

InterMail Release Notes (SUN)

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1.1 What's New in 4.1.2

This document lists the corrections and enhancements delivered with the release of InterMail version 4.1.2. InterMail version 4.1.2 incorporates all features and defect corrections from all previous 4.0.x releases.

Significant features and improvements are highlighted in the sections that follow.

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- A new feature has been added to the MSS that allows you to place limits on the number of POP/IMAP connections to a specified MSS. This enables InterMail to distribute user access to multiple MSS machines.
- The MTA's capability to process deferred mail has been improved.
- A memory enhancement has been added to the BrightLight Spam Wall, speeding up the processing time between the MTA and the BrightLight product. The BrightLight product is delivered as an individual component, separate from the InterMail installation. For installation and operational instructions, refer to the BrightLight documentation.
- The anti-spam elements have been improved to allow for faster searching of larger IP lists.
- Scalability of the Integrated Services Directory has been improved:

An enhanced mutex solution allows the Directory Cache Server to perform 5 times the updates and 5 times the lookups as the previously released Directory Cache Server.

The "realms" solution further enhances scalability by partitioning the directory user information into multiple realms instead of a single realm.

- Users can now authenticate using an SMTP alias as a login name.
- An enhanced tool to move mailboxes including IMAP attributes that was shipped after the 4.01.01.00 release is included in 4.01.02.00. This tool, `imimapboxcopy` has been further enhanced since the 4.01.01.xx service packs to make it significantly more performant. The `imboxmove` utility that uses the `imimapboxcopy` utility has also been continued to be updated and is included in this release.
- The InterManager product has been enhanced to improve account-provisioning performance. See the updated *InterManager Administration Guide* for details.

Subsequent work in this regard is ongoing and will be included in the InterMail 4.1.3.0 release. A service pack for 4.1.2.x is also being considered as of the writing of this document.

- In InterManager 4.1.1, only the creation of a single Service Provider was allowed. In InterManager 4.1.2, this restriction has been removed, allowing the "Primary Service Provider" to create other Service Providers and provide wholesale mail outsourcing.
- Support for Oracle 7.3.4.3 was added in 4.01.01.01. The patch to Oracle 7.3.4.3 is also shipping with InterMail 4.1.2.0 in case you have not yet applied any service packs for the 4.1.1.0 release. This patch provides key solutions that aid in index and data stabilization.

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- The InterMail product was built in an improved manner in 4.1.2 to include a static build of Oracle libraries. Although the footprint of the InterMail binaries is larger, building in this manner improves the usage of the InterMail system. Building in this manner will also ease the subsequent transition to Oracle 8 since linking InterMail in this manner allows the ability to be compatible with both Oracle 7 and Oracle 8.

- The following new configuration keys have been added (see the Supplemental Manual for detailed information):

```
bucketizeMtaDefer
cacheAlwaysReadThru
dbReconnectInterval
dirCacheUpdateThreshold
loginAliases
maxMSSRetrieveConnectionList
maxMSSRetrieveConnectionTimeout
partitionRouterData
partitionUserData
queueServerRetrieveHosts
queueServerStoreHosts
realms
rejectSenderBadAddress
rmeAccessList
```

- The following administration commands have been added (see the Supplemental Manual for detailed information):

```
immovmsgfiles
imdbindexrecreate
imfolderlist
```

- The following new log event messages have been added (see the Supplemental Manual for detailed information):

```
CacheConfigInfoMismatch
CacheConfigVersionMismatch
CacheGenericMsg
CacheRealmConfig
CacheRealmDataDeleteFailed
CacheRealmDataFetchFailed
CacheRealmDataStoreFailed
CacheRealmServerDown
CacheRealmServerUp
ConfParmError
DbFeatureUnavailWithoutSchemaPatch
```

DbRemovingConnection
DbTempDisconnect
MsFolderNotRemovable
MsNoSuchObject
MsObjTypeMismatch
MsStaleRef
MtaHeaderNotTerminated
NioConnNotAllowed
RmeConnectionUnavailable
SmtplibSenderAddrInvalid
SmtplibBadRelayPolicy

Version 4.1.1 (201-229-111)

- The WebMail application is enhanced to include an improved user interface, robust paging functionality, and improved logging that is easily customizable to satisfy the ISP's needs. In addition, error messages are restructured to allow more efficient methods of troubleshooting.
- Webmail's workload can now be distributed among several httpd servers, so that an inexpensive Intel box running Linux can service all image requests to WebMail.
- A multi-journaling feature is added to the MSS to enhance capacity and efficiency in InterMail system.
- An enhanced Oracle package is added to improve the efficiency of the InterMail system.
- SNMP functionality is now fully supported.
- Updates are made to the Oracle database utilities; these updates include previous patch components.
- SSL is supported for POP and SMTP.
- The following new configuration keys are added (see the Supplemental Manual for detailed information):

multiJournaling
numJournalsPerServer
rejectInvalidFromAddr
retryOnConnectFail
sessionExpireTimeoutSecs
trustedInterfaces

- The following new log event messages are added (see the Supplemental Manual for detailed information):
CacheUpdateStarted
CacheUpdateCompleted
CacheUpdateOutOfRange

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DbDatabaseNote
FiltActionSendMessage
JrnBadNumJournalsParm
NioGetSockNameFail
NioFcntlFail
PopDomainTableEntryError
ProcNoRunDir
ProcChownFail
RmeInvalidCOSAttribute
RunMssQuotaMaxMsgs

Version 4.1 (201-229-108)

- System mail filtering is extended to include per-user mail filtering, enhancing InterMail's spam prevention capabilities.
- Updates are made to the Oracle database utilities; these updates include previous patch components.
- No updates to the operating system patch levels are required if InterMail version 4.0.3 is currently installed.
- A new feature is added that allows ISP's to control POP/IMAP access based on the location of the user.
- The following configuration keys are added (see the Supplemental Manual for detailed information):

filterSendMessageCharset
hostnameAliasList

- The following log event messages are added (see the Supplemental Manual for detailed information):

AcctNontrustedLogin
CacheUpdateTimeTooLong
FiltActionRewriteHeader
FiltHeaderRewriteFailed
MsDeliverFolderNotFound
MtaHeaderRewriteFailed
MtaQueueServerInteractionMismatch
NioGetHostNameFail
ProcUncaughtCPlusException
QsrvNotLocked

- The following administration command is added (see the Supplemental Manual for detailed information):

imfilterctrl

- The following class of service attributes are added (see the Supplemental Manual for more information):

`pref_popaccess` (replaced `pref_pop`)

`pref_popsslaccess` (replaced `pref_popssl`)

`pref_imapaccess` (replaced `pref_imap`)

`perm_mtafilterperuser`

`pref_mtafilterperuser`

- Miscellaneous defects are corrected.

Version 4.0.3.z (201-229-104)

- Enhanced session management is added to the Web Server, allowing for faster performance and improved scalability in WebMail, InterManager, and SelfCare.
- The InterManager application supports delegated administration for site administrators and organization administrators.
- Two new tools (`imbatchload` and `imbatchextract`) support population of InterManager's LDAP tables with InterMail user information.
- The performance of the `imdirsnc` utility has been improved. In a test case with 5 million users, the utility ran 5 times faster, however, results will vary based on the number of users supported by your installation and the specific profiles for those users.
- A new version of Oracle is introduced that contains previous patches.
- A new deployment worksheet is introduced.
- The following configuration keys are added (see the Supplement to the Manual for more information):

`mss/messageJournaling`

`imqueueserv/messageJournaling`

`maxAutoReplyMsgLenKb`

`allowedIPs`

`scanOldMessagesIntervalInHours`

`cacheDisableReadThrus`

`cacheDisableWriteThrus`

`sessionDBFilePath`

`numDBFile`

- The following administration command is added (see the Supplement to the Manual for more information):

`immsgverify`

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- The following log messages are added (see the Supplement to the Manual for more information):

ProcObjBadRefCnt

PopMaxSessions

PopConnectionNotAllowed

- Miscellaneous defects are corrected.

Note: For details on defects corrected, See the section on Defects Corrected.

Version 4.0.2.z (Build 201-227)

- The IMAP4 UIDPLUS extension is supported.
- A quota limiting the total number of messages per mailbox is implemented.
- WebMail is fully functional.
- The following configuration keys are added (see the Supplement to the Manual for more information):

cacheAuthoritativeForMTA

loginDefaultDomainTable

loginDefaultDomain

maxLogUpdates

mutexSerialNumbering

sqlSingleThread

vxfSpaceReservation

- Miscellaneous defects are corrected.

Version 4.0.1.z (Build 201-221)

- The InterMail system design is modified so that a single Directory Cache Server can divide its data among multiple, local cache files. This change supports unlimited user scalability in the Integrated Services Directory.
- Miscellaneous defects are corrected.

Version 4.0 (Build 201-219)

- Improved Integrated Services Directory functionality.

Version 4.0 (Build 201-217-106)

- Modified the Integrated Services Directory to support improved InterManager functionality.
- SelfCare is fully functional.
- Improved garbage collector for the Message Store database.
- Miscellaneous defects are corrected.

1.2 Operating System Requirements

InterMail 4.1.2 (201-229-116) runs on Solaris 2.6 –8 or 2.6 –13 and requires Oracle 7.3.4.3.

In addition to the standard operating system release, one or more of the OS patch kits may be required. Refer to the sections that follow for details on required patch kits for a particular OS version.

Note: It is preferable that customers obtain operating system software directly from the operating system vendor. However, some operating system vendors may provide only the most recent patch set through their website. If you are having difficulty in obtaining these Patch Kits, please contact Software.com by sending a request to ship.team@Software.com.

If you are running Solaris 2.6, you must also have the Solaris 2.6 –08 or the 2.6 -13 Patch Kit installed in order to upgrade to InterMail 4.1.2. These are the only patches that has been tested and certified to operate properly with InterMail 4.1.2.

1.2.1 Solaris 2.6 –08 Patch Kit Details

The complete list of patches contained in the October 5, 1998 Solaris 2.6 –08 Patch Kit appears below. To guarantee that the proper files have been installed on your system, compare the files currently installed with the list below. If you find any discrepancies, please contact Software.com for assistance.

- 106125-05 SunOS 5.6: Patch for patchadd and patchrm
- 105401-15 SunOS 5.6: libnsl and NIS+ commands patch
- 105181-08 SunOS 5.6: kernel update patch
- 105562-03 SunOS 5.6: chkey and keylogin patch
- 105210-14 SunOS 5.6: libc & watchmalloc patch
- 105216-03 SunOS 5.6: /usr/sbin/rpcbind patch
- 105356-07 SunOS 5.6: /kernel/drv/ssd patch
- 105357-02 SunOS 5.6: /kernel/drv/ses patch
- 105375-09 SunOS 5.6: sf & social driver patch
- 105379-05 SunOS 5.6: /kernel/misc/nfssrv patch
- 105621-08 SunOS 5.6: libbsm patch
- 105393-06 SunOS 5.6: at & cron utility patch
- 105395-03 SunOS 5.6: /usr/lib/sendmail patch
- 105407-01 SunOS 5.6: /usr/bin/volrmmount patch
- 105552-02 SunOS 5.6: /usr/sbin/rpc.nisd_resolv patch
- 105615-04 SunOS 5.6: /usr/lib/nfs/mountd patch
- 105665-03 SunOS 5.6: /usr/bin/login patch
- 105667-01 SunOS 5.6: /usr/bin/rdist patch
- 105786-05 SunOS 5.6: /kernel/drv/ip patch
- 105741-05 SunOS 5.6: /kernel/drv/ecpp patch

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- 105720-05 SunOS 5.6: /kernel/fs/nfs patch
- 106049-01 SunOS 5.6: /usr/sbin/in.telnetd patch
- 106235-02 SunOS 5.6: lp patch
- 106257-04 SunOS 5.6: /usr/lib/libpam.so.1 patch
- 106271-04 SunOS 5.6: /usr/lib/security/pam_unix.so.1 patch
- 105755-06 SunOS 5.6: libresolv, in.named, named-xfer, nslookup, nstes
- 105926-01 SunOS 5.6: /usr/sbin/static/tar patch
- 106301-01 SunOS 5.6: /usr/sbin/in.ftpd patch
- 106448-01 SunOS 5.6: /usr/sbin/ping patch
- 105464-01 SunOS 5.6: multiple xterm fixes
- 105490-05 SunOS 5.6: linker patch
- 105580-07 SunOS 5.6: /kernel/drv/glm patch
- 105797-04 SunOS 5.6: /kernel/drv/sd patch
- 105600-06 SunOS 5.6: /kernel/drv/isp patch
- 106226-01 SunOS 5.6: /usr/sbin/format patch
- 105642-05 SunOS 5.6: prtdiag patch
- 106040-10 SunOS 5.6: X Input & Output Method patch
- 105558-01 CDE 1.2: dtpad patch
- 105669-04 CDE 1.2: libDtSvc Patch
- 105837-02 CDE 1.2: dtappgather Patch
- 106242-01 CDE 1.2: libDtHelp.so.1 fixes
- 106222-01 OpenWindows 3.6: filemgr (ff.core) fixes
- 105284-15 Motif 1.2.7: Runtime library patch
- 105802-06 OpenWindows 3.6: tooltalk patch

Additional 2.6 –8 Patch Requirements

It is required that you apply the 105490-07 patch to the Solaris 2.6 operating system. This fixes the Solaris bug ID 4201613. If this patch is not applied, InterMail 4.1.2 may not function properly. Contact your software vendor to obtain the 105490-07 patch.

1.2.2 Solaris 2.6 –13 Patch Kit Details

The complete list of patches contained in the Solaris 2.6 –13 Patch Kit appears below. To guarantee that the proper files have been installed on your system, compare the files currently installed with the list below. If you find any discrepancies, please contact Software.com for assistance.

- 106125-06 SunOS 5.6: Patch for patchadd and patchrm
- 106828-01 SunOS 5.6: /usr/bin/date patch
- 105401-20 SunOS 5.6: libnsl and NIS+ commands patch
- 105181-13 SunOS 5.6: kernel update patch
- 105562-03 SunOS 5.6: chkey and keylogin patch
- 105210-19 SunOS 5.6: libc & watchmalloc patch
- 105568-13 SunOS 5.6: /usr/lib/libthread.so.1 patch
- 105216-03 SunOS 5.6: /usr/sbin/rpcbind patch
- 105356-08 SunOS 5.6: /kernel/drv/ssd patch
- 105357-02 SunOS 5.6: /kernel/drv/ses patch
- 105375-10 SunOS 5.6: sf & social driver patch
- 105379-05 SunOS 5.6: /kernel/misc/nfssrv patch
- 105621-09 SunOS 5.6: libbsm patch
- 105393-07 SunOS 5.6: at & cron utility patch
- 105395-05 SunOS 5.6: /usr/lib/sendmail patch
- 105407-01 SunOS 5.6: /usr/bin/volrmmount patch
- 105552-02 SunOS 5.6: /usr/sbin/rpc.nisd_resolv patch
- 105615-04 SunOS 5.6: /usr/lib/nfs/mountd patch
- 105665-03 SunOS 5.6: /usr/bin/login patch
- 105786-08 SunOS 5.6: /kernel/drv/ip patch
- 105741-05 SunOS 5.6: /kernel/drv/ecpp patch
- 105720-06 SunOS 5.6: /kernel/fs/nfs patch
- 106049-01 SunOS 5.6: /usr/sbin/in.telnetd patch
- 106235-03 SunOS 5.6: lp patch
- 106257-04 SunOS 5.6: /usr/lib/libpam.so.1 patch
- 106271-05 SunOS 5.6: /usr/lib/security/pam_unix.so.1 patch
- 105755-07 SunOS 5.6: libresolv, in.named, named-xfer, nslookup, nstes
- 105926-01 SunOS 5.6: /usr/sbin/static/tar patch
- 106301-01 SunOS 5.6: /usr/sbin/in.ftpd patch
- 106439-02 SunOS 5.6: /usr/sbin/syslogd patch
- 106448-01 SunOS 5.6: /usr/sbin/ping patch
- 105490-07 SunOS 5.6: linker patch
- 105580-10 SunOS 5.6: /kernel/drv/glm patch

- 105797-06 SunOS 5.6: /kernel/drv/sd patch
- 105600-07 SunOS 5.6: /kernel/drv/isp patch
- 106226-01 SunOS 5.6: /usr/sbin/format patch
- 105642-05 SunOS 5.6: prtdiag patch
- 106040-10 SunOS 5.6: X Input & Output Method patch
- 105800-05 SunOS 5.6: /usr/bin/admintool, y2000 patch
- 106193-03 SunOS 5.6: y2000 sysid unzip patch
- 107434-01 CDE 1.2: Spell checking occasionally kills mail
- 105558-04 CDE 1.2: dtpad patch
- 105669-07 CDE 1.2: libDtSvc Patch
- 105837-02 CDE 1.2: dtappgather Patch
- 106242-02 CDE 1.2: libDtHelp.so.1 fixes
- 105566-06 CDE 1.2: calendar manager patch
- 105703-09 CDE 1.2: dtlogin patch
- 105464-02 OpenWindows 3.6: Multiple xterm fixes
- 106222-01 OpenWindows 3.6: filemgr (ff.core) fixes
- 105284-24 Motif 1.2.7: Runtime library patch
- 105802-07 OpenWindows 3.6: ToolTalk patch

1.3 Installation Overview

The InterMail version 4.1.2 release (build 201-229-116) includes both a complete installation package for new customers and a patch for existing customers (customers with a prior InterMail version already in place). Which of these items you use will depend on your installation's current status.

Review the appropriate section below for an outline of the steps for your particular installation.

1.3.1 New Customers

New customers should follow the standard installation instructions documented in the InterMail Installation Guide. This guide has been improved as of the 4.1.2 release for your benefit.

Note: A high-level outline of installation steps is provided below for your convenience. However, for detailed instructions on a standard InterMail installation, see the improved InterMail Installation Guide.

The standard installation consists of three operations:

1. Install the Oracle software on all machines running either the Integrated Services Directory or Message Store database.
2. Install the InterCore software on each host in the InterMail system.
3. Install the InterMail software on each host in the InterMail system.

Note: *There is no need to apply any of the Oracle patches (imora4msspatch, imora4dirprepatch, imora4dirpatch, etc.) for new installations of 4.1.2.*

1.3.2 Existing Customers on Versions Prior to 4.1.1.x

In order to apply the InterMail 4.1.2 patch you must be running a minimum release level of InterMail 4.1.1.

If you have InterMail versions 4.0, 4.0.1, 4.0.2, 4.0.3, or 4.1, you must obtain the 4.1.1 release, follow its instructions, and apply that patch release *before* applying the 4.1.2 maintenance patch release.

Warning! The 3.2 to 4.x upgrade is not supported for the 4.1.2 release. If you are currently using InterMail 3.2.x, you must first upgrade from 3.2.x to 4.1.1.x, then apply the patch to move from the 4.1.1.x release to the 4.1.2.x release.

To upgrade from 3.2.x to 4.1.1.x, you will need to obtain the 4.1.1.x release and the improved 3.2.x to 4.1.1.x Upgrade Procedure and Documentation.

1.3.3 Existing Customers on the 4.1.1.x Release

Sites running InterMail 4.1.1 or higher may update directly to InterMail 4.1.2. The following list provides a high-level overview of patch operations in the recommended order:

1. Apply the OS patch levels for Solaris. See Section 1.4.1.
2. Apply the patch to Oracle 7.3.4.3 if you have not already done so as part of the update to 4.1.1.x. See Section 1.4.2 for details.
3. Apply the InterMail patches in the following order:
 - Patch the Directory hosts. See Section 1.4.3.
 - Patch the hosts running Directory Cache Servers. See Sections 1.4.4, 1.4.5 and 1.4.6.
 - Path the front end hosts (MTA, POP Server, IMAP Server, Web Server based components). See Section 1.4.7.
 - Patch the Message Store hosts (MSS). See Section 1.4.8.

Although there are multiple ways to apply the InterMail 4.1.2 solution, our testing efforts were concentrated on the method published in this document. Therefore, you are strongly recommended to perform patch operations in the order described herein.

1.3.4 Prerequisites and Special Considerations

The interoperability of InterMail components between 4.1.1.x and 4.1.2.x is improved over prior releases. However, to minimize potential interoperability issues, Software.com recommends that you apply the patch in the order documented. If you deviate from the recommended order of patch application, please observe the following considerations.

- To avoid compatibility issues between 4.1.1.x and 4.1.2.0 components, you should apply the Oracle patches for the directory (imora4dirprepatch and imora4dirpatch) first. These

patches add the `pref_imapsslaccess` attribute and assign it to the default class of service (among other things). That attribute is required for compatibility between the 4.1.2 MTA and the 4.1.1.x Directory Cache Server.

If for some reason you absolutely cannot run the `imora4dirprepatch` and `imora4dirpatch` patches before applying any InterMail 4.1.2 software, you must add the `pref_imapsslaccess` attribute manually and assign it to the default class of service. Use `imdbcontrol` to perform this function, as in the following:

1. Create `pref_imapsslaccess`:

```
% imdbcontrol cca pref_imapsslaccess A S
```

2. Add `pref_imapsslaccess` to the user's COS:

```
% imdbcontrol sca default pref_imapsslaccess none
```

- You must run the ISD Oracle patches (`imora4dirprepatch` and `imora4dirpatch`) before using a 4.1.2 Directory Cache Server.
- You cannot bring up a 4.1.2 Directory Cache Server without first creating a 4.1.2 cache file. Create the new cache file using the updated version of the `imdirsync` utility shipped with the InterMail 4.1.2 software. If you do not create a new 4.1.2 cache file, you will not be able to start your 4.1.2 Directory Cache Server. (Also note, you cannot use a 4.1.1.x Directory Cache Server host with a 4.1.2 cache file.) Suggestions for upgrading Directory Cache Servers are provided in Section 1.4.4.
- The Directory Cache Server hosts must be updated one at a time. You should be able to run your site with both 4.1.1.x and 4.1.2 Directory Cache Servers provided the following conditions are met:

The different Directory Cache Servers are installed on separate hosts.

Each 4.1.1.x Directory Cache Server is using a cache created with 4.1.1.x software, and each 4.1.2 Directory Cache Server is using a cache created with 4.1.2 software

The appropriate versions of the cache utilities are used—the InterMail 4.1.1.x versions of `imdirsync`, `imcachecontrol` and `imcachread` with the InterMail 4.1.1.x cache and Directory Cache Server., and the 4.1.2.x versions of `imdirsync`, `imcachecontrol` and `imcachread` with the InterMail 4.1.2 cache and Directory Cache Server

- You should not turn on or attempt to use the bucketized deferred MTA feature until both the Queue Server and MTA components are updated to the 4.1.2 level. This feature is off by default as shipped in the 4.1.2 patch and should remain off until both components are updated to the 4.1.2 level.
- Many of the manual workaround steps related to patch application have been resolved for the InterMail 4.1.2 release. However, there are two exceptions that still require attention. These exceptions relate to customizations you may have made to the InterManager and WebMail products at your site. If you have customized either of these applications you should be aware of the following:

The InterMail 4.1.2 patch will overlay the InterManager and WebMail components with the latest fixes and improvements to these components. Customizations will have to be adjusted back into these products.

The InterMail 4.1.2 patch will generate new versions of the `httpd.conf` and `snmpd.conf` files. These files were updated to support functionality delivered as part of the InterMail 4.1.2 solution. The 4.1.2 Web Server and 4.1.2 `snmpd` components will not function with 4.1.1.x files, as those files are not compatible with the 4.1.2 software. Therefore, if you made customizations to the 4.1.1.x files, you will have to consider if you want to make the same adjustments in the new versions.

- The Oracle 7.3.4.3 patch can be applied before or after the InterMail portion of the update as the two operations are completely independent. A soft maintenance window is needed for both the Oracle update and the InterMail utility to recreate indexes.

1.4 Installation Instructions

Before executing any of these instructions, please review the previous section to ensure that your site has met *all* prerequisites and that you understand the special considerations outlined in the installation overview.

1.4.1 Applying OS patch levels for Solaris platforms

An operating system update is recommended for Solaris platforms for the 4.1.2 version of InterMail. The update must be applied to each host in the InterMail system so that all hosts are operating at certified and supported levels.

OS level updates must be performed in a maintenance window.

Please refer to the operating system vendor's instructions for details on operating system update procedures.

OS Patch Updates for Solaris

As mentioned in Release Notes for 4.1.1, the Solaris 2.51 OS level is no longer supported for InterMail as of the 4.1.2 Maintenance Release. Therefore, you will need to go to the 2.6 level with patch level -08 or -13 prior to installing the 4.1.2 Maintenance Release.

The 4.1.2 Maintenance Release includes OS patch updates for Solaris. The update moves your OS to the 2.6 -13 level of Solaris. Patch installation instructions are available from SUN. See the Solaris 2.6 -13 Patch Kit Details in Section 1.2.2 for more information.

1.4.2 Upgrading to Oracle 7.3.4.3

Before patching to InterMail version 4.1.2 you should ensure that you are running the correct version of Oracle.

The Oracle database was upgraded to the 7.3.4.3 level as part of the 4.1.1.1 Service Pack release. It is assumed that you are currently running this level of Oracle. If you have not yet upgraded to Oracle 7.3.4.3, please do so before patching to InterMail 4.1.2.

The instructions that follow provide a detailed description of the Oracle upgrade procedure. Please use these instructions instead of the instructions packaged in the install file which ships with this patch as they are an updated and improved version.

All hosts running a Directory database instance or a Message Store database instance must be updated. Patching to Oracle 7.3.4.3 will take approximately one hour per host and requires a maintenance window. The type of maintenance window required depends on the type of host you are upgrading.

The following chart describes minimal maintenance window considerations:

Host	Impact on Provisioning	Impact on Mail Flow
MSS	No impact unless ISD and MSS are both on the same host.	<p>During the Oracle 7.3.4.3 patch application users with mailboxes on the MSS host being patched will be denied access to their mail. The MTA will defer delivery of messages to mailboxes on this host until patch application is complete.</p> <p>Users whose mailboxes reside on other MSS hosts with separate Oracle installs will not be affected.</p> <p><i>Note: While the MSS instance is being upgraded, you may want to post a web page for WebMail users indicating that service is temporarily unavailable.</i></p>
ISD	Stopped during Oracle 7.3.4.3 apply in window	Mail will flow uninterrupted except at the very end of the maintenance window when the Directory Cache Servers are bounced to

Before you go into a maintenance window, log in to the `oracle` account and verify that the environment is set to the correct `ORACLE_BASE`, `ORACLE_HOME`, `ORACLE_SID` and `PATH`. The `USER` and `LOGNAME` environment variables should be set to “`oracle`” (unless Oracle is installed at your site under a Unix user other than the default “`oracle`”). If the “`su`” command is used to log in as the `oracle` user, use “`su - oracle,`” not “`su oracle.`”

1. Go into a maintenance window. The type of window varies depending on the host.

If the host you are upgrading contains an Directory Cache Server, these directory caches can remain up, but provisioning tools must be stopped as indicated above and all users must be

off the Oracle system. This is done by bringing down the listener and bouncing Oracle to remove the users that are logged into the Oracle instance. These steps are explained in Step 4.

If the host you are upgrading contains an MSS, that MSS and any MSS that accesses that MSS Oracle instance will need to be brought down prior to upgrading the Oracle. Your MTA will defer mail for this MSS while it is down and the POP Server will indicate that the MSS is unavailable. For WebMail clients, you may want to post a web page at your site indicating that the service is temporarily disabled for clients accessing the respective MSS host that is being upgraded.

The instructions that follow are common for the applicable host except where stated differently.

2. Make a directory for the patch set. Copy the downloaded file (in BINARY form) to this directory (using the name 7343patchset.Z for example). Then change to this directory, uncompress, and untar the patch set.

Example:

```
% mkdir $ORACLE_HOME/patchset
% cd $ORACLE_HOME/patchset
% uncompress 7343patchset.Z
% tar xvf 7343patchset
```

3. This will create a new directory using the patch set version underneath the current directory.

Example:

```
$ORACLE_HOME/patchset/7.3.4.3
```

4. Shutdown all instances running from this \$ORACLE_HOME. This should be a clean shutdown (i.e. shutdown immediate). You must ensure that no one is using the Oracle executable, otherwise you may get an executable busy message and be unable to copy onto it.

Typically there will just be one database running out of the \$ORACLE_HOME: a directory (ISD) database –IMD1, or an MSS database –IMM1; however, sometimes both databases share the same \$ORACLE_HOME. In the latter case, verify that both databases are down before continuing. You can use the “shutdownDB <db instance>” utility to stop the database(s). See the following steps to shutdown a database:

Make sure both ORACLE_HOME and ORACLE_SID are set properly.

```
% echo $ORACLE_HOME $ORACLE_SID
% svrmgrl
> connect internal
> shutdown immediate
> exit
```

5. Shutdown the listener:

Example:

```
% lsnrctl stop
```

6. Start the Installer that was provided in the baseline release. If it is installed on your system, it is under the \$ORACLE_HOME/orainst/orainst directory.

Example:

```
% cd $ORACLE_HOME/orainst
% ./orainst
```

7. The “oraInst” utility has two interfaces: a character based one, and a Motif based GUI. The latter is the easiest to use. You can run the Motif based version as follows:

Example:

```
% cd $ORACLE_HOME/orainst
```

Make sure DISPLAY is set properly. You will need to set the IP address of the computer you are working on to view the Motif based GUI.

Example:

```
% setenv DISPLAY <ip address>:0.0
```

Note: You must enter ‘:0.0’ after IP address in order to view the GUI.

```
%echo $DISPLAY  
%./orainst /m
```

Note: If the Motif version refuses to start up successfully, run `./orainst -h`. This will print out documentation that might be helpful.

8. At the install screen, you will be given the choice between the default install and the custom install. Select “Custom Install.”
9. At the Installation Activity Choice screen, choose the “Install, Upgrade, or De-Install Software” option.
10. At the Installation Options screen, choose the “Add/Upgrade Software” option.
11. At the “Installation Options: Home Locator” screen, verify that the setting for \$ORACLE_HOME is correct.
12. At the next screen, “Logging Status,” you will specify the locations of the log files. There are four: the installer log, the SQL log, the makefile log, and the OS log. It is likely that you will have to change the location of these log files. It is suggested that you place these files in the \$ORACLE_HOME/orainst directory.
13. At the install source screen, select the “Install from CD-ROM” option.
14. At the “\$ORACLE_LINK Directory” screen, enter the pathname of the directory where the untarred patch set is located.

Example:

```
$ORACLE_HOME/patchset/7.3.4.3.0
```

15. When prompted for what languages to install, it is suggested that you select “All languages.”
16. At the “Root Install Script File” screen, select “Create new root.sh file.”
17. At the “Save root.sh File” screen, make sure the pathname is appropriate. You will need to change it if it comes up as “/nfs/oracle/RELEASE_AREA/ORACLE_INSTALLATIONS/...”. It is suggested that you enter the name \$ORACLE_HOME/orainst/root.sh0
18. Accept “relinking” when prompted by the Installer.

19. At the Software Asset Manager screen, use the “From . . .” button to navigate to the directory where the untarred patch set is located.

Example:

```
$ORACLE_HOME/patchset/7.3.4.3.0
```

20. Select the `unix.prd` file from this directory.
21. Select “Oracle7 Server” from the sub-window labeled “Products available on...” Click the “Install” button. Answer “yes” when asked if you want to upgrade an Oracle feature to 7.3.4.3.0. Click “OK” when the two screens come asking what group can act as dba or OSOPER.
22. The installer will ask you if you want to “upgrade the software to 7.3.4.3.” Answer “yes.”
23. Next, select the dba group and the OSOPER group.
24. When the Installer has finished, it prompts you to run the `root.sh` script. You do *not* have to run the `root.sh` script after installing a patch set.
25. After upgrading, you will be returned to the “Software Asset Manager Screen.” Click on the “Exit” button in order to stop the Installer.
26. Repeat this step for every database instance that runs out of `$ORACLE_HOME`. Typically there will only be one database running out of `$ORACLE_HOME`, but some locations will have both a directory and an MSS database sharing the same `$ORACLE_HOME`.
27. echo the `ORACLE_SID` before you start it.

Example:

```
% echo ORACLE_SID
```

28. `cd ORACLE_HOME/rdbms/admin`. This is where you run the server manager script, as in the following example:

```
% cd $ORACLE_HOME/rdbms/admin
```

Set `ORACLE_SID` to the name of the db, for example, “`setenv ORACLE_SID IMM1`.”

```
% setenv ORACLE_SID DbName
% svrmgrl
> connect internal
> startup
> @catalog.sql
> @catproc.sql
> @catrep.sql
> @catexp.sql
> exit
```

29. These scripts will take approximately 60 minutes to run. The following are estimates for each .sql scrip based on a user base of 50,000 accounts:

.sql script	Estimated time
@catalog.sql	4 minutes
@catproc.sql	24 minutes
@catrep.sql	20 minutes
@catexp.sql	2 minutes

30. Start all Oracle database instances (as the `oracle` user) by running the following command:

```
% startupDB [dbname]
```

Where:

dbname Name of the Oracle database instance.

Do this for both the directory and the MSS instances.

31. Start the listener by running the following command:

```
% lsnrctl start
```

Depending on the type of host (IMD or MSS), you will take different actions at this point.

If you just patched Oracle to 7.3.4.3 for an ISD, you will need to bounce the Directory Cache Server(s) on all hosts that connect to this ISD database. Log in as the InterMail user (`imail` by default) and “bounce” the Directory Cache Server for all hosts that a Directory Cache Server runs on. This ensures a proper reconnection of the Directory Cache Server to the ISD after the upgrade and is highly recommended. The following is an example of how to run the command:

```
% ~/lib/imservctrl startStop imdircacheserv
```

If you just patched Oracle 7.3.4.3 for an MSS, you will need to start up the MSS server(s) that access this MSS instance. The following is an example of how to run the command:

```
% ~/lib/imservctrl restart mss
```

32. You can now start your provisioning software to provision accounts if this was an upgrade of an Oracle impacting an ISD.
33. You can now start sending/receiving/popping mail from/to mailboxes on this MSS if this was an upgrade of an Oracle on an MSS.

Patch Considerations

At this point, InterMail 4.1.1 (201-229-111) will operate with the patched Oracle 7.3.4.3. You can continue with the patching up of the InterMail binaries from 4.1.1 to 4.1.2, or you can keep InterMail 4.1.1 in its present state. Additional maintenance windows will be required if you choose to patch to 4.1.2, although the “down-time” is much less depending on the number of InterMail accounts.

You will also want to consider running the `imdbindexrecreate` utility to recreate the indexes that will eliminate/prevent index and data corruption from resulting. For additional information on the `idbindexrecreate` utility refer to Section 1.5, Cautions and Special Instructions.

1.4.3 Upgrading the Integrated Services Directory (ISD) Host

The ISD should be upgraded first, before all other InterMail update operations are performed. Upgrading the ISD is a multi step procedure. The following table summarizes the steps involved. Explicit instructions for each step are provided in the sections that follow.

Steps	Mail Send/Receive	Provisioning Possible	Approximate Time
Apply <code>imora4dirprepatch</code>	Yes, done live	Yes, done live	10 minutes
Apply <code>imora4dirpatch</code>	Yes, <code>imdircacheserv</code> is doing cache reads while the ISD is down	No provisioning in this step	10 minutes
Restart Directory Cache Servers on all hosts	No	No	1-2 minutes

Apply pre-patches to the ISD (`imora4dirprepatch`)

The first step in updating the ISD is to apply any required pre-patches. The InterMail 4.1.2 patch contains a single ISD pre-patch called `imora4dirprepatch`.

The `imora4dirprepatch` utility carries out schema changes to the ISD database. These changes can be made while InterMail is up and running. The Directory Cache Server can be connected to the database while `imora4dirprepatch` is being applied, and account provisioning can continue unabated while `imora4dirprepatch` runs.

The intention of this patch solution is to minimize the maintenance window required for the application of InterMail patches. Because this patch is run live, it is recommended that you apply this patch at a lower activity point for your mail service. The service impact of running this portion of the patch is minimal since both mail flow and provisioning can continue in an uninhibited manner. The estimated time for the `imora4dirprepatch` patch to run is 10 minutes, based on one of our test runs in which updating a directory of 25,000 accounts took one minute of actual processing time.

Applying the Patch

The patch should be applied as the `oracle` Unix user on the host with the directory or ISD database. (Note: This file should be outside the patch tar file for your convenience.):

```
su - oracle
```

Verify that the `ORACLE_HOME` and `ORACLE_SID` environment variables are set properly:

```
echo $ORACLE_HOME $ORACLE_SID
```

Run the following command:

```
% imora4dirprepatch -id <user>/<pass> -dbname <ORACLE_SID>
```

Where:

`<user>/<pass>` The username and password for the Oracle InterMail user (imail/imail by default).

<ORACLE_SID> The name of the Integrated Services Directory database instance
(IMD1 by default).

It is best to run `imora4dirprepatch` off-peak, because it potentially creates disk contention that could degrade performance.

The `imora4dirprepatch` Schema Changes

The `imora4dirprepatch` utility creates a `PODCRLOG` tablespace, and an `LDAPX2` tablespace. The latter tablespace is only created if support for InterManager is installed in the database.

Patch Considerations

After applying `imora4dirprepatch`, InterMail 4.1.2 (201-229-116) will still operate with the patched Oracle 7.3.4.3. You can continue with the patching of the ISD and the InterMail 4.1.2 binaries or you can keep InterMail 4.1.1 in its present state. Additional maintenance windows will be required if you choose to patch to 4.1.2, although the “down-time” is much less depending on the number of InterMail accounts.

Patch the ISD (`imora4dirpatch`) and Restart All Directory Cache Servers

The next step in the Oracle upgrade is to apply the `imora4dirpatch`. This utility completes the work started by `imora4dirprepatch` and brings a previously installed pre InterMail 4.1.2 directory database's schema up to date.

The `imora4dirpatch` utility must be run during a maintenance window. Otherwise, database clients (like the Directory Cache Server) will encounter obscure Oracle errors. There can be no provisioning taking place on accounts; however, mail can continue being sent and the Directory Cache Server can be running.

This procedure has to be done on all hosts that run a Directory Cache Server. Typically the estimated time for the `imora4dirpatch` utility to run is 10 minutes, based on our test run for 25,000 accounts which took 4 minutes of processing time.

When the `imora4dirpatch` utility is finished, you can start provisioning the accounts, back out of the maintenance window, and continue sending mail.

Maintenance Window Required

1. To ensure that no programs are connected to the database during the patch, the following procedure can be utilized. This will work as long as all programs connect to the directory database via Oracle `Sql*Net`.

```
% su - oracle
% echo $ORACLE_SID
```

2. Stop the listener.

```
% lsnrctl stop
```

3. Connect to the `svrmgr1` and run the following commands:

```
% svrmgr1
> connect internal
> shutdown immediate
> startup
> exit
% sh imora4dirpatch -id imail/imail -dbname IMD1
% lsnrctl start
```

Note: This process takes 4 minutes for every 25,000 accounts.

Syntax:

```
% imora4dirpatch -id <user>/<pass> -dbname <ORACLE_SID>
```

Where:

<user>/<pass> The username and password for the Oracle InterMail user (imail/imail by default).

<ORACLE_SID> The name of the Integrated Services Directory database instance (IMD1 by default).

4. To ensure that the newly restarted Oracle instance can reconnect, go to each host running a Directory Cache Server and restart the Directory Cache Server using the following command:

```
% ~/lib/imservctrl restart imdircacheserv
```

Patch Considerations

At this point, InterMail 4.1.1 will operate with the patched Oracle 7.3.4.3. From here you can continue with the patching of the InterMail 4.1.2 binaries, or you can keep InterMail 4.1.1 in its present state. The imora4dirprepatch and imora4dirpatch patches add COS values and improve compatibility between the 4.1.1 and 4.1.2 components.

Additional maintenance windows will be required if you choose to patch further into to 4.1.2. Please review the next section carefully for other issues to consider before proceeding with the update.

1.4.4 Preparing to Update the Directory Cache Servers

The next step in the application of the InterMail 4.1.2 solution is updating the Directory Cache Servers. This requires some thought and planning. The exact steps and plans will vary from customer to customer because the InterMail setup varies from site to site, but the general operations are as follows:

1. Verify that the imora4dirprepatch and the imora4dirpatch have been applied to your ISD. If not, apply them according to the instructions provided in Section 1.4.3.
2. Establish the first 4.1.2 Directory Cache Server via impatch (or a fresh install).
3. Run the imdirsync utility provided with the 4.1.2 software to create an initial 4.1.2 cache file for use by the initial 4.1.2 Directory Cache Server.
4. Update all other Directory Cache Servers host by host, copying the 4.1.2 cache file to each new host.

Considerations in the Choice of an Initial Directory Cache Server

How you establish the initial 4.1.2 Directory Cache Server and create the initial 4.1.2 cache file is a matter for careful consideration. There are a variety of options that can be chosen to accomplish this task and a number of issues to consider.

Issues to consider include the number of Directory Cache Servers used by the site, available additional hardware to use as a temporary machine, number of accounts in the directory, the load on the Directory Cache Server hosts and the setup of the site.

Options vary according to these considerations as well as customer preferences related to maintenance windows impacting mail flow and provisioning. These considerations and options will determine how you will apply the 4.1.2 patch solution to the first Directory Cache Server host. Please peruse the options and steps relating to `imdirsync` while contemplating the aforementioned considerations and other site specific considerations.

The imdirsync Command

The `imdirsync` command creates a directory cache from the content of the Integrated Services Directory (Oracle Database). Because the 4.1.2 Directory Cache Server will only function with a 4.1.2 cache file, a new 4.1.2 cache file must be created from the ISD via the 4.1.2 `imdirsync` utility before the 4.1.2 Directory Cache Server can be put into service.

It is possible that the `imdirsync` command will take a considerable amount of time to run, perhaps more time than is desired for a maintenance window.

Provisioning: Enabled vs. Disabled

Before `imdirsync` is run, a decision has to be made whether or not to disable provisioning. Some elements to consider are:

- The time it will take for `imdirsync` to run. The `imdirsync` processes approximately take one minute for every 25,000 accounts.
- The number of Directory Cache Server hosts in your InterMail system. At least one Directory Cache Server host needs to be running for provisioning to be allowed via InterManager. However, you can continue provisioning via `imdbcontrol` and the InterMail APIs provided your provisioning mechanism does not access `imdbcontrol` and the InterMail APIs on the Directory Cache Server host that is currently being updated. In a multiple Directory Cache Server system, one Directory Cache Server host could be chosen to shutdown and run `impatch` and `imdirsync`, while the other Directory Cache Server hosts pick up the load. In a single directory cache host system, the only option you have to keep provisioning enabled would be to install InterCore/InterMail on a test host and run `imdirsync` from there.

If you plan to keep provisioning enabled then value of the `logAgeHours` must be set to the following:

```
/*/imdirscacheserv/logAgeHours: [X+3]
```

Where:

<code>X+3</code>	The estimated time it will take for your site to run <code>imdirsync</code> . It processes approximately 25,000 accounts per minute. Determine the number of accounts in your ISD and divide it by 25,000. The result is the total estimated minutes to run <code>imdirsync</code> . Next convert this estimated time to hours and then add 3 for a safety factor.
------------------	--

By doing this equation, you are making sure that when `imdirsync` finishes, any `IM_LOG` entry that was created right after the `imdirsync` started is still apparent, and the Directory Cache Server can pick up that change via periodic update process.

Increasing the value for the `logAgeHours` configuration key also increases the space requirement for the `IM_LOG` table in your ISD. Verify that the Oracle table space containing

IM_LOG has sufficient free space before increasing the value of logAgeHours. Once imdirsync is run, change the value of logAgeHours back to its original setting

Choosing a Host

In a multi Directory Cache Server host system, one of the existing hosts could be chosen for the initial run of `impatch` and `imdirsync`. A directory cache host with lower activity probably should be chosen.

Another option is to install a Directory Cache Server on a test host and then run `imdirsync` on that host.

The `impatch` Utility

The `impatch` utility upgrades the InterMail binaries. You will need to apply `impatch` on every InterMail host in your system on a host by host basis.

This utility runs as a script that includes questions you will be required to answer before the upgrade operation can be executed. Therefore, you should be prepared to identify the following items before attempting to run this utility:

- The name of the InterMail UNIX user (`imail`, by default)
- The path to the InterMail directory
- The location of the patch file
- The path to the temporary working directory

Note: You will need approximately 86 Mb of free space for the data that will be expanded into the temporary working directory.

To run `impatch`, do the following:

```
% su
% csh
% source ~imail/.cshrc
% ./impatch
```

1.4.5 Updating the Initial Directory Cache Server

Upgrading the initial Directory Cache Server host is a multi step procedure. The following table summarizes the steps involved. Explicit instructions for each step are provided in the sections that follow.

Steps	Mail Send/Receive	Provisioning Possible	Approximate Time
Update InterCore and InterMail components by running <code>impatch</code> (or install new 4.1.2 components on a test machine)	Yes, if multiple Directory Cache hosts	Yes, depending on the configuration of your site and the method of provisioning you employ.	5-10 minutes
Create the initial 4.1.2 cache file by running <code>imdirsycn</code>	Yes, if multiple Directory Cache hosts	Yes, depending on the configuration of your site and the method of provisioning you employ.	10,000 accts/min to 25,000 accts/min
Verify that <code>imsysmon</code> is working after you apply the patch	Yes	Yes	15 minutes

You can establish the initial Directory Cache Server one of two way:

- by installing a new server on a test machine, or
- by upgrading an existing Directory cache Server

The first method would be preferable in installations with a single Directory Cache Server in operation, but the option you select will depend on the particular requirements of you site. (See Section 1.4.4 for additional information.)

The sections that follow provide instructions for either method, followed by instructions for the remaining (non-optional) operations.

Option 1: Establish the initial 4.1.2 Directory Cache Server by Installing it on a Test Machine

1. Install Oracle `SqlNet`. For complete details on this, refer to *the InterMail Installation and Migration Guide*.
2. After installing `SqlNet`, verify that the `tnsname.ora` file is set up properly. This file can be found in the `$TNS_ADMIN/` directory. Edit this file and verify that host and port entries within the ISD's Oracle Instance section (for example, `IMD1`) refer to the production ISD host.

3. Install InterCore 4.1.2. For complete details on this, refer to the *InterMail Installation and Migration Guide*. All that needs to be installed this test host is the Directory Cache Server (`imdircacheserv`). The `imconfserv`, `snmp`, and `http` servers do not need to be installed.

Option 2: Establish the initial 4.1.2 Directory Cache Server by Updating an Existing Directory Cache Server Host

1. On the chosen Directory Cache Server Host, shut down all the InterMail/InterCore servers by executing the following command as the `imail` user:

```
% ~/lib/imservctrl stop
```

2. Run `impatch`. See the Section 1.4.4 for instructions. The time frame for running `impatch` should be take approximately 7-10 minutes.

At least one Directory Cache Server host needs to be running for provisioning to be allowed via InterManager. However, you can continue provisioning via `imdbcontrol` and the InterMail APIs provided your provisioning mechanism does not access `imdbcontrol` and the InterMail APIs on the Directory Cache Server host that is currently being updated.

However, If you only have one Directory Cache Server host, this will stop mail flow. If this is not acceptable, you will need to either choose Option 1 or have more than one Directory Cache Server host so that another host can handle the load for mail flow and provisioning while you are running `impatch`.

Create a New 4.1.2 Cache File

Regardless of the option selected for establishing the initial 4.1.2 Directory Cache Server, you must now use the 4.1.2 `imdirsync` utility to create the initial 4.1.2 cache file.

At least one Directory Cache Server host needs to be running for provisioning to be allowed via InterManager. However, you can continue provisioning via `imdbcontrol` and the InterMail APIs provided your provisioning mechanism does not access `imdbcontrol` and the InterMail APIs on the Directory Cache Server host that is currently being updated.

If you run `imdirsync` on your only Directory Cache Server host, mail flow will be stopped and provisioning will be shutdown. If this is not acceptable, you will need to either choose Option 1 or have more than one Directory Cache Server host so that another host can handle the load for mail flow and provisioning while you are running `imdirsync`.

To run `imdirsync` do the following:

1. If the decision was previously made to disable provisioning while running `imdirsync`, please do it now for all accounts. If the decision is to keep provisioning enabled, then set the `logAgeHours` configuration key, according to the explanation described in Section 1.4.4.
2. Log in as your `imail` account to the host that you are choosing to run `imdirsync` on.
3. Shut down the InterMail servers on this host by running the following command:

```
~/lib/imservctrl stop
```

4. Run `imdirsync`. It will process approximately 25,000 accounts per minute. Times vary according to equipment used at site and your setup.

```
% ~lib/imdirsync
```

5. Start up the InterMail servers

```
% ~lib/imservctrl start
```

It is very import to run this step immediately after the `imdirsync` has completed. This will ensure that the directory cache files, now at 4.1.2 format, do not get old and become unusable. The directory cache files will become old if the time to it takes to run `imdirsync` and start up the servers is greater than the value defined in the `/*/imdircacheserv/logAgeHours` configuration key.

If provisioning was disabled, enable it now.

If it was enabled during this process, change the `/*/imdircacheserv/logAgeHours` configuration key back to its original setting. The Directory cache files on this host, now at 4.1.2 level, may need to catch up with any provisioning that has occurred since while `imdirsync` was running. The Directory Cache Server will do this through its periodic update process.

Note: For more information on the `imdirsync` command, see the InterMail Reference Guide.

Verify that `imsysmon` is Running

The `imsysmon` program was improved in the 4.1.2 InterMail solution. The 4.1.2 `imsysmon.ini` file format has changed to incorporate new features. However, the 4.1.2 `imsysmon` component is backward compatible and will work fine with the existing `imsysmon.ini` file existing at the customer site.

Each site should check to ensure their monitoring software is working correctly after performing a patch apply for a specific host. The `imsysmon` utility is an example of a key monitoring program that should be checked to ensure it is working properly and its notification system functioning as it should.

Patch Considerations

As long as a single Directory Cache Server host is completely updated (both the Directory Cache Server and its associated cache file), you can run your site in this state and update subsequent hosts on different days or times.

Additional maintenance windows may not be required to update subsequent hosts.

1.4.6 Updating Subsequent Directory Cache Servers

The following table summarizes the steps involved in upgrading subsequent Directory Cache Servers. These steps must be performed once for every Directory Cache Server host (hosts that contain a Directory Cache Server) in your InterMail Installation. Explicit instructions for each step are provided in the sections that follow.

Steps	Mail Send/Receive	Provisioning Possible	Approximate Time
Update InterCore and InterMail components by running <code>impatch</code> on other <code>imdircacheserv</code> hosts, then copy an existing 4.1.2 cache file to the updated host	Yes, if multiple Directory Cache hosts	Yes, depending on the configuration of your site and the method of provisioning you employ.	10 minutes plus time to ftp or cp cache file on file system
Verify that <code>imsysmon</code> is working after you apply the patch	Yes	Yes	15 minutes

Update the Existing Directory Cache Server

1. On the chosen Directory Cache Server Host, shut down all the InterMail/InterCore servers by executing the following command as the `imail` user:

```
% ~/lib/imservctrl stop
```

2. Run `impatch`. See the Section 1.4.4 for instructions. The time frame for running `impatch` should be take approximately 7-10 minutes.

If you only have one Directory Cache Server host, this will stop mail flow, however provisioning may continue.

At least one Directory Cache Server host needs to be running for provisioning to be allowed via InterManager. However, you can continue provisioning via `imdbcontrol` and the InterMail APIs provided your provisioning mechanism does not access `imdbcontrol` and the InterMail APIs on the Directory Cache Server host that is currently being updated.

Replace the Current Cache File with the 4.1.2 Cache File Previously Created

The new 4.1.2 directory cache Server will only operate with a 4.1.2 cache file. Rather than rerun `imdirsync` to create a new 4.1.2 cache file (a potentially time consuming operation), use the following instructions to copy an existing 4.1.2 cache file.

1. Log into any current Directory Cache Server host that has already been patched to InterMail 4.1.2 and had `imdirsync` run to convert the caches files to the 4.1.2 level. Log in as the `imail` user.

2. Shut down the Directory Cache Server by running the following command:

```
% ~/lib/imservctrl stop imdircacheserv
```

At this point mail flow will occur within a multi Directory Cache Server host system, but will be stopped on a single Directory Cache server host system.

At least one Directory Cache Server host needs to be running for provisioning to be allowed via InterManager. However, you can continue provisioning via `imdbcontrol` and the InterMail APIs provided your provisioning mechanism does not access `imdbcontrol` and the InterMail APIs on the Directory Cache Server host that is currently being updated.

3. Go to the directory where the Directory Cache files exist:

```
% cd $INTERMAIL/dirCacheDB
```

4. FTP all the cache files to a temp directory on the current Directory Cache host that will now be updating to InterMail 4.1.2. When finished quit out of your FTP session

5. Start up the Directory Cache Server on the directory cache host that you just FTP the 4.1.2 Directory Cache files from.

```
% ~/lib/imservctrl start imdircacheserv
```

6. Log back in, as your `imail` account, to the current Directory Cache host that you are upgrading to InterMail 4.1.2.

7. Remove any `*.db` files in the `$INTERMAIL/dirCacheDB` directory. Next copy the Directory cache files from the temp directory, from step 5 above, to the `$INTERMAIL/dirCacheDB` directory. After the copy has completed, check the permissions of the new `*.db` files to make sure they have `read/write` permission for the `imail` user and group `unix` accounts

8. Finally restart all of the servers on this current Directory Cache host:

```
% ~/lib/imservctrl start
```

9. At this point, the current Directory Cache host has been successfully patched to InterMail 4.1.2. Repeat steps above for any subsequent Directory Cache hosts that need to be upgraded.

Verify that imsysmon is Running

The `impatch` utility copies in a new file named `imsysmon.ini.201-229-116` during the patch installation. The `.ini` file is copied into the `/config` directory of your InterMail installation. This file is an updated `imsysmon.ini` file for feature improvements included with the 4.1.2 version of `imsysmon`.

Each site should check to ensure their monitoring software is working correctly after performing a patch apply for a specific host. The `imsysmon` utility is an example of a key monitoring program that should be checked to ensure it is working properly and its notification system functioning as it should.

1.4.7 Patching Hosts with No MSS or Directory

The following is a set of instructions on how to apply the InterMail 4.1.2 patch on hosts that do not have an MSS or Directory. These are hosts that do not have Oracle instances and do not have Directory Cache Server or MSS's. Therefore, these hosts have a reduced set of considerations and application steps. There may be multiple hosts of these types at any given site. The following table outlines the steps needed to patch non-MSS and non-Directory hosts to InterMail 4.1.2.

Steps	Mail Send/Receive	Provisioning Possible	Approximate Time
Run <code>imservctrl</code> to stop servers on the host	Yes, in general if other hosts of same type exist and are up (POP, MTA, etc.)	Yes	1-2 minutes
Run <code>impatch</code> to update the InterCore and InterMail components	Yes, in general if other hosts of same type exist and are up (POP, MTA, etc.)	Yes	10 minutes
Re-adjust <code>httpd.conf</code> and <code>snmpd.conf</code> if customized at site since they will be overwritten by the patch	Yes, in general if other hosts of same type exist and are up (POP, MTA, etc.)	Yes	30 minutes
Run <code>imservctrl</code> to start servers on the host	Yes	Yes	1-2 minutes
Verify that <code>imsysmon</code> is working after you apply the patch	Yes	Yes	15 minutes
Verify that your <code>httpd</code> server and your <code>snmpd</code> components are working correctly	Yes	Yes	15 minutes

Stop Servers

Stop the servers on the host where you will apply `impatch`. To stop the servers on that host, run the following command:

```
% ~/lib/imservctrl stop
```

Run `impatch`

Start the `impatch` utility. If there is an MTA on the host that you are running `impatch` on, mail will get deferred. However, this mail will be processed when the server is restarted. Run the

`impatch` utility according to Section 1.4.4 instructions in the section. For more information, see the `readme` file that ships with the `impatch` utility.

Modify the `httpd.conf` and/or `snmpd.cnf` Configuration Files

The `impatch` utility copies in or generates a new version of the `httpd.conf` and the `snmpd.cnf` files during the 4.1.2 patch installation. There have been changes in these files that are necessary for the Web Server and `snmpd` related components to function properly with InterMail 4.1.2. These changes are incorporated or generated during the patch process so the service will function afterwards without manual intervention. However, these files will overwrite your existing files at your site. Normally this is not an issue; however, there is a chance at some sites the configuration stored in the `httpd.conf` and/or `snmpd.cnf` files may have been customized for tuning. In this case, it is advised that you ensure your changes are incorporated into the respective file before you bring the service back up. The original versions of these files as they existed before the `impatch` installation are preserved for your benefit.

Start Servers

Start the servers on the host where you applied `impatch`:

```
% ~/lib/imservctrl start
```

Verify that `imsysmon` is Running

The `imsysmon` program was improved in the 4.1.2 InterMail solution. The 4.1.2 `imsysmon.ini` file format has changed to incorporate new features. However, the 4.1.2 `imsysmon` component is backward compatible and will work fine with the existing `imsysmon.ini` file existing at the customer site.

Each site should check to ensure their monitoring software is working correctly after performing a patch apply for a specific host. The `imsysmon` utility is an example of a key monitoring program that should be checked to ensure it is working properly and its notification system functioning as it should.

The `impatch` utility copies in a new file named `imsysmon.ini.201-229-116` during the patch installation. The `.ini` file is copied into the `/config` directory of your InterMail installation. This file is an updated `imsysmon.ini` file for feature improvements included with the 4.1.2 version of `imsysmon`.

Note: *In general, you should upgrade all servers to 4.1.2 prior to enabling any new 4.1.2 enhancements. Specifically, you should not turn on the MTA deferred bucketize directory solution until the MTA and Queue Server components are successfully updated to the 4.1.2 level. In general, the hosts running 4.1.1.x components will be compatible with other hosts running 4.1.2 components, especially if you have updated the `imora4dirprepatch` and `imora4dirpatch` in the recommended order. See Prerequisites and Special Considerations Section if you have not run these first.*

1.4.8 Patching an MSS host (MSS)

When you patch the MSS host to InterMail 4.1.2, it must occur in a maintenance window. During the maintenance window, you will not be able to access the mailboxes on this MSS host. However, if you have multiple MSS hosts, the other MSS hosts will be able to service requests for the mailboxes on those respective hosts.

In general, the MSS machines should be patched last. The following table outlines the steps needed to patch the MSS to InterMail 4.1.2.

Steps	Mail Send/Receive	Provisioning Possible	Approximate Time
imservctrl to stop servers on the host	Partial if you have another MSS host that will be up during patch apply. The mailboxes on the other MSS's that are up will still be able to send/receive mail.	Yes, unless if ISD and MSS are on the same box.	1-2 minutes
make sure cron won't kick off immssgc or imbucketscreate during patch apply	Partial if you have another MSS host that will be up during patch apply. The mailboxes on the other MSS's that are up will still be able to send/receive mail.		5 minutes
run imora4msspatch to apply to MSS	Partial if you have another MSS host that will be up during patch apply. The mailboxes on the other MSS's that are up will still be able to send/receive mail.	Yes, unless if ISD and MSS are on the same box.	? minutes

Steps	Mail Send/Receive	Provisioning Possible	Approximate Time
impatch	Partial if you have another MSS host that will be up during patch apply. The mailboxes on the other MSS's that are up will still be able to send/receive mail.	Yes, unless if ISD and MSS are on the same box.	10 minutes
imservctrl to start servers on the host	Yes	Yes	1-2 minutes
Verify that imsysmon is working after you apply the patch	YES	Yes	15 minutes
Make sure cron is updated so immssgc and imbucketscreate function again	Yes	Yes	5 minutes

Stop Servers

Stop the servers on the host where you will apply `impatch`. To stop the servers on that host, run the following command:

```
% ~/lib/imservctrl stop
```

Stop cronjobs and immssgc and imbucketscreate

If there are any cronjobs running or the `immssgc` and/or `imbucketscreate` programs are started, you should stop the programs before running `impatch`.

Run imora4msspatch to apply Database update

The next step in the preparation and application of the InterMail 4.1.2 solution is to run the `imora4msspatch` for the MSS Oracle database. This patch should be available outside the `impatch` tar file for your convenience.

The `imora4msspatch` utility must be run during a maintenance window. Otherwise, database clients will encounter obscure Oracle errors. Mail will not be inserted or retrieved during this maintenance window for any mailbox on the respective MSS host.

Perform the following steps to update the MSS hosts:

1. Go into a maintenance window.
2. Shutdown the InterMail servers

```
% ~/lib/imservctrl stop
```

Apply the `imora4msspatch`. This file lives in the `/patch/bin` directory of the InterMail tar file that is delivered. The `imora4msspatch` utility performs schema upgrades that cannot be safely done with the MSS live. Therefore, the utility must be run during a maintenance window. This file will take approximately 10 minutes to run and took 2 minutes to run for a database with 50,000 accounts.

Syntax:

```
% imora4msspatch -id <user>/<pass> -dbname <ORACLE_SID> -tmpdir \  
<scratchDir>
```

Where:

`<user>/<pass>` The username and password for the Oracle InterMail user (imail/imail by default).

`<ORACLE_SID>` The name of the Integrated Services Directory database instance (IMD1 by default).

`<scratchDir>` The temporary directory where the scratch file will be written (e.g. `/var/tmp`).

3. Start the `impatch` utility. This will take approximately 7 minutes to complete.
4. Restart the MSS:

```
% ~/lib/imservctrl start
```

Run Impatch

Start the `impatch` utility. If there is an MTA on the host that you are running `impatch` on, mail will get deferred. However, this mail will be processed when the server is restarted. Run the `impatch` utility according to Section 1.4.4. For more information, see the `readme` file that ships with the `impatch` utility.

Start Servers

Start the servers on the host where `impatch` is intended to be applied. Restart the servers on that host.

```
% ~/lib/imservctrl start
```

Verify that imsysmon is Running

The `imsysmon` program was improved in the 4.1.2 InterMail solution. The 4.1.2 `imsysmon.ini` file format has changed to incorporate new features. However, the 4.1.2 `imsysmon` component is backward compatible and will work fine with the existing `imsysmon.ini` file existing at the customer site.

Each site should check to ensure their monitoring software is working correctly after performing a patch apply for a specific host. The `imsysmon` utility is an example of a key monitoring program that should be checked to ensure it is working properly and its notification system functioning as it should.

The `impatch` utility copies in a new file named `imsysmon.ini.201-229-116` during the patch installation. The `.ini` file is copied into the `/config` directory of your InterMail

installation. This file is an updated `imsysmon.ini` file for feature improvements included with the 4.1.2 version of `imsysmon`.

Reset the cronjob and immssgc and imbucketscreate

Check to ensure that the `cron` is set and that the `immssgc` and `imbucketscreate` are configured to start again at the correct times. After the patch installation, monitor the process after the first few times to ensure it is functioning correctly.

Note: *If you have multiple MSS instances at your site, you can repeat the above steps for each subsequent MSS instance. Your InterMail installation will function properly with some MSS hosts running at the 4.1.1.x level and some at the 4.1.2.x level.*

1.5 Cautions and Special Instructions

The sections that follow identify issues with the current software and provide special instructions that must be followed to ensure successful operation of your InterMail installation. You should not install the 4.1.2 release without first reviewing the information provided in this section.

Special Installation Instructions and Cautions

- This is a special note for Solaris InterMail 4.1.1 SNMP implementations:

The patch release delivers a new `snmpd.cnf` file. If you had implemented SNMP in your InterMail 4.1.1 environment and had customized that `snmpd.cnf` file, you will want to make those modifications in the new, patch-delivered file. You will find your old `snmpd.cnf` file in the `/patch` directory beneath the InterMail installation directory.

Also, the `config.db` key, `snmpdm_opt`, is being updated from

```
/*/sysadmin/snmpdm_opt: [-aperror ] to  
/*/sysadmin/snmpdm_opt: [-aperror -tcpany]
```

- During a patch install, the following error may be received when starting the MTA:

```
% File sslwrap.cxx; Line 494 # Error 1 [????] returned
```

If you are patching InterMail from a previous version, you will need to do the following to enable SSL:

1. Change the ownership of the `$INTERMAIL/lib/certs/im_default_certs.txt` file to `imail:imail` on all MTA and POP Server hosts.
2. Verify that there is a `sslCertChainPathAndFile` config key for all mta hosts, and it should look like the following example:

```
<host>/mta/sslCertChainPathAndFile:[<installDir>/lib/certs/  
im_default_certs.txt]
```

3. Verify that there is a `sslCertChainPathAndFile` configuration key for all POP Server hosts, and it should look like the following example:

```
<host>/popserv/sslCertChainPathAndFile:[<installDir>/lib/certs/  
im_default_certs.txt]
```

(ITS 25911)

- There is an error when running `imdbcontrol CreateAccount`. This error is produced when running `imbatchload` on the `sitestartup.batch` file:

```
% imdbcontrol ca testman venus 432234 testman testman clear
software.com A S default
imdbcontrol: Oracle Error executing command ca
Internal Error
```

This occurs because there are erroneous spaces in a section of the `sitestartup.batch` file:

```
key: ispdn#dc=software ,dc=com
```

The space between “software” and the comma should not be there. The above entry should look like this:

```
key: ispdn#dc=software,dc=com
```

(ITS 26002)

- During an InterMail installation, you are given the choice of which servers you want installed on a particular host:

The Manager server (immgrserv) will run on this host	required
The Configuration server (imconfserv) will run on this host	no
The SNMP server (snmpdm) will run on this host	no
SNMP management will be enabled	no
The Directory Cache server (imdircacheserv) will run on this host	no
The Web server (httpd) will run on this host	no
Do you accept these settings? (Yes/No/Quit) [yes] n	

Although “no” is the option selected, all servers are installed. (ITS 19930)

- There are special considerations that need to be taken when installing InterManager. If a domain (e.g. `software.com`) already existed prior to the InterManager installation, and InterManager is installed, using the default `sitestartup.batch` file with the same root level domain (e.g. `accordance.software.com`), an error is produced. InterManager will think that the `software.com` domain is in use.

For example, when a new organization is created called `software.com`, with a primary domain of `software.com`, the following error is given:

```
Permission denied
```

If the organization is created in an `imbatchextract` file, “already exists” and “object not found” errors are produced.

The root domain must be considered before the Administration Organization is made. (ITS 20648)

- When performing a patch installation, `~/lib/certs/im_default_certs.txt` has incorrect permissions. Change the ownership to `imail:imail` and the permissions will be set correctly. (ITS 20800)

Modifying the .profile and .cshrc Files

In order to identify the InterMail Perl directory after installation, set an environment variable for PERLHOME and modify the PATH statement for the .profile and .cshrc files to read the PERLHOME.

For example, the .cshrc file does not contain a PERLHOME variable and the PATH statement is as follows:

```
PATH=${INTERMAIL}/bin:${ORACLE_HOME}/bin:${INTERMAIL}/perl/bin: \
/sbin:/usr/sbin:/usr/bin:/usr/sadm/install/bin:.
```

Therefore, add a PERLHOME environment variable, as in the following example (which assumes /voll/imap as InterMail's home directory):

```
setenv PERLHOME /voll/imap/perl
```

...and modify the PATH statement:

```
PATH=${INTERMAIL}/bin:${ORACLE_HOME}/bin:${PERLHOME}/bin: \
/sbin:/usr/sbin:/usr/bin:/usr/sadm/install/bin:.
```

Similarly, modify the .profile file to reflect these changes (which assumes /voll/imap as InterMail's home directory):

```
PERLHOME=/voll/imap/perl
export PERLHOME
```

...and modify the PATH statement:

```
PATH=${INTERMAIL}/bin:${ORACLE_HOME}/bin:${PERLHOME} \
/bin:${HTTPD}/bin:/sbin:/usr/sbin:/usr/bin:/usr/sadm/install/bin:
export PATH
```

(ITS 19064)

In addition to the previous changes, another modification may be needed in the .profile file.

You will need to replace:

```
set VAR=value
```

with:

```
VAR=value
```

(ITS 20129)

The imdbindexrecreate Utility

The 7.3.4.3 Oracle patch can be applied before or after the InterMail impatch portion of the update is performed.

You want to update to the 7.3.4.3 version of Oracle because Oracle indicates that this patch level of Oracle will stop index corruption from occurring for all indexes created

A soft maintenance window is needed for both the Oracle update as well as the InterMail utility to recreate indexes.

There are two ways of preventing index corruption:

1. Run `imdbindexrecreate` on all InterMail indexes to recreate them after you have updated to Oracle 7.3.4.3. Oracle recommends this step to prevent index corruption.
2. Run `imdbindexreorg` to compress indexes. Only run `imdbindexrecreate` on those InterMail indexes found to be corrupt by running the `imdbindexreorg` utility.

The `imdbindexrecreate` utility takes longer to run and since both it and `imdbindexreorg` must be run in maintenance windows, the length of the maintenance window or maintenance windows you will take depends on the option you choose.

The `imdbindexrecreate` utility is only be used to recreate InterMail indexes. This utility has not been tested on Oracle data dictionary indexes and there are sometimes subtle issues with rebuilding these indexes. If one of these indexes is known to be corrupt, you should call Oracle support or Software.com support. This is highly unlikely to happen, but the current InterMail tools were not designed to resolve this issue.

The `imdbindexrecreate` tool can be run on either 7.3.4.1 or 7.3.4.3 levels of Oracle to drop and add indexes to solve immediate corruption issues that happen. However, as mentioned above, Option 1 may be safer than Option 2, if the maintenance windows can be planned at your site.

SNMP Workarounds

If you are a new customer installing InterMail for the first time, no special instructions are required to run the SNMP Server. If you are an existing user (201-217-106 base or higher), you will need to make following modifications to the configuration database:

```
/* /common/masterAgentHost: [<host>]
/* /common/snmpReconnectNapTime: [15]
/* /snmpdm/runDir: [tmp/snmpdm]
/<host>/snmpdm/snmpRequestPort: [161]
/<host>/snmpdm/snmpTrapPort: [162]
```

Where:

<host> is the name of the InterMail host (machine name).

Change this key from `off` to `on`:

```
/<host>/sysadmin/snmpdm_run: [on]
```

Next, remove the `nosmnp` argument from each server in the `config.db`. (ITS 23959)

Then set the following environment variables in the `.cshrc` and `.profile` files.

```
SR_AGT_CONF_DIR=<InterMailHomeDir>/snmp
SR_MGR_CONF_DIR=<InterMailHomeDir>/snmp
```

Where:

<InterMailHomeDir> is the absolute path of InterMail's home directory (type `echo $INTERMAIL` to find out this location).

To establish the SNMP communication ports, add the following environment variables in the `.cshrc` and `.profile` files.

```
SR_SNMP_TEST_PORT 161
SR_TRAP_TESTTT_PORT 162
```

Note: A “stock” SNMP agent is included in the Solaris 2.6 operating system by default, and it occupies the conventionally used port 161. If you intend to use the InterMail SNMP server, you must use a different port for the InterMail settings. (ITS 18062)

When installing InterMail, the option to turn on SNMP is provided. If “yes” is the option selected, the `/*/common/masterAgentHost` configuration key is set automatically. However, if SNMP is turned off during installation (selecting “no” as the option), and it is later turned on, the `/*/common/masterAgentHost` configuration key will need to be set manually in the configuration database. SNMP functionality will not work if this key is not properly configured.

Additional Cautions

- In InterManager, attempting to login as SA results in an error on dual node install. If an error occurs, set `httpd_run` to be the machine with the directory oracle instance. Another option is to run with `sqlnet` installed on remote machine. (ITS 24127)
- In InterManager, creating an account with invalid characters causes errors. It is important that you only use the standard characters and numbers, underscores, dashes and periods. (ITS 25528)
- In InterManager, recreating an organization without checking the “Create domains if they don't exist” box causes an error that says, “ReadDomain: Unknown internal error.” In order to ensure that no errors occur, verify that the “Create domains if they don't exist” box is checked. (ITS 26003)
- Do not modify `init_modperl.pl` to call `im_init()` before the child Web Servers are forked. This will cause all of the child processes to use the same resources that are created by `im_init()`. By calling `im_init()` after the fork, it is guaranteed that each child receives its own set of resources. Therefore, do not, under any circumstances, call `im_init()` in the Web Server's parent process. (ITS 19272)
- The `DeleteCosAttribute` argument to `imdbcontrol` is **EXTREMELY DANGEROUS; DO NOT USE THIS ARGUMENT.**
- It is possible for a user to change the administration port of a running service; however, this will cause problems because if the administration port number is changed on a running server, and that new port number is used, InterMail will still listen to the old port number. Therefore, do not change the administration port of a running service. (ITS 13181)
- If the class of service user limit is reached in InterManager, a blank error message is received. (ITS 19678)
- In the InterManager Perl API, `SwCom::IMgr::OrgUnit->Read` does not return an `undef` when an error occurs. Instead, an empty hash is received and no error message is produced. (ITS 20154)
- In the InterManager Perl API, it is recommended that the extract file be modified to add the appropriate context records. If this is not done, duplicate SMTP addresses will appear in the LDAP tree. (ITS 20617)

Additional Special Instructions

- If you have a 4.1.1 Directory Cache Server running with a 4.1.2 MTA, mail may be deferred with a “dircache down” error. To fix this issue, perform the following steps:

1. Create a `pref_imapsslaccess` class of service attribute:

```
% imdbcontrol cca pref_imapsslaccess A S
```

2. Place that attribute into the user’s class of service:

```
% imdbcontrol sca default pref_imapsslaccess none
```

- The Perl API types of `IM_DOMAIN_DELETED` and `IM_DOMAIN_NO_CHANGE` are not included in the latest build. To solve this issue, use the integer that corresponds to the missing type:

For `IM_DOMAIN_DELETED`, use 1, as shown in the following example:

```
$domain = new Domain(
    type => 1,
    name => `justmadeup.edu`,
);
```

For `IM_DOMAIN_NO_CHANGE`, use 0, or `IM_DOMAIN_UNKNOWN`, which is equivalent. (ITS 24536)

- When servers are disabled, `imconfedit` returns the following error:

```
Set <server>_run: [off]
Exit imconfedit.
Do you want to start/stop the servers now? (Y/N) y

Select [y], receive this error:
*** SERVER popserv does not run on HOST(S) venus ***
*****Execution of "imctrl venus stop popserv" was unsuccessful (exited with 1)
*****
leaving result of editing in /tmp/config.db.edit.19347
----- Aborted -----
***** Could not execute imctrl venus stop popserv: Bailing out! *****
```

This error is erroneous and should be ignored. Changes made using the `imconfedit` utility will be recognized. (ITS 24943)

- The Manager Server (`immgrserv`) must be started using `imservctrl start`. The `imctrl` utility will not start the Manager Server. (ITS 24840)
- Solaris has a threads bug (Sun bug ID 4040356) that limits the number of threads per process at about 2550. In order to get more concurrent connections, a `-bound` option is added to the `imaperv` process.

```
/<hostname>/sysadmin/imaperv_opt: [ -bound -nosnmp]
```

At least 14,000 threads per process will be added when the `-bound` option is implemented.

Additionally, each IMAP connection requires a minimum of 2 file descriptors, and a 3rd if `/*common/cacheLimitInKB` limit is reached. So, if you want to support 15,000 concurrent IMAP users, your `rlim_fd_max` needs to be set to at least 30,000 and more likely 40,000 for overhead and for the eventuality of reaching the `cacheLimitInKB` limit for a percentage of messages. (ITS 21245)

- There is a hard coded limit in `~imail/lib/intermailStartStop`. The following is the hard limit for the number of mailboxes allowed:

```
$immssshare -localconfig $MSSTable create 10000N
```

This line hard codes the limit to 10,000 mailboxes loaded into the shared memory table when InterMail is started (`imservctrl start`). (ITS 22096)

- Before running `cosupgrade`, you must manually create every class of service that you specify in the input file for `cosupgrade` (for example, basic or deluxe) by using `imdbcontrol CreateCos`. If this is not done the following error is produced:

```
IM Error in IM_UpdateAccount(): Lookup Failed
```

- There is an issue where Web Server will not start and there is no message in the log. This is caused by the Web Server not being able to write to the existing log files in the `httpd/logs` directory. If this occurs, become root and change the ownership of the files in the `httpd/logs` directory to the user which `httpd` should run (usually `imail`).
- `imctrl stopStart httpd` does not restart the Web Server properly. Instead, use `imservctrl restart httpd` (ITS 17768).
- Updated directory information is passed from the Integrated Services Directory to the directory caches at regular intervals as defined by the `dirCacheUpdatePeriod` configuration key. The value of this key defines the maximum delay between making a change and having the changed information visible through the InterManager interface. (ITS 20284)
- If the `numUserDBFiles` configuration key is used to increase the number of Directory Cache files in the configuration database, `imdirsync` *must* be run for your changes to take effect. If `imdirsync` is not run, the additional Directory Cache files will not be recognized. (ITS 19061)
- When changes are made that affect the Directory Cache Server (i.e. adding class of service attributes to a user's account) and run `imdirsync`, those changes will not be immediately reflected in the current Directory Cache file. The `imdirsync` utility actually places those changes in a new Directory Cache file, ready to be used when the interval, defined by the `dirCacheUpdatePeriod` configuration key, updates the Directory Cache Server. (ITS 17531)
- If the Integrated Services Directory database is restarted, all Directory Cache Servers need to be restarted also. Restarting the Directory Cache Servers is important *after* bringing down the listener, and *before* bringing up the listener and Oracle up. Waiting until Oracle and the listener are brought back up to restart `imdircacheserv` is too late (ITS 16525).
- Messages from `imservctrl start` that indicate that certain servers have not started should be confirmed with a `ps` command (`ps -aef | grep imail`) after `imservctrl start` is finished. In addition, the InterMail logs should be reviewed for issues.
- InterMail provides a POP Locking mechanism that ensures that only one POP session can be started per account. This prevents contention for messages from multiple POP sessions; however, this mechanism is only enabled when a mailbox contains mail. When there is no mail in a mailbox corresponding to an account, the POP Locking mechanism *is not enabled* (ITS 13963).

- The `maxQueueTimeInDays` configuration key should not be set differently for each MTA. Since it is not known which MTA will process the queue, it is recommended that this configuration key is set the same for all MTA's, using `/*/mta/maxQueueTimeInDays`. (ITS 18845)
- Internet Explorer 3.0 does not support the uploading of attachments in WebMail. The error message says, "Attachments: Requires <MSIE 4> or the MSIE <File Upload patch>." In order to solve this problem, you must have the "File Upload Add-On" installed, which is available from Microsoft. (ITS 15693)
- You must run `im_init()` before using `WebSession.pm`. The `SwCom::Mail` call is also required in order to use `WebSession.pm`. (ITS 17013)
- New organizations are not allowed to have the same primary domains as other organizations. However, organization (a) can use organization (b)'s primary address as their secondary address. (ITS 20648)
- When setting the `dn` configuration in the `sitestartup.batch` file, there should be a "dc=" entry for every portion of a domain. For example, if the domain is "accordance.software.com," the "dc=" value should look like this:
`key: ispdn#dc=accordance,dc=software,dc=com` (ITS 20875)
- RFC 821 states that a domain name can have the maximum of 64 characters. Therefore, do not exceed the domain name limit as stated in RFC 821. (ITS 14929)

1.6 Supporting Documentation

InterMail 4.1.1 comes with an expanded manual set, including:

- *The InterMail Installation and Migration Guide*, which describes pre-installation background information and issues, complete step-by-step instructions for the installation of the InterMail system, and post-installation test procedures that should be used prior to operation. It also includes instructions on how to migrate account information and mailboxes from sendmail and Post.Office.
- *The InterMail Operations and Reference Guide*, containing
The Operation Guide, focuses on the day-to-day operational tasks that will be required to successfully configure, monitor, and run an InterMail system.
The Reference Guide, describes server architecture, available configuration keys, and administrative commands, and a complete list of events that are recorded in log files.
- *The Integrated Services Directory (ISD) Guide*, describes the structure, data objects, and methods of accessing and modifying the contents of the Integrated Services Directory database, the database which contains all account, quota, domain, and class of service information.
- *WebMail Reference Guide*, describes the operation and customization of the WebMail application.
- *The InterManager Administration Guide*, includes instructions for the operation of InterManager.
- *The Supplemental Manual*, provides reference material and operational instructions that update and expand on information in all standard InterMail documentation.

InterMail 4.1.1 also includes a full set of UNIX manual pages (located in `$INTERMAIL/man`) and the `imcmdlist` command, which produces a short description of administration commands included in InterMail. However, this list is not definitive and should be used in conjunction with the *InterMail Reference Guide* and the *Supplement to the Manual*. (ITS 20460)

1.7 Added/Changed Configuration Keys

The sections that follow list new and modified configuration keys. Please see the *InterMail Reference Guide* and the *Supplemental Manual* for more detailed information on configuration keys.

1.7.1 New Configuration Keys

Version 4.1.2 (201-229-116)

bucketizeMtaDefer
cacheAlwaysReadThru
dbReconnectInterval
dirCacheUpdateThreshold
loginAliases
maxMSSRetrieveConnectionList
maxMSSRetrieveConnectionTimeout
partitionRouterData
partitionUserData
queueServerRetrieveHosts
queueServerStoreHosts
realms
rejectSenderBadAddress
rmeAccessList

Version 4.1.1 (201-229-111)

multiJournaling
numJournalsPerServer
rejectInvalidFromAddr
retryOnConnectFail
sessionExpireTimeoutSecs
trustedInterfaces

Version 4.1 (201-229-108)

filterSendMessageCharset
hostnameAliasList

Version 4.0.3 (201-229-104)

mss/messageJournaling
imqueueserv/messageJournaling
maxAutoReplyMsgLenKb
allowedIPs
scanOldMessagesIntervalInHours
cacheDisableReadThrus
cacheDisableWriteThrus
sessionDBFilePath
numDBFile

Version 4.0.2 (201-227)

cacheAuthoritativeForMTA
loginDefaultDomainTable
loginDefaultDomain
maxLogUpdates
mutexSerialNumbering
sqlSingleThread
vxfsSpaceReservation

Version 4.0.1 (201-221)

createMboxes
numUserDbFiles
maxSessionsPerUser
snmpReconnectNapTime

Version 4.0 (201-217-106)

outboundDeferProcessInitialWait
serverLineLengthLimit
alwaysTryFirstList
traceToStderr
sessionDataFile
MSSConnPoolSize
sessionFlushIntervalSecs

sessionExpireTimeoutSecs
cookieDomain
banners
mtaHosts
cookieExpireTimeoutDays
popFilter

1.7.2 Modified Configuration Keys

Version 4.1.2 (201-229-116)

numUserDbFiles

Version 4.0.2 (201-227)

dbCacheSizeInKB
localFallback

Version 4.0 (201-217-106)

alwaysTryFirst

primaryDB* keys -- these keys were previously contained under the `/*/imdircacheserv` portion of the configuration database hierarchy, but have now been moved and reside under the `/*/common` portion of the hierarchy.

1.7.3 Obsolete Configuration Keys

Version 4.1.2 (201-229-116)

abortOnNullMutex
authorizedGroups
matchProtocol
passwordType
radiusAcctDir
radiusAcctPort
radiusAcctRelayPort
radiusAuthPort
radiusAuthRelayPort
radiusLogDir
rejectInvalidFromAddr

Version 4.1 (201-229-108)

`maxQueueTimeInDays` – This key is replaced by `maxQueueTimeInHours`. See the Supplemental Manual for more information.

Note: It is very important that you update your configuration database when upgrading to 4.1. If this is not done, these changes to `MaxQueueTimeInHours` will not take effect.

Version 4.0.3 (201-229-104)

`sessiondatafile` – This key is replaced by `sessionDBFilePath`.

1.8 Added/Changed Administration Commands

The sections that follow list new and modified administration commands. Please see the *InterMail Reference Guide* and the *Supplemental Manual* for more detailed information on administration commands.

1.8.1 New Administration Commands

Version 4.1.2 (201-229-116)

`immovmsgfiles`
`imdbindexrecreate`
`imfolderlist`

Version 4.1 (201-229-108)

`imfilterctrl`

Version 4.0.3 (201-229-104)

`immsgverify`

Version 4.0.1 (201-221)

`imcachecheck`

1.8.2 Modified Administration Commands

Version 4.1.1 (201-229-111)

`imdbcontrol GetFirstModified (gfm)`

Version 4.0 (201-217-106)

`imcacheread`
`imspoolistoldfiles`

imboxsync

1.8.3 Obsolete Administration Commands

Version 4.0.3 (201-229-104)

`imdbcontrol SetServiceLevel` (This command is replaced by `imdbcontrol SetCosAttribute` and `imdbcontrol SetAccountCos`. See the *Integrated Services Directory Guide* for detailed information on these commands).

Version 4.0 (201-217-106)

`imboxquota`

`imconfcopy`

`imconfupdate`

`imdbmake`

`impopping`

1.9 Added/Changed Log Events

The sections that follow list new and modified log events. Please see the *InterMail Reference Guide* and the *Supplemental Manual* for more detailed information on log events.

1.9.1 New Log Messages

Version 4.1.2 (201-229-116)

`CacheConfigInfoMismatch`

`CacheConfigVersionMismatch`

`CacheGenericMsg`

`CacheRealmConfig`

`CacheRealmDataDeleteFailed`

`CacheRealmDataFetchFailed`

`CacheRealmDataStoreFailed`

`CacheRealmServerDown`

`CacheRealmServerUp`

`ConfParmError`

`DbFeatureUnavailWithoutSchemaPatch`

`DbRemovingConnection`

`DbTempDisconnect`

`MsFolderNotRemovable`

MsNoSuchObject
MsObjTypeMismatch
MsStaleRef
MtaHeaderNotTerminated
NioConnNotAllowed
RmeConnectionUnavailable
SmtplibSenderAddrInvalid
SmtplibBadRelayPolicy

Version 4.1.1 (201-229-111)

CacheUpdateStarted
CacheUpdateCompleted
CacheUpdateOutOfRange
DbDatabaseNote
FiltActionSendMessage
JrnBadNumJournalsParm
NioGetSockNameFail
NioFcntlFail
PopDomainTableEntryError
ProcNoRunDir
ProcChownFail
RmeInvalidCOSAttribute
RunMssQuotaMaxMsgs

Version 4.1 (201-229-108)

AcctNontrustedLogin
CacheUpdateTimeTooLong
FiltActionRewriteHeader
FiltHeaderRewriteFailed
MsDeliverFolderNotFound
MtaHeaderRewriteFailedMta
QueueServerInteractionMismatch
NioGetHostNameFail
ProcUncaughtCPlusException
QsrvNotLocked

Version 4.0.3 (201-229-104)

ProcObjBadRefCnt
PopMaxSessions
PopConnectionNotAllowed

Version 4.0.2 (201-227)

DbWritesBlocked
DbWritesUnblocked

Version 4.0.1 (201-221)

AcctForwardInfoInvalid
AcctForwardInfoMissing
AcctForwardTo
CacheBadConfig
CacheConfigDbFilesMismatch
CacheConfigHashAlgUnknown
CacheConfigNotFound
CacheCopyFailed
CacheOpenFail
CacheReopenCloseError
CacheReopenError
ImapNoProxyLogin
MsInitFailure
PopSyncError
ProcReExecingProg
ProcSetuidSucceed

Version 4.0 (201-217-106)

DbOracleHomeUndefined
DbTnsAdminUndefined
AcctPopNotAllowed
AcctSslPopNotAllowed
ImapSyncError
ProcCloseFail
ProcDupFailed
ProcDupSurprise (same as ProcDupFailed)
ProcPipeCreateFailed
ProcWriteToStderr

RmtBadExitStatus
RmtDupFailed
RmtDupSurprise
RmtExecFailed
RmtForkFailed
RmtPipeCreateFailed
RmtProcessSignalled
RmtWaitpidTimeout
RmtChildFstatFail
SnmpCantConnectToMasterAgent
SnmpInitFailed
RmtDidntDie

1.9.2 Modified Log Messages

Version 4.0 (201-217-106)

ConfNoDomainName
MsgTrace
RmtContradictoryVerbsError
SidelineFailure

1.9.3 Obsolete Log Messages

Version 4.0 (201-219)

SysHeapCorrupted (SysNoSpace logs the situations previously logged by SysHeapCorrupted)

Version 4.0 (201-217-106)

AcctSslPop
PopSslDisallowed
RmtProgramExecError

1.10 Added/Changed Class of Service Attributes

The sections that follow list new and modified class of service attributes. Please see the *Integrated Services Directory Guide* and the *Supplemental Manual* for more detailed information on class of service attributes.

1.10.1 Added Class of Service Attributes

Version 4.1 (201-229-108)

```
pref_popaccess
pref_popsslaccess
pref_imapaccess
perm_mtafilterperuser
pref_mtafilterperuser
```

1.10.2 Obsolete Class of Service Attributes

Version 4.1 (201-229-108)

```
pref_pop (replaced by pref_popaccess)
pref_imap (replaced by pref_imapaccess)
pref_popssl (replaced by pref_popsslaccess)
```

1.11 Open Issues

Requests for correction have been submitted against all of the following items. Items of major significance are listed first for ease of recognition.

Major Issues

- 12182 Changing `numMssPorts` from any number greater than 1 results in error. SEE THE WORKAROUND!!!
- 13181 Admin port of a running system can be changed. This should not be an allowable operation. See the Special Instructions section for related warning.
- 14604 `delete_remote_forward (sql)` forbids removing fwd addr if local delivery not set.
- 16797 Portion of InterMail install missing relating to `httpd` port configuration.
- 16835 `ConfNotAConfiguredHost` should be an error, not fatal.
- 19064 Perl home is not set correctly when a 201-227 patched install is done. See the Special Instructions section for related warning.

- 19678 Adding more users than what class of service allows gives blank error message. See the Special Instructions section for related warning.
- 20154 `SwCom::IMgr::OrgUnit->Read` returns empty hash on bad call should return `undef`. See the Special Instructions section for related warning.
- 20800 Patched install leaves `~/lib/certs/im_default_certs.txt` with bad perms. See the Special Instructions section for a related warning.
- 20875 `dn` config in `sitestartup` should be made more clear. See the Special Instructions section for related warning.
- 22349 MSS does not write to logs or talk to clients as it should.
- 22353 The `httpd` process appears to be doing excessive logging in the `httpd/error_log` file.
- 24672 MSS does not remove lock on mailbox if the POP RME connection is broken.
- 24749 Possible MTA core issue.
- 24874 Possible double-defer after `MtaServerSocketClosed`.
- 25654 Third party issue where Oracle 7.3.4.1 causing index corruption in some minor cases. Apply of the Oracle 7.3.4.3 patch will be necessary. The plan to test InterMail with this version of Oracle was being planned as of the writing of this document.
- 25653 Tool being developed by Software.com to automate the clean up the corrupted indexes referenced in 25654. This software was developed and the plan to test with was occurring as of the writing of this document.
- 25765 `imcachecopy` should not corrupt cache if disk becomes full.
- 43843 Long Perl sessions via InterManager Perl API has memory issue.
- 44236 Old `psmtp`, `pop`, `intId` processes left in the Directory Cache after `psmtp`, `pop`, `intId` change.
- 44841 WebMail cannot display kanji properly both on header and body field.

Minor Issues

- 9677 `imsysmon` Urgent messages should line up with the other messages.
- 11478 `imboxmigrate` fails on empty Berkeley `mbox` files.
- 13963 POP Locking Mechanism only enabled when there is mail in a user's mailbox. See the Special Instructions section for related warning.
- 15068 The `imboxcreate` utility accepts quota value (`totalBytes`).
- 16125 The `imdbcontrol` command in batch mode gives a summary line after commands:
- 16201 Mail is bounced, using SMTP proxy mode for non local account with relaying off.
- 16525 Restart Oracle and you must restart the Directory Cache Server. See the Special Instructions section for related warning.
- 17586 Directory lookup doesn't take quotes off addresses.
- 17587 The `imdbcontrol` utility does not allow special characters in alias address.
- 17933 Configuration lookup routines are not handling default host parameter correctly.
- 17994 The `imdirsync` utility cores when run from two servers to the same directory database simultaneously.
- 19193 `sendmail` to InterMail migration tools are not working properly.

- 19507 SNMP issue regarding operating system conflicts.
- 21092 `imoldmsgdel` fails when `uname -n` and `$INTERMAIL/config/hostname` are different.
- 22040 Incorrect error message when setting the `/*/cookieDomain` configuration key.
- 22149 `rmeTimeout` should be re-analyzed
- 22223 The MTA should process bad Header/Body files differently.
- 22247 HTTP header character set information according to Content-Type Header.
- 22325 Servers don't start if `config.db` isn't readable, but no errors are produced.
- 22430 On a correctly built MSS architecture, `immssgc` cannot delete mail as it should.
- 22635 The `immsgdelete` utility should delete widows.
- 22786 `iminboxlist` produces `sqlSubsInsert():not unique` error
- 23167 Protect shell characters in `immigacctcreate`
- 23196 Setting `createsMboxes` to false does not defer mail.
- 23298 `httpd -version` should include internal build version string
- 23798 `immsgverify` needs to detect widow.
- 25146 Request for `imbucketscreate` to exclude lost + found directory from buckets file.
- 45181 An admin user should have admin privileges without setting the COS via the command line.

1.12 Defects Corrected

The following is a list of issues that have been corrected. An identifying number and brief description is provided.

Fixed in 4.1.2 (201-229-116)

- 6312 Fixed `immigacctcreate` in update mode.
- 12500 Fixed issue regarding the setting of the server host on authentication form.
- 13165 Fixed a shared memory error regarding the `imorainstall` command.
- 17770 Added multi-national language catalogue support.
- 18133 Fixed Directory Cache regarding C-API code.
- 18712 Corrected `imservctrl` logs regarding started/stopped servers.
- 19422 Documented `NioConnectionLimitTableBadEntry`.
- 20497 Corrected `imboxdelete` and `immsinit` usage.
- 21694 Fixed links to log file requests.
- 22152 Corrected exiting behavior with `imservctrl` when if it cannot find the `libDir`.
- 22198 Improved `imorpharm` functionality.
- 22355 Added buckets to the deferred/MTA directory.
- 22357 Defined a max number of RME connections from POP/IMAP to each MSS host.
- 22382 Enhanced `imsysmon`'s Oracle monitoring.

- 22631 Corrected RME errors regarding MTA and MSS communication.
- 23054 Fixed SMTP banner to be configurable rather than take `hostname/domainName`
- 24296 Corrected issue in the MSS regarding the `RmeStaleRef` entries.
- 24376 InterManager now shows account ID when displaying user info.
- 24396 Corrected InterCore installation regarding the first entry of install directory.
- 24422 Corrected issue with `immovmsgfiles` regarding orphaned messages.
- 24617 Improved the Oracle 7.3.4.1 index rebuild.
- 24880 Improved the 4.0.3 IMAP Server regarding Fatal event messages.
- 24889 Corrected 4.0.3 MSS processes errors.
- 25086 The `imboxmove` command now moves all account objects and preserves MSS state.
- 25314 Improved SA and OA to delete addresses from "Additional SMTP Address:"
- 25760 Fixed issue regarding the creation of users with both upper and lower cases.
- 25821 Improved `immssgc` to use `sql*net` and local `ipc`.
- 25870 Corrected Directory Cache Server issue regarding the Oracle `libs` and `libpath`.
- 26114 SA can no longer enter a non-numeric value in the "Max. Mailboxes" field.
- 43024 Corrected MSS issue on 4.0.3 version.
- 43409 Corrected issue regarding attached files in WebMail.
- 43454 Added `autoreplytxt` feature to `imimapcopy`.
- 43485 Improved InterManager response times as more users/domains are added.
- 43493 Improved `imboxmove` performance when accounts are in maintenance mode.
- 43538 Enhanced resource allocation in OA authentication form.
- 43558 `imsysmon` now takes the "service name" instead of the actual host name in the `config.db`.
- 43863 Corrected virtual memory process size in the MSS.
- 43878 Improved provisioning account speed.
- 44020 Changed SQL to further augment the provisioning performance with InterManager.
- 44110 Corrected `imintegcheck ListExtraAccounts` functionality regarding `RTRIM()`.
- 44343 Removed WebMail navigation buttons when logged into Self Care standalone.
- 44353 Improved WebMail's requirements regarding direct access to interface parts.
- 44372 Improved speed of IP checks in the `blockTheseIPs` configuration key.
- 44395 Rewrote SQL in system so that Optimizer plans avoid table scans.
- 44517 Built wholesale solution for Provider Administrators.
- 44525 `imorainstall` now allows multiple `oracleUserPasswords`
- 44539 Added static link solution to the Oracle upgrade.
- 44797 Corrected POP Server functionality regarding CPU space.
- 45343 Improved `imsysmon` to use all entries in `LogEventFilters`.
- 45459 Corrected `imdbhotbackup` functionality when reuse mode.
- 45678 Corrected memory issue in the Perl API `Account.xsh`.
- 45772 Corrected `imora4dirpatch` functionality regarding empty databases.

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- 46244 Corrected the IMAP Server and MSS regarding FioCreateFail (EMFILE) errors.
- 46274 Added a new way to generate MessageIDs
- 46285 MsMsgDeleted now logged when /*/mss/messageTracing set to [true].
- 46309 Corrected COS::Read() memory issue in Perl API
- 46403 Corrected the numusers attribute when a user is moved to new class of service.
- 46820 Fixed imcachecopy functionality.
- 47356 Fixed MSS issue regarding truncated messages.
- 48389 Fixed mime parser to handle empty mime headers correctly.

Fixed in 4.1.1 (201-229-111)

- 4156 Corrected Perl API for Directory API regarding standard error codes.
- 4468 Corrected GetAccount, ReadAcctAlias regarding an invalid parameter list
- 6312 Fixed immigacctcreate in update mode.
- 9498 Improved MSS journaling functionality.
- 11837 Corrected vxfs file system problems with kernel memory.
- 12340 imconfformput no longer removes config.form file.
- 14730 Corrected POP Server functionality while in proxy mode.
- 16167 The imdbcontrol utility no longer returns a 0 status on failed commands.
- 16706 Corrected imdbcontrol getfirstmodified issue.
- 16877 Improved imboxsync regarding negative mailbox internal id's.
- 17250 Added per-user sieve rules in the MTA.
- 17591 Corrected rolloverTimeZero configuration key functionality.
- 17770 Multi-national language catalogue now supported.
- 17784 Mail is now bounced when sending forwarding to an invalid local address.
- 18005 Added a log message when connection limit is reached in the POP and IMAP Servers.
- 18083 Corrected imservctrl restart during install regarding chmod directories.
- 18571 Fixed permissions in .pid files.
- 18586 Corrected issue regarding Oracle environment variables being set where MSS and Queue Server are configured.
- 18712 Corrected imservctrl regarding inaccurate log messages.
- 19647 Added new LD_LIBRARY path in crontab entry.
- 19726 Fixed error during InterCore install regarding libomu.so.4.2.
- 20230 WebMail now includes charset type in header.
- 20266 Corrected errors executing imservctrl.
- 20333 Corrected issue regarding MTA performance while running internal tests (DEC).
- 20492 Improved MsLoadedByOtherMSS functionality if Create() fails.
- 20495 Fixed imdirprobe error when connecting to Oracle.
- 20659 Corrected issue regarding the sender's ip address in WebMail.

- 20688 Corrected issue regarding buckets directory in InterManager.
- 21092 Fixed issue regarding `imoldmsgdel` when `uname -n` and `$INTERMAIL/config/hostname` are different.
- 21256 Corrected issue regarding InterMail' management of incorrectly formatted `MAIL FROM:'s`.
- 21613 Corrected MTA issue regarding the `SmtPserverResponseOverflow` log message.
- 21719 The `immsinit` utility no longer uses `uname -a` for hostname, but uses `$INTERMAIL/config/hostname` instead.
- 21943 Fixed `editDomain.cgi`.
- 22150 The `imsysmon` utility reports via email that log summary was empty.
- 22318 Improved the `imboxtest` utility.
- 22516 Improved `bounceNotify` functionality regarding MSS operations.
- 22559 The `imsysmon` utility can check multiple file system buckets.
- 22791 Improved connection implementation when we get `NioConnectReadFail`.
- 23112 Corrected abnormal characters in the signature text.
- 23169 The `immsgmassmail` utility is now able to send to addresses with shell sensitive characters
- 23257 Corrected issue regarding memory in the MTA.
- 23536 Corrected issue regarding multiple `crontab` entries.
- 23714 Fixed issue regarding adding classes of service to an org unit.
- 23715 Fixed issue regarding creating a user in an org unit.
- 23752 Improved `imbatchload` functionality with encrypting passwords.
- 23855 Corrected issue regarding adding `administ` in org view.
- 23898 Improved MTA to re-elect correct Urgency of log events.
- 24071 Improved MSS to work with `/*/mss/dupMessageDetect: [false]`.
- 24236 Corrected `intermailStartStop` perl path variable.
- 24247 Fixed the `imbadmsglist` utility and it no longer receives an Oracle error.
- 24249 SNMP now functions properly on a multiple node install.
- 24343 3.02.07 POP Server and MTA now compatible with 4.01.00.00 MSS.
- 24396 Corrected InterCore install.
- 24331 Corrected issue regarding changing the directory root.
- 24354 Fixed issue regarding `imdbcontrol` and provisioning accounts in InterManager.
- 24512 Corrected issue with OA in InterManager.
- 24570 Fixed issue regarding the creation of a user as an OA with a billing ID of 0.
- 24573 Corrected issue regarding a blank error message when a max number of users for a class of service is reached.
- 24599 InterManager login URL no longer results in a "No Login Name Given" error.
- 24762 Corrected issue regarding the addition and deletion of class of service attributes.
- 24852 Fixed issue regarding `imctrl` and its `httpd` start/stop command.

- 24879 Corrected `immsgmassmail` Perl defect.
- 24907 Corrected issue with OA class of service display.

Fixed in 4.1 (201-229-108)

- 14821 Corrected an issue with the `imdbspacecheck` command regarding history files mounted on a different volume than `tmp` files.
- 15981 `imdircachesserv` now add log entry when update thread is running behind.
- 19959 Corrected error messages that were produced in the logs.
- 20201 Corrected issue regarding growth in certain Web Server processes.
- 20204 The ability to change default domain in InterMail install is present.
- 20303 Removed `*/mss/quotaUpdateTimes` from `config.db`.
- 20469 `imoraupgrade` no longer terminates if listener is not running
- 20491 Corrected issue with 4.0 Directory Cache Server working with 3.2 servers.
- 20509 `imboxmigrate` now strips off unnecessary info from MessageID.
- 20537 Corrected Oracle error in `cosupgrade`. Enhanced `imboxmigrate` to strip off unnecessary information from MessageIDs.
- 20600 Fixed issue regarding multiple entries in `loginDefaultDomainTable`.
- 20612 Corrected issue regarding the `*/imdircachesserv/dirCacheUpdatePeriod` configuration key.
- 20661 MTA now has configurable way to search for a hostname alias (of itself) in DNS
- 20756 Removed `-version` flag for `imsysmon` from man pages
- 20768 Added a feature that allows the MTA to search for a hostname alias.
- 20922 Added a way for Webmail to have multiple pages for easy access to messages.
- 21000 Corrected InterMail upgrade of directory from 3.2 to 4.0.
- 21086 Corrected `immigacctcreate -u` functionality.
- 21121 Fixed `imdirprobe -master`.
- 21122 Improved `imdirprobe -master` functionality.
- 21159 Library Loading Order for 4.0
- 21216 Improved the InterMail directory upgrade from 3.2 to 4.0.
- 21226 Corrected InterCore install paths for shared library `libclntsh.sl` are now found.
- 21234 Corrected issue with the `ServCtrlSRMEServerThread::threadmain` thread.
- 21300 Corrected `imdircachesserv`, no longer reports `ProcThrdCreateFail SRMEServerThread`
- 21320 Fixed bad `imdbcontrol` syntax in `postinstall`
- 21355 Increased `*/mss/serverThreadStackSizeInKB` value in SGI release packages.
- 21469 Added more diagnostics in queue server code.
- 21471 `queueSplitFactor` no longer applies to deferred/MTA.
- 21549 `deferFeeder` no longer exits if it hits an exception.
- 21551 Corrected parsing of addresses with '%' in them.
- 21553 `imdbspacequickcheck` is no longer off by 1.

- 21650 CacheUpdateOutOfRange needs to be higher than Warn
- 21651 All BEGIN_QCONN_POOL() calls need a TRY{ } block around them.
- 21656 imqueserv ops no longer return ErmStatus that aren't always logged.
- 21672 Default class of service now assigned to accounts.
- 21683 Corrected issue regarding imqueueserv logging errors.
- 21737 imdirsync updates from IM_LOG table when finished.
- 21792 immsgdelete works on folders other than Inbox.
- 21794 Corrected error in configuration update/assess code.
- 21813 Improved communication between the MTA and Queue Server.
- 21867 Corrected issue regarding a NioServerGoneDown error in the Queue Server.
- 21728 Improved MSS processing of large quantities of messages.
- 21915 Fixed link in msgtext.cgi.
- 21916 Paging now included in help file.
- 21934 Dual-node install no longer fails when dircacheserv on 1st host.
- 21940 Corrected imconfget functionality.
- 21948 immssshare now works properly.
- 21949 Improved MSS performance regarding large messages in mailboxes.
- 21963 InterMail portion of install no longer asks for location of sed.
- 21999 IM_DeleteMbox should retry the port when the MS is loaded by another MSS
- 22121 immsgverify is new and improved.
- 22133 imaccountquery should not use hard-coded tmp filename for temporary storage
- 22146 Improved immsgverify performance.
- 22159 imsysmon now reports via email if log summaries are empty.
- 22211 MSS MS::imapSelect Inefficient
- 22217 Corrected imapserv issue.
- 22224 intermailStartStop no longer has imconfget options in the wrong order.
- 22229 imboxmove is improved.
- 22292 queueSplitFactor in the Queue Server should be MTA's queueSplitFactor
- 22294 Fixed the Web Server response when under heavy load.
- 22327 Corrected Perl issue.
- 22330 setupEnvVar is now set up POX_03
- 22344 imoldmsgdel now deletes all old mail.
- 22348 SMimeBodyPart to be valid, with member _pMimeData
- 22350 Corrected IM_FolderMessage errors
- 22354 Web Server functionality improved while under load.
- 22376 imdbindexreorg no longer mishandles -degree and -bloat arguments.
- 22526 C-API example Makefile has old IM32 stuff that now works.
- 22569 Should use snim_getpid instead of getpid

Release Notes

- 22570 Corrected issue in `Validator::_doLookups()` when `imdircachesserv` is down.
- 22598 Corrected issue with MSS growth with Header/Body that are all embedded nulls.
- 22626 `MssRmeServerThread` object now calls `setMemPool`
- 22688 Fixed null class of service values after running `imora4dirpatchcos`
- 22698 Symbolic links no longer disrupt `imdbhotbackup`
- 22751 Corrected issue in configuration update/assess code.
- 22778 Corrected Queue Server functionality regarding control files.
- 22781 Included `imora4msspatch`, and `imora4mssprepatch` in `$INTERMAIL/bin`.
- 22825 Corrected deployment worksheet issue regarding number of Redo Groups
- 22885 `iminstall` no longer aborts with “`}` unexpected”
- 22913 Corrected Oracle install error.
- 22951 Corrected `imora4mssprepatch` script in the if statement
- 22952 Corrected `imora4msspatch`, script error.
- 22956 Corrected issue regarding directory database patch.
- 23017 “`shnew.cxx`”, line 104: error(3114): identifier “`_shi_New`” is undefined
- 23039 `imbuckscreate` is now run during install
- 23266 Corrected BODYSTRUCTURE “body disposition” `attr/value sub-list` format.
- 23270 Corrected MTA issue regarding SIEVE rules.
- 23272 Corrected issue with `imora734upgrade`
- 23281 Corrected MTA issue with NIS lookups
- 23296 IMAP Server no longer uses one memory pool
- 23305 Set Default class of service attributes so service can be used versus off or NULL
- 23433 Added `imfilterctrl` in latest SUN build (Sieve rules)
- 23477 Member list `omember` list of mailgroups scalability issue solution failing to add.
- 23485 Corrected class of service attributes issue.
- 23491 Corrected class of service attributes issue.
- 23506 MSS no longer leaves orphaned rows in `IM_FolderMessage`
- 23513 Migration no longer runs during bigtime
- 23537 SUN - MTA no longer has issue with sideline feature.
- 23542 Modified `Fat1` message when using `imfilterctrl` with invalid option.
- 23554 Added html page for `FiltActionRewriteHeader`
- 23556 Added html file for `MsDeliverFolderNotFound`
- 23557 Added html file for `MtaHeaderRewriteFailed`
- 23558 Added html file for `MtaHeaderRewriteFailed`
- 23559 Added html file for `MtaQueueServerIterationMismatch`
- 23560 Added html file for `NioGetHostNameFail`
- 23562 Added html file for `QsrvNotLocked`

- 23582 `imfilterctrl` now validates input rule from `stdin`
- 23583 Fixed POP Server issue regarding cored SSL-session
- 23622 Corrected memory issue in the `httpd`.
- 23758 Can now assign classes of service to organizations if Netscape and org has spaces .

Fixed in 4.0.3 (201-229-104)

- 2300 `imboxdelete` will now delete a mail store if some MSS has mail store loaded.
- 2396 Fixed `DIR_SGA_Size`.
- 2780 Fixed the `imorainstall` hard-coded path for `whoami`.
- 4169 Oracle install now changes `showDB` scripts.
- 6968 Corrected Oracle index bloat in the directory.
- 7090 Enhanced the MTA processes when handling `*.temp` files in the deferred directory.
- 8179 Anti-junk mail configuration options now set up dynamically.
- 8715 Added freelists in Oracle as well as other Oracle tuning parameters.
- 8788 Mailbox move scripts now preserve mailbox quotas.
- 8849 The term “blob” is eradicated from customer visible product.
- 9142 Removed `met1` from InterMail 4.0.
- 9400 Removed `imdbcontrol` options for making, deleting directory DB still there.
- 9406 Fixed `immsinit` regarding Perl searches.
- 9425 Corrected Oracle install issue when `whoami` is present in `PATH`.
- 10096 Fixed ERTN functionality regarding non-existent domains.
- 10098 Fixed ETRN functionality regarding the SMTP Server.
- 10196 Corrected LDAP install compilation error.
- 10241 Modified install message.
- 10565 Messages directory is no longer referred to by `mssBlobDir` key in `config.db`.
- 11009 `imboxsync` no longer looks for `immsscall` in the `/lib` directory.
- 11148 Modified `.cshrc` during install.
- 11347 Header rewrite values are no longer converted to lower-case.
- 11540 Corrected typo in the install stream.
- 11814 Modified class of service information in the Oracle directory.
- 12962 IMAP Server now supports UIDPLUS extension.
- 13361 Corrected batchload failures in installed configuration.
- 13430 Corrected issue regarding account COS val.
- 13627 Corrected 4.0 POP Server communication with a 3.2 MSS.
- 13997 Fixed the `quotaThreshold` functionality.
- 14357 Added SNMP support in configuration and remote control servers.
- 14398 CSR Admin no longer creates a new class of service.
- 14467 Corrected issue regarding batchload needing to create appropriate Mailgroups and Mailtemplates.

Release Notes

- 14503 Corrected the ability to edit the account status via the person Edit form in the InterManager GUI.
- 14511 Integrity checker has a new filter to properly analyze some integrity constraints.
- 14526 Corrected WebMail functionality regarding CPU and memory resources.
- 14880 WebMail now removes JavaScript code from html body parts.
- 15248 Queries to variables in sub-agent MIBs now respond.
- 15255 Improved error reporting when `imorainstall` cannot start the database.
- 15368 Corrected `ok_if_exists` error message.
- 15370 Improved the semantics of the required attribute list in `MainCOS::Read()`.
- 15436 `.../snmp/snmpinfo.dat` now contains InterMail specific data.
- 15598 `imservping` now supports `snmpdm`.
- 15628 Modified error message when no cookies are present.
- 15715 All instances of `confess` are turned into `carp()`.
- 15884 `MailTemplate` can now be deleted if referred by a `MailGroup`.
- 16204 Added multiple language internationalization.
- 16222 `imcacheread -f <popAddr> <password>` now prints out account forwards.
- 16234 Core files are preserved more carefully.
- 16341 Corrected InterManager help links.
- 16479 Corrected `imconfserv` regarding `config/hostnames` that do not match unqualified machine names.
- 16541 Fixed `cosupgrade` usage statement.
- 16641 Corrected `imjrnrecover` functionality when exiting with `-j` option.
- 16712 `Person::Create()` no longer returns success even when Account creation fails.
- 16743 Corrected issue regarding administrative authority in InterManager.
- 16879 `OA/authenticate.cgi` now branches to the proper script for an ou admin.
- 16968 Modified SelfCare message when the session times out.
- 17004 `imbroadcast` is no longer missing from distribution.
- 17041 Corrected class of service core dump issue.
- 17062 Corrected issue regarding clients looking up class of service attributes.
- 17065 `pref_localdelivery` is now handled in case-insensitive manner in `im_account.cxx`.
- 17117 Added `DIAG` to distinguish long authentication times from long MSS times.
- 17139 `cosupgrade` now supports the `-v` option.
- 17179 Corrected site administrator error message in InterManager.
- 17210 Trying to find a non-existing organization in edit organization no longer returns an internal server error.
- 17212 POP Server now provides a default domain based on IP address
- 17401 Organizational administrator can no longer edit site administrator entries.
- 17402 Organizational administrator can now create/delete people in organization.

- 17503 Corrected issue with deleting domains in InterManager.
- 17563 Corrected envelope in nested messages.
- 17649 `MsWrongObjectType` log event with dead object is now a Note or Warn, not Urgt.
- 17781 Corrected `clientHeaps` functionality regarding `malloc/free`.
- 17836 Changed `imdirsync` to read records from Oracle in batches for better performance.
- 17936 Corrected `imbatchload` shebang line.
- 17999 Fixed SelfCare functionality regarding duplicate address entries.
- 18063 Added a tool that checks/creates necessary class of service attributes.
- 18068 `popserv/maxSessions` and `imapserv/maxSessions` no longer default to 0.
- 18078 `createLDAPquery.sql` package no longer missing from `imorainstall`.
- 18081 `batchload` now has `admingroup` assignment.
- 18126 Organizational Administrator can now edit people within that organization.
- 18141 Organizational Administrator view now provides a way for an admin to make a new org admin.
- 18142 Corrected class of service link in InterManager.
- 18144 Modified fresh install and patched install to include a new SQL script.
- 18197 Directory Cache Server now updates class of service information when `dirCacheUpdatePeriod` expires.
- 18222 Fixed `quota_msg` functionality with 4.0 MTA.
- 18322 Added configuration keys for LDAP C-API.
- 18333 OU administration views now refer to “organization unit” instead of “organization.”
- 18393 OU Admin screen no longer comes up blank.
- 18475 Corrected issue regarding the appending of flags in IMAP.
- 18476 Modified the organizational administration menu form.
- 18501 Modified organizational administration search mechanism.
- 18511 POP Server now logs when `maxSessions` is hit.
- 18516 Now able to edit the primary SMTP address from person edit form.
- 18521 Queue Server no longer has its own `maxQueueTime` key.
- 18543 `dbCacheSizeInKB` should be for *all* cache files, not per cache file.
- 18605 Find Organizations no longer lists a period when search criteria is empty.
- 18608 OU administration is now able to edit the organizational unit.
- 18628 MTA no longer crashes if the Queue Server connection times out in `getQueuedDomainMessages`.
- 18666 `imqueuesplit` now works with the Queue Server.
- 18760 Corrected RME revision number in `-version` output.
- 18778 `checkNIS()` now functions for domain lookups.
- 18794 Fixed trailing newline on autoreply message.
- 18818 Synchronized the InterManager tables with changes from `imdbcontrol` and the InterMail API.
- 18892 Added proper response when “adding a Org administrator” fails.

Release Notes

- 18898 Fixed `popserv/maxSessions` regarding client connections.
- 18899 Domains now listed by alphabetical range.
- 18935 Corrected error in install regarding `/vol1/imap/perl/man/man3/ExtUtils`.
- 18943 Modified COS Compare form.
- 18945 Modified the checkbox in the “Find User” form.
- 18955 “Find User” form (OA side) now searches by input organization.
- 18964 Included option to disable MSS journaling.
- 18982 Added a method to disable journaling in the Queue Server.
- 18995 Corrected `imdirsync` issue.
- 18996 Added more detailed logs for InterManager.
- 19019 Perl paths now set correctly at install.
- 19021 Modified InterMail Oracle installer for version 8 of Oracle on all platforms.
- 19038 Fixed `RoutingTable::route` and `RoutingTable::needsRewrite`.
- 19067 Corrected `imdirsync` regarding accounts that have null passwords or null class of service names.
- 19073 Fixed the 3.2 POP Server and MTA regarding the 4.0 Directory Cache Server.
- 19111 Fixed journaling issue in the Queue Server.
- 19136 Modified `imboxmove` to delete old mailboxes.
- 19163 help files are now properly linked for InterManager.
- 19197 Corrected Directory Cache Server issue.
- 19246 Corrected issue with `DirObjectClient::connectReport`.
- 19266 `popproxy` no longer fails with `NioFindHostNameFail`.
- 19312 Fixed POP Server ACL issue.
- 19342 Corrected MTA regarding Queue Server requests.
- 19360 Corrected `imboxstats` to determine quota information from the new class of service attributes.
- 19363 Fixed MSS functionality regarding low disk space.
- 19368 POP Server now logs when `maxSessions` is hit.
- 19379 The option to disable MSS journaling is now implemented.
- 19399 `/*/web/cookieDomain` is now set as part of the install process.
- 19400 Corrected `imbatchload` issue with `sitestartup` if previous attempt failed.
- 19403 Removed leading/trailing blanks in email attributes.
- 19411 `imbatchload -Error` option now works correctly.
- 19413 `sitestartup.batch`, and `sitestartup.batch.template` now contain same information.
- 19419 Corrected issue with `im_version`.
- 19421 Modified `immsgverify` production speed.
- 19427 Increased performance in the Directory Cache Server.

- 19428 Created a Directory Cache Server configuration key that disables/enables readthru's and writethru's.
- 19485 Corrected class of service issue that did not allow apostrophe's in the name.
- 19508 Corrected issue with the IMAP Server.
- 19513 Batchload now setting OnMailCOSExistence flag.
- 19521 Modified install so that imbatchextract is part of the install.
- 19541 Corrected imdirsync performance issue.
- 19953 Corrected imbatchload memory issue.
- 19559 RemoteControlObjectClient now backward compatible with any RME protocol number.
- 19585 Corrected error with viewing COS from OA site.
- 19716 Fixed image map for tabs from Site view.
- 19772 UI no longer allows you to add a class of service multiple times to an organization.
- 19773 Domain::Delete() now removes Domain from the domain list.
- 19780 Organization tab now updated after data has been removed.
- 19783 Now able to delete an org if you attempted to delete it when it was a non-leaf.
- 19876 imbatchload can now load extract file and account/class of service info is created.
- 19890 MSDB::moveMessage() fails to detect a message was shared between the folders
- 19894 Added imintegcheck to InterManager installation.
- 19900 imora4dirpatch now initiates im_pk_ldap_query package.
- 19901 Fixed issue regarding imbatchload memory performance.
- 19926 Stop use of realloc() when fetching auto-reply text to improve loading of address books that are large (100K)
- 19938 Installing patch as Oracle no longer yields permission problems.
- 19944 MSS should have config key to limit max size stored in autoreply.
- 19945 Corrected SIGBUS errors in C-API when accessing IM_Mbox object.
- 19959 Corrected memory error messages.
- 19997 Corrected imdirsync speed performance.
- 20003 Built smarthheap for all servers with sysansi to get around memory fragmentation issues.
- 20044 Fixed ProcLockAcqOrder and core in response to NioTimeOutWrite.
- 20076 Added the latest online help files from the mainline to 4.0.3 release
- 20087 Changed order of database and message store reads in imboxsync.
- 20090 IM_UpdateMsgFlags has correct return value when given flags -T-T-F-
- 20118 New sitestartup.batch file now handles carriage returns.
- 20125 imboxmigrate no longer ignores Mailbox-Dst-Machine field in input file.
- 20137 bindas and bindpw are no longer dumped in the output file.
- 20142 mercury/sysadmin/samplescript.batch is now installed.
- 20162 Class of service attributes are now arranged in proper groups.

Release Notes

- 20177 `imdirsync` no longer slows down `dirCacheUpdatePeriod`.
- 20248 Corrupt base64 encoding is now handled correctly.
- 20384 SNMP is linked with `contrib/emanate/`
- 20385 Latest Oracle patch now included in package.
- 20392 Corrected Oracle install issue.
- 20436 Fixed `imdbcontrol 1a` and `cc` internal Oracle error issue.
- 20457 Corrected false message in Compose Screen of WebMail.
- 20488 Missing class of service attribute is now handled correctly.
- 20512 Remote `imdircacheserv` no longer gets set with the wrong hostname.
- 20527 `loginDefaultDomainTable` now works properly.

Fixed in 4.0.2 (201-227)

Major Issues

- 4550 Corrected an issue with sending mail to empty mailboxes.
- 4777 Corrected Berkeley DB regarding the use of wrong `errno`.
- 6438 Fixed issue with no de-duplication on APPEND.
- 8718 Fixed issue with the Manager Server.
- 8800 Corrected out-of-order messages.
- 9905 `imapserv` no longer crashes while using on-the-fly parsing.
- 10137 There is no longer any spinning in `waitForReply`.
- 10720 POP Server no longer dumps core.
- 11489 Fixed POP Server core dump after user telnets to SSL port.
- 11763 Added table `IM_LAST_EXPIRED`.
- 12035 Deleting class of service no longer causes memory corruption in Directory Cache Server.
- 12513 Fixed the `*/slapd/configFile` configuration key.
- 13038 Fixed core dump: `immsgdelete user@addr -all`.
- 13253 MSS no longer sends half-loaded messages to the POP Server.
- 13266 Stateless MTA no longer cores during Queue Server test.
- 13627 4.0 POP Server now works properly with the 3.2 MSS.
- 13635 Corrected WebMail caching issue.
- 13644 Corrected issue with the DocumentRoot being set wrong.
- 13709 3.2 MSS no longer crashes when 4.0 MTA attempts to deliver mail.
- 13778 POP Server no longer dumps core right away under auto or qmail.
- 13823 Fixed Errors during InterCore install regarding the GenDBOpener.
- 14257 Fixed `imdirupdate` command.
- 14333 Corrected `httpd` regarding missing Perl items.
- 14343 Corrected `config.db` parameter.
- 14435 Fixed core dump regarding `immsgdelete`.

- 14569 Corrected MIME parser functionality.
- 14719 Modified `httpd.conf` file.
- 14751 The Bypass Authentication option now works.
- 14881 Per-host limits of sessions established in WebMail.
- 14918 Corrected port issue.
- 14928 MTA notices the `*/mta/logMailBoxCreation` key.
- 14945 Corrected segmentation fault issue.
- 14982 Increased default value of `web/MSSConnPoolSize`.
- 15079 Corrected PERLHOME environment variable in `.profile`.
- 15223 Corrected issue with `impwdhash` output.
- 15436 Fixed `snmpinfo.dat` file.
- 15453 Corrected WebMail cookie error message.
- 15511 WebMail address book now modified via header links.
- 15513 Corrected error regarding address book editing.
- 15526 Corrected sporadic mail submission failures.
- 15551 Help functions are now operational in SA/OA views of InterManager.
- 15622 Fixed `imorpharm` regarding executing the help statement.
- 15777 MSS no longer crashes when IMAP is moving/deleting multiple messages.
- 15811 Response is now received from SNMP when doing `imservping`.
- 15824 `mod_perl` now loaded in 201-220.
- 15871 Fixed MTA with regards to `imservctrl stop`.
- 15878 Fixed `imora4msspatch1` functionality.
- 16059 Corrected deployment worksheet bug in formulas for POXD2.
- 16100 Corrected `pkgadd` error regarding InterCore installation.
- 16109 Corrected upgrade from 3.2 to 4.0 regarding configuration key names.
- 16110 Modified InterMail installation regarding install loop.
- 16111 Corrected `config.db` install information.
- 16151 Fixed `maxMessageSize` configuration key.
- 16178 `dirCacheDB` no longer causes segmentation fault.
- 16228 MTA no longer cores during `imt-mss` test.
- 16270 `imail/journal` directory now created when Queue Server is installed on MSS host.
- 16505 Corrected Oracle 7.3.4 (IRIX) issue regarding single `sqlContext` from Directory Cache Server.
- 16604 InterMail upgrade now looks for Configuration Server on correct port.
- 16674 Corrected InterCore portion of upgrade on MTA host regarding a `libomu.so.4.0` error.
- 16702 Fixed `imdirsnc` issue concerning Oracle connections.
- 16771 class of service upgrade no longer causes the Directory Cache Server to dump core.
- 16789 Corrected issue regarding DIAGs in the Directory Cache Server Oracle connect code.

Release Notes

- 16822 Fixed SSL install issue.
- 16876 IMAP no longer crashes if you are logged in and MSS goes down.
- 16942 `nextCreateLevel` is now thread safe.
- 16945 Corrected issue with MSS stopping.
- 16982 Corrected issue regarding the removal of queue bucket after processing.
- 17133 Fixed issue with Queue Server configuration.
- 17139 `cosupgrade` now supports the `-v` option
- 17184 POP Server no longer cores when connected at secured port.
- 17212 POP Server now provides a default domain based on IP address.
- 17244 Corrected issue regarding MTA CPU space.
- 17269 Fixed MTA core issue.
- 17321 Fixed issue regarding MTA cores.
- 17440 Directory Cache Server no longer fails to read through.
- 17449 IMAP Server no longer dumps core when run under auto.
- 17459 Core files are now found in `runDir` and are getting renamed at startup.
- 17477 Corrected issue with Configuration Server core dumps.
- 17499 Fixed POP Server core dump.
- 17511 Corrected Perl memory growth issue.
- 17527 Fixed Queue Server core dump issue.
- 17543 Fixed auto issue regarding high volume MTA processes.
- 17563 Corrected envelope information in nested messages.
- 17565 Corrected recursion limit overflow.
- 17571 Messages with null bytes no longer cause `imboxmigrate` to call abort.
- 17631 Fixed error at the end of InterCore install.
- 17653 MSS no longer hangs on shutdown after deleting mailbox with duplicate messages.
- 17809 `imdbhotbackup` now recreates temp tablespace.
- 17856 Fixed garbage issue in the Directory Cache Server.
- 17948 Corrected syntax error in fresh install.
- 18022 Corrected symbolic link in lib to `libomu.so.4.0`.
- 18033 Stateful 201-224 MTA no longer dumps core regularly under auto.
- 18124 MIME messages no longer get pre-parsed by MTA when they shouldn't.
- 18133 Fixed issue regarding Directory Cache and C-API code.
- 18197 Directory Cache Server now updates class of service information when `dirCacheUpdatePeriod` expires.
- 18222 4.0 MTA no longer dumps core in stateful mode using 3.2 MSS when looking for class of service-`quota_msg_by`.
- 18243 New aliases created for account now show up in GUI until alias receives mail.
- 18258 Retrieval of auto-reply messages now possible.
- 18295 Account status change now gets updated into Directory Cache Server.

- 18383 OMVersionMach, etc. now defined in C-API programs.
- 18398 Corrected imdirsync issue regarding dirCacheDB owned by root.
- 18414 imapSelect now thread safe.
- 18482 Corrected upgrade issue regarding imora3msspatch1.
- 18494 Corrected issue regarding missing information in imservdisplay.
- 18521 Queue Server no longer has its own maxQueueTime key.
- 18543 dbCacheSizeInKB is now for *all* cache files, not per cache file.
- 18609 Added man page for imorphanrm.
- 18610 Corrected imorphanrm regarding the use of flags.

Minor Issues

- 3449 MIME attachments are now terminated properly.
- 4619 Fixed bigtime.common.
- 6906 Directory Cache Server no longer leaves <defunct> processes.
- 8673 Fixed issue regarding the setting of bogus flags.
- 9719 Modified upgrade mechanism for installation.
- 10499 Modified SEGV in SnmpHandler.
- 10644 Corrected InterCore install issue.
- 11063 `*/mta/relaySourcePolicy` configuration key now takes effect without restarting the MTA.
- 11505 Saying 'no' to snmp now adds `-nosnmp` to `*_opt` configuration keys.
- 11506 `imservctrl` now accurately reports which servers have been started.
- 11755 New columns INITRASN and FREELISTS are now added to the upgrade.
- 11757 Modified quota conversions.
- 11758 Corrected schema version changes.
- 11764 Added `imoraupgrade`, `imora3dirpatch1`, and `imora3dirpatch2` to the Oracle package.
- 11771 `imail4` now has permissions in Oracle for synonyms.
- 11790 Corrected `imdirpatch1` and `imdirpatch2` options issue.
- 11816 Corrected issue regarding idle timeout defeated by new message arrivals.
- 11954 Corrected Oracle script cleanup issue.
- 12830 Corrected issue with `IM_ReadAccountAliases` regarding bogus SMTP addresses.
- 12836 Fixed `imctrl` usage statement.
- 12882 `IM_EnableAccountForwards` now returns an error when called with null SMTP.
- 12985 Corrected issue regarding MTA aborting with `SysHeapCorrupted` error.
- 12993 Fixed issue regarding empty body part with bogus length.
- 13197 Corrected issue regarding deferred mail.
- 13211 Corrected issue regarding Oracle and the `pingInstance`.
- 13427 Added "allCos" processing to `GetAuthInfo` RME.
- 13764 Oracle tools now installed in `$ORACLE_HOME/7.3.4/bin` with write permissions.

Release Notes

- 13976 Corrected issue with stalled MTA during shutdown.
- 14713 `$INTERMAIL/attach` directory now created at time of install.
- 14743 Error text for `addressbookentry.cgi` modified.
- 14529 C-API message optimized.
- 14573 Changed order of database and message store reads in `imboxsync`.
- 15108 Corrected the manner in which WebMail session expires.
- 15219 Configuration Server now started at the end of InterCore install.
- 15221 Web port can now be changed at time of install.
- 15312 InterMail's default `.cshrc/.profile` now includes SNMP-specific environment variables.
- 15356 Corrected issue with the Directory Cache host in InterCore.
- 15366 Proxies now cache pages returned from WebMail.
- 15668 Corrected issue regarding appending messages in IMAP.
- 15686 Corrected issue regarding third party attachment handling.
- 15703 There are no longer unnecessary assessments of configuration additions during install.
- 15709 `mimeParseMode` configuration key is now correctly documented.
- 15766 Corrected the handling of syntax errors in `config.db`.
- 15790 Corrected issue regarding the editing `imconfedit`.
- 15805 Installation now specified correctly regarding `httpd` InterCore install.
- 15807 InterMail install no longer asks for configuration form location when it shouldn't.
- 15816 SNMP trap option port now shown correctly during install.
- 15819 SNMP related keys are now installed correctly.
- 15856 Upgrade from 3.2 to 201-220 no longer fails.
- 15862 MTA core errors are constructive.
- 15882 Corrected issue regarding `imora4msspatch1`.
- 15926 `assert()` no longer prints a message on `stderr` and aborts.
- 15964 Fixed deployment worksheet issue.
- 16018 Line number in `imconfxlate` is now being incremented.
- 16025 Corrected deduping errors.
- 16062 Automated 7.3.4 upgrade not robust against strange file permissions
- 16187 `imctrl` now starts servers correctly.
- 16211 `imcachecopy` is now in the install
- 16213 `DbWritesBlocked` and `DbWritesUnblocked` log messages are now in source tree and install.
- 16256 `lang*` files no longer conflict with each other.
- 16267 Modified SelfCare password requirements and error messages.
- 16269 Modified SelfCare GUI help files.
- 16287 Added an MSS-free C API mechanism for setting/changing autoreply.

- 16312 Modified SelfCare login process.
- 16314 Clicking WebMail buttons while in Selfcare no longer causes error.
- 16344 pingInstance is now installed by imora734upgrade.
- 16365 Directory Cache Server no longer cores when the `<host>/imdircacheserv/numUserDbFiles` configuration key is set to 2.
- 16460 Corrected issue regarding “matched old message” errors.
- 16479 Configuration Server no longer has problems when `config/hostname` does not match unqualified machine.
- 16519 Upgrade now finds Oracle crontab entry and asks to exit.
- 16523 Corrected Configuration Server error during InterCore upgrade.
- 16593 Corrected issue regarding hard-coded Perl path in `intermailStartStop`.
- 16600 Corrected issue with `imoraupgrade4`.
- 16672 Fixed Perl upgrade problems.
- 16702 `imdirsnc` no longer fails to connect to Oracle with 256 db files.
- 16805 Corrected Directory Cache InterMail install issue.
- 16822 Saying 'no' to SSL in the install no longer makes POP Server fail with `NioListenFail`.
- 16865 Corrected issue with `imdbmsgbackup` looking for blob files.
- 16968 Selfcare does now gives a appropriate message when the session times out.
- 16993 Fixed missing header files `im_log.h` & `im_config.h`.
- 16995 Option to install WebMail in InterMail install is now present.
- 17117 DIAG now distinguishes long authentication times from long MSS times.
- 17231 Local forwards are now upgraded correctly.
- 17382 Corrected `imdbplaygcjrn` functionality.
- 17413 Corrected `libim.so` warning during install.
- 17457 The following key has been added: `imqueueserv/runDir: [tmp/imqueueserv]`.
- 17638 Package no longer has conflicting references to libomu version in InterCore.
- 17654 Corrected var args misalignment in log reporting.
- 17781 Corrected `clientHeap` issue.
- 18500 `imconfcontrol` now checks that lock and pid files are stale.
- 18628 Fixed MTA issue regarding Queue Server interoperability.

Fixed in 4.0.1 (201-221-106)

- 17306 `smtpAddress` can now be changed (through batchload).
- 17307 Improved the deleting 'mail' or 'smtpAddress' LDAP attributes.
- 17308 Improved batchload to update domain attributes.
- 16594 Added `totalMsgQuota`.

Fixed in 4.0.1(201-221-105)

- 16771 Fixed cosupgrade re: imdircachesserv core dump.
- 16673 Improved InterMail upgrade process.
- 16632 Improved cosupgrade utility.
- 16730 Corrected POP Server performance re: MSS connections.
- 16786 Added libim symlink (full install only).

Fixed in 4.0.1 (201-221)

- 8894 Some man pages have been added.
- 9124 Corrected imconfedit assessment.
- 9125 Value now set for `*/snmpdm/masterAgentHost`.
- 9924 Useful reporting for imconfedit.
- 10131 Changed allowable syntax for `mta/queueServer` configuration key.
- 10532 Oracle `monitoring/health` commands added.
- 10559 Fixed Perl paths.
- 10568 Added Oracle `monitoring/health` commands.
- 10700 Corrected problem with large headers.
- 10800 Servers shouldn't close all fd's at startup
- 11013 Corrected problem with `imorainstall` and Deployment Worksheet.
- 11516 Corrected allowable syntax with `startKey`.
- 11789 Fixed problem with MTA/rescanner.
- 11844 Corrected authentication failure delay.
- 12140 Corrected `replaceMessage`.
- 12565 Fixed `config.db` problem re: `traceOutputLevel`.
- 12596 Corrected issue concerning default SNMP settings.
- 12756 Corrected issue concerning bounce messages.
- 13010 Corrected POP Server problem.
- 13197 Corrected sidelining issue.
- 13201 Modified `imdbcontrol sca` subcommand with `quotathreshold` values.
- 13278 Installing InterCore Xlating configuration DB fails
- 13431 Change COS RULE application to use default values for undefined global class of service attributes
- 13720 Corrected `RMEProtoBadLength` problem.
- 13771 Corrected `getMS()` problem.
- 13776 Fixed `imdbcontrol` problem.
- 13903 Fixed `IM_UpdateAccount` problem.
- 13924 Corrected issue re: `execCGI` option.
- 13925 Corrected Perl script issue.
- 14002 Corrected `imdirprobe` when forcing cache update.

- 14092 Fixed problem concerning message sizing.
- 14094 imconfedit exit dumps with null field value.
- 14183 Corrected problems with imapserv.
- 14289 Fixed impwdhash.
- 14327 Corrected problem with MTA core dumps.
- 14507 imcorelogs should be removed from install package.
- 14510 imapserv disconnects when select <mbox> , then status <othermbox>
- 14513 Corrected scan_mss utility.
- 14713 \$INTERMAIL/attach created at time of install.
- 14739 Corrected race condition.
- 14826 Fixed imconfserv during installation.
- 14855 MtaTooBusyDefer message now includes MessageID.
- 14883 Added cosName to imdirupdate operation.
- 14911 Fixed problem re: mailbox creation.
- 14928 MTA ignores '/*/mta/logMailBoxCreation' key.
- 14984 Fixed sql*net install issue.
- 14990 Corrected sendmail headers.
- 15007 Fixed sendmail.
- 15038 Modified configuration of httpd.
- 15061 Corrected errors from request script.
- 15146 Corrected server interaction with snmpdm/masterAgentHost.
- 15147 SNMP Configuration keys added in config.db.
- 15161 Corrected imconfedit problem concerning SNMP.
- 15163 SNMP configuration added in install.
- 15176 IM_CreateMsg with a bad text argument can cause the mss to core.
- 15217 Corrected Install in regards to logical hostname.
- 15223 Corrected impwdhash output.
- 15226 if dirCacheDB is not present, imdircache fails to start, no complaints
- 15248 Queries to variables in sub-agent MIBs don't respond.
- 15301 Corrected SMTP banner.
- 15315 Corrected MTA/sendmail interaction.
- 15343 Corrected Directory Cache Server problem.
- 15347 Corrected install problem.
- 15358 Fixed imdirprobe.
- 15549 Corrected possible message duplication with local spool and queue directory.
- 15567 Corrected clientConnectionLimitTable in config.db.
- 15569 Corrected interaction of verifyRCPTs with other features.
- 15598 imservping now interacts with snmpdm.

Release Notes

- 15691 Lengthened `IM_Subscriber.userName`.
- 15697 Corrected IMAP Server problem.
- 15709 `MimeParseMode` configuration key problem corrected.
- 15940 Corrected quotas, quota notification, through class of service.
- 15974 The operation of the `imdirsync` utility has been corrected.
- 15980 Interaction between `imboxsync` and `immsscall` has been corrected.

Fixed in 4.0 (201-219)

- 14443 Corrected problem with class of service Attributes.
- 14510 Corrected problem with selecting folders in IMAP.

Fixed in 4.0 (201-217-106)

- 5747 When in proxy mode, the POP server now returns useful error messages from the relay host.
- 10806 Improved `immssgc` help statement.
- 12990 Improved `immssgc` re: missing rows in `im_message`.
- 13127 Corrected race condition between `immssgc` and `mss`.
- 13307 Improved `immssgc` re: avoid orphan creation.
- 13325 Changed Directory Cache Servers reporting mechanism.
- 13370 Corrected `imdbcontrol` problem.
- 13376 Corrected `imdbcontrol` problem.
- 13378 Corrected InterCore installation problem.
- 13456 Corrected Perl installation problem.
- 13547 Corrected `httpd.conf` file.
- 13587 Fixed error handling problem with message files.
- 13611 Enhanced `imdbcontrol gac`.
- 13645 Corrected WebMail installation location.
- 13646 Fixed shebang for some scripts.
- 13673 Corrected `immssgc` summary.
- 13694 Fixed log message/"welcome" message problem.
- 13803 Fixed Queue Processing logs.
- 13904 Corrected `immssgc` re: deleting unread mail incorrectly.
- 13916 When renaming folders, we update the UID validity value.
- 13925 Added patch shebang for executables.
- 13930 Change C-API connection access to intermittent from persistent.
- 13931 Removed default connection to Oracle; Added Directory Cache connection pool.
- 13991 Corrected InterCore install in order to pass Oracle username to account creation.
- 13992 Corrected user oracle name during install.

- 14014 Optimized performance on index on `im_foldermessage` with message insertion/deletion.
- 14076 Corrected reconnection code problem in `ReadAccountForwards`.
- 14099 Added reconnection logic needs to all class of service functions in `cos.pcxx`.
- 14119 Corrected IMAP problem. set `LD_BREADTH 1` in `.cshrc/.profile`.
- 14132 Added schema patch for New Garbage Collector.
- 14140 Fixed Perl API to create account with a consistent state.
- 14144 Fixed `imdbcontrol` to return error when creating account w/ bogus `cosName`.
- 14451 Added function to C-API.
- 14742 Made `imfiltercheck` case-insensitive.
- 14897 Corrected hardcoded Perl path.

The following defects have been addressed in prior releases:

- A number of IMAP-related issues have been closed.
- Some memory leaks in the Directory and MTA have been fixed.
- Issues related to new development of Perl & PAPI.
- Improved performance handling deferred mail.
- Improvements to install procedure.