, replace the example tags with the values relevant to your configuration. Depending on the situation, additional customization may be required.

**Step I: Reconfigure your iSeries HTTP Server**

1. Start the iSeries HTTP Server administration server using the following command: STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)
2. From the browser, access the administration server on port 2001. For example, enter: http://<my system name>:2001. You will be prompted for your OS/400 user id and password.
3. Click Request Processing -> Request Routing. Add the 3 lines as shown in the table below. This assumes your Domino server uses the default directories for its icons and java applets.

<table>
<thead>
<tr>
<th>Action</th>
<th>URL template</th>
<th>Replacement file path</th>
<th>CGI conversion mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td><em>.nsf</em></td>
<td>/QSYS.LIB/QNOTES.LIB/LIBHTTPX.SRVPGM:Service</td>
<td>%%BINARY/MIXED%%</td>
</tr>
<tr>
<td>Pass</td>
<td>/icons/*</td>
<td>/&lt;my Domino server data directory&gt;/domino/icons/*</td>
<td></td>
</tr>
<tr>
<td>Pass</td>
<td>/domjava/*</td>
<td>/&lt;my Domino server data directory&gt;/domino/JAVA/*</td>
<td></td>
</tr>
</tbody>
</table>

Finally, click Server API Application and add the 2 lines as shown in the table below:

<table>
<thead>
<tr>
<th>Step</th>
<th>Application path and file name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ServerInit</td>
<td>/QSYS.LIB/QNOTES.LIB/LIBHTTPX.SRVPGM:ServerInit</td>
</tr>
<tr>
<td>ServerTerm</td>
<td>/QSYS.LIB/QNOTES.LIB/LIBHTTPX.SRVPGM:ServerTerm</td>
</tr>
</tbody>
</table>

**Step II: Reconfigure your Domino server**

1. Update Domino so that it uses the iSeries HTTP server instead of its own internal HTTP server. To do so, use the CHGDOMSVR SERVER(<my Domino server name>)WEB(<my iSeries HTTP server name>) command.
2. Start your Domino server using the STRDOMSVR SERVER(<my Domino server name>) command.
Step III: Start your iSeries HTTP Server
Start the iSeries HTTP Server using the STRTCPSVR SERVER(*HTTP) HTTPSVR(<my iSeries HTTP server name>) command. You can monitor the server jobs using the Work with Active Job (WRKACTJOB) command as indicated below:

WRKACTJOB JOB job(<my iSeries HTTP server name>).

You should now be able to access .nsf files via the iSeries HTTP Server.

If you want to switch from iSeries HTTP Server to Domino HTTP server, follow the steps below:
1. End the iSeries HTTP Server: ENDTCPFSVR SERVER(*HTTP) HTTPSVR(<my iSeries HTTP server name>)
2. End the Domino Server: ENDDOMSVR SERVER(<my Domino server name>)
3. Change the Domino server: CHGDOMSVR SERVER(<my Domino server name>) WEB(*HTTP)
4. Start the Domino Server: STRDOMSVR SERVER(<my Domino server name>)

If you want to still use the iSeries HTTP Server to serve non-Domino content, you must comment out the ServiceInit, Service, and ServiceTerm directives in the configuration file.

If you want to switch from Domino HTTP Server to iSeries HTTP Server, follow the steps below:
1. End the iSeries HTTP Server: ENDTCPFSVR SERVER(*HTTP) HTTPSVR(<my iSeries HTTP server name>)
2. End the Domino Server: ENDDOMSVR SERVER(<my Domino server name>)
3. Change the Domino server: CHGDOMSVR SERVER(<my Domino server name>) WEB(<my iSeries HTTP server name>)
4. Start the Domino Server: STRDOMSVR SERVER(<my Domino server name>)
5. Start the iSeries HTTP Server: STRTCPFSVR SERVER(*HTTP) HTTPSVR(<my iSeries HTTP server name>)

Problem determination
- It is a good idea to enable at least error logging on the iSeries HTTP Server. Do this using the Configuration->Logging->Error log file. Specify a file name where you want the errors logged. Make sure the directory path exists and that the QTMHHTTP user profile has update access. Check this file when something does not work as expected.
- To get a detailed trace of the web server activity, specify the -vv option on the instance startup value parameter of the STRTCPFSVR command. A spool file associated with the main iSeries HTTP server job will contain the trace.
- Partial NSDs will be taken in some situations. Typically, they include just the stack and the notes.ini file. Look for them in the Domino server's data directory.
- Check the job log of all of the HTTP Server jobs. Use the WRKSPFLF QTMHHTTP command to get a list of the job logs once the jobs have ended. If job logs are not being produced, then you may have to change the job description. To do this, use the CHGJOBD JOBD(QHTTPSVR/QZHBHTTP) LOG(4 00 *SECLVL) command.
- In the case of a crash, you may have to restart both the iSeries HTTP Server and the Domino server. Make sure all jobs are ended for both servers before beginning the restart.

Diagnostic Tools
When attempting the initial launch of the Domino plug-in for iSeries HTTP Server, it is recommended that you enable certain diagnostic tools to assist in isolating configuration problems. Typically, if there is a configuration error, the iSeries HTTP Server jobs will start, run for a few seconds, then end. You can monitor this with WRKACTJOB.<iSeries HTTP Server name>>.

Two important sources of diagnostic information are the iSeries HTTP Server "very verbose" trace, and the iSeries HTTP Server job logs. To turn on the 'very verbose' trace, specify -vv on the "Instance startup values" parameter of the STRTCPFSVR command. This generates a spool file for user QTMHHTTP associated with the first iSeries HTTP Server job. To ensure the iSeries HTTP Server generates job logs, enter the following command:

CHGJOBD JOBD(QHTTPSVR/QZHBHTTP) LOG(4 00 *SECLVL)
If the iSeries HTTP Server fails to start successfully and you see the message below in one of the QTMHHTTP job logs, this may indicate that the associated Domino server has not been changed to specify the iSeries HTTP Server. To correct, run CHGDOMSVR SERVER(<Domino Server name>) WEB(<iSeries HTTP Server name>)

<table>
<thead>
<tr>
<th>MCH3601</th>
<th>Escape</th>
<th>LIBNOTES</th>
<th>QNOTES</th>
<th>40</th>
<th>06/26/00</th>
<th>09:42:04</th>
<th>LIBNOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*STMT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From module . . . . . . : INOTESIF
From procedure . . . . : 

InotesHTTPFileAuth
Statement . . . . . . : *N
To module . . . . . . : INOTESIF
To procedure . . . . : 

InotesHTTPFileAuth
Statement . . . . . . : *N
Message . . . : Pointer not set for

location referenced.
either directly or as a basing
address.

If you see messages on the Domino console where the data after the "?" in a URL is incorrect or missing, it likely that the ‘CGI Conversion Mode’ parameter of the Service directive in the iSeries HTTP Server configuration file is incorrectly specified. It must be %%BINARY/MIXED%%.

06/26/2000 09:41:08 PM HTTP Web Server: Lotus Notes Exception - File does not exist [/decsdoc.nsf?Íùàò|üúüéüóà]

If the Domino server is ended with the *IMMED option or via a crash, you must completely end the associated iSeries HTTP Server before restarting the Domino server. The following messages on the Domino console indicate that you may have an active iSeries HTTP Server that is preventing successful restart of the Domino server:

06/21/2000 08:18:02 AM WARNING: Unable to locate a server document for this server - damdm1/dam: This database is currently being used by someone else.

In order to share a Notes database, all users must use a Domino Server instead of a File Server.

If you see an iSeries HTTP Server that has threads hung in a loop with the following stack entries, this may indicate that the associated Domino server has ended abnormally. To recover, you must end the iSeries HTTP Server, then restart it and the associated Domino server.

<table>
<thead>
<tr>
<th>Program,</th>
<th>Rqs</th>
<th>Lvl</th>
<th>Procedure</th>
<th>Library</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>OSLockSem</td>
<td>QNOTES</td>
<td>00000000001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt;</td>
<td>LockSemInt</td>
<td>QNOTES</td>
<td>00000000003</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OSLockSpin</td>
<td>QNOTES</td>
<td>00000000004</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt;</td>
<td>HangEnable</td>
<td>QNOTES</td>
<td>00000000005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt;</td>
<td>nix_usleep</td>
<td>QNOTES</td>
<td>00000000006</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>select</td>
<td>QSYS</td>
<td>0000000205b</td>
</tr>
</tbody>
</table>

Enabling simultaneous execution of Domino SMTP and iSeries SMTP
Domino for iSeries R5 provides the flexibility of selecting the SMTP support that best fits the needs of your organization. There are two types of SMTP support available in Domino R5:

- iSeries SMTP support with AnyMail/400 Mail Server Framework. Supports Domino SMTP mail in addition to OS/400 mail, such as OfficeVision/400. This support uses the iSeries SMTP server in combination with the AnyMail/400 Mail Server Framework (MSF).
- Native Domino R5 SMTP support. This option supports Domino mail only and uses the Simple Mail Transfer Protocol (SMTP) function that is built into the Domino R5 server.

Selecting the type of SMTP support for an organization should be carefully planned, and the differences understood, before you configure SMTP support.. There are distinct differences between the two types of SMTP support available with Domino for iSeries R5.
Native Domino SMTP
Configuring a server for this type of SMTP support uses iSeries TCP/IP and Domino for iSeries R5 SMTP. It does not allow the sending of mail to other OS/400 SMTP mail applications that reside on the same server as Domino R5, unless the other mail applications support binding to specific TCP/IP addresses. However, customers can send mail to other iSeries servers that are using OS/400 mail applications. This is the same as sending mail to another location across the Internet.

Domino R5.0 allows binding to a specific TCP/IP address with the use of a notes.ini variable. This gives an organization the ability to run multiple Domino R5.0 SMTP servers on one iSeries simultaneously. Setting the variable TCPIP_TcpIpAddress to an existing TCP/IP address on an iSeries, binds the server to port 25 of the TCP/IP address specified. Port 25 is typically used as the port for SMTP.

iSeries SMTP Support with AnyMail/400 Mail Server Framework Integration
This type of SMTP support allows you to take advantage of being fully integrated with other OS/400 mail applications that reside on the same server as Domino for iSeries R5. Configuring your server for this type of SMTP support uses iSeries TCP/IP support, iSeries SMTP support with AnyMail/400 Mail Server Framework, and Domino R5.0. However, it does not use the SMTP capabilities of Domino R5.0.

iSeries SMTP New Function - Binding to a Specific TCP/IP Address
Binding to a specific TCP/IP address for iSeries SMTP support is a new function that allows the SMTP Server, or SMTP Client, to bind to a specific TCP/IP address based on data from a data area. Binding to a specific TCP/IP address extends the flexibility of the two types of SMTP support available with Domino R5.0. Binding to a specific TCP/IP address functionality has been implemented on the iSeries at V4R2M0, and later, with PTF support. The specific PTF numbers are as follows:

<table>
<thead>
<tr>
<th>OS/400 Release</th>
<th>TMS PTF #</th>
<th>TMM PTF #</th>
</tr>
</thead>
<tbody>
<tr>
<td>V4R2M0</td>
<td>SF55647 (PTR # 3695187)</td>
<td>SF55704 (PTR # 3695975)</td>
</tr>
<tr>
<td>V4R3M0</td>
<td>SF55641 (PTR # 3695187)</td>
<td>SF55703 (PTR # 3695975)</td>
</tr>
<tr>
<td>V4R4M0</td>
<td>SF60787 (PTR # 3695187)</td>
<td>SF60764 (PTR # 3695975)</td>
</tr>
<tr>
<td>V4R5M0</td>
<td>SF60827 (PTR # 3695187)</td>
<td>SF61136 (PTR # 3695975)</td>
</tr>
</tbody>
</table>

Note Without the ability to bind to a specific TCP/IP address, it is not possible for two Domino servers, one configured for Native Domino SMTP support and the other configured for iSeries SMTP support with AnyMail/400 Mail Server Framework Integration, to function simultaneously on the same server.

For more information on SMTP support, see the Domino for iSeries website at and the following address: http://www.ibm.com/ eserver/iseries/domino/r5smtp/r5smtp.htm

Server iSeries port conflict
Domino for iSeries and OS/400 system functions, such as HTTP (port 80) and POP3 (port 110), use the same port numbers. If you start a Domino server with HTTP or POP3 configured and that function is already active on the iSeries server, you will see messages on the Domino server console indicating that there is a port conflict.

You can use the NETSTAT command to determine what ports the iSeries server is using:
1. On any OS/400 command line, enter the following command: netstat
2. On the resulting menu, specify option 3.
3. On the TCP/IP Connection Status display, press F14 to see the ports in use on the iSeries server.

To avoid the port conflicts, change the port used by either the iSeries server or the Domino server. For related information, see the topic “Avoiding conflicts between the iSeries HTTP server and Domino” in Chapter 2 of Installing and Managing Domino for AS/400 or the Domino for iSeries Help database (AS400HLP.NSF).
BRMS: Domino integration overview

BRMS is an IBM iSeries licensed program product (5769BR1 for V4R5 and 5722BR1 for V5R1) that is designed to help you backup and recover your data as well as track and protect the media used. Domino for iSeries allows the configuration of a basic set of defaults for use with BRMS to enable you to back up databases for your Domino server while the server is active (online). To use these functions, you must install the following on your iSeries:

- Version 4 Release 4 (V4R4) of OS/400 or later
- V4R4 of BRMS or later
- The latest PTFs available for your BRMS release.
- Option 1 of Domino for iSeries

Note Backing up your Domino server databases should not replace your occasional complete system backups. For instructions on doing a complete system backup through BRMS, see the iSeries BRMS documentation. The document for V4R4 is Backup, Recovery, and Media Services for AS/400 V4R4 (SC41-5345). iSeries documents are available from the iSeries Online Library, which you can access through the following Web site:
http://www.ibm.com/eserver/iseries/inocenter

To use BRMS to perform an online backup of your Domino database, you should understand the following concepts:

- Media - Removable storage such as a tape cartridge.
- Media identifier - A name given to a physical piece of media.
- Media class - A logical grouping of media with similar physical or logical characteristics, such as density.
- Control group - A grouping of items (such as libraries or stream files) to back up and attributes associated with how to back them up.
- Policies - A set of defaults that are commonly used (such as device and media class). The BRMS system policy contains general use defaults. The BRMS backup policy contains defaults related to backups.

Before you can backup Domino for iSeries, you need to create the BRMS components to enable you to backup your Domino databases while the server is active and to exclude Domino databases from other system backups. For details see "BRMS: Configuring and using for Domino" in these release notes.

Performing an online backup of Domino databases

Using BRMS to perform an online backup of your Domino databases involves the following steps:

1. Determine the device and media class to use.
2. Add media to the media class scratch pool.
3. Start the backup.

Excluding Domino databases from your online backup

You may want to exclude Domino databases from your online backup. For example, you may not need to backup the Domino help databases (such as HELP.NSF). You can exclude Domino databases from your online backup by changing the control group for the Domino server to omit the databases by name.

Excluding Domino databases from other system backups

In addition to backing up your Domino databases, you should also use BRMS to backup the rest of your system so that you can recover all of your data through BRMS. To allow your Domino databases to be used while you backup the rest of your system, you should exclude the Domino databases from the backup. To do this, you'll need to change your backup control group to use the QDOMEXCL link list.

Recovering your Domino data

After a successful backup, BRMS will help you plan for a complete recovery of your system by allowing you to print a complete disaster recovery plan. To enable recovery of all your data, use BRMS to back up the rest of your system in addition to your Domino server databases. See the iSeries BRMS documentation for more information on performing a complete backup and recovery of your iSeries.
To recover Domino databases, you can perform one of the following types of recovery:

- Recover your entire system. Refer to the BRMS documentation for the steps to recover your entire system.
- Recover all databases for all of your Domino servers
- Recover all databases for a specific Domino server
- Recover a single database

**Performance Considerations**

Because of performance limitations of the tape media devices, Domino databases are packaged and saved in groups. By default, five databases are put in backup mode and are then saved. The changes that occurred to all five databases while being backed up are also saved along with the databases. The number of files in the group (default five) can be configured to optimize backup and recovery time for your Domino server.

### BRMS: Configuring and using for Domino

#### Configuring BRMS Integration Components

To enable the BRMS integration feature for a server, the following components need to be created to enable backup using BRMS:

- A control group for performing an online backup of the databases for a Domino server.
- A BRMS link list to exclude Domino databases when backing up OS/400 directories.
- A control group for performing an online backup of the databases for all Domino servers. This control group is optional and is not needed if you have only one Domino server on your iSeries.

Following are example procedures for each situation.

#### Control group for online backup of databases for a Domino server

This control group will be defined to perform an online backup of all databases for a specific Domino server. You can use any name for the control group. However, we recommend that you use the name of the iSeries subsystem in which the Domino server runs. You can determine the subsystem name by entering the following OS/400 command:

```
wrkdomsvr
```

In the following procedure, we represent the control group name by dominox. Substitute the actual server subsystem name for `dominox`.

1. Enter the following OS/400 command: `go brms`
2. Select option 2 (Backup); that is, type a 2 and press Enter.
3. Select option 1 (Backup planning).
4. Select option 2 (Work with backup control groups).
5. Type a 1 (Create) in the Opt column and type `dominox` in the Control Group column. Press Enter.
6. On the resulting display, enter three sets of Seq values:
   - Type 10 in the Seq column, *exit in the Backup Items column, and *dftact in the Weekly Activity SMTWTFS column. Press Enter.
   - Type 20 in the Seq column, *exit in the Backup Items column, and *dftact in the Weekly Activity SMTWTFS column. Press Enter.
   - Type 30 in the Seq column, *exit in the Backup Items column, and *dftact in the Weekly Activity SMTWTFS column. Press Enter.
7. Position the cursor to the Seq 20 entry and press F10.
8. In the Command field, type `savdombrm` and press F4.
9. In the Server name field, type the name of your Domino server; for example, domserv1.
10. In the Control Group field, type the name that you specified in step 5; for example, `dominox`.
11. If desired, position the cursor to the Files to omit field and specify the location of objects that you want to omit (databases you do not want saved). You must specify the location of the objects as the directory path relative to the server data directory. For example, if you want to omit the file named mydb.nsf that is located in the server data directory at `/notes/data`, type `mydb.nsf` in the Files to omit field, not `notes/data/mydb.nsf`. You can use the wildcard character (`*`) in the object name.
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12. Press Enter twice.
14. Select option 1 (Save and exit session) and press Enter.
15. Press F3 four times.

**BRMS link list to exclude Domino databases**
Because Domino databases are backed up using other control groups created by the BRMS integration feature, they should be excluded from backups of the rest of the iSeries integrated file system. This will allow your Domino server to remain active while the rest of the file system is being backed up. You can define the QDOMEXCL link list to allow exclusion of Domino databases from backups of the rest of the file system. To create the QDOMEXCL link list:

1. Enter the following OS/400 command: go brms
2. Select option 2 (Backup).
3. Select option 1 (Backup planning).
4. Select option 5 (Work with backup lists).
5. On the resulting display, type a 1 (Add) in the Opt column, QDOMEXCL in the List Name column, *BKU in the Use column, and *LNK in the Type column. Press Enter.
6. Type a text description, such as "All integrated file system objects except Domino server databases." Press Enter.
7. Type a 2 (Change) next to the QDOMEXCL list name and press Enter.
8. Use sets of the Name field and Include or omit field to define the system objects in the list. For example:
   - Include all of the iSeries integrated file system. Type /* in one of the Name fields and type *INCLUDE in the associated Include or omit field.
   - Omit the QSYS.LIB file system. Type /*QSYS.LIB in a Name field and type *OMIT in the associated Include or omit field.
   - Omit the QDLS file system. Type /*QDLS in a Name field and type *OMIT in the associated Include or omit field.
   - Omit all of the file extensions for Domino databases (*.nt* and *.ns*). Use fully qualified path names to specify the location of these databases. For example, if you want to omit the *.ns* databases that are located in the server data directory at /notes/data, type /*notes/data/*ns* in the Name field.

You can now use this list in a control group instead of the *LINK special value. In BRMS, *LINK means all objects in the iSeries integrated file system. If you are doing an online backup of Domino databases, you do not need to include them in a backup of the entire integrated file system. However, you should do full system backup each week. This means using the *LINK value to include the entire integrated file system.

**Control group for online backup of databases for all Domino servers (optional)**
This control group will be defined to perform an online backup of all databases for all Domino servers. For the control group name, we use qdomino. You can use a different name.

1. Enter the following OS/400 command: go brms
2. Select option 2 (Backup); that is, type a 2 and press Enter.
3. Select option 1 (Backup planning).
4. Select option 2 (Work with backup control groups).
5. Type a 1 (Create) in the Opt column and type qdomino in the Control Group column. Press Enter.
6. On the resulting display, enter the following sets of Seq values:
   - Type 10 in the Seq column, *exit in the Backup Items column, and *dftact in the Weekly Activity SMTWTFS column. Press Enter.
   - Type 20 in the Seq column, *exit in the Backup Items column, and *dftact in the Weekly Activity SMTWTFS column. Press Enter. This Seq entry will represent the first Domino server that you want to back up.
   - Type 30 in the Seq column, *exit in the Backup Items column, and *dftact in the Weekly Activity SMTWTFS column. Press Enter. This Seq entry will represent the second Domino server that you want to back up.
   - Add additional Seq entries until you have one entry for each Domino server that you want to back up. Type xx in the Seq column, where xx is a number such as 40 or 50. Like the previous Seq entries, type *exit in the Backup Items column and *dftact in the Weekly Activity SMTWTFS column. Press ENTER after typing in the values for each Seq entry.
7. Position the cursor to the Seq 20 entry and press F10.
8. In the Command field, type `savdombrm` and press F4.
9. In the Server name field, type the name of your Domino server; for example, `domserv1`.
10. In the Control Group field, type the control group name you specified in step 5; for example, `qdomino`.
11. If desired, position the cursor to the Files to omit field and specify the location of objects that you want to omit (databases you do not want saved). You must specify the location of the objects as the directory path relative to the server data directory. For example, if you want to omit the file named `mydb.nsf` that is located in the server data directory at `/server1/data`, type `mydb.nsf` in the Files to omit field, not `/server1/data/mydb.nsf`. You can use the wildcard character (`*`) in the object name.
12. Press Enter twice.
13. Repeat steps 7 through 11 for each Seq entry that represents a Domino server that you want to back up. Specify the appropriate Domino server name and the control group name from step 5. Also specify any objects to omit.
14. Add a final Seq entry that has `*exit` in the Backup Items column and `*dftact` in the Weekly Activity SMTWTFS column, but does not invoke the `SAVDOMBRM` command. That is, for this final Seq entry, skip steps 7 though 11.
15. Press F3.
16. Select option 1 (Save and exit session) and press Enter.
17. Press F3 four times.

**Determining the device and media class to use**

During the installation process, BRMS chooses a default device based on the fastest and most automated tape drive attached to your system.

BRMS also creates media classes based upon the devices attached to your system. For example, if you have a 6380 tape device attached to your system, media classes such as QIC2GB would be created (6380 uses a media format called QIC2GB).

To review the system policy and to determine the default device and media class, do the following:
1. Enter the following OS/400 command: `go brms`.
2. Select option 11 (Policy administration); that is, type an 11 and press Enter.
3. Select option 1 (System policy).
4. Select option 1 (Display or Change system policy) to review the current values. In particular, look at the values in the Devices and Media class fields. To use a different device or media class, see the instructions in the iSeries BRMS documentation.
5. Press F3 four times.

**Adding media to the media class scratch pool**

Adding media to a BRMS media class allows BRMS to use, track, and protect active data on the media. You should add pre-initialized media to BRMS by using the steps outlined in this section. Once media is added to a media class of available media, BRMS will drive backup operations and use this media, requesting you to load tapes as necessary.

*Note* If your media is not pre-initialized, see the iSeries BRMS documentation for details on how to add existing media content information into the BRMS catalog of information.

It is important to have sufficient media enrolled in the media class before performing a backup operation. We recommend that you enroll at least three pieces of media; for example three tapes. In determining the number of media to add, you should consider the capacity of your media and the size of your Domino server data.

To add media, use one of the following methods based on the type of device you have:

A tape library device is an enclosed unit with many pieces of media that allows for random access to any piece of media. If you will be backing up using a tape library device, perform the following steps:
1. Make sure that your media is in the automated tape library.
2. Enter the following OS/400 command: `go brms`.
3. Select option 1 (Media management) to go to the Media Management menu; that is, type a 1 and press Enter.
4. Select option 9 (Work with media libraries) to work with automated tape library devices that are known to BRMS.
5. Type an 8 (Work with MLB media) and press Enter three times to work with the current inventory of the automated tape library.
6. Type a 1 (Add MLB media) next to the media to be added and press Enter.
7. Type the media class you recorded when you determined the device and media class from the system policy. See "Determining the device and media class to use."
8. Press Enter twice.
9. Repeat steps 6 through 8 until you have enrolled the recommended number of media.
10. Press F3 three times.

**Tip** You can also use the Add Media Library Media to BRMS (ADDMLMBRM) command to perform this operation.

If you are not using a tape library device, you are backing up to a stand-alone device. Therefore, perform the following steps:
1. Enter the following OS/400 command: `go brms`
2. Select option 1 (Media management) to go to the Media Management menu.
3. Select option 2 (Work with media) and press Enter twice to work with the BRMS media inventory.
4. Type a 1 (Add) in the top Opt column and press Enter.
5. Type the volume identifier from the media label and the media class that you recorded from the system policy. See "Determining the device and media class to use."
6. Press Enter twice.
7. Repeat steps 4 through 6 until you have enrolled the recommended number of media.
8. Press F3 four times.

**Tip** You can also use the Add Media to BRMS (ADDMEDBRM) command to perform this operation.

### Excluding databases from your online backup
The previous section, "Configuring BRMS Integration components," described how to create a control group for your Domino for iSeries server. This control group can be used to back up all the Domino databases in the data directory for your Domino server on your iSeries. You can exclude databases from these backups by changing the control group entries. To change your control group entries, perform the following steps:

1. Enter the following OS/400 command: `go brms`
2. Select option 2 (Backup); that is, type a 2 and press Enter.
3. Select option 1 (Backup planning).
4. Select option 2 (Work with backup control groups).
5. Position the cursor in the Opt column next to the control group you want to change. To change the control group that is used to backup all your Domino servers, position the cursor next to the QDOMINO entry. Otherwise, position the cursor next to the entry that has the name of the desired control group.
6. Type a 2 (Edit entries) and press Enter.
7. Press F11.
8. Position the cursor on the line where the value for Exit command column starts with SAVDOMBRM and the value in the SERVER parameter is the same as your Domino server name.
11. Position the cursor to the Files to omit field and specify the location of objects that you want to omit (databases you do not want saved). You must specify the location of the objects as the directory path relative to the server data directory. For example, if you want to omit the file named mydb.nsf that is located in the server data directory at `/notes/data`, type mydb.nsf in the Files to omit field, not `/notes/data/mydb.nsf`. You can use the wildcard character (*) in the object name.
12. Press Enter twice.
14. Press Enter.
15. Press F3 four times.
Excluding databases from your system backup
The QDOMEXCL link list is designed to allow backup of the iSeries integrated file system excluding Domino databases. If you use the QDOMEXCL link list during your backup processing, your Domino databases will continue to be accessible while a backup of the rest of the integrated file system is being performed. To create a new control group that uses QDOMEXCL based on an existing control group, perform the following steps:

1. Enter the following OS/400 command: **go brms**
2. Select option 2 (Backup); that is, type a 2 and press Enter.
3. Select option 1 (Backup planning).
4. Select option 2 (Work with backup control groups).
5. Position the cursor in the Opt column next to the control group you want to use as the basis for the new control group, 6. Type a 3 (Copy) and press Enter.
7. Type a name for the new control group and press Enter.
8. Position the cursor next to the newly created control group. Type a 2 (Edit entries) and press Enter.
9. Note the sequence number value for the Backup Item listed as *LINK.
10. Type a value for the blank Seq field that is one greater than the sequence number noted in step 9. Type QDOMEXCL for the Backup Items field and *LNK for the List Type field.
11. Position the cursor next to the Backup Item listed as *LINK and space over the sequence number.
12. Press Enter.
14. Press Enter.
15. Press F3 four times.

Starting a backup
To start the online backup of all databases for your Domino server, load a tape and use the Start Backup BRMS command as follows:

**strbkubrm ctlgrp(dominox) sbmjob(*no)**

where dominox corresponds to the control group you created for a specific Domino server.

During the backup processing, you may encounter certain errors that require user intervention, such as loading a tape. A message at the bottom of the screen may appear indicating that a message has been sent to the system operator for a reply. While the cursor is on any OS/400 message, you can press F1 to see more information about the message.

The processing time of the backup operation depends on system processor size, device capabilities, amount of data being saved, and activity associated with your Domino server.

When the backup operation is complete, review the job log to make sure that the backup was successful. To display the job log, enter the following OS/400 command:

**dspjoblog**

On the display, press F10 and page up to see the details of any messages logged during backup processing.

To see the BRMS catalog of what has been backed up, do the following:

1. Enter the following OS/400 command: **go brms**
2. Select option 2 (Backup); that is, type a 2 and press Enter.
3. Select option 3 (Display backup activity) to work with backup activity.
4. Select option 3 (Display backup history) to review backup history.
5. Type a 1 (Work with media information) and press Enter three times to see the contents of your backup media.
6. Press F3 five times.

**Note** When you back up an integrated file system object, such as a Domino database, the object will appear as a saved item of *LINK.

**Tip** You can also use the Work with Media Information (WRKMEDIBRM) command to perform this operation.
Recovering all the databases for all your Domino servers
Use the Start Recovery using BRM (STRRCYBRM) command to recover all databases in the data directories of all
Domino servers:

1. Enter the following OS/400 command:
   \texttt{strrcybrm option(*ctlgrp) action(*restore) ctlgrp(qdomino)}
2. Type a 1 next to the items matching the version of backup that you want to restore. Use F16 to select all items. A saved
   item will appear for each database saved.

Recovering all the databases for a specific Domino server
Perform the following steps to recover all databases for a specific Domino server:

1. Enter the following OS/400 command: \texttt{strrcybrm option(*ctlgrp) action(*restore) ctlgrp(control-group-name)}
   For \texttt{control-group-name}, substitute the name of the control group (such as \texttt{dominox}) that
   you created for the Domino server.
2. Type a 1 next to the items matching the version of backup that you want to restore. Use F16 to select all items. A saved
   item will appear for each database saved.

Recovering a single database
Use the Restore Object using BRM (RSTBRM) command to recover a specific Domino database through BRMS. In this
command, you must provide the name of the iSeries device, the name of the database you want to restore, and the
path to the OS/400 directory where you want to restore the database. For example, to recover the catalog.nsf
database in the /notes/data directory, assuming a device of tap01, enter the following OS/400 command:
\texttt{rstbrm dev(tap01) obj('/notes/data/catalog.nsf')}

When the recovery operation is complete, review the job log to make sure that the database was successfully
recovered. To display the job log, enter the following OS/400 command:
\texttt{dspjoblog}

On the display, press F10 and page up to see the details of any messages logged during recovery processing.

Note Multiple objects may be associated with a Domino database when it is backed up while online; therefore,
multiple messages may appear during recovery.

Performance considerations and configuration options
Because of performance impacts of writing individual Domino databases to physical devices, such as tape, the
databases are backed up in groups (5 is the default). You can change this group value by adding the following entry in
the NOTES.INI file for the server:
\texttt{SAVDOMBRM_FILES_IN_GROUP=x}

where \(x\) is the number of files to group in one BRMS package.

As you increase this number, your Domino server is backed up more quickly. However, all databases in the group (that
is, the \(x\) number) will be journaled during the backup, with the changes backed up separately. Because all the
databases in the group are journaled until all databases in the group are backed up, the time during which changes to
the databases can occur is increased and the size of the changes backed up will increase. When the databases are
recovered, the changes to the database that occurred during the backup will be reapplied. This process takes longer
as the number of changes increases.

If your server is being backed up during heavy server usage, you will want to keep this group value relatively small (3
to 7), so that fewer changes occur to the database during the backup operation. As a result, recovery of the database
can occur in a reasonable amount of time.

If your server is being backed up during off hours when server use is low, you can set the group value higher (10 to 20
or even higher) to speed up the backup operation, while keeping the recovery time reasonable. The maximum group
value is 120.
BRMS: Frequently asked questions

What relationship, if any, is maintained between a recovered database and its index?
When you back up a Domino database via BRMS (using the SAVDOMBRM command), its index is not saved. If you want to back up the database index files, you need to save them using the method that you use to back up other files in the iSeries integrated file system, such as the SAV command. If you save both the database and index files at the same time and restore them both at the same time, the index should be up to date with the database. However, if a database with an index is restored to a previous version of the database and the index is not restored, the index may have inaccurate links. To ensure that indexed databases are accurate after a restore, rebuild the index.

Is there any order in which files need to be restored on recovery?
Yes. Because the backup of Domino databases can happen while the server is active, the changes that occur to the database while it is being saved are saved separately and need to be restored to the database when it is recovered. To accomplish the complete recovery of the database, the Domino Release 5 APIs are used. In order for these APIs to be used, certain conditions and files must exist; for example, the NOTES.INI file must be present and available and the server data directory must be valid. If the server data directory is damaged or non-database files are missing, restore the non-database files first before trying to restore Domino databases. Non-database files are saved along with other files in the iSeries integrated file system.

What is this new directory "/brms" in my servers data directory, and where did it come from?
BRMS for Domino now creates a subdirectory in the servers data directory called "brms" in which it stores temporary files (*.brmschgs files) used to store changes to a database that occurred while the database is being saved or backed up. These files were previously stored in the same directory as their associated database.

BRMS: Restriction
Be aware of the following restriction when using the Domino BRMS support.

- Domino BRMS support does not save Domino database files residing in a "link" subdirectory under the server data directory. Link subdirectories can be created via Domino Administration; for example by choosing Tools - Folders - New Link.

BRMS: Restrictions that have been removed
The following BRMS restrictions were removed in Domino for iSeries 5.0.3:

- Backing up a Domino server saves all *.ns* and *.nf* databases in the server data directory, but does not save *.box files. These *.box files are transient files used by the mail router and probably do not need to be saved. However, if you need to back up the *.box files, use the same method that you use to back up other files in the iSeries integrated file system. For example, stop the server and use the SAV command to back up the files. The .box files are now saved along with the *.ns* and *.nt* files.

- Using Domino BRMS, you can only restore a Domino database to the server from which it was saved. For example, Domino BRMS does not currently support restoring a database saved from serverA to a directory in serverB. BRMS for Domino will now restore the databases based on the directory it was saved from. In other words, it will restore the databases to server which lists the "saved from directory" as its data directory.

- Domino BRMS can only restore a Domino database to the same path and database name that it was saved from. For example, Domino BRMS does not currently support restoring a database saved from serverA/datadir/db1.nsf to a new directory or database name on serverA, such as serverA/datadir/subdira/db1.nsf or serverA/datadir/db1a.nsf. This capability is planned for the next Domino for iSeries update (QMU).

  Note As of 5.0.2b, Domino BRMS supports restoring a database to a new directory or new named database in the same server data directory (the directory must exist before the restore). For this function to work, you must also apply PTF SF60285 for 5769BR1.

- Domino BRMS does not currently support saving or restoring Domino servers with a subsystem name of greater than 9 characters. If your Domino server was created with a subsystem name longer than 9 characters, you must change the subsystem name to be 9 characters or less before you use BRMS to save or restore your Domino server. With a 10-character subsystem name, the server will save correctly. However, when you attempt to restore any of the databases, you will get a MCH3601 message that indicates "Pointer not set error in program QNNINBRU."
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Chapter 2 - Things you need to know

**Note** As of 5.0.2b, Domino BRMS supports saving or restoring Domino servers with a subsystem name of up to 10 characters. For this function to work, you must also apply PTF SF60285 for 5769BR1.

- The subsystem name for the Domino server is stored along with the saved Domino data packages in BRMS. This subsystem name is used in a restore operation to determine which server to restore the databases to. If you change the subsystem name of your Domino server, databases saved under the old subsystem name will no longer restore and the restore operation will result in a LNT0960 message with reason code 4 (Error setting environment variables). After changing the subsystem name, you must save your Domino server databases again so that the new subsystem name is stored along with the saved Domino data packages in BRMS. BRMS for Domino will now restore the databases based on the directory it was saved from. In other words, it will restore the databases to server which lists the "saved from directory" as its data directory.

Server

**Caution on mapping server data directory as network drive**

It is not advisable to map the Domino server data directory on the iSeries as a network drive from a Notes client workstation. When the client accesses the data directory of the Domino server through a mapped network drive, the NOTES.INI of the server may be overwritten with the path of the client data directory. This occurs if the client is started when the mapped drive is either the current directory or listed in the user's path, before the notes data directory. In addition, if a user on the client double-clicks to open a Domino database that resides on the mapped network drive, then corruption of the NOTES.INI is possible. One possible consequence of this corruption is that the next time the server is stopped and restarted, the server ends with an error of 'X'00000108' in the QNNINSTS job log. The client can write over the NOTES.INI of the server even if the server is not running.

Sometimes it is necessary to map a drive to a server's data directory from a notes client for diagnostic or repair purposes. Usage of this technique, however, should be left to experienced Lotus Notes professionals and only after proper backup procedures have been followed. It is recommended that network security and administration techniques be followed to prevent the general user from mapping a network drive from a Notes client to a Domino server.

If it is necessary to map the Domino server data directory to a network drive, the recommended procedure is:

1. On the iSeries Domino server, backup the NOTES.INI and any databases that are being accessed.
2. Start the Notes client.
4. Map a drive to the root or the Domino data directory. Make sure you do not specify that the connection should be re-established when starting Windows (Reconnect at Logon not checked) and ensure the drive letter is not in the Windows Path.
5. Using the Notes Client, make the necessary changes to the database (e.g. ACL changes)
6. Disconnect the drive (unmap the drive) on the Windows client. Ensure that the network drive is no longer accessible.
7. Restart the Domino server.

Server

**Change in how Domino jobs are shown for Domino**

The Operations Navigator support for Domino for iSeries version 5.0.3 has been updated in regards to how Domino jobs are displayed. When using the option to display Domino jobs, a subsystem column is now included and the Domino jobs are sorted by subsystem. Since all jobs for a Domino server run within the same subsystem, this makes it easier to determine which jobs are related to a given subsystem and Domino server. In order to see this enhancement, you must update the Domino plug-in on existing Operations Navigator clients to the 5.0.3 version. For information on how to update the Domino plug-in, see Chapter 2 of the *Installing and Managing Domino for AS/400* book.

Server

**Changing Domino-related environment variables**

If you change any Domino-related environment variables, make sure that you change them at the default */OBJ level and not at the */SYS level. Changing the environment variables globally may adversely affect the operation of other application programs.
**Server**

**Controlling Domino server operation during recovery**

By default, when the Domino server goes into recovery (for example, recycling of the server during an error), the system calls the NSD program in QNOTES. The NSD program dumps out critical information that is useful to the Lotus and IBM support team for debugging server problems. The following NOTES.INI setting controls the invocation of this program:

```
CleanupScriptPath=CALL QNOTES/NSD
```

To change the actions that take place during Domino server recovery, you can substitute the name of your own recovery program in place of QNOTES/NSD. However, should you decide to do this, make sure that your own recovery program continues to call QNOTES/NSD. Otherwise, essential debug information may not be available. Also make sure that the QNOTES user profile has *USE authority to your recovery program.

**Server**

**Domino server must be stopped during backup unless using BRMS**

Before doing a backup operation that involves Domino server programs or data, stop the server. Do not restart the server until the backup operation is complete. However, you can back up server data while the server is active if you use the iSeries BRMS support.

For details on BRMS, see the BRMS topics in the "Server administrator" section of the "Things you need to know" chapter of these release notes.

For details on stopping and starting a Domino for iSeries server, see Chapter 3 in *Installing and Managing Domino for AS/400* and the Domino for iSeries Help database (AS400HLP.NSF).

**Server**

**May need to tune OS/400 V4R4 for Domino performance**

OS/400 Version 4 Release 4 (V4R4) and later include enhancements for the performance of threaded applications. After upgrading to OS/400 V4R4 or later, you may need to tune your system again to avoid performance degradation when running Domino for iSeries if you do manual performance tuning of your system (the system value QPFRADJ is set to 0 or 1). If the system value QPFRADJ is set to 2 or 3, the system makes the appropriate adjustments to keep Domino running smoothly on the new release of OS/400.

When doing manual tuning of your system, you may need to increase the Activity Level (ACTLVL) of your system, which is the maximum number of threads that can run in your storage pools. You can change the ACTLVL using the Change Shared Pool (CHGSHRPOOL), Work with Shared Pool (WRKSHRPOOL), or Work with System Status (WRKSYSSTS) commands. The shipped default for Domino for iSeries is to use the *BASE storage pool. The activity level associated with this storage pool may need to be increased. If you changed the storage pool that is used by Domino for iSeries, you may need to increase the activity level of that storage pool to ensure good performance.

Here is a partial list of the most common symptoms that might indicate that the system needs to be tuned again:

- An excessive number of Domino clients time out or are dropped.
- The number of SERVER jobs in the Domino subsystem keeps growing.
- An excessive number of threads in a SERVER job have a status of MTXW and that status rarely seems to change for a thread.
- On the WRKSYSSTS display, the Wait->Inel column is not zero.

For more information on adjusting the performance on your system, see the article "Performance Tuning of AS/400 for Highly Threaded Applications" at the following Web site:


**Server**

**QTIME and QUTCOFFSET system values and Domino time**

If you adjust the OS/400 system values QTIME or QUTCOFFSET, all Domino for iSeries servers must be ended and restarted in order to properly synchronize with the iSeries server time change.
**Use Domino server commands to control Domino jobs**

When starting or ending Domino-related jobs, such as an add-in task, use Domino server commands from the server console first before trying to use OS/400 commands. To start a Domino job from the console, issue the Load server command:

```
load program_name
```

To end a Domino job from the server console, issue the Tell server command:

```
tell program_name quit
```

Issuing the Tell server command from the server console to end an add-in task allows the Domino job to end gracefully, updating any internal structures, releasing any currently held locks, and updating any databases to a consistent state.

If the Domino server command fails to end the job, you can then use an OS/400 command to force the job to end. Using an OS/400 command to end a Domino job slightly increases the risk of causing database problems with any open database and could cause the Domino server to restart.

**Using Java in Domino Agents on iSeries**

When you use Java in a Domino agent on iSeries, follow the tips below to help improve the performance of your Domino application:

- Do not put .jar and .zip files into your Domino agents; instead, put them in stream files in the iSeries file system. Make sure that the QNOTES user profile has read authority to the files. To allow your agents to reference classes in .jar files in the file system, you'll need to add the .jar file's path to the JavaUserClasses variable in the Domino server's note.ini file. The JavaUserClasses value becomes part of the Java Virtual Machine's CLASSPATH. If you need more than one path in the JavaUserClasses variable, make sure to separate the values with colons rather than semicolons. For example:

  ```
  JavaUserClasses=/QIBM/ProdData/HTTP/public/jt400/lib/jt400.jar:/QIBM/ProdData/Lotus/Notes/NCSO.jar
  ```

  It is not necessary to put Notes.jar in the JavaUserClasses variable.

- Ensure that CRTJVAPGM has been run for each of the .jar files. On iSeries, a .class or .jar file will load and execute much faster if a Java program has been created for it. You can use DSPJ VAPGM to determine whether a Java program has been created for the .jar files, and what the optimization level of the program is. For best performance, the Java programs should be created with optimization of at least 30. If the Java program has optimization *INTERPRET or less than 30, you should delete it and create one with optimization 30. For example:

  ```
  DSPJ VAPGM CLSF('/qibm/proddata/http/public/jt400/lib/jt400.jar')
  DLT JVAPGM CLSF('/qibm/proddata/http/public/jt400/lib/jt400.jar')
  CRTJVAPGM CLSF('/qibm/proddata/http/public/jt400/lib/jt400.jar') OPTIMIZE(30)
  ```

  CRTJVAPGM can take a long time and use a lot of CPU resources, so you may want to run it in a batch job. You should check whether a Java program has been created for Notes.jar.

**Backing up your Domino server**

When backing up your Domino server, you should also include the `/QIBM/UserData/Lotus/*` directory since it is not saved as part of SAVLICPGM.

*Note* Beginning with release 5.0.9 of Domino for iSeries, it is no longer necessary to include the QAXNASVR file as part of your server backup.
INI Variable to set Java Classpath Security Check Level

**Domino INI Variable: JavaOS400CHKPATH**

CHKPATH is a variable that can be set when running any OS/400 Java application, and now Domino servlets and agents as well. When using RUNJAVA on iSeries, the option CHKPATH is the equivalent of JavaOS400CHKPATH, a Domino INI variable. CHKPATH means Classpath Security Check Level, which specifies the level of warnings given for directories in the CLASSPATH that have public write authority. A directory in the CLASSPATH that has public write authority is a security exposure because it may contain a class file with the same name as the one you want to run. Whichever class file is found first is run.

Certain Domino tasks create a JVM, such as Amgr and HTTP. In Domino, when the JVM starts, a Java property (os400.class.path.security.check) is set based on the value in JavaOS400CHKPATH. If JavaOS400CHKPATH is not in the INI file, the value of the property defaults to 20, or WARN. CHKPATH must be set to one of the values below or the JVM will fail to start.

The possible values are:

- **JavaOS400CHKPATH=10**
  - **IGNORE:** Ignores that directories in the CLASSPATH may have public write authority. No warnings messages are sent.
- **JavaOS400CHKPATH=20**
  - **WARN:** A warning message is sent for each directory in the CLASSPATH that has public write authority. This is the default setting.
- **JavaOS400CHKPATH=30**
  - **SECURE:** A warning message is sent for each directory in the CLASSPATH that has public write authority. If one or more warning messages are sent, an escape message is sent and the Java program is not run.

If JavaOS400CHKPATH is set to WARN(20) or SECURE(30), warnings will appear in the joblog of the task using the JVM. For example, if the directory `/qibm/proddata/mqm/java/lib` is in the CLASSPATH, has public write authority, and JavaOS400CHKPATH is set to WARN(20) or SECURE(30), the following warning message will be sent to the joblog:

```
Message . . . . : Public write authority on "< ddata/mqm/java/lib".
    the classpath has the same name, the first one found is run.
Recovery . . . : If the classpath security check level (CHKPATH) is *SECURE, the command cannot
    complete if a directory in the classpath has public write
    authority. Have your administrator remove public write authority from directory
    "/qibm/proddata/mqm/java/lib", or change CHKPATH and run the
    command again.
```

If directory "/qibm/proddata/mqm/java/lib" remains public write authority and CHKPATH is not *SECURE, you may verify which classes are run by setting the OPTION parameter to *VERBOSE and running the command again.

To remove these warnings, set the JavaOS400CHKPATH variable to 10, or IGNORE, in the INI file and restart the server task for this joblog.
BRMS: Incremental online backup available in Domino 5.0.8

The Backup and Recovery Media Services (BRMS) support has been enabled to include incremental save and restore of Domino server files. This allows file changes since the previous backup or restore to be managed. To configure a Domino server for BRMS support, specify ADLSRV(*BRMS) on the CFGDOMSVR or CHGDOMSVR CL command.

Be aware of the following restriction that exists with the incremental save and restore process. When applying the incremental logs to a Domino database, that database file must be restored to the same Domino server that it was saved from. The transaction logs are only valid for the database and server where the save was performed. See the following BRMS web pages for other details about features and restrictions with online incremental save and restore and for strategies on how to implement Domino backups using BRMS:

http://www-1.ibm.com/servers/eserver/iseries/service/brms/domIncremental.htm

JavaMaxHeapSize *NOMAX

As of R5.0.9, there are two new Notes.INI variables:

- JavaMaxHeapSize
- JavaMinHeapSize

When running Java, these variables allow you to set the level of memory that is available to the JVM to run servlets, agents, or other Java applications.

For Domino's JVM, JavaMaxHeapSize defaults to 2GB and the JavaMinHeapSize defaults to 64 MB. To change these values, enter the number in bytes.

For example: To set maximum heap size to 100 MB (100*1024*1024) set JavaMaxHeapSize=104857600.

The same method applies to setting JavaMinHeapSize.

To set the value of JavaMaxHeapSize to *NOMAX, set JavaMaxHeapSize=1 in the INI file. This will allow the JVM to use as much memory as needed.

If the Domino server is using Java extensively, it may be advisable to set the JavaMaxHeapSize to *NOMAX.

Message Tracking Collector support for Domino for iSeries

Domino for iSeries supports a limited implementation of the Message Tracking Collector (MTC).

The Message Tracking Collector allows you to collect data stored in the MTSTORE.NSF (in the MTDATA folder) database for mail tracking and reports. The Reports database acts as a repository for the data stored by the Message Tracking Collector and allows you to view the data as a table and a graph.

If you manually run the Message Tracking Collector from your Domino Administrator client, then you will be able to view the data as a table and as a graph.

If you automatically run the Message Tracking Collector from your Domino server, you will be able to view the data as a table.

Since the Message Tracking Collector is implemented on a limited basis, you may see error messages in the server console when the reports database is updated by the Message Tracking Collector.

These error messages on the console are reported since AWT is not currently supported on iSeries. AWT is required to compose a graphical image of the data retrieved from the MTSTORE.NSF. With this limitation causing unavailability of the graph, the resulting report document still allows for monitoring and tracking mail usage by having the data in a table format.
Directory synchronization

Server
Directory synchronization change to simplify backup
Directory synchronization has been changed to simplify backing up your iSeries. Previously, you needed to manually end the directory synchronization lock job (QNNDILCK) before backing up your iSeries server. The purpose of the QNNDILCK job was to ensure that you did not enable more than one directory synchronization configuration for an iSeries server. Failure to end QNNDILCK could result in a backup failure or problems when you attempted to restart your Domino server after your backup was complete.

The QNNDILCK job was changed so that it starts but does not remain active. You must now ensure that only one directory synchronization configuration is enabled for an iSeries server. Enabling more than one directory synchronization configuration for an iSeries server could cause confusing results or possibly cause looping because of multiple directory synchronization jobs updating the iSeries server distribution directory.

Server
Error message when editing or viewing configuration
An error message could occur when you are using a Notes Release 5.x client to edit or view a configuration in the Directory Sync Configuration database. When you click the Edit Field Mappings button or the Display Field Mappings button, you may see an error message with this text:

Cannot execute the specified command

Press OK to proceed to the next window. You will see the Field Mappings display and can edit or view the field mappings. Do not use the navigator buttons that are displayed in the navigator pane on the left side.

Server
Removing directory synchronization
Support for directory synchronization is automatically included in OS/400 and in the Domino server configuration if you install software option 1 of Domino for iSeries and use the defaults when setting up a Domino server on iSeries.

- When you install software option 1, OS/400 adds the autostart job entry named QNNDISTJ to the subsystem named QSYSWRK. Each time the QSYSWRK subsystem starts, a QNNDISTJ job becomes active to support directory synchronization.
- When you set up a Domino server and use the default for the Directory Services option, the setup processing adds directory synchronization to the server by changing the NOTES.INI file as follows:
  - Adds the QNNINADD task to the ServerTasks= statement
  - Adds the NSF_HOOKS=QNNDIHK statement

    If you want to install software option 1 (for example, to install the Operations Navigator support), but do not want directory synchronization, do the following to remove directory synchronization.

- After installing software option 1, remove the QNNDISTJ autostart job entry by entering the following command on any OS/400 command line:

  rmvaje sbsd(qsyswrk) job(qnndistj)

- Make sure that directory synchronization is not included in the server configuration when you set up the server:
  - If using the Web-based setup, remove the check mark from the Directory synchronization box under the Directory Services option.
  - If using the CFGDOMSVR command, specify a value other than *ALL or *SYSDIR in the Directory services field.

If you previously set up the server using the default for Directory Services, you can use the CHGDOMSVR command to remove directory synchronization from the server configuration. In the CHGDOMSVR command, specify a value other than *ALL or *SYSDIR for the Directory services field.

For more details on installing the Domino software and setting up a server, see Chapter 1 in Installing and Managing Domino for AS/400 or the Domino for iSeries Help database (AS400HLP.NSF).
Server

**Updating directory synchronization help information**

**Note** The following information applies only if you are upgrading from Domino for iSeries release 4.6.x to release 5.x. It does not apply if you are upgrading from Domino for iSeries release 5.x to a later 5.x release.

For each server that has the Directory Synchronization Configuration database (NNDIRSYC.NSF) and the Directory Synchronization Logging database (NNDILOG.NSF), you need to change the database design so that the “About this Database” and “Using this Database” information gets updated with the latest Release 5 content. The design changes you make are the same for both databases.

1. Open the database. Choose File - Database - Open, specify the Domino server, and select either the Directory Sync Configuration database (NNDIRSYC.NSF) or the Directory Synchronization Logging database (NNDILOG.NSF).
2. From the open database, choose View - Design.
3. Under the Design category, click Other to show a view of design documents, including the “About this Database” Document and “Using this Database” Document.
4. Select the “About this Database” Document and choose Edit - Properties.
5. In the Properties window, click the Design tab and uncheck the box that has the description: “Do not allow design refresh/ replace to modify.”
6. In the view of design documents, select the “Using this Database” Document and repeat step 5.
7. In the view of design documents, select the “Icon” Document and repeat step 5.

**Note** The Directory Synchronization Logging database may not have a document for “Using this Database,” so you can skip step 6.

Do these steps for both the Directory Sync Configuration database and the Directory Synchronization Logging database. The next time the designer task runs to update the design for databases, the latest help information appears in these databases.

Server

**Updating the Domino Directory Internet mail address field**

Directory synchronization will work best if R5 Domino Directory entries that represent Notes users contain an Internet address in the new Internet Address field of the Person document. Notes users who are registered using the R5 Domino Administrator client will have an Internet address in their Person document by default. You can use the Set Internet Address tool that is part of the Domino Administrator client to fill in the Internet Address field for all other Person documents in which the field is blank; for example, entries that were in a 4.6.x Address Book that was upgraded to R5. Examine your existing Person documents to decide what options to use when using the Set Internet Address tool. More information is available in the Lotus Release Notes: Domino/Notes 5.x.

When the Internet Address field in a Person document is blank, directory synchronization calls a Domino API to construct an Internet address to place in the SMTP address fields of the OS/400 system distribution directory. The default format for this constructed Internet address is Firstname_Lastname/org%server_domain@internet_domain. This is a change from pre-R5 servers and additional setup may be required for these addresses to be usable when OfficeVision/400 users attempt to route mail to Notes users. For this reason, we recommend that every Notes user have an appropriate value in the Internet Address field of the Person document.

---

**International Language Requirements**

Server

**Bi-directional (BiDi) Language Support**

In order to use bi-directional languages (for example, Arabic or Hebrew), perform the following steps:

1. Install the R5 client on a BiDi (bi-directional) Windows platform (Arabic or Hebrew, Enabled or Localized)
2. Run the client to finish setup and verify that everything is working.
3. Turn on BiDi support by adding the following line to your NOTES.INI file: `EnableBiDiNotes=1`
4. Hebrew users who want to force all equations to flow from left to right should also add:
EnableHebrewEquations=1

These settings will be enabled by default in Arabic and Hebrew localized versions of Notes.

Additional BiDi relevant settings may be selected by choosing File - Preferences - User Preferences and then selecting International.

**Bi-directional language issues**

- Previous releases of Notes did not support BiDi; however, some users may have R4.x databases with documents containing BiDi text. When such documents are edited using Notes R5, the BiDi text is converted to the R5-supported format. Once converted, Notes R4.x cannot read any BiDi text in these documents. Also, if you use Notes R5 to create or edit a document containing BiDi text then this text is not visible to an R4.x client. Furthermore, if you use a R4.x client to edit such an R5 document, then the BiDi text is lost.
- You can design views with the most significant column on the right. However, quick search always acts on the leftmost column. You may want to create a hidden leftmost column containing appropriate data for quick search.
- Outline flow is from left to right and the bitmap is always to the left of the text.
- We recommend that you use English only in domain names, organization names, ID file names, mail file names and passwords.
- To send faxes containing Arabic or Hebrew text, the server must be running on a BiDi-enabled Windows 95/98/NT platform.
- When running on Arabic or Hebrew Windows, the NOTES.INI setting EnableBiDiNotes=1 is required to correctly display setup dialogs.
- Excel spreadsheet data is imported into Notes with left-to-right reading order and table direction.
- When exporting a Notes document to RTF format, the reading order of the first paragraph is left-to-right. You may want to start such documents with a carriage return.
- Notes tables with right-to-left reading order are exported to RTF format with left-to-right reading order.
- Import and export do not handle the following characters: &rlm, &lrm, &zwj, &zwnj.
- The reading order of field help and database synopsis is always left-to-right.
- Alphabetical bullets always use English letters.
- Find/Replace works from left-to-right across BiDi tables.
- When creating hotspots containing bilingual text, you should include all of the minor language string in the hotspot.
- When determining reading order of strings in the search bar editor, any text in the gray highlighted area is treated as part of the whole line.
- In right-to-left tabbed tables, you must enter text into the second tab before you can enter text into the rightmost tab.
- When changing tabs or cell widths in a scrolled right-to-left paragraph, use the Properties box rather than clicking on the ruler.
- The No Wrap alignment does not work with right-to-left reading order.
- Using F11 to change text style does not work for BiDi text.
- The marked area cannot be predicted if you change the reading order of marked mixed text. The same happens with undo.

**Hebrew specific issues**

When EnableHebrewEquations=1 is set:

- Equations should be written without spaces
- Trailing periods always appear to the left of numbers
- Editing in Native OS controls is not affected (display of equations, currencies, dates is determined by the operating system).

MIME Mail received in visual reading order can be read by selecting the encoding to be Hebrew (8859-8 Visual).

In some cases measurements appear as inches regardless of the setting in the International Settings Dialog. This will work as expected after changing the setting.
Enhanced Bi-Di support

Beginning with Domino for iSeries release 5.0.2, a user can use these new CCSIDs to take advantage of the enhanced BiDi support offered in V4R4:

- 62211 - Hebrew implicit left to right
- 62235 - Hebrew implicit right to left
- 62245 - Hebrew implicit contextual left to right

OS/400 ships a IW_IL.LOCALE with the operating system that is created with CCSID 424. The three new CCSIDs can be used with the create locale command (CRTLOCALE) on iSeries to create new BiDi environments for Domino on iSeries.

Refer to the chapter on Locale support in the book *International Application Development (SC41-5603)* for the step-by-step directions on how to create your own locale using one of the new CCSIDs and the Hebrew locale source. By setting the QNOTES user profile to point to your new locale it will now have this new environment available to it.

Note: You may want to rename your current IW_IL object to save it and then create your new locale using the characters IW_IL. These characters are used by the code to know that it is Hebrew.

For more information on Bi-Directional Language Support, see the "International Language Requirements" section in the "Things you need to know" chapter.

Indic Language Support statement for Domino for iSeries

While Indic support has been announced by Lotus in Notes and Domino 5.0.3, the support does not fully apply to Domino for iSeries version 5.0.3. At this time, V4R4 and prior versions of OS/400 do not have support for Indic languages. Indic support is coming in a future OS/400 release and at that time, Domino for iSeries will be tested with the OS/400 Indic support so that support can be announced.

Using Domino for iSeries with unsupported languages

While it may be possible to use Domino for iSeries with an OS/400 language that is not supported by the Domino for iSeries product, there are typically some functional areas that are more prone to exhibit problems. Those areas are usually ones that involve interaction with EBCDIC on the OS/400, and therefore, conversions between LMBCS and EBCDIC. This is usually because the proper code page conversion support does not exist for converting between LMBCS and EBCDIC for the associated language. A list of the functional areas more likely to experience problems are:

- Administrative interfaces unique to the iSeries, such as: CL commands or Operations Navigator interfaces for installation, server configuration, starting and stopping the server, viewing the Domino console from the OS/400 interfaces, and so on.
- Directory Synchronization
- Interfaces to OS/400 DB2, such as, DECS, LEI, @DB commands, LS:DO.
- Domino integration with OS/400 MSF (Mail Server Framework).

Depending upon the language used, these functions may exhibit improper conversion of character problems or even functional failure. Since the languages are unsupported this means they have not been tested by the Domino for iSeries development team and actual operation is unknown.

If the product is able to be successfully installed on a language version of OS/400 that is not supported by Domino for iSeries, and a server is configured and started, then Notes and Domino operations on the server that do not interact with OS/400 EBCDIC interfaces will typically work. Examples include: mail, replication, web serving, accessing and managing Notes databases, running LotusScript agents. However, even these operations cannot be guaranteed.

The list of languages supported by Domino for iSeries can be seen in the “About using national language versions” section in Chapter 1 of *the Installing and Managing Domino for AS/400 book.*
Server

ZH_CN_LOCALE object updated to use CCSID 1388

Domino for iSeries ships its own LOCALE objects in the QUSRNOTES library. In the 5.0.7 QMR, the Domino ZH_CN_LOCALE has been updated from CCSID 935 (GB) to CCSID 1388 (GBK). CCSID 935 (GB) is a sub-group of 1388 (GBK).

When the Domino product is upgraded (slip install) to 5.0.7 or a later QMR, this LOCALE object in QUSRNOTES is not replaced during install so that any customer changes to the LOCALE objects are not over-written. The updated LOCALE is installed only to the QNOTES library and consequently the updated CCSID will not automatically take effect.

In order to use the updated Domino LOCALE and take advantage of CCSID 1388 in an upgrade scenario, issue the following command before starting the Domino server:

```
CHGUSRPRF QNOTES LOCALE('QSYS.LIB/QNOTES.LIB/ZH_CN_LOCALE')
```

When the Domino product is installed for the first time (scratch install) at 5.0.7 or a later QMR, it is not necessary to issue the CHGUSRPRF CL command noted above because the updated LOCALE object will be copied to the QUSRNOTES library and the CCSID 1388 setting will have immediate effect.

The 1388 CCSID is supported on OS/400 V4R4, V4R5 and V5R1.

Application development

Server

LotusScript performance enhancement

PTF SA89838 for Domino R5.0.4 is a Domino for iSeries hotfix that is now available and is known to improve the performance of certain applications using LotusScript. In particular, this improvement has been seen in Domino.doc, as well as that of the ezMerchant product from Binary Tree. It improves performance of large LotusScript agents in Domino applications by disabling a run-time check for duplicate names. This check is unnecessary in most instances, as duplicate name problems should have been debugged when the agents were developed. If you wish to turn this check back on to investigate problems with agents that are not executing properly, you can set the variable ‘LS_Dup_Name_Check=1’ in notes.ini and recycle the task that is running the agents (or just recycle the entire server). This fix is included in the 5.0.4a QMU.

Server

Accessing Domino from WebSphere servlets

There are two Java interfaces in Domino R5 from which to access Domino databases from WebSphere HTTP Servlets:

- A local interface; similar to that used in R4.6.
- A new interface (for R5) that uses CORBA/IIOP through the DIIOP task in Domino.

Using the local interface

To use the local interface, import lotus.domino.* classes into your Java code and compile against Notes.jar (which ships to /qibm/proddata/lotus/notess.jar). Every thread that uses the Domino classes must either be inherited from the NotesThread class or call NotesThread.sinitThread() to initialize notes for that thread. When running with the local classes, the Java code to access the Domino databases is actually going to run local; that is, directly in your process/job. It will then load up and run out of the QNOTES/LIBLSXBE service program to access the Domino back-end classes. From there, the Java code goes into the Domino APIs in the QNOTES/LIBNOTES service program. This is essentially the same as running as a Java stand-alone application using the notes APIs (as opposed to a Java agent running inside the Domino environment).
The R5 versions of the *Installing and Managing Domino for AS/400* book, the as4help.nsf, and as4help.pdf document what is necessary to run in this environment. Specific requirements are as follows:

- You need to run under the user profile QNOTES.
- You need to have library QNOTES in the library list (in order to find LIBLSXBE).
- You need to have the server's data directory and the Domino executable directory in your PATH environment variable for the job.
- You need to include Notes.jar plus your classes (accessible when running under user profile QNOTES) in the CLASSPATH of the JVM.

In order to run a servlet manager under a specific user profile (such as QNOTES), use Operations Navigator to give that user authority to an HTTP application interface. For more information, refer to the WebSphere documentation at http://www.ibm.com/eserver/iseries/products/websphere/index.htm.

In order to get QNOTES in the library list:

1. Copy one of the Job Descriptions in library QUSRNOTES (WRKJOBD QUSRNOTES/*ALL) such as DOMINO00 or DOMINO01 to something like QNOTESJOBD. This Job Description contains a library list in it that contains the QNOTES library.
2. Change the QNOTES user profile to use QUSRNOTES/QNOTESJOBD as its default job description instead of the standard QDFTJOBD. After doing that, when WebSphere switches to user profile QNOTES, it will get QNOTES in the library list via this job description.

The PATH is set up via the environment variables for the servlet manager. CLASSPATH is setup for the servlet as normal.

You may also need to give QNOTES *ALLOBJ* authority.

**Note** When accessing Domino via the local APIs you are running as the server.

**Using the remote CORBA/IIOP interface**

Another method of accessing the Domino data is via the remote CORBA/IIOP interface. The servlet code you write is almost the same as the local interface except you must:

- Import lotus.domino.*
- Compile against and run with NCSO.jar (which ships to /qibm/proddata/lotus/notes/shared/ncso.jar)
- Not use NotesThread at all
- Have your Domino server setup to handle IIOP. That means enabling the DIIOP task in the ServerTasks statement in the Notes.ini (or via the CFGDOMSVR/CHGDOMSVR or Operations Navigator GUI).
- There are settings in the Name and Address book in Domino similar to the Agent Manager security settings that allow you to specify who can come in and run things via the DIIOP task. For a secure solution, you'll need to have a user profile with an internet password setup to run programs via DIIOP.

The servlet will get a session a little differently when using IIOP. It will send in the IP address and port of the HTTP server of the Domino server that it wants to talk to and a user and internet password to use. For more information on how to get a Session object for use in an IIOP environment, see the NotesFactory class information in the Domino Designer help.

The setup on the WebSphere side for accessing Domino via CORBA/IIOP is much simpler. You don't need to run under QNOTES or have QNOTES in your library list. You only need NCSO.jar and the classes for your servlet in your CLASSPATH.

Creating a Direct Executable Java program for NCSO.jar can dramatically improve the performance of using this on the iSeries. To do so, you should issue the CRTJ VAPGM CLSF('/qibm/proddata/lotus/notes/shared/ncso.jar') OPTIMIZE(40) command. Since this can take a long time to run and considerable CPU resources, you may want to submit this command (SBMJOB OB) to have it run in batch mode. A Java program is already created for the Notes.jar file.

**Note** When you access the Domino APIs you are doing it as a real user (the one that you specified when you established your session).
Advantages of using the remote CORBA/IIOP interface

- Domino server can be on any system and it can be moved in the future
- Can talk to multiple Domino servers from one servlet
- Servlet can move to any HTTP server
- Domino security is used

Advantages of using the local classes

- Faster than going over TCP/IP to the server
- Server does not need to be running
- Do not need IIOP turned on or configured

Note: This Release Note applies to versions 5.0.0, 5.0.1, 5.0.2, 5.0.3, and 5.0.4 of Domino for iSeries.

Server

Changed location for symbolic links to server programs

For Domino for iSeries 4.6.x, symbolic links to Domino server programs were stored in /QIBM/UserData/Lotus/Notes. Beginning with Domino for iSeries R5, the symbolic links to the server programs were removed from /QIBM/UserData/Lotus/Notes and moved to /QIBM/ProdData/Lotus/Notes. Symbolic links to user programs should continue to be created in /QIBM/UserData/Lotus/Notes.

Server

Domino for iSeries C++ API Release 2.1 available

The Domino for iSeries C++ API Release 2.1 is shipped with Domino for iSeries beginning with release 5.0.8.

You can upgrade to 2.1 by installing option 4 (C++ API) of the Domino for iSeries 5.0.8 software. You can also download the C++ API Release 2.1 from the following Web site:

http://www.ibm.com/lotus/cppapi or

The toolkit and documentation is also available through the Domino for iSeries Web site:

http://www.ibm.com/eserver/iseries/dominodembtools.htm

For C++ documentation, see this Web site:

http://www.notes.net/doc

Look for the product named C++ API.

Server

Domino Web server API (DSAPI): Differences for iSeries

The Domino Web Server Application Program Interface (DSAPI) is a C API for writing your own extensions to the Domino Web Server. A DSAPI extension, or filter, is a program that you create and is notified when certain events occur in the Webserver, such as when a user is about to be authenticated.

This note only describes the differences between a Domino for iSeries server from a general Domino server. For more details, see the Web Server section in the Lotus Release Notes: Domino/Notes 5.0, What’s New chapter.

For a Domino iSeries server, a filter must be built as a service program on the server’s OS/400. The service program name must be begin with LIB. For details on how to build a filter on an iSeries, see the example in the “Domino Web server API: Example of a filter” section in these release notes.
Installing the filter
Install the filter by specifying the name of the filter service program in the Server record, in the field DSAPI filter file name in the Internet Protocols -> HTTP table. When you enter the filter name here, make sure that you remove the 'LIB' prefix. The Web server will add LIB in front of the filter name after getting it from this field. You can specify just the name of the filter file if it is located in the Domino program or data directory; otherwise, you must specify the fully qualified path name.

For example, if your filter service program is called LIBFILTER and is stored in library SAMPLELIB, you should specify /QSYS.LIB/SAMPLELIB.LIB/FILTER.SRVPGM.

Writing the filter code

Note This release note contains a save file (savedobj.savf) which is available from either the online or Notes file (.nsf) version of the release notes.

Detach the following attachment, which is a save file.

![savedobj.savf]

Create a save file (SAMPLELIB/SAVEDOBJ) on the iSeries that has the Domino server, where SAMPLELIB could be your working DSAPI library on the iSeries. FTP the save file as binary to the iSeries that has the Domino server.

On the iSeries, enter the following command to restore the save file:

```
RSTOBJ OBJ(QCSRC) SAVLIB(SAMPLELIB) DEV(*SAVF) OBJTYPE(*FILE)
SAVF(SAMPLELIB/SAVEDOBJ) RSTLIB(SAMPLELIB)
```

This restored QCSRC includes one source member called FILTER. It is the C program DSAPI source. FILTER program includes source member QNOTESAPI/H.DSAPI which contains all the DSAPI structures and functions.

The DSAPI interface passes and accepts only ASCII strings. If you wish to process the data in EBCDIC format, a convenient way to do that is to use the OSTranslate function to translate all strings that pass back and forth across the DAPI interface. The prototype for this function is in QNOTESAPI/H/OSMISC. You must bind QNOTES/LIBNOTES into your service program and add the following to the FILTER program:

```
#include <global.h>
#include <osmisc.h>
```

Determine which events your filter needs to handle. For example, if you are implementing a custom authentication scheme, the filter must handle the authorization and group events. Fill out the appropriate filter functions. You may want to add startup code to the initialization function, and cleanup code to the terminate function.

Note In member dsapi.h, kInterfaceVersion must match filterInitData ->serverFilterVersion. If filterInitData ->serverFilterVersion is changed, you must change kInterfaceVersion accordingly and recompile your API. In this case, you may also want to look at the Release Notes for the new server to determine if there is any other change in the server that may affect your API. If your code does not run, this might be the reason. We suggest that you put a printf statement in FILTER to check filterInitData ->serverFilterVersion periodically. The printf statement is already in FILTER in the attached save file. You may also want to set up an algorithm to stop the program and issue a message. Also note that the printf output goes to a spool file associated with the QNOTES user profile. To find it, enter WRKSPLF SELECT(QNOTES). You can view it only after ending the Domino HTTP job.

For more detailed rules on writing a filter code, see the "Web Server" section in the "What's new" chapter of Lotus Release Notes: Domino/Notes 5.0.
Creating the filter
Run the following commands to create the filter:

```
ADDLIBLE LIB(QNOTESAPI)
CRTCMOD MODULE(SAMPLELIB/FILTER) SRFILE(SAMPLELIB/QCSRC) DEFINE(OS400)
CRTSRVPGM SRVPGM(SAMPLELIB/LIBFILTER) MODULE(SAMPLELIB/FILTER) EXPORT(*ALL)
BNDSRVPGM(QNOTES/LIBNOTES)
GRTOBJAUT OBJ(SAMPLELIB/LIBFILTER) OBJTYPE(*SRVPGM) USER(QNOTES) AUT(*USE)
```

Installing the filter
See "Domino Web server API (DSAPI): Differences for iSeries" in these release notes.

Server

**End-of-line character different on iSeries**
When writing an application to parse information, be aware that the end-of-line character may be different on the iSeries platform than on other platforms. For example, OS/400 uses character 10 (carriage return) as the end-of-line character, whereas Windows NT uses both characters 10 (carriage return) and 13 (line feed).

Server

**ISpy task not automatically loaded**
The ISpy task is a server task written in Java which is loaded and run by the RunJava program. Its purpose is to monitor response times for TCP services and mail services.

Domino for iSeries does not load the RunJava ISpy task by default. You can load it manually or have the Domino server load it automatically.

To load the task manually, enter the following command at the server console (note that ISpy is case-sensitive):

```
load runjava ISpy
```

To have the Domino server load the task automatically, add RunJava ISpy to the ServerTasks line in the NOTES.INI for the server. For example:

```
ServerTasks=Router,Replica,Update,AMgr,...,RunJava ISpy
```

Server

**LotusScript converts characters to EBCDIC on iSeries**
All LotusScript® statements that write to a file (such as Print #, Put, and Write #) will convert the characters to the platform-specific code page. The iSeries platform uses EBCDIC code pages, which are different from the ASCII code pages used by UNIX or Windows platforms. Therefore, the LotusScript statements will convert the characters to EBCDIC when writing to OS/400 files. Similarly, LotusScript statements that read from a file (such as Get, Input #, and Line Input #) will read OS/400 files as EBCDIC characters.

You can convert the EBCDIC file to ASCII by using the OS/400 Copy Object (CPY) command in your LotusScript program. For example:

```
Shell("DEL OBJLNK('/acme1/notes/asciifile1.txt')")

Shell ("CPY OBJ('/acme1/notes/ebcdicfile.txt')

TOOBJ('/acme1/notes/asciifile1.txt') FROMCODEPAGE(37) TOCODEPAGE(819)")
```
**Lotus Domino for iSeries R5.0.12 Release Notes**

**Chapter 2 - Things you need to know**

**Server**

**LSX Toolkit Version 3.1 available for iSeries**

As of Domino for iSeries 5.0.3, the LSX Toolkit Version 3.1 is available for iSeries. You can obtain this new version by installing option 5 of the Domino for iSeries software. After installing the LSX software on your iSeries server, refer to the LSX release notes in /qibm/proddata/lotus/LSX/readme.txt and the iSeries-specific installation and usage instructions in /qibm/proddata/lotus/LSX/readme_os400.txt.

You can also obtain the most recent version of the toolkit at http://www.ibm.com/lotus/techzone.

In previous releases of Domino for iSeries, the LSX Toolkit was provided with a complete directory tree in the /qibm/proddata/lotus/LSX directory. Starting with release 5.0.3, the toolkit is provided as a single self-extracting executable, lsxtk_31.exe, which will expand on a PC where the LSXs will be created. The advantage of this change is that the entire directory tree in /qibm/proddata/lotus/LSX no longer needs to be copied to a PC. Now, only the single self-extracting executable, lsxtk_31.exe, needs to be copied to a PC.

To remove the LSX files from a prior version of Domino for iSeries, you must delete option 5 of 5769LNT (DLTLICPGM command) before installing option 5 of Domino for iSeries 5.0.3. If you install the LSX Toolkit with Domino for iSeries 5.0.3 on your iSeries server with LSX already installed from a prior version, the files listed below will be installed and any existing LSX files in /qibm/proddata/lotus/LSX/ will remain. Subsequent removal of option 5 will only delete those files that are installed with the LSX Toolkit provided with Domino for iSeries 5.0.3. You must manually remove any remaining, obsolete LSX files in /qibm/proddata/lotus/LSX.

The following LSX Toolkit files are installed with option 5 of Domino for iSeries 5.0.3 in /qibm/proddata/lotus/LSX:

- lsxtk_31.exe Self-extracting PC file that contains the LSX Toolkit 3.1.
- readme.txt LSX release notes for LSX Toolkit 3.1.
- readme_os400.txt iSeries-specific installation and usage information for LSX Toolkit 3.1.

**Domino for iSeries API**

This release note documents API functions provided with Domino for iSeries to allow program access to Domino server information:

**Note** The API functions QnninListDominoServers and QnninRtvDominoServerAttr are ONLY provided with Domino for iSeries 5.0.3 and later R5 versions of Domino. The QnninRtvDominoServerAttr API is provided with Domino for iSeries 5.0.8 and later releases. If you are using enhanced versions of the API, with additional options provided after the initial release of availability, the enhanced features will only be available with the corresponding version of Domino installed. For example, the QnninRtvDominoServerAttr API features that are provided in Domino for iSeries release 5.0.8 will not be available for use on systems with an earlier release of Domino installed.

Use the QnninListDominoServers API to get the list of Domino servers that are configured and then, one at a time, call the QnninRtvDominoServerAttr or QnninRtvDominoServerAttr API to retrieve specific information about that server.

You can download examples for using these API programs at:

These API functions are included in the base option of Domino for iSeries, 5769LNT. If 5769SS1 option 13 (OS/400 System Openness Includes) has already been installed when Domino for iSeries version 5.0.3 or later is installed, then a symbolic link will be created in the IFS to the associated header file that is in the QNOTES library. If you expect developers to need the symbolic link from IFS, then make sure that 5769SS1 option 13 is installed prior to installing Domino for iSeries version 5.0.3 or later. If option 13 is not installed on the system at the time Domino is installed, you must create a symbolic link to the header file using the command as shown below:

```
QSYS/ADDLNK OBJ('/QSYS.LIB/QNOTES.LIB/H.FILE/QNNINLDS.MBR')
NEWLNK('/QIBM/INCLUDE/QNNINLDS.H')
```

**Note** The directory '/QIBM/INCLUDE' must exist on the system for this command to work. It is generally created after installing 5769SS1 option 13. The directory should be owned by QSYS and have public *RX authority.
List Domino Servers (QnninListDominoServers)

Required Parameter Group:

<table>
<thead>
<tr>
<th>Offset Dec</th>
<th>Offset Hex</th>
<th>Type</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>Binary(4)</td>
<td>Bytes returned</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Binary(4)</td>
<td>Bytes available</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>Binary(4)</td>
<td>Primary type of Domino server</td>
</tr>
<tr>
<td>12</td>
<td>C</td>
<td>Binary(4)</td>
<td>Secondary type of Domino server</td>
</tr>
<tr>
<td>16</td>
<td>10</td>
<td>Binary(4)</td>
<td>Number of active jobs in the subsystem</td>
</tr>
<tr>
<td>20</td>
<td>14</td>
<td>Binary(4)</td>
<td>Offset to data directory path</td>
</tr>
<tr>
<td>24</td>
<td>18</td>
<td>Binary(4)</td>
<td>Length of data directory path</td>
</tr>
</tbody>
</table>

Service Program Name: QNNINLDS

Similar Commands: None

Authorities and Locks

Default public authority

*USE

Required Parameter Group

Data buffer for Domino servers

OUTPUT; CHAR(*)

This returns the information about a specific Domino server. For the format, see "Data Buffer".

Data buffer length

INPUT; BINARY(4)

The length of the data buffer. The length must be at least big enough to hold the Bytes returned field and Bytes available field. Failure to provide enough room for the data will result in errors or incomplete data being returned.

Server name

INPUT; CHARACTER(255)

The name of the Domino server to retrieve information. This is a blank padded field. If the server name was 10 characters long, then there would be 245 blanks following the server name.

Server name length

INPUT; BINARY(4)

The length of the server name including the blanks. It should always be 255.

Error code

I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter. If this parameter is omitted, diagnostic and escape messages are issued to the application.

Data Buffer

For detailed descriptions of the fields in this table, see Field Descriptions.
Field Descriptions

Bytes available The length of data that could be returned by this API. This value is greater than "Bytes returned" when the length of the receiving variable is too small, causing truncation of data.

Bytes returned The length of data returned in this structure. This value includes this and all following fields. If the data is truncated because the receiver variable is not large enough to hold all of the available data, this value will be less than the bytes available value.

Length of server entry This is the length of each server entry returned.

Number of server entries returned This is the number of server entries that can be found in the returned "Server entries" field. There could be a 0 returned for this field if there isn't enough space to hold the first server entry or no Domino servers are currently configured.

Offset to server entry This is the offset to the start of the server entries. The offset is from the start of the "Bytes returned" field.

Server entries This is the start of the server entries returned. Each server entry is the length specified in the "length of server entry" field. Each server entry is a structure that contains the name of the server. The current maximum length of the server name is 255 bytes.

Error Messages

CPF24B4: Severe error while addressing parameter list.
CPF3CF1: Error code parameter not valid
CPF3CF2: Error(s) occurred during running of &1 API.
CPF3C1E: Required parameter &1 omitted.
CPF3C21 E: Format name &1 is not valid.
CPF3C24 E: Length of the receiver variable is not valid.

Retrieve Domino Server Information (QnninRtvDominoServerI)

Required Parameter Group:
1. Data buffer for Domino server information O Char(*)
2. Data buffer length I Binary(4)
3. Server name I Char(255)
4. Server name length I Binary(4)
5. Error Code I/O Char(*)

Service Program Name: QNNINLDS

Similar Commands: None

Authorities and Locks

Default public authority *USE
### Required Parameter Group

**Data buffer for Domino servers**

```
OUTPUT; CHAR(*)
```

This returns the information about a specific Domino server. For the format, see "Data Buffer".

**Data buffer length**

```
INPUT; BINARY(4)
```

The length of the data buffer. The length must be at least big enough to hold the Bytes returned field and Bytes available field. Failure to provide enough room for the data will result in errors or incomplete data being returned.

**Server name**

```
INPUT; CHARACTER(255)
```

The name of the Domino server to retrieve information. This is a blank padded field. If the server name was 10 characters long, then there would be 245 blanks following the server name.

**Server name length**

```
INPUT; BINARY(4)
```

The length of the server name including the blanks. It should always be 255.

**Error code**

```
I/O; CHAR(*)
```

The structure in which to return error information. For the format of the structure, see Error Code Parameter. If this parameter is omitted, diagnostic and escape messages are issued to the application.

### Data Buffer

For detailed descriptions of the fields in this table, see Field Descriptions.

<table>
<thead>
<tr>
<th>Offset Dec</th>
<th>Offset Hex</th>
<th>Type</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>Binary(4)</td>
<td>Bytes returned</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Binary(4)</td>
<td>Bytes available</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>Binary(4)</td>
<td>Primary type of Domino server</td>
</tr>
<tr>
<td>12</td>
<td>C</td>
<td>Binary(4)</td>
<td>Secondary type of Domino server</td>
</tr>
<tr>
<td>16</td>
<td>10</td>
<td>Binary(4)</td>
<td>Number of active jobs in the subsystem</td>
</tr>
<tr>
<td>20</td>
<td>14</td>
<td>Binary(4)</td>
<td>Offset to data directory path</td>
</tr>
<tr>
<td>24</td>
<td>18</td>
<td>Binary(4)</td>
<td>Length of data directory path</td>
</tr>
<tr>
<td>28</td>
<td>1C</td>
<td>Binary(4)</td>
<td>Offset to executable directory path</td>
</tr>
<tr>
<td>32</td>
<td>20</td>
<td>Binary(4)</td>
<td>Length of executable directory path</td>
</tr>
<tr>
<td>36</td>
<td>24</td>
<td>Character(20)</td>
<td>Subsystem description</td>
</tr>
<tr>
<td>56</td>
<td>38</td>
<td>Character(10)</td>
<td>Library name</td>
</tr>
<tr>
<td>66</td>
<td>42</td>
<td>Binary(1)</td>
<td>Server status</td>
</tr>
<tr>
<td>67</td>
<td>43</td>
<td>Binary(1)</td>
<td>Auto-Start with TCP/IP Servers</td>
</tr>
<tr>
<td>68</td>
<td>44</td>
<td>Binary(4)</td>
<td>Partition Number</td>
</tr>
<tr>
<td>72</td>
<td>48</td>
<td>Binary(4)</td>
<td>Offset to generic information</td>
</tr>
<tr>
<td>76</td>
<td>4C</td>
<td>Binary(4)</td>
<td>Length of generic information</td>
</tr>
<tr>
<td>*</td>
<td>*</td>
<td>Character(*)</td>
<td>Variable data</td>
</tr>
</tbody>
</table>
Field Descriptions

Auto - Start with TCP/IP servers  This is a flag that indicates if the server will be started automatically when TCP/IP is started on the server.

  0 - The server will not be started with TCP/IP
  1 - The server will be started with TCP/IP

Bytes available  The length of data that could be returned by this API. This value is greater than "Bytes returned" when
the length of the receiving variable is too small, causing truncation of data.

Bytes returned  The length of data returned in this structure. This value includes this and all following fields. If the
data is truncated because the receiver variable is not large enough to hold all of the data available, this value will be
less than the bytes available value.

Length of data directory path  This is the length of the data in the data directory path.

Length of executable directory path  This is the length of the data in the executable directory path.

Length of generic information  This is the length of the data in the generic information.

Library name  This is the library name of the run time programs.

Number of active jobs in the subsystem  This is the number of active jobs in the subsystem associated with this
Domino server. If the Domino server is currently not running this value will be 0. If a -1 is returned then the
number of active jobs running in the subsystem could not be determined, and a diagnostic message is written that
gives more information on why this information could not be retrieved.

Offset to data directory path  This is the offset, from the start of the returned data, to where the data directory path
can be found. It will be somewhere within the variable data portion of the returned data.

Offset to executable directory path  This is the offset, from the start of the returned data, to where the executable
directory path can be found. It will be somewhere within the variable data portion of the returned data.

Offset to generic information  This is the offset, from the start of the returned data, to where the generic configuration
information can be found. It will be somewhere within the variable data portion of the returned data.

Partition Number  The internal partition number used by the Domino server to identify itself within a partitioned
server environment.

Primary type of Domino server  This is the type of Domino server. The possible values are:

  ● 0 - Unknown Domino server type
  ● 1 - Domino server
  ● 2 - Stand alone QuickPlace server
  ● 3 - Stand alone Sametime server

If the server type is a Domino server, you may need to check the Secondary type of Domino server field to see if there
are other capabilities of the server.

Secondary type of Domino server  This Domino server also has these additional capabilities. The possible values are:

  ● 0 - No additional capabilities.
  ● 1 - Also a QuickPlace server
  ● 2 - Also a Sametime server
  ● 3 - Also a QuickPlace AND Sametime server

This field is only valid if the Primary type of Domino server field indicates a Domino server.

Server status  This is the current status of the server. The possible values are:

  ● 1 - Server ended
  ● 2 - Server started
  ● 3 - Server starting
  ● 4 - Server ending
  ● 5 - Server in standby mode
  ● 99 - Server in unknown status

Subsystem description  This is the name of the subsystem description used for this Domino server. The first 10 bytes
of the data will be the subsystem description name and the next 10 bytes will be the library name where the
subsystem description can be found.

Variable data  This is the start of the variable data field. Use the offset and length fields to actually find and retrieve
data from this area.
Error Messages
CPF24B4: Severe error while addressing parameter list.
CPF3CF1: Error code parameter not valid
CPF3CF2: Error(s) occurred during running of &1 API.
CPF3C1E: Required parameter &1 omitted.
CPF3C24: Length of the receiver variable is not valid.
LNT0907: The server name specified, &1, is not valid.

Retrieve Domino Server Attributes (QnninRtvDominoServerAttr)

Required Parameter Group:

1. Data buffer for Domino server information O Char(*)
2. Data buffer length I Binary(4)
3. Server name I Char(255)
4. Server name length I Binary(4)
5. Format name I Char(8)
6. Error Code I/O Char(*)

Service Program Name: QNNINLDS

Similar Commands: None

Authorities and Locks
Default public authority
*USE

Required Parameter Group
Data buffer for Domino server information
OUTPUT; CHAR(*)

This returns the information about a specific Domino server. For the format, see "Data Buffer".

Data buffer length
INPUT; BINARY(4)

The length of the data buffer. The length must be at least big enough to hold the Bytes returned field and Bytes available field. Failure to provide enough room for the data will result in errors or incomplete data being returned.

Server name
INPUT; CHARACTER(255)

The name of the Domino server to retrieve information. This is a blank padded field. If the server name was 10 characters long, then there would be 245 blanks following the server name.

Server name length
INPUT; BINARY(4)

The length of the server name including the blanks. It should always be 255.

Format name
INPUT; CHARACTER(8)

The name of the format used to retrieve different Domino server attributes. You can use the following format names:
DATR0100, DATR0200

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter. If this parameter is omitted, diagnostic and escape messages are issued to the application.
**Data Buffer**
For detailed descriptions of the fields in these tables, see Field Descriptions.

**DATR0100 Attribute Buffer**

<table>
<thead>
<tr>
<th>Offset Dec</th>
<th>Offset Hex</th>
<th>Type</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>Binary(4)</td>
<td>Bytes returned</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Binary(4)</td>
<td>Bytes available</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>Binary(4)</td>
<td>Primary type of Domino server</td>
</tr>
<tr>
<td>12</td>
<td>C</td>
<td>Binary(4)</td>
<td>Secondary type of Domino server</td>
</tr>
<tr>
<td>16</td>
<td>10</td>
<td>Binary(4)</td>
<td>Number of active jobs in the subsystem</td>
</tr>
<tr>
<td>20</td>
<td>14</td>
<td>Binary(4)</td>
<td>Offset to data directory path</td>
</tr>
<tr>
<td>24</td>
<td>18</td>
<td>Binary(4)</td>
<td>Length of data directory path</td>
</tr>
<tr>
<td>28</td>
<td>1C</td>
<td>Binary(4)</td>
<td>Offset to executable directory path</td>
</tr>
<tr>
<td>32</td>
<td>20</td>
<td>Binary(4)</td>
<td>Length of executable directory path</td>
</tr>
<tr>
<td>36</td>
<td>24</td>
<td>Character(20)</td>
<td>Subsystem description</td>
</tr>
<tr>
<td>56</td>
<td>38</td>
<td>Character(10)</td>
<td>Library name</td>
</tr>
<tr>
<td>86</td>
<td>42</td>
<td>Binary(1)</td>
<td>Server status</td>
</tr>
<tr>
<td>87</td>
<td>43</td>
<td>Binary(1)</td>
<td>Auto-Start with TCP/IP Servers</td>
</tr>
<tr>
<td>88</td>
<td>44</td>
<td>Binary(4)</td>
<td>Partition Number</td>
</tr>
<tr>
<td>72</td>
<td>48</td>
<td>Binary(4)</td>
<td>Offset to generic information</td>
</tr>
<tr>
<td>76</td>
<td>4C</td>
<td>Binary(4)</td>
<td>Length of generic information</td>
</tr>
<tr>
<td></td>
<td>*</td>
<td>Character(*)</td>
<td>Variable data</td>
</tr>
</tbody>
</table>

**DATR0200 Attribute Buffer**

<table>
<thead>
<tr>
<th>Offset Dec</th>
<th>Offset Hex</th>
<th>Type</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>DATR0100 Buffer (see above)</td>
<td>DATR0100 Buffer</td>
</tr>
<tr>
<td>80</td>
<td>50</td>
<td>Character(1)</td>
<td>Log replication events</td>
</tr>
<tr>
<td>81</td>
<td>51</td>
<td>Character(1)</td>
<td>Log client session events</td>
</tr>
<tr>
<td>82</td>
<td>52</td>
<td>Character(1)</td>
<td>DOLS enabled</td>
</tr>
<tr>
<td>83</td>
<td>53</td>
<td>Character(1)</td>
<td>Day light savings time enabled</td>
</tr>
<tr>
<td>84</td>
<td>54</td>
<td>Character(6)</td>
<td>Time zone</td>
</tr>
<tr>
<td>90</td>
<td>5A</td>
<td>Character(10)</td>
<td>Collation sort order</td>
</tr>
<tr>
<td>100</td>
<td>64</td>
<td>Character(11)</td>
<td>SMTP type</td>
</tr>
<tr>
<td>111</td>
<td>6F</td>
<td>Character(5)</td>
<td>Reserved</td>
</tr>
<tr>
<td>116</td>
<td>74</td>
<td>Binary(4)</td>
<td>Offset to organization name</td>
</tr>
<tr>
<td>120</td>
<td>78</td>
<td>Binary(4)</td>
<td>Length of organization name</td>
</tr>
<tr>
<td>124</td>
<td>7C</td>
<td>Binary(4)</td>
<td>Offset to web browser list, List Type 1</td>
</tr>
<tr>
<td>128</td>
<td>80</td>
<td>Binary(4)</td>
<td>Offset to News Readers List List Type 1</td>
</tr>
<tr>
<td>132</td>
<td>84</td>
<td>Binary(4)</td>
<td>Offset to Mail services List List Type 1</td>
</tr>
<tr>
<td>136</td>
<td>88</td>
<td>Binary(4)</td>
<td>Offset to Advanced services List List Type 1</td>
</tr>
<tr>
<td>140</td>
<td>8C</td>
<td>Binary(4)</td>
<td>Offset to Connection Services List List Type 1</td>
</tr>
<tr>
<td>Offset Dec</td>
<td>Offset Hex</td>
<td>Type</td>
<td>Field</td>
</tr>
<tr>
<td>-----------</td>
<td>------------</td>
<td>--------</td>
<td>---------------------------------------------------------</td>
</tr>
<tr>
<td>144</td>
<td>90</td>
<td>Binary(4)</td>
<td>Offset to Directory Services List List Type 1</td>
</tr>
<tr>
<td>148</td>
<td>94</td>
<td>Binary(4)</td>
<td>Offset to Additional Services List List Type 1</td>
</tr>
<tr>
<td>152</td>
<td>98</td>
<td>Binary(4)</td>
<td>Offset to TCP Info List List Type 2</td>
</tr>
<tr>
<td>156</td>
<td>9C</td>
<td>Binary(4)</td>
<td>Offset to canonical name (available in release 5.0.9)</td>
</tr>
<tr>
<td>160</td>
<td>A0</td>
<td>Binary(4)</td>
<td>Length of canonical name (available in release 5.0.9)</td>
</tr>
<tr>
<td>*</td>
<td>*</td>
<td>Character(*)</td>
<td>Variable data</td>
</tr>
</tbody>
</table>

**Field Descriptions**

**Auto - Start with TCP/IP servers**: This is a flag that indicates if the server will be started automatically when TCP/IP is started on the system.

0 - The server will not be started with TCP/IP
1 - The server will be started with TCP/IP

Bytes available: The length of data that could be returned by this API. This value is greater than “Bytes returned” when the length of the receiving variable is too small, causing truncation of data.

Bytes returned: The length of data returned in this structure. This value includes this and all following fields. If the data is truncated because the receiver variable is not large enough to hold all of the data available, this value will be less than the bytes available value.

Collation sort order: This field indicates which way the Domino server will sort characters. The possible values are:

*SAME
HU - Hungarian
RU - Cyrillic

*STD - Standard
IS - Icelandic
SK - Slovak

CS - Czech
IT - Italian
 SL-SI - Slovenian

DA-DK-AA - Nordic 2to1
JA - Japanese
 SJ-AL - Albanian

DE - German
KO - Korean
SV - Swedish

E2-ES - Spanish - Modern
LT - Lithuanian
TH - Thai

EL - Greek
LV - Baltic
TR - Turkish

EN - Latin1
NL - Dutch
ZH-CN - Simplified Chinese

ES - Spanish - Traditional
NO - Nordic
ZH-TW Traditional Chinese

ET-EE - Estonian collation
PL - Latin2
FI - Finnish

PL-PL - Polish
FR - French
PT - Portuguese

HR - Croatian
RO - Romanian
**DOLS enabled**: This is a flag that indicates if the server is enabled for Domino Offline Support (DOLS). The possible values are:
- '0' - Not enabled for DOLS
- '1' - Enabled for DOLS

**DST**: This is a flag that indicates if the server is configured for Daylight Savings Time (DST). The possible values are:
- '0' - Not configured for DST
- '1' - Configured for DST

**Length of canonical name**: This is the length of the data in the canonical name. If length is equal to 0 (zero) then no canonical server name is available. This field is only provided with Domino for iSeries release 5.0.9 or later.

Example of canonical server name:

```
CN=MYSERVER/O=ORG1/C=US
```

**Length of data directory path**: This is the length of the data in the data directory path.

**Length of executable directory path**: This is the length of the data in the executable directory path.

**Length of generic information**: This is the length of the data in the generic information.

**Length of organization name**: This is the length of the data in the organization name.

**Library name**: This is the library name of the runtime programs.

**Log client session events**: This is a flag that indicates if client session events should be logged. The possible values are:
- '0' - Do not log client session events
- '1' - Log client session events.

**Log replication events**: This is a flag that indicates if replication events should be logged. The possible values are:
- '0' - Do not log replication events
- '1' - Log replication events.

**Number of active jobs in the subsystem**: This is the number of active jobs in the subsystem associated with this Domino server. If the Domino server is currently not running this value will be 0. If a -1 is returned then the number of active jobs running in the subsystem could not be determined. If a -1 is returned there is a diagnostic message written that gives some more information on why this information could not be retrieved.

**Offset to advanced services list**: This is the offset, from the start of the returned data, to the list of advanced services of the server.

This list is in List Type 1 format. See below for the description of the List Type 1 format.

**Offset to canonical name**: This is the offset, from the start of the returned data, to where the canonical name can be found.

It will be somewhere within the variable data portion of the returned data. This field is only provided with Domino for iSeries release 5.0.9 or later.

**Offset to connection services list**: This is the offset, from the start of the returned data, to the list of connection services of the server.

This list is in List Type 1 format. See below for the description of the List Type 1 format.

**Offset to data directory path**: This is the offset, from the start of the returned data, to where the data directory path can be found. It will be somewhere within the variable data portion of the returned data.

**Offset to directory services list**: This is the offset, from the start of the returned data, to the list of directory services of the server.

This list is in List Type 1 format. See below for the description of the List Type 1 format.

**Offset to executable directory path**: This is the offset, from the start of the returned data, to where the executable directory path can be found. It will be somewhere within the variable data portion of the returned data.

**Offset to generic information**: This is the offset, from the start of the returned data, to where the generic configuration information can be found.

It will be somewhere within the variable data portion of the returned data.
**Offset to mail services list:** This is the offset, from the start of the returned data, to the list of internet mail packages of the server.

This list is in List Type 1 format. See below for the description of the List Type 1 format.

**Offset to news readers list:** This is the offset, from the start of the returned data, to the list of news readers of the server.

This list is in List Type 1 format. See below for the description of the List Type 1 format.

**Offset to organization name:** This is the offset, from the start of the returned data, to where the organization name can be found.

It will be somewhere within the variable data portion of the returned data.

**Offset to tcp/ip information list:** This is the offset, from the start of the returned data, to the list of tcp/ip port information of the server.

This list is in List Type 2 format. See below for the description of the List Type 2 format.

**Offset to web browsers list:** This is the offset, from the start of the returned data, to the list of web browser features of the server.

This list is in List Type 1 format. See below for the description of the List Type 1 format.

**Partition Number:** The internal partition number used by the Domino server to identify itself within a partitioned server environment.

**Primary type of Domino server:** This is the type of Domino server. The possible values are:

- 0 - Unknown Domino server type
- 1 - Domino server
- 2 - Stand alone QuickPlace server

If the server type is a Domino server, you may need to check the Secondary type of Domino server field to see if there are other capabilities of the server.

**Secondary type of Domino server:** This Domino server also has these additional capabilities. The possible values are:

- 0 - No additional capabilities.
- 1 - Also a QuickPlace server
- 2 - Also a SameTime server
- 3 - Also a QuickPlace AND SameTime server

This field is only valid if the Primary type of Domino server field indicates a Domino server.

**Server status:** This is the current status of the server. The possible values are:

- 1 - Server ended
- 2 - Server started
- 3 - Server starting
- 4 - Server ending
- 5 - Server in standby mode
- 99 - Server in unknown status

**SMTP Type:** This field indicates how the Domino server supports SMTP mail. The possible values are:

- *MSF* AS/400 SMTP server in combination with the AnyMail/400 Mail Server Framework
- *DOMINO* Built-in Domino SMTP
- *QUICKPLACE* Built-in QuickPlace SMTP (QuickPlace servers only)

**Subsystem description:** This is the name of the subsystem description used for this Domino server. The first 10 bytes of the data will be the subsystem description name and the next 10 bytes will be the library name where the subsystem description can be found.
**Time Zone:** This field indicates what time zone the server is configured for. The possible values are:

- **GMT** - Greenwich Mean Time
- **BST** - Bering Standard Time
- **HST** - Alaska-Hawaii Standard Time
- **ZW1** - 1 hour West of GMT
- **ZW12** - 12 hours West of GMT
- **ZE6B** - 6 1/2 hours East of GMT
- **ZW2** - 2 hours West of GMT
- **ZE12C** - 12 3/4 hours East of GMT
- **ZE6** - 6 hours East of GMT
- **ZW3** - 3 hours West of GMT
- **ZE12** - 12 hours East of GMT
- **ZE5C** - 5 3/4 hours East of GMT
- **NST** - Newfoundland Standard Time
- **ZE11B** - 11 1/2 hours East of GMT
- **ZE5B** - 5 1/2 hours East of GMT
- **AST** - Atlantic Standard Time
- **ZE11** - 11 hours East of GMT
- **ZE5** - 0 hours East of GMT
- **EST** - Eastern Standard Time
- **ZE10B** - 10 1/2 hours East of GMT
- **ZE4B** - 4 1/2 hours East of GMT
- **CST** - Central Standard Time
- **ZE10** - 10 hours East of GMT
- **ZE4** - 0 hours East of GMT
- **MST** - Mountain Standard Time
- **ZE9B** - 9 1/2 hours East of GMT
- **ZE3B** - 3 1/2 hours East of GMT
- **PST** - Pacific Standard Time
- **ZE9** - 9 hours East of GMT
- **ZE3** - 0 hours East of GMT
- **YST** - Yukon Standard Time
- **ZE8** - 8 hours East of GMT
- **ZE2** - 0 hours East of GMT
- **ZW9B** - 9 1/2 hours West of GMT
- **ZE7** - 7 hours East of GMT
- **CET** - Central European Time

**Variable Data:** This is the start of the variable data field. Use the offset and length fields to actually find and retrieve data from this area.

**List Formats**

**List Type 1**

<table>
<thead>
<tr>
<th>Offset Dec</th>
<th>Offset Hex</th>
<th>Type</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>Binary(4)</td>
<td>Number of Items in List</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Binary(4)</td>
<td>Length of each item</td>
</tr>
<tr>
<td>*</td>
<td>*</td>
<td>Character(*)</td>
<td>Items in the list</td>
</tr>
</tbody>
</table>

**List Type 2**

<table>
<thead>
<tr>
<th>Offset Dec</th>
<th>Offset Hex</th>
<th>Type</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>Binary(4)</td>
<td>Number of Items in List</td>
</tr>
<tr>
<td>*</td>
<td>*</td>
<td>Character(*)</td>
<td>TCP/IP list items in TCP List Format</td>
</tr>
</tbody>
</table>

**TCP List Format**

<table>
<thead>
<tr>
<th>Offset Dec</th>
<th>Offset Hex</th>
<th>Type</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>Binary(4)</td>
<td>OffsetToNext Item</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Character(17)</td>
<td>TCP/IP Address</td>
</tr>
<tr>
<td>21</td>
<td>15</td>
<td>Character(1)</td>
<td>Port Enabled</td>
</tr>
<tr>
<td>22</td>
<td>16</td>
<td>Character(10)</td>
<td>Port Encrypted</td>
</tr>
<tr>
<td>32</td>
<td>20</td>
<td>Binary(4)</td>
<td>Offset To Port Name</td>
</tr>
<tr>
<td>36</td>
<td>24</td>
<td>Binary(4)</td>
<td>Length of Port Name</td>
</tr>
<tr>
<td>40</td>
<td>28</td>
<td>Binary(4)</td>
<td>Offset To Network Name</td>
</tr>
<tr>
<td>44</td>
<td>2C</td>
<td>Binary(4)</td>
<td>Length of Network Name</td>
</tr>
</tbody>
</table>
TCP List Format Field Descriptions

Length of Network Name: This is the length of the Network Name data.

Length of Port Name: This is the length of the port name data.

Offset to Network Name: This is the offset, from the start of this list element, to where the network name can be found.

Offset to next item: This is the offset, from the start of the first element in the list, to where the next element can be found.

Offset to Port Name: This is the offset, from the start of this list element, to where the port name can be found.

Port Enabled: This is a flag that indicates if this Domino Server Port is enabled. Possible values are:
- '0' - Server port not enabled.
- '1' - Server port is enabled.

Port Encrypted: This indicates if the data sent through the port is encrypted. Possible values are:
- *ENCRIPT
- *NOENCRIPT

TCPIP Address: This is the tcp/ip address for this Domino Server Port.

Error Messages
CPF24B4: Severe error while addressing parameter list.
CPF3CF1: Error code parameter not valid.
CPF3CF2: Error(s) occurred during running of &1 API.
CPF3C1E: Required parameter &1 omitted.
CPF3C21: Format name &1 is not valid.
CPF3C24: Length of the receiver variable is not valid.
LNT0907: The server name specified, &1, is not valid.

QnninSetDominoEnv

QnninSetDominoEnv is an API provided by the QNNINLDS SRVPGM. This API will set the current jobs working environment into a state to allow the NotesInitExtended API to be called for a specific Domino server. Information such as, Servers data directory, current user, Domino executable path, etc. will be set correctly after calling QnninSetDominoEnv. This removes the burden from the caller from having to know this specific information about each Domino server when initializing the Notes API environment.

Set Domino Environment (QnninSetDominoEnv)

Required Parameter Group:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Action to Perform</td>
<td>Binary(4)</td>
</tr>
<tr>
<td>2</td>
<td>Server name</td>
<td>Char(255)</td>
</tr>
<tr>
<td>3</td>
<td>Server name length</td>
<td>Binary(4)</td>
</tr>
<tr>
<td>4</td>
<td>User Profile Action</td>
<td>Binary(4)</td>
</tr>
<tr>
<td>5</td>
<td>Path Action</td>
<td>Binary(4)</td>
</tr>
<tr>
<td>6</td>
<td>Error Code</td>
<td>I/O Char(*)</td>
</tr>
</tbody>
</table>

Service Program Name: QNNINLDS

Similar Commands: SETDOMENV

Authorities and Locks
Default public authority
*USE
**Required Parameter Group**

**Action to Perform.**

**INPUT; BINARY(4)**

If this value is 0, the API will set the current jobs environment to a state ready for the NotesInitExtended() API call. Job attributes such as PATH environment variable, current working directory, current user, and library list may be changed by this API.

If this value is 1, the API will reset the environment back to its original state. The QnninSetDominoEnv API must have been called previously with a value of 0 for this parameter in order to call it a second time with a value of 1.

**Server name**

**INPUT; CHAR(255)**

The name of the Domino server to retrieve information.

**Server name length**

**INPUT; BINARY(4)**

The length of the server name.

**User Profile Action**

**INPUT; BINARY(4)**

If this value is 0, the API will not change the current user for the job. If this value is 1, the current user for the job will be changed to a user profile that is required for the Domino server. It is recommended that this value be set so that authority and newly created objects while running in the Domino environment be set to the correct USRPRF.

**Path Action.**

**INPUT; BINARY(4)**

If this value is 0, the PATH environment variable will be replaced with a PATH needed to run in the Domino environment.

If this value is 1, the required Domino environment path elements will be added at the beginning of the existing PATH value.

If this value is 2, the required Domino environment path elements will be added at the end of the existing PATH value.

**NOTE:** If specifying Path Action 2, and there is an existing PATH value that contains a notes.ini file for a different server, that file will be found before the notes.ini file for the server specified on this API call.

**Error code**

**I/O; CHAR(*)**

The structure in which to return error information. For the format of the structure, see Error Code Parameter. If this parameter is omitted, diagnostic and escape messages are issued to the application.

**Error Messages**

CPF24B4: Severe error while addressing parameter list.

CPF3CF1: Error code parameter not valid

CPF3CF2: Error(s) occurred during running of &1 API.

CPF3C1E: Required parameter &1 omitted.

CPF3C24: Length of the receiver variable is not valid.

LNT0907: The server name specified, &1, is not valid.

LNT8891: Error resetting the Domino environment.
**QnninGetDomino Env**

QnninGetDominoEnv is an API provided by the QNNINLDS SRVPGM. This API will retrieve information about the current jobs Domino server environment. The server for the current environment is determined by searching for the notes.ini file in the PATH environment variable. If the notes.ini file can not be found in the current PATH, this API will fail.

**Get Domino Environment**
QnninGetDominoEnv

Required Parameter Group:

1. Data buffer for Domino environment O Char(*)
2. Data buffer length I Binary(4)
3. Format name I Char(8)
4. Error Code I/O Char(*)

**Service Program Name:** QNNINLDS

**Similar Commands:** None

**Authorities and Locks**
Default public authority
*USE

**Required Parameter Group**

Data buffer for Domino environment
OUTPUT; CHAR(*)

This returns the information about a Domino environment. For the format, see "Data Buffer".

Data buffer length
INPUT; BINARY(4)

The length of the data buffer. The length must be at least big enough to hold the Bytes returned field and Bytes available field. Failure to provide enough room for the data will result in errors or incomplete data being returned.

Format name
INPUT; CHAR(8)

The name of the format used to retrieve the Domino environment information. You can use the following format names:
DENV0100

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.
If this parameter is omitted, diagnostic and escape messages are issued to the application.

**Data Buffer**

For detailed descriptions of the fields in these tables, see Field Descriptions. The QnninDominoEnv definition has been supplied in the qnninlds.h file to assist mapping the data buffer to a C/C++ data structure.

DENV0100 Attribute Buffer

<table>
<thead>
<tr>
<th>Offset Dec</th>
<th>Offset Hex</th>
<th>Type</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>Binary(4)</td>
<td>Bytes returned</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Binary(4)</td>
<td>Bytes available</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>Binary(4)</td>
<td>Length of server name</td>
</tr>
<tr>
<td>12</td>
<td>C</td>
<td>Char(256)</td>
<td>Server Name</td>
</tr>
<tr>
<td>268</td>
<td>44</td>
<td>Binary(4)</td>
<td>Length of directory path</td>
</tr>
<tr>
<td>272</td>
<td>110</td>
<td>Char(256)</td>
<td>Data directory name</td>
</tr>
<tr>
<td>328</td>
<td>210</td>
<td>Binary(4)</td>
<td>Length of run path</td>
</tr>
</tbody>
</table>
Field Descriptions

Bytes available: The length of data that could be returned by this API. This value is greater than “Bytes returned” when the length of the receiving variable is too small, causing truncation of data.

Bytes returned: The length of data returned in this structure. This value includes this and all following fields. If the data is truncated because the receiver variable is not large enough to hold all of the data available, this value will be less than the bytes available value.

Length of server name: The length, in bytes, of the servers name returned in the server name field.

Server Name: The Domino server’s name determined from the current jobs environment.

Length of data directory path: The length, in bytes, of the data directory returned in the Data directory name field.

Data directory name: The Domino server’s data directory determined from the current jobs environment.

Length of run path: The length, in bytes, of the Run path returned in the Run path field.

Run path: A PATH environment component that contains the Domino server’s executable information.

Server’s runtime library: The library that contains the Domino server’s executable binary objects.

Server’s user profile: The user profile that the Domino server jobs will run under.

Server’s release: A character representation in CCSID 37, of the Domino server’s release.

Reserved: Reserved field.

Error Messages
CPF24B4: Severe error while addressing parameter list.
CPF3CF1: Error code parameter not valid
CPF3CF2: Error(s) occurred during running of &1 API.
CPF3C1E: Required parameter &1 omitted.
CPF3C21: Format name &1 is not valid.
CPF3C24: Length of the receiver variable is not valid.
LNT0907: The server name specified, &1, is not valid.
LNT8895: Domino server environment information cannot be retrieved.

QnninListDominoRlsI

QnninListDominoRlsI is an API provided by the QNNINLDS SRVPGM. This API will retrieve a list of installed Domino releases on the current iSeries system.

List Domino Release Information (QnninListDominoRlsI)

Required Parameter Group:

<table>
<thead>
<tr>
<th>Offset Dec</th>
<th>Offset Hex</th>
<th>Type</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>532</td>
<td>214</td>
<td>Char(256)</td>
<td>Run path</td>
</tr>
<tr>
<td>788</td>
<td>314</td>
<td>Char(10)</td>
<td>Server’s runtime library</td>
</tr>
<tr>
<td>798</td>
<td>31E</td>
<td>Char(10)</td>
<td>Server’s user profile</td>
</tr>
<tr>
<td>808</td>
<td>328</td>
<td>Char(16)</td>
<td>Server’s release</td>
</tr>
<tr>
<td>324</td>
<td>338</td>
<td>Char(16)</td>
<td>Reserved</td>
</tr>
</tbody>
</table>

Service Program Name: QNNINLDS

Similar Commands: None
Authorities and Locks
Default public authority
*USE

Required Parameter Group
Data buffer for Domino releases
OUTPUT; CHAR(*)
This returns the the list of installed Domino releases. For the format, see “Data Buffer”.

Data buffer length
INPUT; BINARY(4)
The length of the data buffer. The length must be at least big enough to hold the Bytes returned field and Bytes available field. Failure to provide enough room for the data will result in errors or incomplete data being returned.

Format name
INPUT; CHAR(8)
The name of the format used to retrieve the Domino environment information. You can use the following format names:
DRLS0100

Error code
I/O; CHAR(*)
The structure in which to return error information. For the format of the structure, see Error Code Parameter. If this parameter is omitted, diagnostic and escape messages are issued to the application.

Data Buffer
For detailed descriptions of the fields in these tables, see Field Descriptions. The QnninListDominoRls definition has been supplied in the qnninlds.h file to assist mapping the data buffer to a C/C++ data structure.

<table>
<thead>
<tr>
<th>Offset Dec</th>
<th>Offset Hex</th>
<th>Type</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>Binary(4)</td>
<td>Bytes returned</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Binary(4)</td>
<td>Bytes available</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>Binary(4)</td>
<td>Offset to release entries</td>
</tr>
<tr>
<td>12</td>
<td>C</td>
<td>Binary(4)</td>
<td>Number of release entries</td>
</tr>
<tr>
<td>16</td>
<td>10</td>
<td>Binary(4)</td>
<td>Length of each release entry</td>
</tr>
</tbody>
</table>

Field Descriptions
Bytes available: The length of data that could be returned by this API. This value is greater than “Bytes returned” when the length of the receiving variable is too small, causing truncation of data.

Bytes returned: The length of data returned in this structure. This value includes this and all following fields. If the data is truncated because the receiver variable is not large enough to hold all of the data available, this value will be less than the bytes available value.

Offset to release entries: The offset, in bytes, from the beginning of the buffer to the array of Domino release information (See below).

Number of release entries: The number of release entries returned in the array of Domino release information.

Length of each release entry: The length, in bytes, of each Domino release array element.

DRLS0100 Release Information array element. The DominoRs100 definition has been supplied in the qnninlds.h file to assist mapping the release information to a C/C++ data structure.

<table>
<thead>
<tr>
<th>Offset Dec</th>
<th>Offset Hex</th>
<th>Type</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>Binary(4)</td>
<td>Length of run path</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Char(256)</td>
<td>Run path</td>
</tr>
<tr>
<td>260</td>
<td>104</td>
<td>Char(10)</td>
<td>Run time library</td>
</tr>
<tr>
<td>270</td>
<td>10E</td>
<td>Char(16)</td>
<td>Release</td>
</tr>
<tr>
<td>286</td>
<td>11E</td>
<td>Char(7)</td>
<td>Product ID</td>
</tr>
<tr>
<td>293</td>
<td>125</td>
<td>Char(5)</td>
<td>Product Option</td>
</tr>
<tr>
<td>298</td>
<td>12A</td>
<td>Char(16)</td>
<td>Reserved</td>
</tr>
</tbody>
</table>
Field Descriptions

Length of run path: The length, in bytes, of the run path returned in the Run path field.

Run path: A PATH environment component that contains a Domino release's executable information.

Run time library: The library that contains the Domino release's executable binary objects.

Release: A character representation in CCSID 37, of the Domino release.

Product ID: The licensed program product ID of the Domino release.

Product Option: The licensed program option of the Domino release.

Reserved: Reserved field.

Error Messages

CPF24B4: Severe error while addressing parameter list.
CPF3CF1: Error code parameter not valid
CPF3CF2: Error(s) occurred during running of &1 API.
CPF3C1E: Required parameter &1 omitted.
CPF3C21: Format name &1 is not valid.
CPF3C24: Length of the receiver variable is not valid.
LNT0907: The server name specified, &1, is not valid.

QnninGetIniValue - QnninGetIniValuez

QnninGetIniValue and QnninGetIniValuez are APIs provided by the QNNINLDS SRVPGM. These APIs will retrieve a value from a Domino server's notes.ini file. These APIs will behave similarly to the Domino OSGetEnvironmentString API.

Get Notes.Ini Value(QnninGetIniValue)

Required Parameter Group:

1  Server name  I  Char(255)
2  Server name length  I  Binary(4)
3  Notes.ini variable name  I  Char(*)
4  Notes.ini variable name length  I  Binary(4)
5  Return Buffer  O  Char(*)
6  Return Buffer Length  I  Binary(4)
7  Return Bytes Available  O  Binary(*)
8  Error Code  I/O  Char(*)

Service Program Name: QNNINLDS

Similar Commands: None

Authorities and Locks

Default public authority

*USE

Required Parameter Group

Server name

INPUT; CHAR(255)

The name of the Domino server to retrieve information.

Server name length

INPUT; BINARY(4)

The length of the server name.

Notes.ini variable name

INPUT; CHAR(*)

The variable name for the entry in the notes.ini to be retrieved. Notes.ini entries are in the form of variable=value;
The variable name is expected to be in CCSID 37.

Notes.ini variable name length

**INPUT; BINARY(4)**

The length of the variable name supplied in the Notes.ini variable name parameter.

Return Buffer

**OUTPUT; CHAR(*)**

The value associated with the Notes.ini variable name will be returned in this buffer. The value will be returned in a CCSID 37 character array.

Return Buffer Length

**INPUT; BINARY(4)**

The size of the buffer that will be used to return the notes.ini value.

Return Bytes Available

**OUTPUT; BINARY(*)**

The number of bytes returned in the Return Buffer.

If this value is larger than Return Buffer Length, then only Return Buffer Length bytes will be returned.

Error code

**I/O; CHAR(*)**

The structure in which to return error information. For the format of the structure, see Error Code Parameter. If this parameter is omitted, diagnostic and escape messages are issued to the application.

Error Messages

CPF24B4: Severe error while addressing parameter list.

CPF3CF1: Error code parameter not valid

CPF3CF2: Error(s) occurred during running of &1 API.

CPF3C1E: Required parameter &1 omitted.

CPF3C24: Length of the receiver variable is not valid.

LNT0907: The server name specified, &1, is not valid.

LNT8896: Error occurred when trying to set or get Domino configuration value.

Get Notes.Ini Value - zero terminated

(QnninGetIniValuez)

This API is identical to the QnninGetIniValue API except that the input string parameters are entered as null terminated strings. This eliminates the parameters associated with specifying lengths of character strings. This API is useful when calling from an environment that may restrict the number of parameters that can be passed.

Required Parameter Group:

1. **Server name** I Char(255)
2. **Notes.ini variable name** I Char(*)
3. **Return Buffer** O Char(*)
4. **Return Buffer Length** I Binary(4)
5. **Return Bytes Available** O Binary(*)
6. **Error Code** I/O Char(*)

See QnninGetIniValue for parameter descriptions. Input Char(*) and Char(n) parameters are expected to be null terminated.
QnninSetIniValue - QnninSetIniValuez

QnninSetIniValue and QnninSetIniValuez are APIs provided by the QNNINLDS SRVPGM. These APIs will set a value in the Domino server's notes.ini file. These APIs are similar to the Domino OSSetEnvironmentVariable API. These APIs can also be used to remove a value from the notes.ini file.

Set Notes.Ini Value(QnninSetIniValue)

Required Parameter Group:

1. Server name: Char(255)
2. Server name length: Binary(4)
3. Notes.ini variable name: Char(*)
4. Notes.ini variable name length: Binary(4)
5. New value: Char(*)
6. New value length: Binary(4)
7. List Processing Flags: Binary(4)
8. Error Code: Char(*)

Service Program Name: QNNINLDS

Similar Commands: None

Authorities and Locks
Default public authority
*USE

Required Parameter Group
Server name
  INPUT; CHAR(255)
  The name of the Domino server to set information.

Server name length
  INPUT; BINARY(4)
  The length of the server name.

Notes.ini variable name
  INPUT; CHAR(*)
  The variable name for the entry in the notes.ini to be set.
  The variable name is expected to be in CCSID 37.

Notes.ini variable name length
  INPUT; BINARY(4)
  The length of the variable name supplied in the Notes.ini variable name parameter.

New Value
  INPUT; CHAR(*)
  The new value to be set, associated with the Notes.ini variable name. This value is expected to be in character set CCSID 37.
  This parameter may also contain a value to be removed from an existing list entry in the notes.ini if the List Processing Flags (see below) is set to (2) - Remove.

New Value Length
  INPUT; BINARY(4)
  The size of the new value. If this parameter is 0, then the entry associated with the Notes.ini variable name is removed.

List Processing Flags
  INPUT; BINARY(4)
  This flag indicates how to operate on notes.ini entries that are in the form of a list. The valid values are:
0 Replace Replace the value that may currently be set.
1 Append Append the new value to an existing list.
2 Remove Remove the value from a list. The value in New Value will be removed from the list associated with the Notes.ini variable name.

Error code
   I/O; CHAR(*)
   The structure in which to return error information. For the format of the structure, see Error Code Parameter. If this parameter is omitted, diagnostic and escape messages are issued to the application.

Error Messages
CPF24B4: Severe error while addressing parameter list.
CPF3CF1: Error code parameter not valid
CPF3CF2: Error(s) occurred during running of &1 API.
CPF3C1E: Required parameter &1 omitted.
CPF3C24: Length of the receiver variable is not valid.
LNT0907: The server name specified, &1, is not valid.
LNT8896: Error occurred when trying to set or get Domino configuration value.

Set Notes.ini Value - zero terminated
(QnninSetIniValuez)

This API is identical to the QnninSetIniValue API except that input string parameters are entered and returned as null terminated strings. This eliminates the parameters associated with specifying lengths of character strings. This API is useful when calling from an environment that may restrict the number of parameters that can be passed.

Required Parameter Group:
1 Server name I Char(255)
2 Notes.ini variable name I Char(*)
3 New value I Char(*)
4 List Processing Flags I Binary(4)
5 Error Code I/O Char(*)

See QnninSetIniValue for parameter descriptions. Input Char(*) and Char(n) parameters are expected to be null terminated.

Note To remove a notes.ini value, the New Value string should be set to a null string. This behavior is different in that there is no New Value length parameter that can be set to 0 to indicate an item should be cleared. Instead, the New Value length is determined by the fact that the first character in the string is null.

QnninGetServerDocItem - QnninGetServerDocItemz

QnninGetServerDocItem and QnninGetServerDocItemz are APIs provided by the QNNINLDS SRVPGM. These APIs will retrieve an item value from a Domino server's server document found in the Domino directory (names.nsf file). These APIs will behave similarly to the Domino NSFItemGetText, NSFItemGetNumber, or NSFItemGetLong APIs.

Get Server Document Item
(QnninGetServerDocItem)

Required Parameter Group:
1 Server name I Char(255)
2 Server name length I Binary(4)
3 Server document item name I Char(*)
4 Server document item name length I Binary(4)
5 Return Buffer O Char(*)
6 Return Buffer Length I Binary(4)
7 Return Bytes Available O Binary(*)
8 Return Buffer data type. I Binary(4)
9 Error Code I/O Char(*)
Service Program Name: QNNINLDS

Similar Commands: None

Authorities and Locks
Default public authority
   ^USE

Required Parameter Group
Server name
   INPUT; CHAR(255)
   The name of the Domino server to retrieve information.
Server name length
   INPUT; BINARY(4)
   The length of the server name.
Server document item name
   INPUT; CHAR(*)
   The item name for the entry in the server document to be retrieved.
   The variable name is expected to be in CCSID 37.
Server document item name length
   INPUT; BINARY(4)
   The length of the item name supplied in the Server document item name parameter.
Return Buffer
   OUTPUT; CHAR(*)
   The value associated with the server document item will be returned in this buffer.
Return Buffer Length
   INPUT; BINARY(4)
   The size of the buffer that will be used to return the item value.
Return Bytes Available
   OUTPUT; BINARY(*)
   The number of bytes returned in the Return Buffer.
   If this value is larger than Return Buffer Length, than only Return Buffer Length bytes will be returned.
Return Buffer data type
   INPUT; BINARY(4)
   This parameter indicates what format the data should be returned in. The valid values are:
   1 Text Data   Return buffer will be a CCSID 37 CHAR(*)
   2 Float Data  Return buffer will contain a C/C++ compatible "double" data type.
   3 Integer Data Return buffer will contain a BINARY(4) value.
Error code
   I/O; CHAR(*)
   The structure in which to return error information. For the format of the structure, see Error Code Parameter.
   If this parameter is omitted, diagnostic and escape messages are issued to the application.

Error Messages
CPF24B4: Severe error while addressing parameter list.
CPF3CF1: Error code parameter not valid
CPF3CF2: Error(s) occurred during running of &1 API.
CPF3C1E: Required parameter &1 omitted.
CPF3C24: Length of the receiver variable is not valid.
LNT0907: The server name specified, &1, is not valid.
LNT8896: Error occurred when trying to set or get Domino configuration value.

Get Server Document Item - zero terminated
(QnninGetServerDocItemz)

This API is identical to the QnninGetServerDocItem API except that the input string parameters are entered as null terminated strings. This eliminates the parameters associated with specifying lengths of character strings. This API is useful when calling from an environment that may restrict the number of parameters that can be passed.

Required Parameter Group:

1. Server name I Char(255)
2. Server document item name I Char(*)
3. Return Buffer O Char(*)
4. Return Buffer Length I Binary(4)
5. Return Bytes Available O Binary(*)
6. Return Buffer data type. I Binary(4)
7. Error Code I/O Char(*)

See QnninGetServerDocItem for parameter descriptions. Input Char(*) and Char(n) parameters are expected to be null terminated.

QnninSetServerDocItem and QnninSetServerDocItemz

QnninSetServerDocItem and QnninSetServerDocItemz are APIs provided by the QNNINLDS SRVPGM. These APIs will change an item value in a Domino server's server document found in the Domino directory (names.nsf file). These APIs will behave similarly to the Domino NSFItemSetText or NSFItemSetNumber APIs. These APIs can also be used to remove an item from the server document.

Set Server Document Item
(QnninSetServerDocItem)

Required Parameter Group:

1. Server name I Char(255)
2. Server name length I Binary(4)
3. Server document item name I Char(*)
4. Server document item name length I Binary(4)
5. New Value I Char(*)
6. New Value Length I Binary(4)
7. List Processing Flags I Binary(4)
8. New Value data type I Binary(4)
9. Error Code I/O Char(*)

Service Program Name: QNNINLDS

Similar Commands: None

Authorities and Locks

Default public authority

*USE

Required Parameter Group

Server name

INPUT; CHAR(255)

The name of the Domino server to set information.

Server name length

INPUT; BINARY(4)

The length of the server name.

Server document item name

INPUT; CHAR(*)

The item name for the entry in the server document to be set.
The variable name is expected to be in CCSID 37.

Server document item name length

INPUT; BINARY(4)

The length of the item name supplied in the Server document item name parameter.

New Value

INPUT; CHAR(*)

The value associated with the server document item will be set to this value. This parameter may also contain a value to be removed from an existing list entry in the notes.ini if the List Processing Flags (see below) is set to (2) - Remove.

New Value Length

INPUT; BINARY(4)

The size of the New Value. If this parameter is 0, then the item in the server document is cleared.

List Processing Flags

INPUT; BINARY(4)

This flag indicates how to operate on items that are in the form of a list. The valid values are:

0 Replace Replace the value that may currently be set.
1 Append Append the new value to an existing list.
2 Remove Remove the value from a list. The value in New Value will be removed from the list associated with the item name.

New Value data type

INPUT; BINARY(4)

This flag indicates what data type format the new value is in. The valid values are:

1 Text Data New Value is a CCSID 37 CHAR(*)
2 Float Data New Value is a C/C++ compatible "double" data type.
3 Integer Data New Value is a BINARY(4) value.

Error code

I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter. If this parameter is omitted, diagnostic and escape messages are issued to the application.

Error Messages

CPF24B4: Severe error while addressing parameter list.
CPF3CF1: Error code parameter not valid
CPF3CF2: Error(s) occurred during running of &1 API.
CPF3C1E: Required parameter &1 omitted.
CPF3C24: Length of the receiver variable is not valid.
LNT0907: The server name specified, &1, is not valid.
LNT8896: Error occurred when trying to set or get Domino configuration value.

Set Server Document Item - zero terminated
(QnninSetServerDocItemz)

This API is identical to the QnninSetServerDocItem API except that the input string parameters are entered as null terminated strings. This eliminates the parameters associated with specifying lengths of character strings. This API is useful when calling from an environment that may restrict the number of parameters that can be passed.

Required Parameter Group:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Server name</td>
</tr>
<tr>
<td>2</td>
<td>Server document item name</td>
</tr>
<tr>
<td>3</td>
<td>New Value</td>
</tr>
</tbody>
</table>
4 List Processing Flags I Binary(4)
5 New Value data type I Binary(4)
6 Error Code I/O Char(*)

See QnninSetServerDocItem for parameter descriptions. Input Char(*) and Char(n) parameters are expected to be null terminated.

Note To remove a server document item, the New Value string should be set to a null string. This behavior is different in that there is no New Value length parameter that can be set to 0 to indicate an item should be cleared. Instead, the New Value length is determined by the fact that the first character in the string is null.

Server

**Setting up CGI-BIN programs**

To define the location in which the server should look for a CGI-BIN program:

1. Change the server document in the Domino Directory to specify the desired directory (location).
2. Use the Mapping form in the Webserver document of the Domino Directory (names.nsf) to map the CGI-BIN URL to the desired directory (location) and specify EXECUTE access.

You can also use ILE RPG and ILE COBOL programs as CGI-BIN programs. For information about running these types of CGI programs on iSeries, see the *ICS, ICSS Web Programming Guide* (GC41-5435).

Examples: Defining the location of a CGI-BIN program

The ILE C CGI-BIN program named MYLIB/CGIEXMP is referenced from an HTML document with the following tag: <form method=POST action="/cgi-bin/cgiexmp.pgm">. This example assumes that the default CGI-BIN path is /cgi-bin. To have the server pick up the desired CGI-BIN program, use one of the following procedures:

**Change the server document in the Domino Directory**

2. In the HTTP Server section, type in the CGI directory field: /qsys.lib/mylib.lib
3. Save the document and restart the Web server.

Server

**Using the C API with program source in IFS**

This release note applies to R5.0.8 of Domino for iSeries and beyond.

Users of the Domino for iSeries C API (5769LNT - Option 3) who compile source code that is contained in an IFS file (for example, SRCSTMF() is specified on the CRTCMOD or the CRTBNDC CL commands) can use the symbolic links created during installation from the C header file member(s) in QNOTESAPI/H. The IFS directory containing the symbolics is:

/QIBM/ProdData/LOTUS/NOTESAPI/include/

For example, a user's C source code is contained in the IFS file /myfiles/csource/foo.C and this source file includes the Domino C API header file <dsapi.h>. To compile this source code with the Domino for iSeries C API header file DSAPI in QNOTESAPI/H, the IFS directory containing the header file's symbolic link must be included in the compilation's search path. This is accomplished using the ADDENVVAR command as shown below.

```
ADDENVVAR ENVVAR(INCLUDE) VALUE('/QIBM/ProdData/LOTUS/NOTESAPI/include/')
```

Then issue the create command (CRTCMOD or CRTBNDC CL command) to create the module or program object. For example:

```
CRTBNDC PGM(QGPL/FOO) SRCSTMF('/myfiles/csource/foo.c')
```
Server

Obtaining Domino server information

Application writers who want to obtain the Domino server's status should use the Domino API functions provided by the QNNNLDS *SRVPGM. The List Domino Servers function (QnninListDominoServers) is used to retrieve a list of Domino servers and the Retrieve Domino Server Information function (QnninRtvDominoServer) can be used to obtain each server's status. See the section titled 'Domino for iSeries API' for details about the API functions available and their capabilities. The use of unpublished interfaces to obtain Domino server information, including the server's status, is not supported and is subject to change without notice.

Server

New version of the Lotus C API toolkit for AS/400

The Lotus C API Toolkit Release 5.0.7 using Native C Compiler for AS/400 is now available on the web. The toolkit and documentation can be obtained at the following URLs:

http://www.lotus.com/capi
http://www.lotus.com/techzone
http://www.ibm.com/eserver/iseries/domino/domdevtools.htm

This toolkit is the upgraded version of the Lotus C API toolkit Release 5.0.7 for AS/400 with instructions on how to use the Native C compiler (ILE C compiler). The previous version of Lotus C API Release 5.0.7 for AS/400 had used the VisualAge C++ Compiler. As of OS/400 V5R1, the VisualAge C++ Compiler is no longer supported. It is necessary to compile C API programs using the native AS/400 C compiler.

This toolkit supports development of C programs for Domino Release 5.0.7 and later with OS/400 V5R1.

This toolkit provides instructions to compile C API source programs located in either the IFS or in an AS/400 physical file.

Server

Compile C++ Application Programs using ILE C++ compiler

As of OS/400 V5R1, the VisualAge C++ compiler is no longer supported. Instead, you should compile C++ application programs using the iSeries native C++ compiler - ILE C++ compiler. The ILE C++ compiler is available as the Product 5722-WDS Option 52.

The C++ program source code can be either in IFS files or in physical file members. You should keep the source code in IFS files.

The Lotus C++ API Release 2.2 for iSeries is available with Domino for iSeries 5.0.11. When the C++ API 2.2 for iSeries is installed, the library QNOTESCPP is created, which contains the C++ API service program LNCPP22 and C++ API headers as members in file H and HPP. Also, the symlinks /qibm/proddata/lotus/notescpp/include/*.h and /qibm/proddata/lotus/notescpp/include/*.hpp to the header members in the file QNOTESCPP/H and QNOTSCPP/HPP are created. The symlinks are used to compile C++ applications in IFS.

The C++ API 2.2 service program is built teraspace-enabled. The C++ applications are recommended to be compiled with teraspace enabled.


The following is an example to compile and link a Domino C++ application:

1. Compile and link the Domino C++ application with the source as an IFS file /ntcppapi/cppsamp/cppsamp.cpp:

   1) Compile the application - the CPPSAMP (*MODULE) will be created in library NTCPPAPI:

      CRTCPMOD

      MODULE(NTCPPAPI/CPPSAMP)

      SRCSTMF('NTCPPAPI/CPPSAMP/CPPSAM

   P.CPP')
SYSIFCOPT(*IFSIO)
DEFINE(OS400 UNIX)

INCDIR('/QIBM/PRODDATA/LOTUS/NOTESC/INCLUDE')

2) Create executable ILE program - the CPPSAMP (*PGM) will be created in library NTCPPAPI:

CRTPGM
PGM(NTCPPAPI/CPPSAMP)
MODULE(*PGM)

BNDSRVPGM(QNOTESC/PLNCPP22)
DETAIL(*BASIC)

3) If the application is to run under the Domino server, create a symbolic link from the Domino server Userdata directory to the executable program:

ADDLNK
OBJ('/QSYS.LIB/NTCPPAPI.LIB/CPPSAMP.PGM')
NEWLNK('/QIBM/UserData/Lotus/Notes/cppsamp.pgm')
LNKTYPE(*SYMBOLIC)

Compile and link the Domino C++ application with the source as a member cppsamp in the file cppsamp in library ntcpapi

1) Add the QNOTESC library to your library list:

ADDLIBLE QNOTESC

2) Compile the application - the CPPSAMP (*MODULE) will be created in library NTCPPAPI:

CRTCPPMOD
MODULE(NTCPPAPI/CPPSAMP)

SRCFILE(NTCPPAPI/CPPSAMP)
SYSIFCOPT(*IFSIO)
DEFINE(OS400 UNIX)

3) Create executable ILE program - the CPPSAMP (*PGM) will be created in library NTCPPAPI:

CRTPGM
PGM(NTCPPAPI/CPPSAMP)
MODULE(*PGM)

BNDSRVPGM(QNOTESC/PLNCPP22)
DETAIL(*BASIC)

4) If the application is to run under the Domino server, create a symbolic link from the Domino server Userdata directory to the executable program:

ADDLNK
OBJ('/QSYS.LIB/NTCPPAPI.LIB/CPPSAMP.PGM')
NEWLNK('/QIBM/UserData/Lotus/Notes/cppsamp.pgm')
The Lotus C++ API Release 2.2 Toolkit for iSeries provides samples that describe how to use the C++ API and instructions on how to compile the samples using ILE C++ compiler and how to run the samples. The toolkit can be downloaded from the web: http://www.ibm.com/download.

**Domino for iSeries C++ API Release 2.2 is now available**

The Domino for iSeries C++ API 2.2 is shipped with Domino for iSeries beginning with release 5.0.11. This release of the C++ API supports development of programs for Notes/Domino release 5.0.6 and later.

You can install the C++ API Release 2.2 for iSeries by installing Option 4 for Domino for iSeries 5.0.11. You can also install the C++ API Release 2.2 through the Lotus C++ API Release 2.2 Toolkit for iSeries. The toolkit can be downloaded from the web at one of the following locations:

The IBM Support and Downloads Web site at the following URL:
http://www.ibm.com/download
- Select All downloads & drivers
- Select Software downloads
- Select Groupware-Productivity and Lotus
- Choose Lotus in "Software products" search box

You can also download the toolkit from the Domino for iSeries Developer's Tools Web site at the following URL:

The C++ API 2.2 Document (Reference Guide and User's Guide) can also be downloaded from the above website.
When you install the C++ API 2.2, the C++ API library QNOTESCPPP is created. The C++ API 2.2 service program LNCPP22 is installed in QNOTESCPPP. The C headers and C++ headers for the C++ API 2.2 are installed as members of the iSeries files H and HPP in QNOTESCPPP. Also, the symbolic links:
/QIBM/Proddata/Lotus/Notescpp/include/*.h and /QIBM/Proddata/Lotus/Notescpp/include/*.hpp to the C header and C++ header members in the files QNOTESCPPP/H and QNOTESCPPP/HPP are generated.

Security

Server

QNOTES user profile requirements
In order to function correctly, Domino for iSeries requires *RWX (read, write and execute) access to the root integrated file system directory. For example, when creating new Domino servers, a new directory needs to be created off of the root directory for the associated new Domino data directory. By default, when first installed, OS/400 sets the public access to the root integrated file system directory to *RWX. However, for security reasons, some administrators may decide to restrict public access. For example, public access may be set to *X (execute). In this case, the QNOTES user profile should be given *RWX access to the root integrated file system directory.

Performance

Server

Performance monitoring statistics
Domino will now track performance metrics of the operating system and output the results to the server. Type “show stat platform” at the server console to display them. This feature is disabled by default in R5.0.3 and later versions. You can enable it by setting the parameter:

PLATFORM_STATISTICS_ENABLED=1

in the NOTES.INI file and restarting your server.

Metrics are collected continuously, unless disabled or reset (see commands below), or unless the server is brought down. The server resets this information each time it is started. This feature also expects certain Notes processes to be present. Performance counters for absent Notes processes will have zero values. This is normal behavior.

Multiple Domino Partitions and Shared Statistics
Statistics are gathered once every interval which is defaulted to 1 minute. If there are multiple Domino partitions collecting statistics, some statistic values can differ due to the interval starting at a different time. For example, partition 1’s one minute interval may go from 10:00:30 to 10:01:30, and partition 2 may go from 10:01:00 to 10:02:00. Each are collecting the total CPU utilization of the system for their specific interval.

<table>
<thead>
<tr>
<th>Time</th>
<th>System CPU</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00:30 - 10:01:00</td>
<td>10%</td>
</tr>
<tr>
<td>10:01:00 - 10:01:30</td>
<td>50%</td>
</tr>
<tr>
<td>10:01:30 - 10:02:00</td>
<td>50%</td>
</tr>
</tbody>
</table>

Partition 1 will report a total CPU % Use as 30% (Average of the first two intervals: 10% and 50%). Partition 2 will report 50% (Average of the second two intervals: 50% and 50%). Both values are correct for the duration of their interval. All shared statistics are subject to differences from partition to partition due to partitions not measuring the same moment in time. For this same reason, partitions collecting with different intervals (every minute for one server, every 10 minutes for another, for example) can also show different values.

Disk and process statistics require two collections before a value can be computed. The values for the statistics will always be displayed as 0 until the second collection. For example, if the collection interval is 3 minutes, the first values for process and disk will be displayed 6 minutes after the server has been started.
Performance Statistics Collected

**System Statistics** System Statistics are collected from the same information for each partition. The value reported may differ from partition to partition due to the different interval times explained above.

**Memory Statistics** Domino partitions can run in the same, or different, memory pools. The memory statistics for a partition will report statistics for the memory pool that the partition is running in. If more than one partition is running in a pool, then the values may differ for each partition due to the different measuring times explained above.

**Process Statistics** Process statistics are independent from partition to partition; no values are shared. Some processes, such as SERVER and AMGR, can have statistics collected for up to 4 instances of the process. If an instance of a processes is not present then a 0 is reported for its value. For example, if there are two AMGR processes running, Platform.Process.AMGR.1.Util and Platform.Process.AMGR.2.Util will have real values (which can still be 0 for 0% utilization). Since there are no additional AMGR tasks, Platform.Process.AMGR.3.Util and 4 will show values of 0. Note that the processes reported are just for this partition. Platform.Process.SERVER.1.Util and Platform.Process.SERVER.2.Util are not reporting the SERVER utilization of partition 1 and 2, it is for two SERVER processes of the same partition. If there are more than 4 instances of a single process on a partition, only the first four will be saved and reported in statistics.

Any new process will take two collections before it is reported by statistics. This goes for processes started when the partition is started, or processes started later with the load command.

Because of rounding, the sum of the CPU % used by the Domino processes can possibly be reported as more than the overall system CPU % used.

**Disk Statistics** Disk statistics are collected from the same information for each partition. All configured disks in all ASPs are collected. For example, the Percent Used statistic is the percent of all space of all configured disks that are in use. The Percent Busy is an average of the percent busy time for every configured disk.

The Domino server monitors the following metrics:

<table>
<thead>
<tr>
<th>Performance Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform.System.TotalUtil</td>
<td>The average CPU percent utilization of all processors on the system.</td>
</tr>
<tr>
<td>Platform.LogicalDisk._Total.1._Total.1.PctTime</td>
<td>The average of the percent time that all configured disks in all ASPs are busy. The first &quot;_Total&quot; refers to all physical disks, and the second &quot;_Total&quot; refers to all logical disks. For the iSeries, just read it as the total of all disks configured.</td>
</tr>
<tr>
<td>Platform.LogicalDisk._Total.1._Total.1.PctUsed</td>
<td>The percentage of all configured disks in all ASPs that is currently allocated for data.</td>
</tr>
<tr>
<td>Platform.Memory.FaultsPerSec</td>
<td>The number of page faults per second in the memory pool this server is using.</td>
</tr>
<tr>
<td>Platform.Memory.PagesPerSec</td>
<td>The number of pages per second read to or written from the disk with the memory pool this server is using.</td>
</tr>
<tr>
<td>Platform.Memory.WaitToIneligible</td>
<td>The number of Wait to Ineligible transitions for threads in the memory pool this server is using. Any value greater than zero indicates your max active in the memory pool is too low.</td>
</tr>
<tr>
<td>Platform.Memory.KBSize</td>
<td>The amount of memory in kilobytes allocated to the pool that this Domino partition is running in.</td>
</tr>
<tr>
<td>Platform.Process.SERVER.1.Util</td>
<td>The CPU utilization of the first server process of this partition. This is the percentage of the sample interval that the process used the CPU.</td>
</tr>
</tbody>
</table>
### Performance Metric

| Platform.Process.REPLICA.1_Util | The CPU utilization of the first replica process of this partition. |
| Platform.Process.REPLICA.2_Util | The CPU utilization of the second replica process of this partition. |
| Platform.Process.REPLICA.3_Util | The CPU utilization of the third replica process of this partition. |
| Platform.Process.REPLICA.4_Util | The CPU utilization of the fourth replica process of this partition. |
| Platform.Process.UPDATE.1_Util | The CPU utilization of the first update process of this partition. |
| Platform.Process.UPDATE.2_Util | The CPU utilization of the second update process of this partition. |
| Platform.Process.UPDATE.3_Util | The CPU utilization of the third update process of this partition. |
| Platform.Process.UPDATE.4_Util | The CPU utilization of the fourth update process of this partition. |
| Platform.Process.ADMINP.1_Util | The CPU utilization of the first adminp process of this partition. |
| Platform.Process.HTTP.1_Util | The CPU utilization of the first http process of this partition. |

For some metrics, average, minimum, and maximum statistics are also reported. For example, in addition to Platform.System.TotalUtil there are the following secondary statistics:

| Platform.System.TotalUtil.avg | The average of all TotalUtil samplings for a session. This is calculated by summing all the TotalUtil samplings, and dividing by the number of samplings. |
| Platform.System.TotalUtil.min | The smallest TotalUtil sampling for a session. |
| Platform.System.TotalUtil.max | The largest TotalUtil sampling for a session. |

If a process is removed, the metric for that process will go to 0. If a new process begins, it will use the first unused statistic slot. For example: There are 3 AMGR processes. Process 2 ends, so we are only receiving statistics from Platform.Process.AMGR.1_Util and Platform.Process.AMGR.3_Util. If another AMGR starts, it will report it's statistics to the first unused statistic slot, which is Platform.Process.AMGR.2_Util.

The PLATFORM command allows you to control this feature at the console. It has the following form:

```
PLATFORM <main argument> [ <optional arguments> ]
```

These are the main arguments:

<table>
<thead>
<tr>
<th>Argument(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIME [&lt;sampling rate&gt;]</td>
<td>With an optional argument, changes the sampling rate to the specified value in minutes. Otherwise displays the current sampling rate. The default is 1 minute.</td>
</tr>
<tr>
<td>RESET</td>
<td>Initiates the beginning of a new statistics monitoring session; resets secondary metrics.</td>
</tr>
<tr>
<td>WAIT</td>
<td>Pauses the collection of performance data</td>
</tr>
<tr>
<td>RUN</td>
<td>Resumes the collection of performance data. The data from the next collection will be from the interval of when the WAIT command was issued until the RUN command is issued. A RESET should also be issued after the RUN if you do not want to report that value of that potentially long interval.</td>
</tr>
</tbody>
</table>

For example, to start a new performance data monitoring session with a sampling rate of 5 minutes, type the following commands at the console:

```
platform time 5 - The server collects performance data every 5 minutes.
platform reset - Statistic values sampled before this command was issued are not used in calculating average, maximum, or minimum.
```
Viewers and Filters

Server

Using the Verity Keyview filter for indexing binary attachments

Beginning with release 5.010, Domino for iSeries will now use the Verity Keyview filter for retrieving text from binary attachments. Supported formats include Acrobat PDF, Word, WordPerfect, 1-2-3, Excel, Freelance, PowerPoint, HTML, and many others.

Note: WordPro attachments cannot be indexed.

To enable this feature, a database has to be full text indexed with the option to index binary attachments. Indexing attachments as raw text will continue to operate as before, and does not use the Keyview filter. The Keyview filter can be enabled or disabled for the entire server by specifying the notes.ini setting of FT_BINARY_FILTER_OFF. A value of FT_BINARY_FILTER_OFF=1 indicates Keyview filter will not be used, and is the default value for existing servers. A value of FT_BINARY_FILTER_OFF=0, or no setting present in the notes.ini file, indicates that Keyview filter will be used, and is the default setting for new servers configured with release 5.0.10. This notes.ini setting allows administrators to shut off the filter without having to change the indexing options on all databases that have the binary attachment option turned on.

When indexing binary attachments, the source text is converted from the character set of the attachment to LMBCS. There may be times when the character set of the text in the attachment is not known. In these situations an assumption will be made as to what the “default” character set of the text is. The locale of the QNOTES USRPRF will be used to make this determination. The default character set may also be indicated by specifying a notes.ini entry of OS400_KEYVIEW_CSID=CharacterSetVal. The values allowed for CharacterSetVal can be found in the documents titled “Setting up Domino on Linux for non ‘C’ locales” and “Setting collation on the Domino server” located in the core Domino release notes, Chapter 2, Section 6.

See below for a mapping of the QNOTES locale to default character set if a notes.ini entry does not exist.

Example of specifying a notes.ini entry:

OS400_KEYVIEW_CSID=0052 to assume untagged documents are 1252.

Comments

Table 1 QNOTES locale mapping to a default document character set.

<table>
<thead>
<tr>
<th>QNOTES Locale</th>
<th>Region / Language</th>
<th>Default Character Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR_AA</td>
<td>Arabic Speaking countries/Arabic</td>
<td>IBMCP1256</td>
</tr>
<tr>
<td>BG_BG</td>
<td>Bulgaria/Bulgarian</td>
<td>IBMCP1251</td>
</tr>
<tr>
<td>CS_CZ</td>
<td>Czech Republic/Czech</td>
<td>IBMCP1250</td>
</tr>
<tr>
<td>DA_DK</td>
<td>Denmark/ Danish</td>
<td>IBMCP1252</td>
</tr>
<tr>
<td>DE_CH</td>
<td>Switzerland/ German</td>
<td>IBMCP1252</td>
</tr>
<tr>
<td>DE_DE</td>
<td>Germany/ German</td>
<td>IBMCP1252</td>
</tr>
<tr>
<td>EL_GR</td>
<td>Greece/ Greek</td>
<td>IBMCP1253</td>
</tr>
<tr>
<td>EN_BE</td>
<td>Belgium/ English</td>
<td>IBMCP1252</td>
</tr>
<tr>
<td>EN_GB</td>
<td>Great Britain/ English</td>
<td>IBMCP1252</td>
</tr>
<tr>
<td>EN_US</td>
<td>USA/ English</td>
<td>IBMCP1252</td>
</tr>
<tr>
<td>ES_ES</td>
<td>Spain/ Spanish</td>
<td>IBMCP1252</td>
</tr>
<tr>
<td>ET_EE</td>
<td>Estonia/ Estonian</td>
<td>IBMCP1257</td>
</tr>
<tr>
<td>FI_FI</td>
<td>Finland/ Finnish</td>
<td>IBMCP1252</td>
</tr>
<tr>
<td>FR_BE</td>
<td>Belgium/ French</td>
<td>IBMCP1252</td>
</tr>
<tr>
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Chapter 3 - Troubleshooting

Installation Issues

Server

Strings.res file error during LODRUN or RSTLICPGM

If an error occurs indicating that /qibm/proddata/lotus/notes/RES/C/strings.res is in use during LODRUN or RSTLICPGM, delete the /qibm/proddata/lotus/notes/RES/C/strings.res file, or sign off the interactive sessions that have run CFGDOMSVR or CHGDOMSVR. Running LODRUN or RSTLICPGM again should then be able to restore the strings.res file.

Server

Installing QuickPlace 1.0.3 onto Domino 5.0.3

QuickPlace and Domino products share the QNOTES user profile. As a result, if you install QuickPlace for iSeries version 1.0.3 onto a system that has Domino for iSeries version 5.0.3, there are some situations in which the QNOTES user profile locale may be modified to a value that may not be appropriate for your situation. Since QuickPlace for iSeries version 1.0.3 is only supported in the English language, the QNOTES locale will always be set to the EN_US (US English) locale.

For example, if your Domino for iSeries version 5.0.3 Domino server has the QNOTES user profile set to use the FR_FR (French) locale and you install QuickPlace for iSeries version 1.0.3, the QNOTES profile locale will then be set to EN_US.

To modify the locale specified for the QNOTES user profile, use the CHGUSRPRF command. As in the example above, if the desire was to continue to use the French locale, the following command would be issued to reset the QNOTES user profile from US English to French:

CHGUSRPRF USRPRF(QNOTES)
LOCALE('/QSYS.LIB/QUSRNOTES.LIB/FR_FR.LOCALE')

Server

Locked objects during Domino upgrade

Prior to upgrading to a new version of Domino, ensure the Domino servers and all things related to Domino have ended. For example, if a WRKDOMSVR screen is still active, the install may fail because there will be a lock on two objects: QGNNINDS and QNOTES.

In version 5.0.3, a lock on QGNNINDS will be specifically checked at installation time and, if detected, the message CPF9803 (Cannot allocate object QGNNINDS in library QSYS) is issued. In this situation, any instance of the WRKDOMSVR panel should be cancelled.

When everything has ended, enter the command below:

WRKOBJLCK OBJ(QNOTES)
OBJTYPE(*lib)

This will further verify that there are no Domino-related objects that are locked.

An additional procedure is to enter the command: ‘WRKUSRJOB QNOTES’. This command will list all of the jobs running under the QNOTES user profile. Make sure all of the statuses are OUTQ (if any are in an ACTIVE state you'll probably have difficulty installing).
Server

**Time out message from Internet Explorer during configuration**

You may receive a 'time out' message from Microsoft Internet Explorer when configuring a Domino server on iSeries. This is caused by Internet Explorer reaching its maximum time to wait for a response from the server. The following is copied from Microsoft Product Support Services - Knowledge Base Search:

Microsoft Internet Explorer 4.0 and 4.01, and Internet Explorer 4.01 Service Pack 1 have default timeout settings of five minutes. Internet Explorer 4.01 Service Pack 1 provides the ability to change the default timeout setting using the registry.

This problem is fixed in Internet Explorer version 4.01 Service Pack 1 and later. To resolve this problem, follow these steps:

1. Install Internet Explorer version 4.01 Service Pack 1 or later. To obtain Internet Explorer, please visit the following Microsoft Web site:
   http://www.microsoft.com/ie/
2. Add the ReceiveTimeout DWORD value with a data value of <number of seconds>*1000 in the following registry key:
   HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Internet Settings. For example, if you want the timeout duration to be 8 minutes, set the ReceiveTimeout data value to 480000 (<480>*1000). To do this:
   - Right-click and select **New->DWORD value**
   - Name the new entry 'Receive Timeout'
   - Right-click on the new entry and select **Modify**
   - In the Value data field, enter **480000**
   - Click **OK**
1. Restart your computer.

**Note** This applies to versions 5.0.0, 5.0.1, 5.0.2, 5.0.3, and 5.0.4 of Domino for iSeries.

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**Operations Navigator issues**

Server

**Problem accessing mail if registered using Operations Navigator**

Notes users who are registered through Operations Navigator may have difficulty sending and receiving mail because the home server cannot be identified. To avoid this problem, make sure you provide a fully qualified value for the Home Server under the Mail tab. For example:

CN=systemxx/O=orgxx

If the user is already registered, edit the Person document for the user and specify a fully qualified value for the Home Server.

Server

**Using the Domino plug-in with different Notes clients**

The Domino plug-in for Operations Navigator could cause Notes to trap when both of the following conditions occur:

- A Release 4.6.x Notes client and a Release 5 Notes client are both installed on the workstation.
- Notes 4.6.x 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.x and Notes 5 cannot run simultaneously.
DECS issues

Server

Avoiding DECS problems in connecting to local server

If you are unable to list the Notes application databases through the DECS administrator interface, the problem could be that the DECS server cannot find itself. The following are conditions where this could occur:

- The local 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 iSeries server.
- The server is not known to the DNS or there is no entry for the server in the TCP/IP host table. You can display the host table entries by using the CFGTCP command.

The error is indicated by this pop-up message:

No databases were found on the Notes server "CN=xxxxxx/O=yyyy"

If you receive this error message, add a Connection document in the Domino Directory that enables the server to connect to itself. In the Connection document, specify the actual port and Internet address being used by the server.

DECS does not work after installing LEI

The Domino Enterprise Connection Services (DECS) and the Lotus Enterprise Integrator (LEI) share some common functions. Domino for iSeries R5 contains updated versions of those functions that are needed for DECS to work properly. LEI 3.0 contains older versions of those functions. Therefore, if you install the LEI 3.0 software after installing Domino for iSeries R5, DECS will not work properly because the older LEI version of the common functions replaced the updated DECS version. To make sure that the required DECS functions are installed, do one of the following:

- Install LEI first and then upgrade to the new release of Domino for iSeries.
- If you already installed LEI after installing Domino for iSeries, do either of the following:
  - Install QMU LEI 3.0 06 from this Web site:
    Follow the instructions on the Web site.
  - Reinstall the Domino for iSeries software. You do not need to set up existing Domino servers again after reinstalling the software. Just make sure the Domino servers are stopped when you reinstall the software.

SMTP Mail issues

Server

Problem registering or sending mail to user on DBCS system

You may experience problems registering users or sending mail to users on a system enabled for double-byte (DBCS) if you specify SMTP when you set up a Domino for iSeries Release 5 server; that is:

- If you specify *ALL or *SMTP for the Internet mail packages (MAIL) option in the CFGDOMSVR or CHGDOMSVR command.
- If you check SMTP for the Internet mail packages option during Web-based setup.

To work around this problem, enter the following command on the Domino server console:

load updall names.nsf -R
SPR fixes

Server

CCSID problem when redirecting console output to a file
When you perform some commands from the Domino console and then attempt to view the file, you may see meaningless data displayed in the file. This limitation applies when redirecting Domino console output to an IFS file on OS/400. The redirection function writes the data in binary and some applications, when attempting to read it, assume that the data is EBCDIC text.

For example, the EDTF command which displays the IFS file may not show the text correctly. In some cases, EDTF can detect the data is ASCII and will convert the displayed data to EBCDIC. When EDTF is unable to automatically convert the data, a user can use the EDTF screen options (F15 = Services) and specify to change the CCSID of the file to 850.

Note: This problem has been encountered when performing the following commands:

- show users >filename
- show cluster >filename
- show configuration tcpip >filename
- show diskspace >filename
- show memory >filename
- show port >filename
- show schedule >filename

For more information, see SPR# BKOB4HVJ SW.
Chapter 4 - Documentation updates

Installing and Managing Domino for AS/400

Server
OS/400 base memory requirement
The topic "About Lotus Domino for AS/400 system requirements" in Chapter 1 of Installing and Managing Domino for AS/400 and the Domino for iSeries Help database (AS400HLP.NSF) indicates an OS/400 memory requirement of:

- 16MB base memory

The actual memory requirement for OS/400 is:

- 64MB minimum base memory:
  - 128MB recommended for mail server
  - 256MB recommended for application server

Server
Changing the priority of a server job permanently
The procedure for permanently changing the priority of a server job has changed from the description in Chapter 3 of Installing and Managing Domino for AS/400 and the Domino for iSeries Help database (AS400HLP.NSF). The following outlines the new procedure.

Changing the priority of a server job permanently
By default, Domino server jobs run at a priority of 20. To enable a server job to run at a different priority than the other server jobs, create a new class object specifically for that job. These classes must be in library QUSRNOTES. Use the Create Class (CRTCLS) command to create the class. For example, to create a class named MYCLASS in library QUSRNOTES with run priority set to 30:

crtcls cls(qusrnotes/myclass) runpty(30)

Next, you need to tell Domino which task (or tasks) should use this class. Domino for AS400 looks for this information in a file named '/qibm/userdata/lotus/notes/domino_classes'. You can use the EDTF command to create this file if it does not already exist. Add your server, class, and tasks to the file in the following format:

SERVER=myserver
CLASS=myclass
TASKS=task1,task2,task3
CLASS=myclass2
TASKS=task4,task5
SERVER=myserver2
CLASS=myclass3 qusrnotes
TASKS=task6

Now, each time task1, task2, or task3 jobs start for the server MYSERVER, the jobs run using the attributes specified in the QUSRNOTES/MYCLASS class.

You can specify a different priority for any server job except SERVER and QNNINSTS. These two jobs always run at the priority specified in the class that is created when the server is set up.

Note This procedure works only for Domino for iSeries R5 servers running on OS/400 V4R3 or later.
Server

**Controlling automatic server restarts**

The topic “About automatic Domino server restarts” in Chapter 3 of *Installing and Managing Domino for AS/400* and the Domino for iSeries Help database (AS400HLP.NSF) describes a procedure for controlling automatic server restarts after an error. The procedure has changed. The following outlines the correct procedure.

**About automatic server restarts**

An exception (unhandled error) in the Domino server or add-in programs that run under the server usually leaves the server in an unpredictable condition. Therefore, if an exception occurs, Domino for iSeries automatically cleans up the server and restarts it. The clean-up processing ends all server and add-in jobs.

You can control this automatic recovery and the number of attempts to restart the server by using the AS400_DOMSVR_RESTART environment variable. This environment variable specifies the number of restart attempts after an exception occurs. Initially, Domino for iSeries tries up to 10 times to restart the server after an exception. You can use AS400_DOMSVR_RESTART to change the value to a larger or smaller number. Setting the value to 0 prevents the Domino server from automatically restarting.

Use the Add Environment Variable (ADDENVVAR) or the Work with Environment Variable (WRKENVVAR) command to add the AS400_DOMSVR_RESTART environment variable and set its value. This environment variable affects only the Domino server that you start from the same job in which you define the environment variable. For example, to turn off automatic recovery for the Domino server named SERVER1:

1. Sign on to your iSeries.
2. Temporarily stop the Domino server:
   ```
   enddomsvr server1
   ```
3. Use the ADDENVVAR command to add the AS400_DOMSVR_RESTART environment variable and set its value to 0:
   ```
   addenvvar envvar('AS400_DOMSVR_RESTART') value('0')
   ```
4. Start the server:
   ```
   strdomsvr server1
   ```

Server

**Example: Running tasks when server not running**

The topic “Examples: Running tasks when the server is not running” in Chapter 3 of *Installing and Managing Domino for AS/400* and the Domino for iSeries Help database (AS400HLP.NSF) contains an incorrect example of the SBMJOB command. Here is the corrected example:

```
sbmjob cmd(call
pgm(qnotes/fixup)
parm('names.nsf'))
user(qnotes) curlib(qnotes)
inlib1(*jobd)
log(4 00 *seclvl)
cpyenvvar(*yes)
```

Server

**Location of EDTF command**

As of OS/400 Version 4 Release 4 (V4R4), the Edit File (EDTF) command is shipped in the QSYS library along with other OS/400 commands. In the earlier OS/400 releases V4R2 and V4R3, the EDTF command is shipped in the separate QGPTOOLS library and must be downloaded as a PTF. See “iSeries PTF requirements” in these release notes.

Also as of OS/400 V4R4, a Display File (DSPF) command is included with EDTF and other OS/400 commands. The DSPF command is a read-only equivalent of the EDTF command.

For information about using the EDTF command, see Chapter 3 in *Installing and Managing Domino for AS/400* or the Domino for iSeries Help database (AS400HLP.NSF).
Server

**Removed restriction on double-byte database file names**

Ignore the topic "Restriction on double-byte database file names" in Chapter 1 of *Installing and Managing Domino for AS/400* and the Domino for iSeries Help database (AS400HLP.NSF).

This restriction was removed in Domino for iSeries Release 5.

Server

**Single Logon clarifications**

Be aware of the following clarifications to the Single Logon topics in Chapter 1 of *Installing and Managing Domino for AS/400* and the Domino for iSeries Help database (AS400HLP.NSF).

**About Domino for iSeries Single Logon**

The Domino for iSeries Single Logon support can synchronize Microsoft Windows, Lotus Notes, and selected OS/400 passwords if the user changes the password through the Notes client (File - Tools - User ID - Set Password). However, Windows users cannot change the Single Logon password through the Windows password services.

**Installing Domino for iSeries Single Logon**

Here is an updated procedure for installing Single Logon:

1. Before you begin the installation, synchronize your Lotus Notes, Client Access, and Windows passwords to the same password.
2. Sign on to your Domino server from a Notes client.
3. Use File - Database - Open to find the Domino for iSeries Single Logon database (NNSLINST.NSF).
4. Click on the database to open it.
5. Detach the SLSETUP.EXE file from the end of the Single Logon database.
6. Close all active applications, including Notes, and run the SLSETUP.EXE to begin the installation.
7. When the installation is complete, restart your computer to begin using the Single Logon capabilities.

The following Web site contains the latest updates to Single Logon, including a Question and Answer section and the NNSLINST.NSF database file with the latest fixes:


If you are having a problem with an earlier version of Single Logon, uninstall the old version of the NNSLINST.NSF database and install the new version from the Web site using the instructions provided. You may also want to check the Web site for possible future updates to the NNSLINST.NSF database. The NNSLINST.NSF database will work for all Notes clients running Notes release 4.6.2 or later. However, the Web page only has the English version of the database.

Server

**Upgrading Domino in iSeries Navigator**

If you upgrade to release 5.0.3 from a previous Domino for iSeries release and you previously added the Lotus Domino plug-in from that previous release to Operations Navigator on a workstation, you must upgrade the plug-in. The topic "Upgrading Domino in Operations Navigator" in Chapter 1 of *Installing and Managing Domino for AS/400* book describes a procedure for upgrading the plug-in on a workstation that is running Client AccessTM for Windows 95/NT. For an updated procedure that also covers Client Access for Windows, see the equivalent topic in Chapter 1 *(Installing Domino for iSeries)* in the R5 Domino for iSeries Help database (AS400HLP.NSF).

Server

**Web setup does not copy ID files**

Chapter 1 in *Installing and Managing Domino for AS/400* and the Domino for iSeries Help database (AS400HLP.NSF) indicates that the Web-based setup process copies the ID files to the administrator workstation. This copy function is not yet available. It is planned for a future release.

After the Web-based setup is complete, you can use Client Access or the TCP/IP File Transfer Protocol (FTP) to copy the Certifier ID and administrator ID files from the Domino data directory on iSeries to the Notes data directory on the workstation. Chapter 1 in *Installing and Managing Domino for AS/400* and the Domino for iSeries Help database (AS400HLP.NSF) provides an example of using FTP to copy the ID files.
Server

Web setup provides a single setup method
The description of Web-based setup in Chapter 1 of Installing and Managing Domino for AS/400 and the Domino for iSeries Help database (AS400HLP.NSF) indicates that there are two setup methods. Web-based setup was simplified to a single setup procedure for all users, with defaults provided for the most likely selections.

As you go through the setup panels, you can easily change the defaults. For example, if one of two options is selected, just click the other option to select it. Similarly, if there is a check mark by one option that you do not want, just click the box to remove the check mark. Note that some setup panels are scrollable. Use the scroll bar to see all options.

Server

LIBASCII support is replaced by ASCII C/C++ Run Time PRPQ
The topic “LIBASCII aid for ASCII-EBCDIC conversion” in Chapter 7 of Installing and Managing Domino for AS/400 and the Domino for iSeries Help database (AS400HLP.NSF) is now obsolete.

With Domino 5.0.6a and later releases, the LIBASCII service program is no longer supported and can no longer be downloaded from the web. The alternative replacement to the LIBASCII service program is the ASCII C/C++ Run Time for the AS/400 PRPQ (5799-AAS) which can be downloaded for free at:


See also the following Web page for more information:


Server

Authorities required to manage an iSeries Domino server
The authorities described below are required to use the following Domino for iSeries functions:

DSPDOMCSL

To view the Domino server console log using the DSPDOMCSL CL command (or option 5 from the WRKDOMSVR display) the user profile must have either of the following:

- *ALLOBJ special authority
- Execute (*X) data authority to the Domino server’s data directory (and its parent directories if the directory is not directly under the root directory) which contains the server console file. To grant this specific authority, issue the following command for the Domino server’s data directory and each one of its parent directories.

CHASEOBJ('<directory path>')
USER(<user-profile-name>)
DTA(*X)
WRKDOMCSL

To work with the Domino server console using the WRKDOMCSL CL command (or option 8 from the WRKDOMSVR display) the user profile must have either of the following:

- *ALLOBJ special authority
- *USE authority to the WRKDOMCSL object (object type *CMD) in the QSYS library, *USE authority to the QNNINCSS object (object type *PGM) in the QNOTES library and *X data authority to the Domino server's data directory (and its parent directories if the directory is not directly under the root directory).

To grant this specific authorities, issue the following commands:

```
GRTOBJAUT
OBJ(QSYS/WRKDOMCSL)
OBJTYPE(*CMD)
USER(<user-profile-name>)
AUT(*USE)

GRTOBJAUT
OBJ(QNOTES/QNNINCSS)
OBJTYPE(*PGM)
USER(<user-profile-name>)
AUT(*USE)

CHGAUT OBJ('<directory path>')
USER(<user-profile-name>)
DTAAUT(*X)
```

for the Domino server's data directory and each one of its parent directories.

WRKDOMSVR

To view the Domino server status on the WRKDOMSVR display, the user profile must have *USE object authority to the QUSRNOTES library. To grant authority to this library, use the command:

```
GRTOBJAUT
OBJ(QSYS/QUSRNOTES)
OBJTYPE(*LIB)
USER(<user-profile-name>)
AUT(*USE)
```

Server

**Single Logon: failure to change OS/400 password**

The Single Logon documentation (nnslinst.nsf file) has been updated for R5.0.10. The following information is taken from that document.

**Workstation Requirements:**

Domino for iSeries Single Logon runs on any Intel workstation platform running one of the following:

- Microsoft Windows 95
- Microsoft Windows 98
- Microsoft Windows NT version 3.51 or later
- Microsoft Windows 2000
Optional Software
- IBM Client Access for Windows 95/NT, version 3 release 2 modification level 0 (V3R2M0) or later
- Lotus Notes Client, version 4.6.2 or later

Before you Install:
Domino for iSeries Single Logon integrates with Microsoft Windows and provides single logon and simplified password management. Before installing Single Logon on your workstation, you must do the following steps:

1. If you are using Windows 95, Windows 98 or Windows 2000, you must configure Windows to prompt for a user ID and password.
2. If you are going to use Single Logon with Lotus Notes client, install the Lotus Notes client before installing Single Logon.
   Note: If you are using Windows NT and the Lotus Notes Single Logon option is already installed, uninstall the Lotus Notes Single Logon option. The Domino for iSeries Single Logon and the Lotus Notes Single Logon can not both be installed on a workstation.
3. Set your Lotus Notes password to match your Windows password.
4. If you are going to use Single Logon with IBM Client Access for Windows:
   - Install Client Access before installing Single Logon.
   - Configure the connections to your iSeries server.
   - Set your OS/400 passwords to match your Windows password.

The Install Process:
The following occurs during the Single Logon workstation installation after you detach and execute the file attached to this document:

1. A self-extracting file automatically starts the Single Logon install process.
2. Several files are copied to:
   - Your Windows and Lotus Notes directories.
   - The Domino for iSeries Single Logon program directory.
3. The Windows registry is updated so that Windows calls the Single Logon network and password providers which caches the Windows password when you log onto Windows.
4. Ensure that the Windows password is set to the same value as the OS/400 passwords and Lotus Notes password.
5. If you have Lotus Notes installed, the notes.ini file is updated so Lotus Notes uses the Single Logon extension manager, (slextmgr.dll).
6. Prompts you to restart Windows to enable Single Logon.

Logging on with Single Logon:
After installing Single Logon and restarting Windows, Single Logon will automatically provide sign-on to connected OS/400(s) and Lotus Notes using the Windows password you entered. Note that any changes to OS/400 connections will take effect the next time you log onto Windows.

Password Synchronization using Single Logon
If you have Lotus Notes installed, you must change your password using the Lotus Notes interface. Single Logon will then synchronize your OS/400 and Windows passwords with this new Lotus Notes password. Do not attempt to change your password using any OS/400 or Windows interfaces.
In addition, make sure that you take into consideration any OS/400 password rules. If you happen to change your Lotus Notes password to a password that does not follow the OS/400 password rules, your passwords will no longer be synchronized. That is, your Lotus Notes and Windows passwords will be synchronized but your OS/400 password will not. In the event that this situation occurs, you can recover synchronization by setting the Lotus Notes password back to the prior password. At this point, you must change the Lotus Notes password to one which follows the OS/400 password rules.

If you are using Single Logon with Windows 9x and Client Access, disable the Client Access password caching. Refer to the Client Access User's Guide security section entitled "To disable caching of OS/400 Passwords."

Synchronizing your passwords:
1. For Windows 95, Windows 98 and Windows 2000:
   - OS/400 password(s) are synchronized with the Windows password by the Client Access password provider.
   - Lotus Notes password is synchronized with the Windows password by the Domino for AS/400 Single Logon extension manager.

2. For Windows NT:
   - OS/400 password(s) are synchronized with the Windows password by the Domino for AS/400 Single Logon password provider.
   - Lotus Notes password is synchronized with the Windows password by the Domino for AS/400 Single Logon extension manager.
   - Note that you must restart Windows NT for your new Windows password to take effect.

**Windows Logon on Problems**

If Single Logon is having problems logging onto an iSeries server or to a Notes database, you may want to reset the Single Logon password cache and then log onto Windows again. To reset Single Logon’s password cache, run regedit.exe and delete the following Windows registry entry using regedit:

HKEY_CURRENT_USER\Software\IBM\Lotus\Domino for AS400\Single Logon\Volatile

Changing the Windows logon password through the Windows User Manager is not supported by Single Logon. If Single Logon is having problems logging onto the Lotus Notes Client because the Windows logon password was changed using the Windows User Manager you can still work with Lotus Notes by removing the next line from the notes.ini:

EXTMGR_ADDINS=slextmgr.dll

**Uninstalling Single Logon:**

You can uninstall Single Logon from your workstation using the Add/Remove Program services found in the Windows Control Panel. You must restart Windows after removing Domino for iSeries Single Logon.
Server

**How to delete a configured communication port**

There are three ways to delete an entry from the list of configured communication ports of a Domino server.

1. **Through the Domino plugin (iSeries Navigator).**

Follow this path in the iSeries Navigator:
   
   `<system_name> -> Network -> Servers -> Domino,
   
   then, on the right pane:
   
   right click on the Domino server name and choose the 'Properties' option.

   On the 'Properties' panel:
   
   - Choose the 'Network Configuration' tab.
   - From the list displayed, select the communication port to be deleted.
   - Click the 'Delete' button.
   - Finally, click the OK button to perform the action.

2. **Through the Change Domino Server (CHGDOMSVR) command.**

Use the parameter TCPOPT specifying exactly the number of desired ports. For example, if server 'test1' has three configured communication ports but the intention is to have two configured ports, the CHGDOMSVR could be used as follows (do not prompt for the values, type them directly in the command line):

   `===> CHGDOMSVR SERVER(test1) TCPOPT((TCPIP NETWORK1 *NOENCRYPT '9.5.5.21' *YES)
   (TCPIP2 NETWORK1 *NOENCRYPT '9.5.5.22' *YES))`

   Note: An existing communication port can be disabled (but not deleted) setting to *NO the parameter TCPOPT->'Enable port' provided by the CHGDOMSVR command.

3. **Modifying the server document.**

Open the Domino directory database (names.nsf) through the Notes Administrator and open the server configuration document. Then:

   - Click the 'Edit Server' button.
   - Select the 'Ports' tab.
   - Select the 'Notes Network Ports' sub-tab.
   - From the list displayed, blank out the name of the port to be deleted.
   - Click on the 'Save & Close' button.
Chapter 5 - Interoperability

Server

General Domino and Notes interoperability issues
For general Domino and Notes interoperability issues, see the Lotus Release Notes: Domino/Notes 5.x.

R4.6.x SPR fixes for R5 interoperability
If you have a mixed Release 4.6.x and Release 5 environment, be aware of the R4.6.x to R5 interoperability problems that are identified in the following SPRs. These problems were fixed as of 4.6.4 on iSeries and as of 4.6.3b on other platforms.

Template - Mail file
- SPR FGRN3YFSN3 - Fixes a problem with receiving an erroneous error message (Object variable not set) when receiving a reschedule notice for a repeating meeting from an R5 user without having first accepted the parent.
- SPR FGRN3ZJQCT - Corrects a problem with the first instance of a repeating meeting not saving a date and time when an R5 user proposes a new date and time.

Template - Web mail file
- SPR FGRN3WPHWF, FGRN3ZJQCT, FGRN3Z8HSR - Replaces the RSVP button with the Accept button on Calendar entries for repeating meetings received by Web users from R5 users. When using the RSVP button (which is not valid for Web users), the error, ‘Original invitation document not found (wNoticeOpen),’ is displayed.
Chapter 6 - History of changes

Domino for AS/400 R5 - initial release

Server

What's new in Domino for iSeries R5 - initial release

Server setup
Domino for iSeries R5 provides two methods of setting up a Domino server:

- A Web-based setup method that allows you to set up a server from a Web browser on a workstation.
- An OS/400 command method that uses an enhanced version of the Configure Domino Server (CFGDOMSVR) command.

Single Logon
The OS/400 Integration option of the Domino for iSeries R5 software includes a Single Logon capability for workstations running Microsoft Windows 95, Windows 98, or Windows NT. Using this capability, Domino users can log on once and access both Notes and Client Access functions.

SMTP mail support
There is no SMTP MTA support in Domino R5. The SMTP support is incorporated into the Domino router. Domino for iSeries R5 provides two types of SMTP mail support:

- Using the new built-in Domino SMTP support. Use this support if you do not need integration with OS/400 mail features using AnyMail.
- Using the iSeries AnyMail Integration support. This support provides the equivalent of the Domino SMTP support using the OS/400 SMTP server and enables Domino users to exchange mail with users of OfficeVision/400™.

When you set up the Domino server, you only need to specify which type of support you want. No additional setup is required.

DECS
Domino for iSeries R5 includes support for the Domino Enterprise Connection Services (DECS). Using DECS, Domino users can build real-time links from Domino pages and forms to the DB2/400 relational database.

Administrative commands
Domino for iSeries R5 provides additional OS/400 commands for managing Domino servers:

- Change Domino Server (CHGDOMSVR) enables the administrator to reconfigure a server that was previously set up on iSeries.
- Submit Domino Command (SBMDOMCMD) enables the administrator to issue a server command without entering it on the server console. The administrator can also use this command to issue a server command in an OS/400 program.
- Work with Domino Server (WRKDOMSVR) provides an OS/400 display from which the administrator can view the status of Domino servers and perform common administrative actions.

More information
The Installing and Managing Domino for AS/400 book and the equivalent Domino for iSeries Help database (AS400HLP.NSF) contain more information about these enhancements to Domino for iSeries:

- Server setup and Single Logon - Chapter 1
- SMTP mail support - Chapter 2 and Chapter 3
- DECS and administrative commands - Chapter 3
Domino for AS/400 R5.0.1

Server

What's new in Domino for iSeries 5.0.1

The following iSeries enhancements were added to support Domino for iSeries 5.0.1:

- The maximum size of Domino database was increased to 64 gigabytes. You must be running OS/400 V4R4 or later to enable this support.
- You can now change Domino server properties through the Windows-like interface of Operations Navigator for Domino. This function is the graphical interface equivalent of the OS/400 CHGDOMSVR command.
  
  To display the properties of a Domino server on iSeries, right-click the server and choose Properties. You can change the displayed properties only if the server is not active.
- You can now use Operations Navigator to add Domino applications to a Domino server on iSeries. This function is the graphical interface equivalent of the OS/400 ADDDOMAPP command.

  To add an application to a Domino server on iSeries, right-click the server and choose Add Application.

Problems fixed in 5.0.1

Fixes for the following SPRs were included in Domino for iSeries release 5.0.1:

- SPR ADOO47TLEN - Fixes a problem in which the job to populate the Domino address book with OS/400 users ended in error
- SPR DMER43EKVH - Fixes a problem in which an SDD entry is not being renamed
- SPR DYUU46DFJ K - Fixes a problem that prevents logon to any registered IMAP or POP3 account
- SPR DYUU46SCW2 - Fixes a problem where Single Logon is not working on a Taiwan NT machine
- SPR GMEN46WE7G - Prevents a problem in which certain German accented characters are not found in search
- SPR JBLM47KRKA - Fixes a problem in which batch install is not working for 5.0
- SPR KAGE46US9W - Fixes a crash that occurs during use of the webadmin live console
- SPR KAGE46XNF B - Fixes a problem in which an undocumented "Tell HTTP" command crashes the server
- SPR KAGE46ZNX5 - Fixes a problem in which the Tell HTTP Restart command from webadmin crashes the server
- SPR MSUI46XE2Z - Fixes a problem in which HTML Mail that has many DBCS words in the table cannot display correctly
- SPR NMOS47JQP5 - Fixes a problem in which the CHGDOMSVR command is not handling the DIRSRV keyword correctly
- SPR NMOS482SYW - Fixes a problem where Option 13 (Edit NOTES.INI) does not show up on the WRKDOMSVR panel
- SPR OBN47RDM5 - Fixes a problem in which issuing CALL QNOTESINT/QNNDIEND does not end all directory synchronization jobs
- SPR RNAO45LRJ Y - Fixes a problem where %Include does not check the /qibm/userdata/lotus/notes directory for *.lss files
- SPR SALR45FQGP - Prevents a problem where search in condition "By date is on" is not working
- SPR WWAG47YKCJ - Fixes a problem where the LotusScript CDbl() function is not working properly with the Danish Language
Server

Problems previously released as hot fixes (included in 5.0.1)

Previously released hot fixes for the following SPRs were included in Domino for iSeries release 5.0.1:

- SPR DJ LL46YKFJ - Fixes an MSF SMTP loop issuing error messages when OV/400 mail is sent to a nonexistant Notes user
- SPR J BLM48JNI39 - Fixes a problem where SMTP mail cannot be sent out because DNS lookups are not being performed correctly
- SPR MCHG45UE9N - Fixes a problem in which a MIME message is not converted to CD when the recipient's message storage is set to CD
- SPR NMO547VRC3 - Fixes a problem in which mail cannot be sent correctly when configured for MSF SMTP support
- SPR RDOR48JNEK - Fixes a problem in which the HTTP task crashes with a MCH0601 message being written in the job log
- SPR TFOT48BKM5 - Fixes a problem where the MSF version of SMTP creates files in the Notes data directory with graphic characters

Domino for AS/400 R5.0.2

Server

What’s new in Domino for iSeries 5.0.2

The following iSeries enhancements were added to support Domino for iSeries 5.0.2:

- OS/400® now supports Domino asynchronous I/O completion ports that enhance the performance of Domino servers in managing Notes client sessions. This support is provided through iSeries PTFs on OS/400 Version 4 Release 3 (V4R3) and OS/400 Version 4 Release 4 (V4R4). You need to install the PTFs to enable this support. For details, see “iSeries PTF requirements” in the “Things you need to know” chapter.
- As of OS/400 V4R4, Backup, Recovery, and Media Services (BRMS) support is now available for backing databases on your Domino server while the server is active. For details, see the “Backup and recovery” topics in this “What’s new?” chapter.

Server

Problems fixed in 5.0.2a

Fixes for the following SPRs are included in Domino for iSeries release 5.0.2a:

- SPR BLEE4D9GBK - Date format cannot set to Chinese Locale
- SPR CCAL4BLSW3 - MCH0601 in Csetmem on V4R4 systems
- SPR CPRT48UAVP - Domino repeat restart and Error accessing file in config.
- SPR CPRT4CP9YM - CFGDOMSVR server *remove has an error message 'MCH3601'
- SPR ECI048GT65 - No route found to domain QTCP from server
- SPR ECI049KTV5 - Rich Text Notes user receives blank body when sending text mail through Outlook using HTML format
- SPR ECI04A6PL2 - JPEG attachment missing when notes user receives mail from POP3 using Netscape
- SPR J BRT43A3LPR - Web based setup of Domino server has misleading text - it references Organization Name
- SPR J LII4D3AR9 - DECS:Midnight Date values become Null in Notes
- SPR KAGE46US9W - While using the webadmin Live Console, the server crashed
- SPR KAGE4CSH6j - Missing messages for LNT0549, LNT0540, LNT0542 during CFGDOMSVR
- SPR KICA49ECY3 - “Session authentication” doesn’t work correctly
- SPR KICA49ZTB2 - HTTP task crashed when sending mail with a large attachment from web browser
- SPR RDOR44AN8N8Z - HTTP server does not end in stressful environments
Lotus Domino for iSeries R5.0.12 Release Notes

Chapter 6 - History of changes

- SPR RDOR4BKPL4 - Compact of large database causes corruption
- SPR RDOR4C8GHR - HTTP SSL connections hang in stressful environment
- SPR SSPW4CLHNZ - Continuous refreshing of gif
- SPR TFOT4AQPMV - SMTP - MSF: Floating point underflow condition detected
- SPR TSAI4ASQMP - Script error when writing/reading DBCS into/from text files
- SPR WBES4BPJ4L - Extra header lines being added to log when running 5.0 http test suite
- SPR WSCN4DRSND - HTTP connections remain in FIN_WAIT_2 state

Server

**Problems previously released as hot fixes (included in 5.0.2a):**

Previously released hot fixes for the following SPRs are included in Domino for iSeries release 5.0.2a:

- SPR KICA49Z7B2 - Server crashes when sending mail with attachment larger than 16 Meg using WEB mail
- SPR NMOS4DCN9N - R5.01.01 Server crash originating in the ROUTER or POP3 server tasks during JPEGs conversion
- SPR RDOR4DQQ2L - HTTP server crashes with MCH0601 message in module HTREQUEST
- SPR TSAI4ASQMP - LotusScript does not read EBCDIC DBCS from files correctly
- SPR WSCN4ESKLT - Greater than 2gig file support not available for version 5.01 over V4R3

Server

**Problems fixed in 5.0.2b:**

Fixes for the following SPRs are included in Domino for iSeries release 5.0.2b:

- SPR RDOR4ELTLV - HTTP error 500, unknown command returned for customized login screen
- SPR RDOR4ELTQ8 - HTTP hangs and does not serve pages intermittently on busy servers
- SPR RDOR4F9RUJ - HTTP server loops when many users are using Web Mail
- SPR TFOT4ETPMA - SMTP-*MSF-Router will not end with ENDDOMSVR CONTROLLED
- SPR TSAI4ASQMP - LotusScript does not read EBCDIC DBCS from files correctly
- SPR WSCN4ESKLT - Greater than 2gig file support not available for version 5.01 over V4R3

Server

**Problems fixed in 5.02c:**

Fixes for the following SPRs are included in Domino for iSeries release 5.0.2c:

- SPR RDOR4ELTLV - HTTP error 500, unknown command returned for customized login screen
- SPR RDOR4ELTQ8 - HTTP hangs and does not serve pages intermittently on busy servers
- SPR RDOR4F9RUJ - HTTP server loops when many users are using Web Mail
- SPR TFOT4ETPMA - SMTP-*MSF-Router will not end with ENDDOMSVR CONTROLLED
- SPR TSAI4ASQMP - LotusScript does not read EBCDIC DBCS from files correctly
- SPR WSCN4ESKLT - Greater than 2gig file support not available for version 5.01 over V4R3
Domino for AS/400 R5.0.3

Server

What's new in Domino for iSeries 5.0.3

The following iSeries enhancements were added to support Domino for iSeries 5.0.3:

- There are two new APIs that will be provided for Domino for iSeries. The first will be able to list Domino server information, while the second will retrieve Domino server information. For more information on these APIs, see the "Application Development" section of the 'What's new?' chapter.

- The Domino for iSeries C++ API Release 2.01 is shipped with Domino for iSeries beginning with release 5.0.3. For more details, see the 'Domino for iSeries C++ API Release 2.01 available' topic in the "Application Development" section of the 'What's new?' chapter.

- With Domino for iSeries 5.0.3, the LSX Toolkit Version 3.1 is available for iSeries. You can obtain this new version by installing option 5 of the Domino for iSeries software. For more details, see the 'LSX Toolkit Version 3.1 available' topic in the "Application Development" section of the 'What's new?' chapter.

- Improvements in Domino and BRMS interaction. For more details, see the "Restrictions that have been removed" topic in the 'Server administration' section of the 'Things you need to know' chapter. For further details on BRMS, see the BRMS topics in the 'Server administrator' chapter of these release notes.

- Support for Bi-Directional (Bi-Di) languages. Three new CCSIDs were added for Hebrew in release V4R4 of OS/400. For more details, see the "Enhanced Bi-Di Support" topic in the "New Enhancements" section of the 'What's new?' chapter.

- Domino will now track performance metrics of the operating system and output the results to the server. For more information, see the "Performance monitoring statistics" topic in the "New Enhancements" section of the 'What's new?' chapter.

- Domino jobs are now listed by subsystem under Operations Navigator for Domino. For more details, see "Change in how Domino jobs are shown from Operations Navigator for Domino" in the 'Server Administration' section of the 'Things you need to know' chapter.

Problems fixed in 5.0.3

Fixes for the following SPRs are included in Domino for iSeries release 5.0.3:

- SPR# WSCN4EMN5S: Router crashes server MCH3601
- SPR# MGIY4G5SJD: DEC5 failure when attempting to use a stored procedure written in RPG
- SPR# JGIR4EBTPD: When the Notes Named Network contains special characters, prompting the CHGDOMSVR command causes errors
- SPR# WSCN4DRSND: HTTP connections remain in FIN_WAIT_2
- SPR# SFRG4C6RLR: Mail message with double-byte characters crash plain English server
- SPR# PC054B4A67: Some parts of the nsd sections in the nsd file are empty
- SPR# JBOR4D3T7L: 5.0.x/4.6.x: "Unknown OS Error" after files copied to iSeries from a CD
- SPR# JGIR4E8RHZ: FIXUP on a corrupt database crashes the Domino Server
- SPR# WSCN4D3JXH: Large file support not available after an OS upgrade
- SPR# RDOR4DXRGM: FIXUP crashes with MCH1212 exception
- SPR# WSCN4CWGYX: Domino For iSeries: New users cannot receive mail
- SPR# MSUI46YFQ3: R5 SMTP : Mail.box has pending delivery messages after sending mail via AnyMail/ 400 smtp
- SPR# WSCN4EMN5: Router crashes server MCH3601
Domino for AS/400 R5.0.4

Server

What's new in Domino for iSeries 5.0.4

The following iSeries enhancements were added to support Domino for iSeries 5.0.4:

- **Domino plug-in for iSeries HTTP Server** The Domino plug-in for iSeries HTTP Server allows you to perform iSeries web serving of Domino and non-Domino content using a single web server. With this support, Domino can be set up to use the iSeries HTTP Server instead of its internal web server. For more information, see the “Domino plug-in for iSeries HTTP Server” topic in the “New Enhancements” section of the “What's new?” chapter.

- **Expanded SMTP support** There are two types of SMTP support available in Domino R5: iSeries SMTP support with AnyMail/400 Mail Server Framework and Native Domino R5 SMTP support. For more information on this topic, see the “Enabling simultaneous execution of Domino SMTP and iSeries SMTP” topic in the “New Enhancements” section of the “What's new?” chapter.

- **Set NSF_Buffer_Pool_Size_MB=300 at CFGDOMSVR time** Any new Domino servers created in 5.0.4, or later, will now have NSF_Buffer_Pool_Size_MB in the Notes.ini set to 300. This change will now provide for a more suitable default in most environments.

- **Operations Navigator Domino jobs** On the Operations Navigator Domino jobs panel, subsystem name now appears in the second column. For more information, see the “Change in how Domino jobs are shown in Operations Navigator” topic in the “Server administration” section of the “Things you need to know” chapter.

Server

Problems fixed in 5.0.4

Fixes for the following SPRs are included in Domino for iSeries release 5.0.4:

- SPR# BKOB4HMPV5: ADDDOMAPP command gives MCH1001 to user profile with insufficient authority
- SPR# BKOB4HMR79: MCH1001 occurs with user class *SYSOPR user profile attempting to use STRDOMSVR command
- SPR# DSAN4J TM57: Domino Web Server log does not correctly log user’s address when DNS is enabled
- SPR# GHAG4K6TZ7: HTTP logging to extended common text files and the function works/does not work, intermittently
- SPR# DMON4HPVPZ: HTTP job loops allocating memory
- SPR# DMON4J9PQF: Cannot bind HTTP to specific IP address
- SPR# WSCN4D4LVE: Full text index does not search correctly on directory catalog
Domino for AS/400 R5.0.5

Server

Problems fixed in R5.0.5

Fixes for the following SPRs are included in Domino for iSeries release 5.0.5:

- SPR# ECI04HNRYF: Fill in Internet address manually after registering Notes through Operations Navigator for it to receive NRPC or SMTP mail
- SPR# HRON4HQRPV: session.createDateTime( java.util.Date ) gives wrong time
- SPR# HRON4KURLG domino.Session.xxx crashes server
- SPR# PFLS4P5NM5: Illegal conversion from jint to iSeries Pointer
- SPR# BKOB4KTQVV: Server name has failures if it is over 244 characters long
- SPR# DHEK4JDTSK: Fix handling of %80 and above on URLs to OS400
- SPR# HWAI4EE5FW: Server crashed when user creates a New document via browser (DBCS character in field name)
- SPR# HRON4H2SK2: Jar Files do not import on 5.0.2c
- SPR# DJBT4K6M6F: Shell() fails with 'File Not Found' error when calling Java program
- SPR# DMON4MKSKE: HTTP CGI error log file has public read access
- SPR# WSCN4LJP9W: LS:DO does not issue a free statement to release handles
- SPR# PNIL4MDLN2: HTTP Server does not set the WebSphereInit environment variable early enough
- SPR# DMON4M4NWF: Can not access CGI programs via IFS symlink
- SPR# PLYS4G4MV2: CVS crashes when converting html table with > 64 columns to CD
- SPR# MJRA4MKMPT: After upgrading to version 5.0.4, event task jumps up 10% in CPU usage
- SPR# LVIV4LYN97: Fix Domino HTTP crash in ProcessFile()
- SPR# DMON4LFJR: Miscellaneous fixes for OS400 HTTP plugin
- SPR# MGII4KMUCX: Call QNOTESLEI/LEIACT fails with Domino for iSeries R5.03
- SPR# ECI04MHRTRB: From field of MSF notes user’s mail uses NRPC addressing fmt causing reply to fail
- SPR# LJIR4C7MF2: Compact runs at 4am - Router stops working after Compact runs
- SPR# DMON4NBMA: Incorrect DIIOP port is activated
- SPR# DSAN4PCJF2: LotusScript does not Process CR/LF Correctly on iSeries Platform
- SPR# TCAN4PMNST: Unexpected TCP/IP error func: 000Bh error Notes: 1C5B, NT1: 1000h,Stack: 00000D78h on OS/400 V4R5

Domino for AS/400 R5.0.6

Server

What's new in Domino for iSeries 5.0.6

There are no iSeries-specific enhancements added for Domino for iSeries 5.0.6. Refer to the Domino 5.0.6 Release Notes for platform-independent enhancements in 5.0.6.

Due to the large number of enhancements made to the Notes and Domino products in Releases 5.0.3, 5.0.4, 5.0.5, and 5.0.6 verification of the full Software Problem Report (SPR) fix list was still being performed when Lotus went to press for these Release Notes.

Please refer to the following source for a list of SPR initiated enhancements in the Domino for iSeries product, once they are compiled at a later date:
Refreshed Online Release Notes

- (Browsable over the Internet): View the release notes online using live web browsing (using any web browser) at the Domino and Notes User Assistance Web site. This is always the most up-to-date version of the Release Notes, which occasionally contains content not prepared in time for the product install packs. Lotus recommends you check here to ensure you have the latest version: http://www.notes.net/doc
- (Notes Database format): You can also connect to http://www.notes.net/doc to download the latest version in Notes Database format (readme.nsf), for later viewing in a Notes client. This is always the most up-to-date version of the Release Notes available, which occasionally contains content not prepared in time for the product install packs.

Domino for AS/400 R5.0.7

Server

What's new in Domino for iSeries 5.0.7
There are several new iSeries-specific enhancements included with Domino for iSeries 5.0.7. Refer also to the Notes/Domino 5.0.7 Release Notes for platform-independent enhancements in 5.0.7.

TCP/IP Autostart supports Domino and QuickPlace Servers with OS/400 V5R1
A new keyword, AUTOSTART, has been added to the CFGDOMSVR and CHGDOMSVR CL commands. The default setting for this keyword and the value used for all existing Domino servers is AUTOSTART(*NO). Specifying AUTOSTART(*YES) allows a Domino server to be started with TCP/IP when one of the following commands is issued:

STRTCP
STRTCPSVR(*AUTOSTART)
STRTCPSVR(*DOMINO)
The equivalent support is also available with ENDTCP and ENDTCPSPVR or ENDTCPSPVR(*DOMINO).

Domino supports passwords up to 128 characters with OS/400 V5R1
With OS/400 V5R1 the capability to use passwords up to 128 characters is provided. Domino for iSeries 5.0.7 server functions which query for OS/400 passwords (such as web setup, for example) also allow passwords up to 128 characters.

If you use Operations Navigator with OS/400 V5R1 long password support enabled, you must also install Client Access Express V5R1 on your client.

Domino EZ Setup Wizard supported with OS/400 V5R1
The Domino for iSeries 5.0.7 CD-ROM contains additional files that provide a wizard that can be launched from the Operations Navigator Taskpad or EZ-Setup. This feature requires OS/400 and Client Access Express V5R1. Client Access Express must also be installed on the PC. The Domino EZ-Setup Wizard can be used to install the Domino server software and do a basic configuration of your Domino server. The wizard is ideally suited for configuration of the first server in a domain.

Additional BRMS Support
The Backup and Recovery Media Services (BRMS) support has been extended to include incremental save and restore of Domino server files. This allows file changes since the previous backup or restore to be managed. To configure a Domino server for BRMS support, specify ADLSRV(*BRMS) on the CFGDOMSVR or CHGDOMSVR CL command. Refer to the Domino for iSeries web site for more details on availability and BRMS requirements to utilize this feature.

Notes/Domino Fix Lists
Beginning with Release 5.0.5, Lotus introduced the R5 Web Fix List Application which allows you to access all of the fix list (SPR) entries for the 5.0.x codestream on Notes.Net. Beginning with Domino for iSeries Release 5.0.6, fix list entries for the iSeries platform are also listed, including all previous R5.0x iSeries-specific fixes. You can access the R5 Web Fix List application on Notes.Net at http://www.notes.net/r5fixlist.nsf. For more detailed information regarding the R5 Web Fix List application, refer to the Notes/Domino R5 Release Note entitled 'R5 Web Fix Lists on Notes.net'. (NOTE: iSeries SPR fix Lists will no longer be posted in the Release Notes, as they are also available in the new R5 Web Fix List Application.)
Refreshed Online Release Notes:

In 'Web-browsable' and 'Notes/Domino Database' formats
- (Browsable over the Internet): View the release notes online using live web browsing (using any web browser) at the Domino and Notes User Assistance Web site. This is always the most up-to-date version of the Release Notes, which occasionally contains content not prepared in time for the product install packs. Lotus recommends you check here to ensure you have the latest version: http://www.notes.net/doc

- (Notes Database format): You can also connect to http://www.notes.net/doc to download the latest version in Notes Database format (readme.nsf), for later viewing in a Notes client. This is always the most up-to-date version of the Release Notes available, which occasionally contains content not prepared in time for the product install packs.

Domino for iSeries R5.0.8

Server

What's new in Domino for iSeries 5.0.8

In addition to the platform-independent features provided with Domino R5.0.8 such as iNotes Web Access and other new features, the following iSeries-specific enhancements are included with Domino for iSeries R5.0.8. Refer to the Notes/Domino R5.0.8 release notes for platform-independent features.

- HTTP applications, such as Web Mail and QuickPlace, will now support attachments larger than 16MB.
- The GTR-34 search engine that was shipped in Domino Release 5.0.5 is now enabled as the default search engine.
- Full text search supports attachments in the Ichitaro file format.
- The EZ Setup Wizard is enhanced to provide support for specifying Country Code as part of the server name and also supports the minimum administrator password length when configuring a server.
- The Operations Navigator interface is enhanced to include the Domino server's BRMS and AUTOSTART values on the server properties display.
- BRMS support for Incremental Backup is enabled in Domino for iSeries 5.0.7 and 5.0.8. Refer to the Domino for iSeries web site (What's new page) for updates regarding availability of BRMS and Domino PTFs that will be required to fully support this feature.
- The Domino for iSeries C++ API shipped with release 5.0.8 is updated to version 2.1. It can be installed with Domino for iSeries 5.0.8 (option 4) or it can be downloaded from the web.
- The C API (Option 3) is updated in release 5.0.8 to include symbolic links for compiling program source in the integrated file system (IFS).
- The ZH_CN locale is updated to use CCSID 1388.

Domino for iSeries name change

Starting with Domino for iSeries release 5.0.8, you will notice some changes with your physical CD label and associated documentation. The “Domino for AS/400” name is changed to “Domino for iSeries”. Initially, this change is being made in documentation, such as these release notes, the CD label and other associated documentation. This change has already been occurring with the Domino for iSeries web site (www.ibm.com/servers/eserver/iseries/domino). You will still find references to Domino for AS/400 however, specifically with the installed product, as the transition to the new name will occur over a period of time.
Notes/Domino Fix Lists
Beginning with Release 5.0.5, Lotus introduced the R5 Web Fix List Application which allows you to access all of the fix list (SPR) entries for the 5.0.x codestream on Notes.Net. Beginning with Domino for iSeries Release 5.0.6, fix list entries for the iSeries platform are also listed, including all previous R5.0x iSeries-specific fixes. You can access the R5 Web Fix List application on Notes.Net at http://www.notes.net/r5fixlist.nsf. For more detailed information regarding the R5 Web Fix List application, refer to the Notes/Domino R5 Release Note entitled "R5 Web Fix Lists on Notes.net". (NOTE: iSeries SPR fix Lists will no longer be posted in the Release Notes, as they are also available in the new R5 Web Fix List Application.)

Refreshed Online Release Notes:
In 'Web-browsable' and 'Notes/Domino Database' formats

- (Browsable over the Internet): View the release notes online using live web browsing (using any web browser) at the Domino and Notes User Assistance Web site. This is always the most up-to-date version of the Release Notes, which occasionally contains content not prepared in time for the product install packs. Lotus recommends you check here to ensure you have the latest version:

  http://www.notes.net/doc

- (Notes Database format): You can also connect to http://www.notes.net/doc to download the latest version in Notes Database format (readme.nsf), for later viewing in a Notes client. This is always the most up-to-date version of the Release Notes available, which occasionally contains content not prepared in time for the product install packs.

Domino for iSeries R5.0.9

Server
Domino for iSeries 5.0.9 ships DB2 Connector Version 1
Domino R5.0.9 for platforms other than iSeries will include version 2 of the Lotus Connector for DB2. However, Domino for iSeries R5.0.9 continues to ship version 1 of the Lotus Connector for DB2.

Server
What's new in Domino for iSeries 5.0.9
In addition to the platform-independent features provided with Domino R5.0.9, the following iSeries-specific enhancements are included with Domino for iSeries R5.0.9. Refer to the Notes/Domino R5.0.9 release notes for platform-independent features.

- **BRMS support for Incremental Backup** is enabled in Domino for iSeries 5.0.8 and later releases. A BRMS PTF is also required to use this feature. Refer to the section BRMS: Incremental online backup available in Domino 5.0.8 for more information and instructions on how to obtain the BRMS PTF.

- A new Domino API, **Retrieve Domino Server Attributes (QnninRtvDominoServerAttr)**, is available with Domino for iSeries release 5.0.7 and later releases. This API program has been updated in 5.0.9 to return the server's canonical name. See the section Domino for iSeries API programs in the Application Development section of Things you Need to Know for more details.

- The Domino for iSeries C++ API shipped with release 5.0.8 is updated to version 2.1. It can be installed with Domino for iSeries 5.0.8 (option 4) or it can be downloaded from the web.

- The C API (Option 3) is updated in release 5.0.8 to include symbolic links for compiling program source in the integrated file system (IFS).

- The ZH_CN locale is updated to use CCSID 1388.

- In release 5.0.9, the Domino plug-in for Operations Navigator will display a new icon for configured Domino servers. The new icon is and replaces the previous icon:
Domino for iSeries name change
Starting with Domino for iSeries release 5.0.8, you will notice some changes with your physical CD label and associated documentation. The "Domino for AS/400" name is changed to "Domino for iSeries." Initially, this change is being made in documentation, such as these release notes, the CD label and other associated documentation. This change has already been occurring with the Domino for iSeries web site (www.ibm.com/servers/eserver/iseries/domino). You will still find references to Domino for AS/400 however, specifically with the installed product, as the transition to the new name will occur over a period of time.

Notes/Domino Fix Lists
Beginning with Release 5.0.5, Lotus introduced the R5 Web Fix List Application which allows you to access all of the fix list (SPR) entries for the 5.0.x codestream on Notes.Net. Beginning with Domino for iSeries Release 5.0.6, fix list entries for the iSeries platform are also listed, including all previous R5.0x iSeries-specific fixes. You can access the R5 Web Fix List application on Notes.Net at http://www.notes.net/r5fixlist.nsf. For more detailed information regarding the R5 Web Fix List application, refer to the Notes/Domino R5 Release Note entitled "R5 Web Fix Lists on Notes.net". (NOTE: iSeries SPR fix Lists will no longer be posted in the Release Notes, as they are also available in the new R5 Web Fix List Application.)

Refreshed Online Release Notes:
In 'Web-browsable' and 'Notes/Domino Database' formats
- (Browsable over the Internet): View the release notes online using live web browsing (using any web browser) at the Domino and Notes User Assistance Web site. This is always the most up-to-date version of the Release Notes, which occasionally contains content not prepared in time for the product install packs. Lotus recommends you check here to ensure you have the latest version:
  http://www.notes.net/doc

- (Notes Database format): You can also connect to http://www.notes.net/doc to download the latest version in Notes Database format (readme.nsf), for later viewing in a Notes client. This is always the most up-to-date version of the Release Notes available, which occasionally contains content not prepared in time for the product install packs.

Domino for iSeries R5.0.10

Server
OS/400 V4R4 is no longer supported

Warranty program services (defect support) for OS/400 V4R4 is ended.
IBM and Lotus will no longer support Domino for iSeries R5 on OS/400 V4R4. This applies to all currently released versions of Domino for AS/400 R5. Domino for iSeries release 5.0.10 is supported only on OS/400 V4R5 or V5R1.

Server
What's new in Domino for iSeries 5.0.10
In addition to the platform-independent features provided with Domino R5.0.10, the following iSeries-specific enhancements are included with Domino for iSeries R5.0.10. Refer to the Notes/Domino R5.0.10 release notes for platform-independent features.
Lotus Domino for iSeries R5.0.12 Release Notes

Chapter 6 - History of changes

- OS/400 support for Chinese Standard GB18030
  R5.0.10 supports GB18030 (the new Chinese character set) for the first phase of the Chinese Government conformance requirements. Please refer to the Notes/Domino R5.0.10 Release Note entitled "Settings for GB18030 support" for more details. This feature is only available on OS/400 V5R1 and later releases. With OS/400 V5R1, PTFs MF26800, MF27456, MF27457, SI02503, SI02498, SI02750, SI02775, SI02930, SI02969, SI01416, and SI01482 must also be applied to your system for full enablement.

- Verity Keyview Filter support
  Beginning with release 5.0.10, Domino for iSeries will use the Verity Keyview filter for retrieving text from binary attachments. To enable this feature, a database must be full text indexed with the option to index binary attachments. Indexing attachments as raw text will continue to operate as before, and not use the Keyview filter. See the section entitled Using the Verity Keyview filter for indexing binary attachments for more information on using the Keyview filter on Domino for iSeries.

- WRKDOMSVR enhancement
  A new function key (PF10) has been added to the "Work with Domino Servers" (WRKDOMSVR) display for sorting the list of Domino servers by name in alphabetical order or by date from the first to the last created.

- STRDOMSVR/ENDDOMSVR enhancement
  A new keyword special value, SERVER (*ALL), has been added to the "Start Domino Server" (STRDOMSVR) and "End Domino Server" (ENDDOMSVR) commands to start/ end all the Domino servers configured in the iSeries system, except for the *HTTPSETUP server.

- Installed Domino version is VSR1M0
  Note that when viewing the release number for Lotus Domino for iSeries release 5.0.10, it will be displayed as VSR1M0.

- Supported OS/400 releases
  Lotus Domino for iSeries release 5.0.10 can be installed on OS/400 V4R5 and V5R1.

**Notes/Domino Fix Lists**

Beginning with Release 5.0.5, Lotus introduced the R5 Web Fix List Application which allows you to access all of the fix list (SPR) entries for the 5.0.x codestream on Notes.Net. Beginning with Domino for iSeries Release 5.0.6, fix list entries for the iSeries platform are also listed, including all previous R5.0x iSeries-specific fixes. You can access the R5 Web Fix List application on Notes.Net at http://www.notes.net/r5fixlist.nsf. For more detailed information regarding the R5 Web Fix List application, refer to the Notes/Domino R5 Release Note entitled "R5 Web Fix Lists on Notes.net". (NOTE: iSeries SPR fix Lists will no longer be posted in the Release Notes, as they are also available in the new R5 Web Fix List Application.)

**Refreshed Online Release Notes:**

In 'Web-browsable' and 'Notes/Domino Database' formats

- (Browsable over the Internet): View the release notes online using live web browsing (using any web browser) at the Domino and Notes User Assistance Web site. This is always the most up-to-date version of the Release Notes, which occasionally contains content not prepared in time for the product install packs. Lotus recommends you check here to ensure you have the latest version:
  
  http://www.notes.net/doc

- (Notes Database format): You can also connect to http://www.notes.net/doc to download the latest version in Notes Database format (readme.nsf), for later viewing in a Notes client. This is always the most up-to-date version of the Release Notes available, which occasionally contains content not prepared in time for the product install packs.
Domino for iSeries R5.0.11

Server
Install Domino for iSeries R5.0.10 only on V4R5 or V5R1
Domino for iSeries Release 5.0.10 should only be installed on OS/400 V4R5 or V5R1. For more information, see 'OS/400 V4R4 is no longer supported' in the 'Restrictions' section of the 'Things you need to know' chapter.

Server
What's new in Domino for iSeries 5.0.11
Domino R5.0.11 is primarily a fix release. In addition to the platform-independent features and fixes provided with Lotus Notes and Domino Server R5.0.11, the following iSeries-specific enhancements are included with Domino for iSeries R5.0.11. Refer to the Notes/Domino R5.0.11 release notes for additional information on platform-independent features and changes.

- The C++ API option (option 4) is updated to release 2.2.
- Installed Domino version is V5R1M1
  Note that when viewing the OS/400 release/version/modification of Lotus Domino for iSeries release 5.0.11, it will be displayed as V5R1M1.
- Supported OS/400 releases
  Lotus Domino for iSeries release 5.0.11 can be installed on OS/400 V4R5, V5R1 and V5R2.