

Tru64 UNIX Best Practice

Configuring IMAP Mail Servers Using Internet Express

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Product Version: Internet Express Version 6.0

This Best Practice describes how to use Internet Express to configure an Internet Message Access Protocol (IMAP) mail server for accessing mail.

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Configuring IMAP Mail Servers Using Internet Express

Internet Express is a collection of popular Open Source and other Internet software on CD-ROM. Internet Express gives you the latest versions of the Cyrus IMAP Mail Server and University of Washington IMAP Mail Server (UW-IMAP), plus other mail server components. Using Internet Express, you can install an IMAP mail server on your *Tru64*TM UNIX system, and use the default configuration values provided.

See the Tru64 UNIX Best Practices Web page for more information about Best Practices documentation.

Is This Best Practice Right for You?

Not all Best Practices apply to all configurations, so you must be sure this Best Practice is appropriate for your system and circumstances. To use this Best Practice, you must meet the requirements described in the following table.

Requirement	Description
Operating System	Tru64 UNIX Version 5.0A or higher
Product Version	Internet Express Version 6.0 or higher
System Configuration	High-speed network interface. Consider multiple network interfaces for very high volumes.

If you do not meet the previous requirements, see *Alternative Practices* for information.

Before You Begin

Before you apply the Best Practice for Configuring IMAP Mail Servers using Internet Express, you must understand some background information and perform some preliminary tasks.

If you have not already done so, register the IP address and any IP aliases for the system and configure the network. The Internet Express installation procedure will lead you through the network configuration if necessary.

If you need to better understand the mail server environments, or this component, see the Best Practice document the Best Practice document *Planning Mail Services Using Internet Express*. It describes the basic mail functions, including the protocols used and mail server components available in Internet Express.

HP's IMAP Mail Server Implementations

HP offers the following implementations of IMAP:

- The Cyrus IMAP Mail Server is provided with the Tru64 UNIX operating system and is the recommended IMAP mail server available in Internet Express. Internet Express, which releases frequently, always has the latest released version of the Cyrus IMAP Mail Server. The Cyrus IMAP Mail Server has better scalability and performance than other implementations (for example, the UW-IMAP mail server) but it uses a private mail storage format and requires slightly more administration overhead.
- The University of Washington IMAP Mail Server (UW-IMAP), provided in Internet Express, supports all major UNIX mailbox formats and is easy to administer. Mail folders can be shared with UNIX mail applications such as dtmail, mh, mailx, and binmail.

Note

If you choose to install both the Cyrus IMAP and the UW-IMAP mail servers, you must indicate which IMAP server you want to enable on your system.

Because these mail servers share the same port, you can enable only one IMAP mail server on the system at any given time. You can switch from one mail server to another at any time.

See Choosing an IMAP Server in the *Internet Express for Tru64 UNIX Installation Guide* for a comparison of the Cyrus IMAP Mail Server with the UW-IMAP Mail Server (file format, user setup, administrative overhead, mail folder sharing, and disk quota management).

Cyrus IMAP Mail Server

The Cyrus IMAP Mail Server provides superior performance and scalability features, especially for sites with a large number of users who store a large volume of mail. Cyrus also provides automated disk quota management, which is a benefit to Internet Service Providers (ISPs) who need to control the disk space consumed by users' mail.

As a Best Practice, to get the latest version of the Cyrus IMAP Mail Server, install it from the Internet Express kit.

The Cyrus IMAP Mail Server uses a private mailbox format. Mail is stored in a spool area that is not accessible by users. Each mail folder is stored in a directory with caching files, and each mail message is stored as an individual file in one of the folder directories. The Cyrus mailbox format provides the following benefits:

- Excellent performance of all folder operations.
- Lower I/O overhead for request handling. Note, however, that the one-file-per-message storage scheme can result in a large number of small files, which might require file system tuning.

Applying the Best Practice

Before you configure the Cyrus IMAP Mail Server, be sure to follow the recommendations in *Before You Begin*.

The Internet Express CD-ROM contains the Cyrus IMAP Mail Server, as well as other Internet software. This Best Practice recommends that you:

1. *Obtain the Internet Express Kit.*
2. *Install the Cyrus IMAP Mail Server* (subset IAECYRS).
3. *Install the Administration Utility* (subset IAEADM).
4. *Create UNIX System Accounts (Optional).*
5. *Create Cyrus INBOX Folders.*
6. *Convert IMAP Mail Folders.*
7. *Instruct Users to Configure Client Systems.*
8. *Enable the Cyrus IMAP Mail Server.*

Obtain the Internet Express Kit

HP includes the Internet Express CD-ROM with Tru64 UNIX AlphaServer™ systems. If you need the Internet Express CD-ROM, you can contact your HP representative. The part number for the Internet Express Kit is QB-3NCAA-SA .

Install the Cyrus IMAP Mail Server

To install the Cyrus IMAP Mail Server subset (IAECYRS), follow the instructions in the *Internet Express for Tru64 UNIX Installation Guide*. The Internet Express installation procedure automatically selects prerequisite subsets for installation. For the Cyrus IMAP Mail Server, the Tcl runtime components (IAETCRT) are automatically selected and installed.

Install the Administration Utility

To install the Administration utility subset (IAEADM), follow the instructions in the *Internet Express for Tru64 UNIX Installation Guide*. The Internet Express installation procedure automatically selects prerequisite subsets for installation.

Create UNIX System Accounts (Optional)

Follow these steps to create UNIX system accounts using the Internet Express Administration utility:

1. Log in to the Internet Express Administration utility.
2. From the Administration utility main menu, choose Manage Components. The Manage Components menu is displayed.
3. From the Manage Components menu, under Users, choose Manage Users. The Manage Users menu is displayed.
4. To create a UNIX system user account, choose either Create System User Account or Create Captive User Account. On the user account form, fill in the appropriate fields to create a user login name and password. For a system user account, be sure to provide the full pathname of the login directory. Follow the steps in the *Internet Express for Tru64 UNIX Administration Guide* or select online help from the Administration utility.

Create Cyrus INBOX Folders

From the Administration utility, follow these steps to create Cyrus INBOX folders for each user:

1. From the Administration utility main menu, choose Manage Components. The Manage Components menu is displayed.
2. From the Manage Components menu, under Users, choose Manage Users. The Manage Users menu is displayed.
3. From the Manage Users menu, choose Change User Account Mail Service.
4. Choose the user(s) for whom you want to change the service. If no user names appear, click on a group name and then select a user.
5. Assign the Cyrus IMAP mail service to the selected user accounts. You can create Cyrus IMAP user accounts or Cyrus IMAP user accounts with a password, which enables users to create a mail password different from their login password.

[Previous step — explain how to create users with or without a password.]

Convert IMAP Mail Folders

The Tru64 UNIX mail conversion utility, `/usr/dt/bin/mailcv`, converts UNIX (“From” style) folders to the Cyrus format and vice versa.

Follow these steps to convert a user’s existing mail folders (if any) to Cyrus IMAP format.

1. To convert from UNIX (“From” style) folders to IMAP folders, enter the following command:

```
/usr/dt/bin/mailcv [-t] -I [-f foldername | directoryname]
[user | user.folder]
```

where:

- I indicates that the resulting folder format will be IMAP
- f lets you specify the name of the folder (*foldername*) being converted
- directoryname* is the name of top-level directory in a hierarchy of mail directories to be converted
- t option that converts a tree (directory hierarchy) of folders

user is the user account's name
user.folder is a subfolder name (for example, *rogers.misc*)

For example, to convert the tree of UNIX ("From" style) folders for user *rogers* into a tree of Cyrus IMAP folders, starting at directory *garcia*, enter the following command:

```
% /usr/dt/bin/mailcv -I -t -f ./garcia rogers
```

2. To convert IMAP folders to UNIX ("From" style) folders, enter the following command:

```
mailcv -U [-f foldername newfoldername ]
```

where:

- U indicates that the resulting folder format will be UNIX ("From" style)
- f specifies the name of the folder (*foldername*) being converted
- newfoldername* is the name of the new folder after conversion

For more information on the modified `mailcv` utility, see the `mailcv(1)` reference page.

Instruct Users to Configure Client Systems

Provide users with the following information to configure their client systems:

- The name of the IMAP mail server.
- The login name and password.
- For Microsoft Outlook Express or Microsoft Outlook clients, have users move their folder collections to the root level rather than under INBOX, as follows:
 - Choose Tools, then Accounts.
 - Select their account and click the Properties button.
 - Click the IMAP Tab and enter INBOX in the Root Folder Path. INBOX will now be a peer folder rather than a parent folder.
- For Netscape Communicator clients:
 - Choose Edit, then Preferences, and choose Mail Servers from the directory tree.
 - Click on Add. The My Server Properties screen is displayed.

- Click on the Advanced tab. In the Personal Namespace field, enter: “INBOX.” (double quote—INBOX—period—double quote).
- Click OK.

Enable the Cyrus IMAP Mail Server

To enable the Cyrus IMAP Mail Server, follow these steps:

1. On the Administration Utility Main menu, choose Manage Components.
2. Under Mail on the Manage Components menu, choose IMAP Server.
3. On the IMAP Server Administration menu, choose Enable/Disable the Cyrus IMAP Mail Server.
4. Click on Enable.

Note

If you previously installed the University of Washington IMAP Mail Server (UW-IMAP), enabling the Cyrus IMAP Mail Server automatically disables the UW-IMAP mail server, because IMAP mail servers use the same standard IMAP port number.

Verifying Success

After you apply the Best Practice for Configuring IMAP Mail Servers Using Internet Express, you can verify whether it was successful.

- You successfully installed the Cyrus IMAP Mail Server and Administration utility from Internet Express.
- You created a Cyrus INBOX folder for a user and established an IMAP alias.
- You converted existing mail folders to Cyrus format.
- Using the Administration utility, you accessed the IMAP Server Administration menu and enabled the Cyrus IMAP Mail Server.
- Mail is properly delivered to the Cyrus INBOX folder. IMAP clients can access and create mail folders.

- The system generated a log file in `/var/admin/syslog.dated/current_date/mail.log` that you can review.

If the Best Practice was not successful, see *Troubleshooting* for information about identifying and solving problems.

Troubleshooting

If you determine that the Best Practice was not successful, as described in *Verifying Success*, use the following table to identify and solve problems.

Problem	Possible Solutions
An Internet Express subset did not install.	Review the installation steps described in the <i>Internet Express for Tru64 UNIX Installation Guide</i> .
You could not create an INBOX folder and convert your existing mail folders.	Review the steps in the <i>Internet Express for Tru64 UNIX Administration Guide</i> . Review the command-line options that might be applicable to your site.
You could not start the Cyrus IMAP Mail Server.	The mail server might not have properly installed. Remove and then reinstall the server.
Clients cannot access mail in their Cyrus INBOX folders.	Check that the following information is correct: user name, password, IMAP server host name, IMAP protocol default port (143).

Alternative Practices

Although this Best Practice is the recommended method for configuring the IMAP mail server, you can use an alternative method if your system does not meet the requirements described in *Is This Best Practice Right for You?*:

- Install the binary kit or install sources copied from <http://asg.web.cmu.edu/cyrus/>
- If you are running Tru64 UNIX Version 5.0A or higher and choose not to install the latest Cyrus IMAP Mail Server from Internet Express, continue to use the version provided with the operating system.
- If your installation has a small number of users or it cannot handle the additional administrative overhead required by Cyrus, install the UW-IMAP Server from the Internet Express kit.

- If you have not installed the Administration utility, you can create Cyrus INBOX folders from the command line. (See *Creating a Cyrus INBOX Folder from the Command Line*.)

Creating a Cyrus INBOX Folder from the Command Line

Follow these steps to create a Cyrus INBOX folder for a user from the UNIX command line. The steps also describe how to establish an IMAP alias.

1. Review the `cyradm(1)` reference page.
2. As root, enter the following command:

```
# /usr/local/bin/cyradm localhost
```
3. Enter the password. (The system assumes that the user ID is the ID of the user running the command.)

```
localhost password: password
```

4. Enter the following command to create the Cyrus INBOX folder. The user name (for example, `rogers`) must exist in the `/etc/passwd` file with default protections set so that any new files or directories created are owned by the user.

```
localhost> cm user.rogers
```

This folder will display as INBOX to an IMAP mail client but exists on the server as `user.rogers`. All mail folders created by `rogers` will be children of `user.rogers`.

Note

If you plan to serve more than 500 users with Cyrus IMAP mail, consider partitioning the user account space to improve performance. You can specify a partition as an additional parameter when using the `cm` command to create the user's INBOX folder (`user.username` directory). See `cyradm(1)` for more information on partitioning user account space.

5. Exit the `localhost` shell:

```
localhost> Ctrl/D
```
6. Add an IMAP alias for user `rogers` to the `/var/adm/sendmail/aliases` file:

```
rogers: rogers@IMAP
```

7. To enable the IMAP alias to take effect, enter the `newaliases` command:

```
# newaliases
```

Comments and Questions

We value your comments and questions on the information in this document. Please mail your comments to us at this address:

```
best_practices@zk3.dec.com
```

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