ADTRAN ®

NetVanta Unified Communications Technical Note

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Integrating Lotus Notes (R6)

1 Overview

1.1 Intended Audience

This guide is intended for Lotus Notes administrators and Lotus Notes developers who have knowledge of Lotus Notes.

1.2 Introduction

The UC server works with an integrated messaging client, Microsoft Exchange, Lotus Notes and other IMAP Compliant E-mail systems to provide users with a single storage and access point for voice, fax, and e-mail messages. The product provides full fax server capabilities including managing incoming and outgoing faxes.

Users can retrieve and manage messages either over the telephone or directly from the desktop. The product is designed to allow users Personal Assistant (PA) or Personal Business Assistant (PBA) mode. Clients will be able the route specific callers to one-time messages and to filter calls to their extensions by activating call transfer, active message delivery, e-mail notification and pager notification based on Calling Line ID and/or Time of Day.

This document describes the necessary steps required to integrate the product with IBM's Lotus Notes (R6) and higher.

1.3 Integration Overview

The product integrates with Lotus Notes through an IMAP4-compliant e-mail server. With administrator and user configured mailboxes and passwords, the product deposits voice and fax messages into the appropriate IMAP mailbox. Users can either manage their voice and fax messages through Lotus Notes Mail or manage them over the telephone.

ActiveX controls are inserted into the Lotus Notes mail templates to accommodate the new voice and fax forms. The ActiveX controls allow the forms to connect to the product server to manage message waiting lights and allow playback of voice messages over a telephone.

Lotus Notes users will be able to see the voice messages in their inbox and have the ability to play them through their PC sound card or over their telephone. They will also be able to view their fax messages without having to open additional programs.

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From the product:

1. From the product, create an IMAP4 server in the administration window

2. Create users that use the IMAP4 messages store

3. Users must configure their Lotus Notes username and password by using the first time access wizard.

From Lotus Notes:

1. Activate the IMAP4 server task

2. Copy the mail6UMS.ntf template and modify the mail6UMS.ntf template by:

    a. Using the NetVanta template file (contact ADTRAN to obtain the template file)

    b. Integrating the Lotus Script code provided in Appendix A into the copy of the original mail6.ntf template file (mail6UMS.ntf).

3. Migrate users to use IMAP message store

4. Propagate the mail template (mail6UMS.ntf) to your users.

2 UC Server Configuration

The following steps highlight the specific configuration to accommodate Lotus Notes.

2.1 Creating IMAP4 Server for Lotus Notes

Launch the product administrator application

1. Select the administration pane, select the servers object

2. Right-click anywhere in the content pane.

3. Click **New > IMAP** to open the IMAP4 Configuration dialog box.

4. Type a server name in the **Name** box. (i.e. Lotus Notes Server)

5. Type a host name in the **Host name or IP Address** box. This is the IP address of the Lotus Notes server.

6. Type a port number in the **Port number** box. The default port number is 143.

7. If you want the messages that users delete to be permanently deleted, enable the **Permanently delete messages flagged for deletion** box.

8. Click **OK**.

NOTE: *You can add multiple IMAP servers.*

2.2 Creating Users for Lotus Notes

The New User Wizard steps you through the process of creating a Lotus Notes user.

To add a Lotus Notes user

1. Start the Administrator application to obtain the Administration view.

2. Click the **Users** folder.

3. Right-click anywhere in the content pane.

4. Click **New** to open the New User Wizard, and click Next.

5. Select one of the following user types:

   - Windows User—user information and messaging options are linked with Active Directory

   - Local User—user information and messaging options are controlled by the UC server

6. Type the new user's name information in the **Name information** section of User Information box. If the user is an Active Directory user, click Browse to locate the name information.

7. Type the user's phone number information in the **Phone number information** section of the User Information box. Click Next.

8. Enter the information that is required in the Authentication dialog box. Click Next.

9. In the Messaging box, select the Lotus Notes Server from the E-Mail Storage list.

   NOTE: *The name of the server depends on what you named it in Creating IMAP4 Server for Lotus Notes on page 2*.

10. Type the user's exact Lotus Notes Id name in the Mailbox box. This is typically in the format <NotesId>@<domino_server>.<domain>.com. E.g. jsmith@domino1.company.com

11. If you know the mailbox password type and confirm the user's Lotus Notes mailbox password. If you do not know the password, enter a dummy password to be used a placeholder password until the user starts UC Client for the first time and configures their own Notes mailbox password using the First Time Access Wizard.

12. Select the appropriate contact management software from the list in the Contact Management section. Click Next.

13. (For NetVanta Enterprise Communications Server and NetVanta Business Application Server) In the Phone Selection box, configure a phone for the new user. Click Next.

14. Select the answering mode for the new user by choosing one of the following:

    - **Personal Assistant** – provides standard voice mail features and is the default call answering mode

    - **Personal Business Assistant** – provides more advanced features for the user who wants to create personalized services and announcements

15. Select one of the following operator types:

- **System**
- **Personal**

16. View the Summary screen and click Submit if you are satisfied with the information.

2.3 Converting Existing Users to Lotus Notes

Editing a user allows you to convert a user's message store to Lotus Notes.

To convert an existing user:

17. Start the Administrator application to obtain the Administration view.

18. Click the **Users** folder.

19. Double-click the user to be converted to use Domino server as their message store.

20. If the user is a Windows user, uncheck *Use Active Directory for messaging configuration* only if it is enabled.

21. Click the **Messaging** tab.

22. Click the **E-mail Storage** drop-down list and select the name of the Lotus Notes Server.

    NOTE: *The name of the server depends on what you named it in Creating IMAP4 Server for Lotus Notes on page 2.*

23. Type the user's exact Lotus Notes Id name in the Mailbox. This is typically in the format <NotesId>@<domino_server>.<domain>.com. E.g. jsmith@domino1.company.com

24. If you know the mailbox password type and confirm the user's Lotus Notes mailbox password. If you do not know the password, enter a dummy password to be used a placeholder password until the user starts the UC client for the first time and configures their Notes mailbox password using the First Time Access Wizard.

25. Click OK.

3 Lotus Notes Configuration

The instructions include the steps required to copy the NetVanta template files into the following Lotus Notes master templates:

- Master template "StdR6mailUMS" – file name is mail6UMS.ntf

- Master template "StdR4PublicAddressBook" – file name is pubnames.ntf. The pubnames.ntf file can be optionally modified. It is not necessary for the integration of voice and fax messages.

NOTE: *Contact ADTRAN to obtain the latest .ntf files for Lotus Notes integration.*

NOTE: *To perform the following activities, the user will require administrator privileges to access the Domino server and the user must also be listed as a member in the LocalDomainAdmins group document located in the Domino Directory database.*

3.1 Modifying the mail6.ntf template as mail6UMS.ntf

Use this method if the mail6.ntf file has been modified by your organization or if there have been changes by Lotus Notes to the template file.

3.1.1 Making a Copy of the Original Templates

To preserve the original *mail6.ntf* and *pubnames.ntf* template files, this procedure provides steps to make a copy of the original templates and allow modifications to be made to the copy of the template files.

Regardless of whether or not the *mail6.ntf* template files have been previously modified, it is recommended to modify a copy of the original template file and deploy the modified template to the product User Lotus Notes accounts. This will ensure that a roll-back is possible in the case of unexpected errors or failures, during or after the integration.

The following instructions guide you through the process of customizing the Lotus Notes master template files. To perform these tasks you must have designer access to the master templates ACL (access control list).

The first task is to copy the original Lotus Notes template files to the data directory on the domino server machine. Using Windows explorer on the Lotus Notes server machine, locate the C:\Lotus\Domino\Data directory (path varies according to where the server software was initially installed).

1. Select the existing *mail6.ntf* file in the aforementioned server data directory, and copy it to the same directory, renaming the new copy to *mail6UMS.ntf*. The *mail6UMS.ntf* file will be used as the base template for product users.

2. Open the Notes Administrator, and ensure that the current domain corresponds to the domain for which the server is being configured. Locate the "Files" tab, and change the "Show me" value to "Templates Only" -- this will reveal, among others, the *mail6UMS.ntf* template file.

NOTE: *It is likely that you will receive an error message when you load Notes informing you that templates exist that have the same name. This is as a result of copying the aforementioned templates into the same directory. The following step will resolve these naming conflicts.*

3. Open the properties dialog for the *mail6UMS.ntf* template file. Rename the template title from *Mail (R6)* to *Mail (R6) UMS*. Locate the database design properties tab, and rename the template name from *StdR6Mail* to *StdR6MailUMS*.
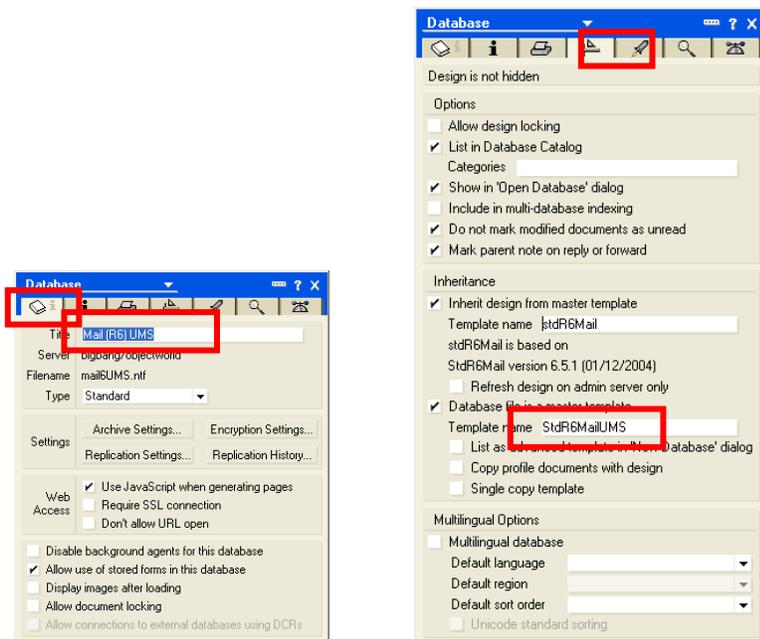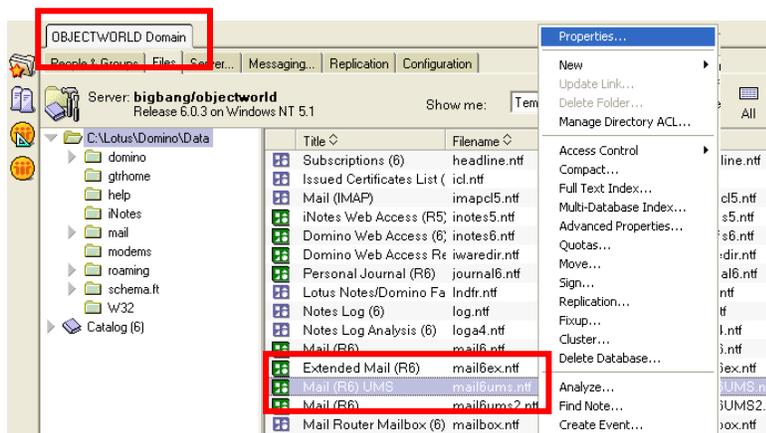
3.1.2 Pubnames.ntf

The Pubnames.ntf is an optional component that allows an agent to be executed that performs bulk changes to users.

The same steps as the procedure above must be performed for the old *pubnames.ntf* template file as well, except:

- In step 3 from the above procedure, change the title from *Domino Directory* to *Domino Directory UMS*, and change the template name from *StdR4PublicAddressBook* to *StdR4PublicAddressBookUMS*.

The Domino server now contains two perfect copies of both the mail and public domino directory templates, but each copy has its own unique identifier. This document later describes how to configure all users wanting to integrate with the product to have their mail database files inherit their design from these new templates.

3.2 Using NetVanta Mail6UMS.ntf Template Files

NOTE: *Do not follow this procedure if you have completed the steps in the procedure above.*

Contact ADTRAN to obtain the *mail6UMS.ntf* and *pubnamesUMS.ntf* files. Copy the *mail6UMS.ntf* and *pubnamesUMS.ntf* files to the aforementioned Lotus Notes server data directory.

Follow the steps to activate new template against specific users. The directions can be found in the section below.

4 Administration Tasks and Server Configuration Settings

The steps described in this section will accomplish the following:

- Prepare the user database to allow the product to access users mailboxes

- Prepare the template file to install custom controls to view voice and fax messages from the Lotus Notes client.

4.1 Loading the IMAP Server Task

The IMAP Server Tasks must be started in order for the product to place voice and fax messages on the Lotus Notes server and to listen to e-mail messages over the telephone.

The IMAP service can be loaded either at the server console or by using the Task Start Tool. This server task starts the IMAP server capability of the Lotus Domino server.

4.1.1 Loading the IMAP Server Task from the Domino Administrator Console

1. From the Domino Administrator, select the server on which to load the IMAP task in the server pane on the left. To expand the pane, click the Servers icon.

2. Click the Server - Status tab.

3. Click Server Console.

4. Enter the following command in the command line at the bottom of the console, and then press ENTER:

   ```
   Load IMAP
   ```

4.1.2 Loading the IMAP Server Tasks Using the Task Start Tool

From the Domino Administrator, in the server pane on the left select the server.

1. To expand the pane, click the Servers icon.

2. Click the **Server - Status** tab.

3. Select the **Server task** and right-mouse click on the Server Task.

4. Select **Start New Task**

5. Select the **IMAP Mail Server** and click **Start Task**
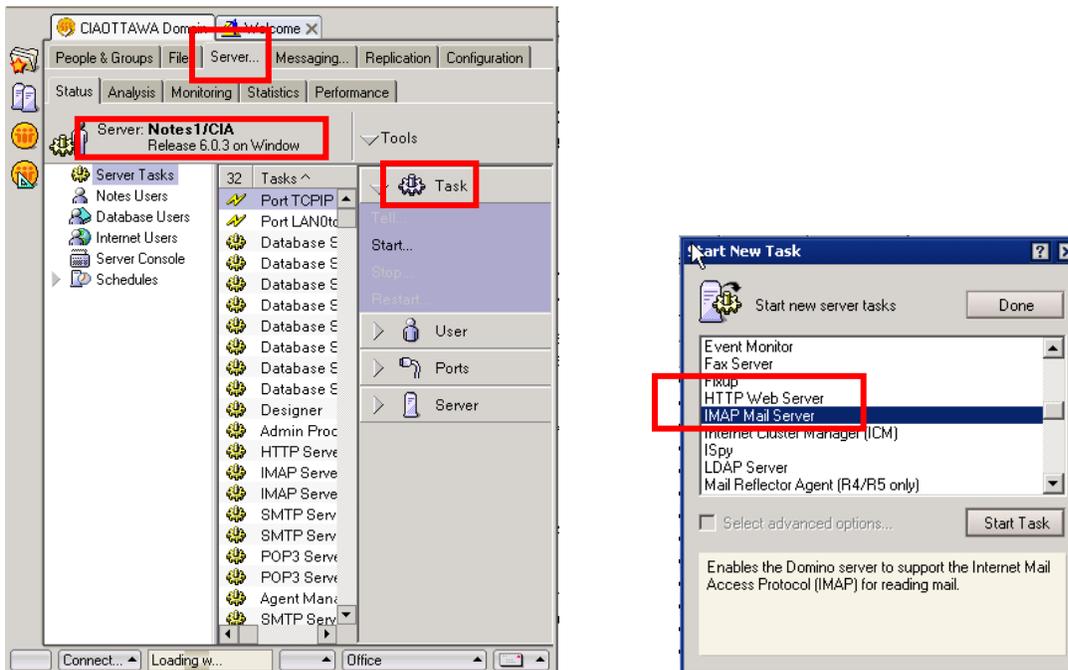
4.2 IMAP Server Configuration Settings

These settings enable the IMAP server to function properly when receiving an incoming email from a voice or fax server.

The following configuration settings must be entered in the server configuration settings document.

4.2.1 Setting the Configuration Document

From the Domino Administrator, in the server pane on the left, select the server on which to edit the document.

1. To expand the pane, click the Servers icon.

2. Click the **Configuration tab**.

3. Select **Configuration** on the left.

4. Double click the server name in the middle pane.
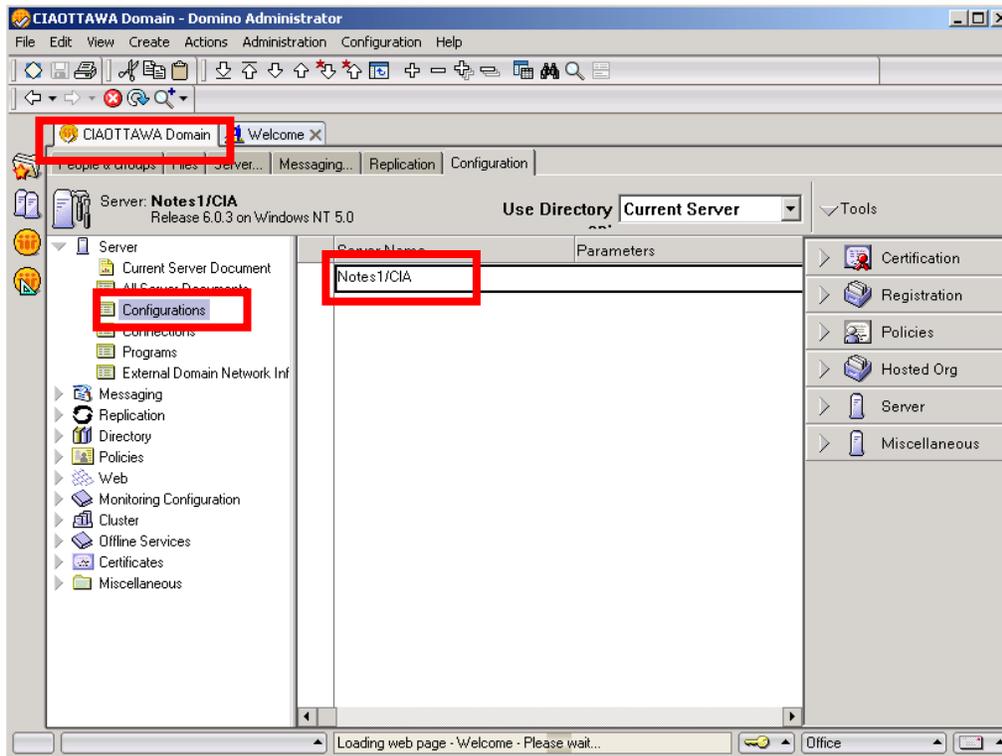
5. At the Basic tab set the "IMAP server returns exact size of message" to Enabled.

6. To edit the configuration document click the Edit Server Configuration action item at the top of the page.

7. At the IMAP tab set the "**Enable IMAP during login**" field to Enabled.

8. To save the configuration document click the Save & Close action item at the top of the page.

4.3 Converting Users to Include IMAP4 Integration

To ensure that the product can access, store and retrieve messages from their Lotus Notes mail database, individual user accounts must be changed to allow IMAP4 integration.

NOTE: *You can also create a Lotus Notes agent that performs this action on more than one database. See the Appendix for details on how you can create this agent.*

To change individual user accounts to allow IMAP4 integration

1. From the Lotus Notes Domino Administrator, select the target user that you wish to include IMAP4 integration.
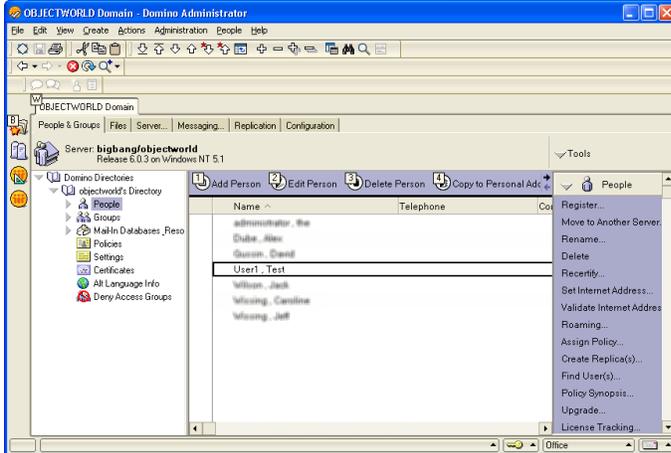
2. Select **Edit Person**
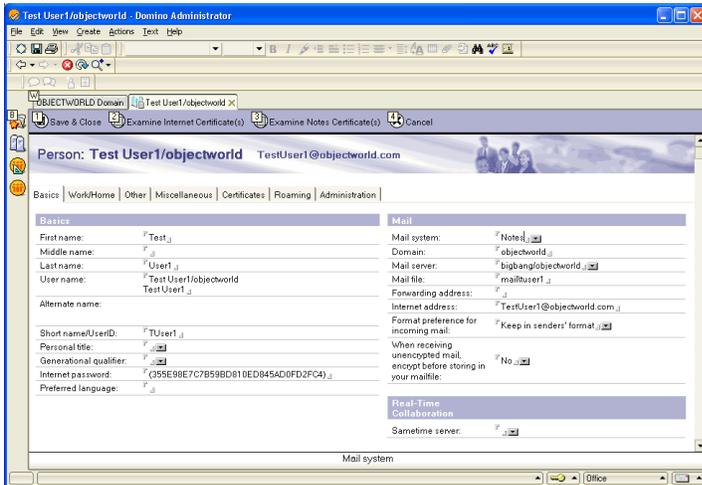
3. From the **mail options** selector in the Edit Person view, select **POP or IMAP**.
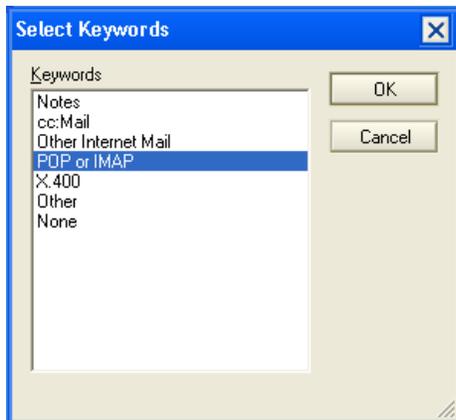
4.4 Indexing the Database(s)

After the databases have been converted to IMAP you will need to create a full text index on all the databases which have been synchronized.

Indexing the databases allows the UC server software's search engine to determine incoming message types which are incorporated in the incoming message header when reaching the database.

You must create an Index on each server that stores mail databases.

To create an index from the Domino Administrator Tool

1. Make sure that you have at least Designer access in the database ACL.

2. In the Domino Administrator Server list, select the server that stores the database(s).

3. In the **Files** tab, select the mail sub-directory.

4. Select all the databases you want to index.

5. From the **Tools** pane, choose **Tools** - **Database** - **Full Text Index.**
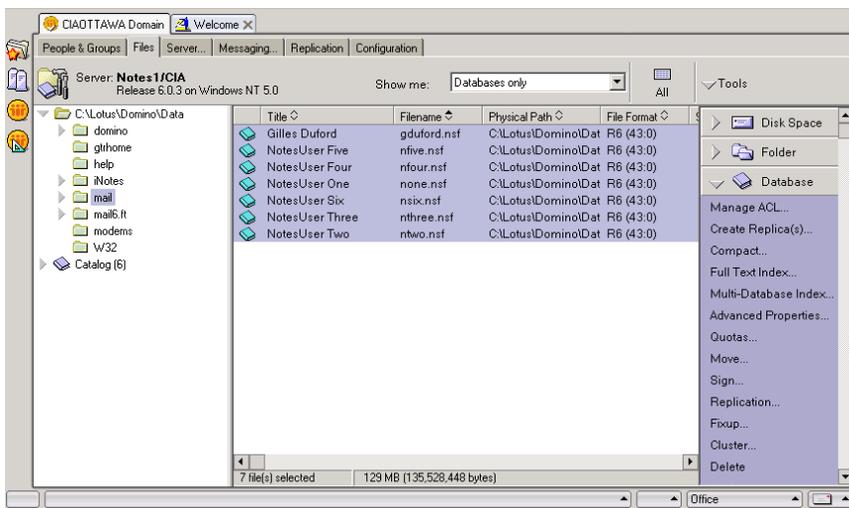
6. Select **Create** (Radio Button).

7. From Index update frequency, select **Immediate**.

8. Click **OK**.

   At the bottom of the Domino Administrator window you will find the results of your indexing process including errors, if any occurred.

4.5 Synchronizing Mail Databases with Master Template

Synchronizing the databases with the master template will update the users' mail databases with the new product features which are required to function with NetVanta's product software. This involves synchronizing all these databases with the new NetVanta master mail template.

If there are multiple Domino servers that require integration with the product, each server that stores mail databases must have a replica of the NetVanta master template from which they will inherit their design, and each user on those other servers must also inherit the design from the NetVanta master template.

You can run the convert task by using a Console Command. There are other ways to start the convert task for synchronizing the master templates; consult the Lotus Notes documentation for more information.

The following sections give step by step instructions on how to convert a user mail database to inherit its design from the modified stdR6MailUMS template.

4.5.1 Assigning the Mail6UMS.ntf Template to Individual Users

Select the properties for individual mail files for users that wish to integrate with the product.

1. Launch the Lotus Notes Administrator and select **Files** > **Mail**. For each user that you wish to change the mail template properties you can right-click and select *Properties*.

2. In the properties view, change the inheritance from the original to StdR6MailUMS.
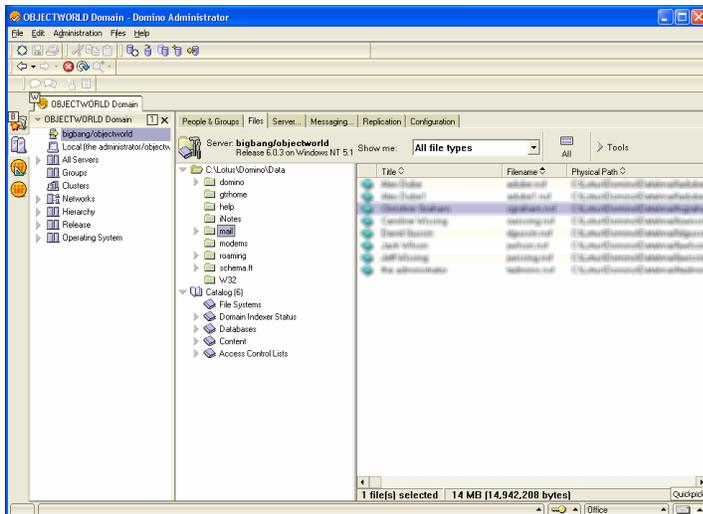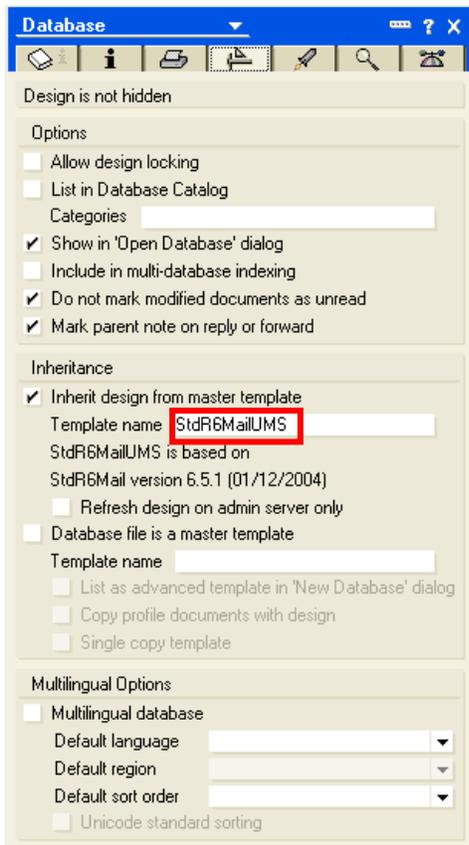
4.5.2 Running the Convert Task Using a Console Command

From the Domino Administrator, select the server on which to run convert in the server pane on the left. To expand the pane, click the Servers icon.

1. Click the Server - Status tab.

2. Click Server Console.

3. Enter the following command:

```
Load convert mail/*.nsf stdR6Mail mail6UMS.ntf
```

Alternatively, you can also specify individual mailboxes in the load convert command.

```
load convert mail/user.nsf stdR6Mail mail6UMS.ntf
```

in the command line at the bottom of the console, and then press ENTER.
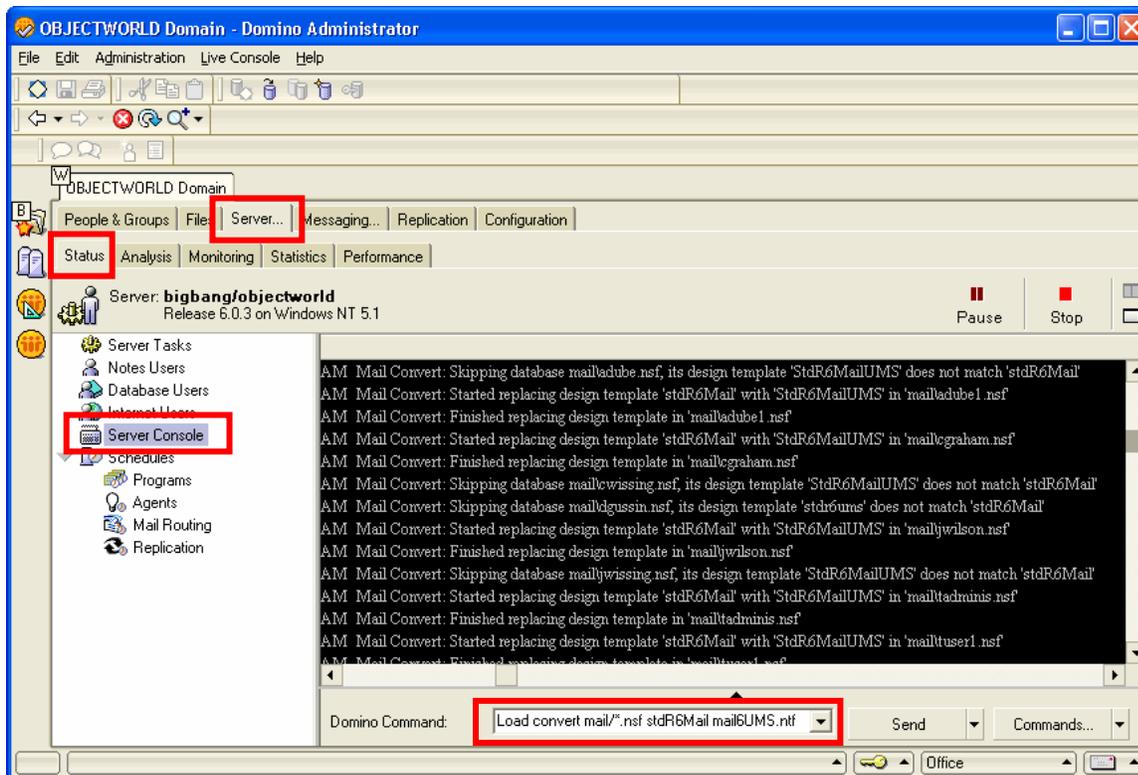
4.5.3 Command Line Options

The following table describes the command line options you can use with the convert task.

load convert [-r | -l | -f | -m | -e | -u | -s] mailfilepath existingtemplatename newtemplatefilename

where -r converts mail files in subdirectories of the specified directory, -l creates a text list of mail files, -f uses a text list of mail databases to determine which mail files to upgrade, -m converts the file or files for IMAP use in Notes 5, -e converts the file or files for IMAP use in Notes 6, -u converts all custom folders to the Inbox design, and -s upgrades folders created without the Preserve bit set. Mailfilepath specifies which mail file or files to upgrade, existingtemplatename specifies a certain mail file design (for example, only mail files using Notes 5 design) to upgrade, and newtemplatefilename specifies the template with which to upgrade the mail files.

5 Using Lotus Notes

Once the Lotus Notes templates have been modified and assigned to individual mail databases, the general use of the Lotus Notes is described in this section.

5.1 Security Alerts

Each user's Lotus Notes client will pop up a security warning for each of the modifications included in the Lotus Notes Mail Template file.

For seamless integration, ensure that the user selects 'Start trusting the signer to execute this action';
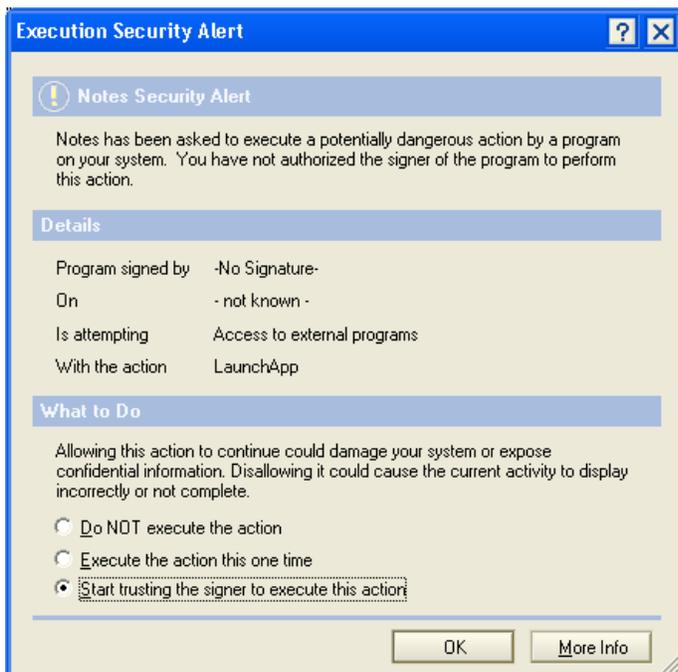
otherwise the user will always be prompted with this security warning.

5.2 Launching Lotus Notes

Each time you launch the Lotus Notes client, it will attempt to connect to the product server. The first time you do this, the product will prompt you for the location of the product Server. This is the machine name or IP Address of the product server. Ensure that you select the '*Save as default*' option to automatically select the product server location.

Once the server has been selected, enter your user name and password. With Active Directory Integration there is single sign-on. Ensure that you select the '*Save as default*' option to automatically log in to the product server the next time you launch Lotus Notes.

5.3 Managing Messages

Incoming voice and fax messages will appear in the Lotus Notes application.
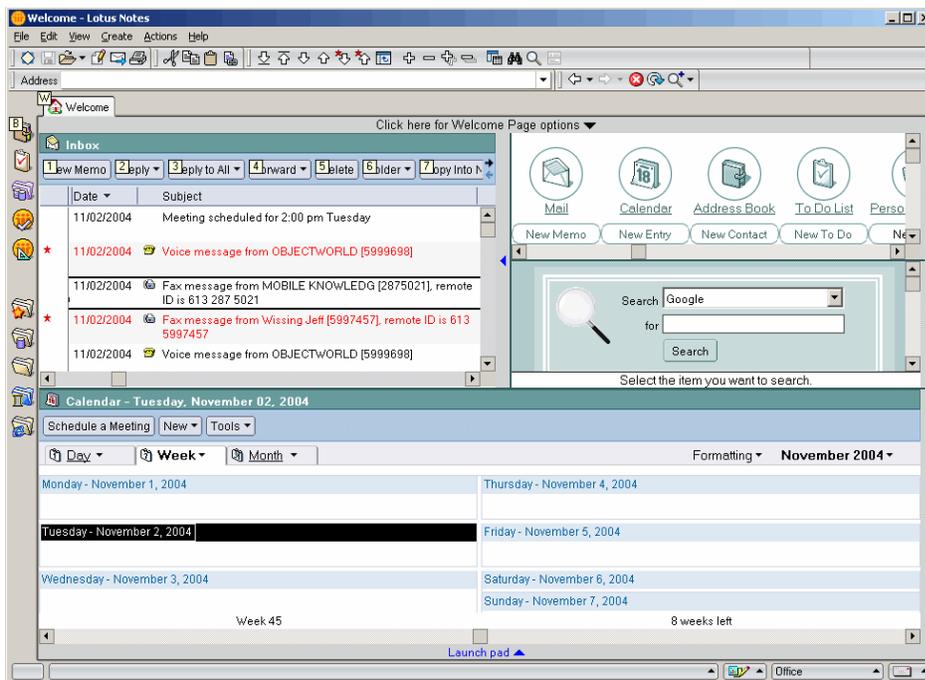
 Voice

 Fax

Lotus Notes will automatically associate custom icons for voice and fax messages. Opening the voice or fax message will reveal the mail template modifications outlined in Section 4.

5.3.1 Incoming Voice Messages

Opening a voice message will reveal the following form and client plug-in. If a voice message does not appear as follows, locate the symptom and troubleshooting step in Appendix C Common Error Symptoms.

The form allows you to select playback type – associated telephone handset or speaker phone. The waveform representation allows highlighting and selection of a section of audio for playback.
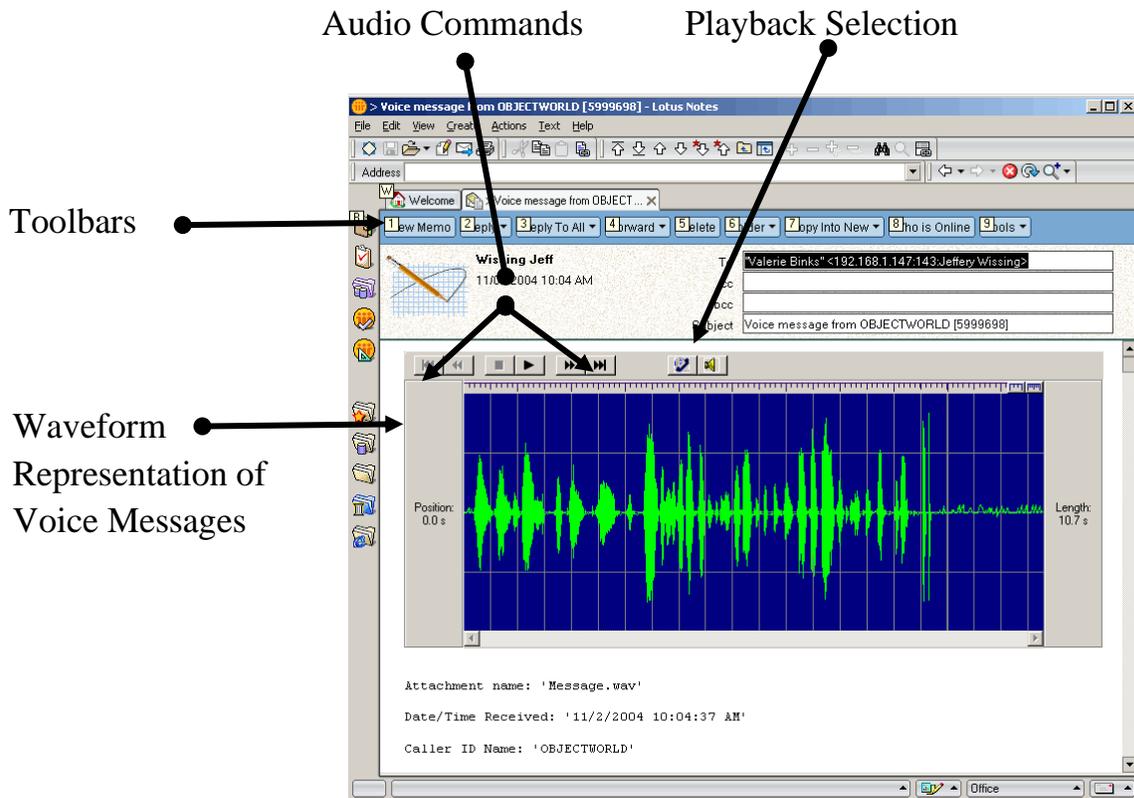
5.3.2 Incoming Fax Messages

Opening an incoming fax message will reveal the following form and client plug-in. If a fax form does not appear as follows, locate the symptom and troubleshooting step in *Appendix C Common Error Symptoms*.

The form allows you to print to a configured printer on your computer, scale the fax image, or navigate to different pages of the received fax document.

Viewing Commands

Toolbars

Displayed Fax
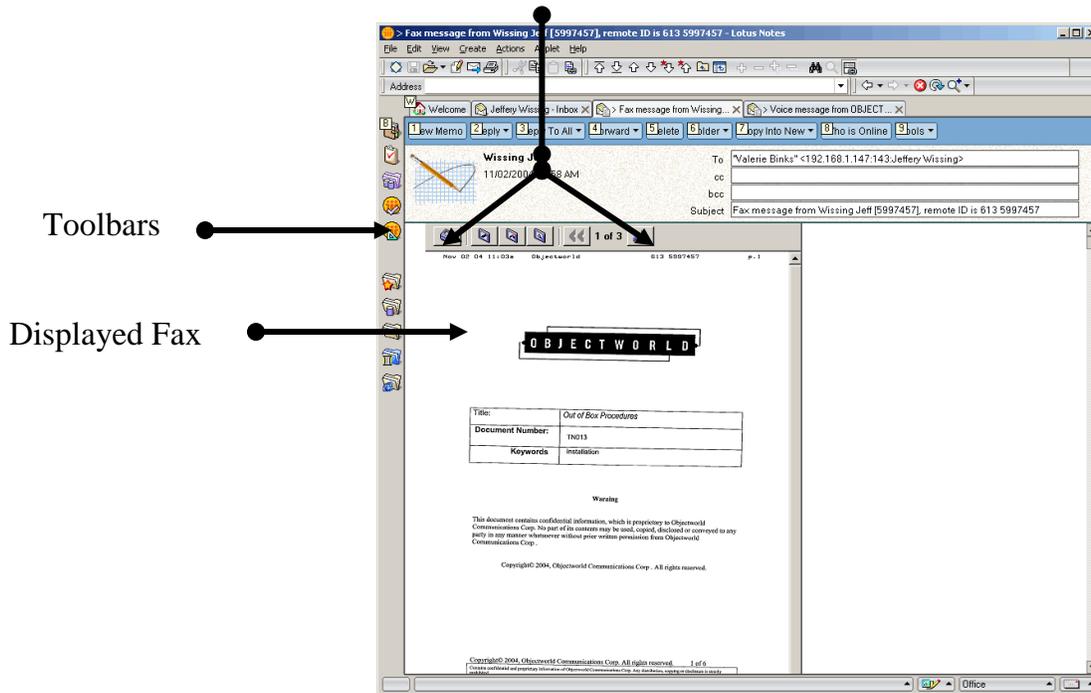
5.3.3 Sent Items—Fax Transmission Reports

Faxes that are sent from the client computer are automatically deposited into a 'Sent Items' folder.

The sent items folder that is used by Lotus Notes IMAP is not the same as the Lotus Notes 'Sent' Folder. In order to review your fax transmission reports, you may have to create a folder called 'Sent Items'

Appendix A Designing the Master Templates

Removed for brevity.

Appendix B Migration from Previous Template Revisions

Appendix B describes the changes from previous version of this document.

B.1. Migration Strategy from TN014-Revision 5 to TN014-Revision 7

THIS SECTION ONLY APPLIES TO INTEGRATIONS THAT ARE BEING MIGRATED FROM REVISION 5 (OR EARLIER). IF THIS IS A NEW INSTALLATION, SKIP TO THE NEXT STEP.

If this integration is a migration from Revision 5 of this document (or earlier), then you must first remove the code from the following $Inbox functions:

- ($Inbox) (Globals) – Declarations
- ($Inbox) (Globals) – Initialize
- ($Inbox) (Folder) – Postopen
- ($Inbox) (Folder) – QueryClose

*****NOTE: DO NOT REMOVE THE CODE FROM the ($Inbox) (Folder) « Form Formula » function *****

Once the $Inbox material has been removed, add the Lotus Script.

Appendix C Common Error Symptoms

Symptom   **I do not receive voice or fax messages in the Lotus Notes client**

Solution   See Synchronizing your password with Lotus Notes and verify that the user has full text index enabled on the user's mail database file.

Symptom   **I hear the message 'We are unable to access your mailbox' when attempting to listen to messages over the telephone.**

Solution   See Synchronizing your password with Lotus Notes and verify that the user has full text index enabled on the user's mail database file.

Symptom   **I changed my Lotus Notes password and now I do not receive voice or fax messages.**

Solution   See Synchronizing your password with Lotus Notes and verify that the user has full text index enabled on the user's mail database file.

Symptom   **I launched my Lotus Notes client and I do not see the voice or fax forms.**

Solution   Ensure that you have followed the procedures for rolling out the modified Mail template file to this user.

Symptom   **How can I change the size of the voice and fax viewers in the Lotus Notes Client?**

Solution   Using the Lotus Notes Designer tool, open the NetVanta_Fax or NetVanta_Voice document and perform the following.

1. Highlight the NetVanta Control. Just click to the left of the inserted OLE Object and ensure that it is selected in the window.

2. From the Properties pane, locate the CAWaveCtrl object □ Properties and change the height and width parameters.

C.1. Synchronize Your Password with Lotus Notes

Lotus Notes maintains two different passwords internally; Lotus Notes and Internet Password. The Lotus Notes password is used exclusively with the Lotus Notes client. The Internet password is used for all other login authentications using internet protocols. This list includes: Web access, POP, and IMAP4.

When you change your Lotus Notes password it does not automatically change your Internet password. The internet password is changed from the web client or by modifying the internet password in the person document.

When a user is created (Registered) with Lotus Notes there is an option to synchronize the Internet password with Lotus Notes. This synchronization only occurs when the user is created. Outside of the original creation, the passwords must be individually managed.

Verify your IMAP user name. Lotus Notes maintains a list of aliases as well as the proper Lotus Notes user name. Ensure that you are using one of the Lotus Notes names listed in the person document.

C.1.1. Change your IMAP4 Password in the Product

To change your IMAP password as registered in the product

1. Launch the product Client. Login as the Lotus Notes user username and telephone password.

2. Select **Tools > Options**.

3. Select the **External Systems** tab.

4. Ensure that the information in the IMAP **mailbox management** section is correct.

5. Click on the **password** button, and enter the new Lotus Notes internet password.

C.2. Testing your IMAP4 Connection with Lotus Notes

From the Windows CMD prompt, type 'TELNET <LOTUS NOTES SERVER> 143'

Each interaction with the IMAP server must begin with a unique identifier. In this example, sequential numbers starting from 1 are used.

Verify username and password

Type 1 login "<Lotus Notes Username>" <internet password>

The IMAP4 server should respond with 1 OK LOGIN completed. If the following error is seen, 'NO LOGIN invalid user name or password' then the wrong username, password or both. Verify the information on the Lotus Notes server.

The following is a list of command and server responses. The 1st command is to simply logon to the Lotus Notes IMAP server. The 2nd command is to retrieve a list of mail directories on the Lotus Notes server. Note that IMAP servers treat the backspace key as a valid ASCII character. If you make a mistake, start a new line number and type more carefully.

```
* OK Domino IMAP4 Server Release 6.0.3 ready Tue, 24 May 2005 14:21:25 -0400
1 login "Jack Wilson" password
1 OK LOGIN completed
2 list "" "*"
* LIST (\HasNoChildren) "\\" Drafts
* LIST (\Noinferiors \HasNoChildren) "\\" Inbox
* LIST (\HasNoChildren) "\\" "Sent Items"
* LIST (\Noinferiors \HasNoChildren) "\\" Trash
2 OK LIST completed
```

To disconnect from the IMAP server, type

```
3 logout
* BYE logging out
3 OK LOGOUT completed
```