



# Alcatel-Lucent

OMC-H 7.7 LOAD 2 BUILD 5 PATCH 6(IN SUPPORT OF USDS  
7.3)

RELEASE NOTES

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# About this document

## Purpose

This document is release notes for OMC-H 7.7. The release notes contain information on system requirements, resolved customer issues, known issues, network equipment compatibility, and installation instructions.

## Reason for reissue

**This is a reissue following Release Notes 1.12, delivery security scan fix and OS hardening for AT&T site.**

The table that follows specifies dates and reasons for reissue of release notes.

Table 1.1 Release notes reissue history

| Issue number | Date of issue | Description of changes                             |
|--------------|---------------|--|
| 0.1          | 07/23/2008    | Draft issue( EForm # <a href="#">326787</a> )      |
| 1.0          | 07/25/2008    | Baselined  |
| 1.1          | 07/31/2008    | Updated a little on OMCH7.7 Q4                     |
| 1.2          | 09/12/2008    | Release Notes (including Upgrade feature) for L2B4 |

| Issue number | Date of issue | Description of changes   |
|--------------|---------------|--|
| 1.3          | 09/26/2008    | Release Notes for L2B4 Patch 2   |
| 1.4          | 10/05/2008    | Release Notes for L2B5   |
| 1.5          | 10/13/2008    | Official Release Notes for L2B5  |
| 1.6          | 10/24/2008    | Official Release Notes for L2B5, deliver a Solaris patch 126262-01 and a EMF patch for Alltel upgrade OMCH 7.5 to 7.7 issue      |
| 1.8          | 04/28/2009    | Official Release Notes for L2B5Patch3, deliver a patch to support 2M2PA or SCTP within the same Board_Group in OMCH7.7.          |
| 1.9          | 10/31/2009    | Official Release Notes for L2B5Patch4, deliver a patch to collection enough info to investigate PM issue from AT&T site.         |
| 1.10         | 12/17/2009    | Update for add workaround procedure to update registry for \$NS_IP_ADDRESS for L2B5Patch4  |
| 1.11         | 12/17/2009    | Official Release Notes for L2B5Patch5. Deliver measurement tool to Verizon site.   |
| 1.12         | 09/30/2010    | Official Release Notes for L2B5Patch6. Deliver a patch to solve AT&T AR6118 and CR113 security scan issues and OS hardening fix. |

## Intended audience

The intended audience for this document includes all personnel who need information about OMC-H 7.7, its functions, and network elements.

The information product can be used by the following audiences:

- OMC-H Users
- Maintenance personnel
- Management personnel
- System installation and integration personnel

## Conventions used

None

## Technical support

For technical support, visit [www.alcatel-lucent.com](http://www.alcatel-lucent.com) ([www.alcatel-lucent.com](http://www.alcatel-lucent.com)) and select **Support**.

## How to comment

To comment on this information product, go to the Online Comment Form (<http://www.lucent-info.com/comments/enus>) or e-mail your comments to the Comments Hotline ([comments@alcatel-lucent.com](mailto:comments@alcatel-lucent.com)).



# 1 Overview



## Overview

### Purpose

This chapter describes release contents applicable to OMC-H 7.7.

### Contents

This chapter covers these topics.

|   |                     |
|---|---------------------|
| <a href="#">Introduction to release content</a> | <a href="#">1-2</a> |
|---|---------------------|

# Introduction to release content

This document corresponds to the OMC-H R7.7. OMC-H R7.7 provides the complete configuration of SS7 and Diameter on MAS R27SU2 and USDS 7.3.

The release deliverables are specified in [[chapter 2](#)]



## 2 Release components

### Overview

#### Purpose

This chapter describes software and documentation deliverables included in this release.

#### Contents

This chapter covers these topics.

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|--|---------------------|
| <a href="#">Software deliverables</a>      | <a href="#">2-1</a> |
| <a href="#">Documentation deliverables</a> | <a href="#">2-4</a> |

### Software deliverables

# Software included in this release

| Comcode   | Description   | File Name   | Media |
|-----------|---|---|-------|
| 301002432 | Operating System SW for the OMC-H Server for Release R7.7 (In support of USDS7.3)     | sol5.10.iso<br>cksum: 1392002765<br>size: 2453647360  | DVD   |
|           | OS SW Update for OMC-H upgrading from R7.5 to R7.7                                    | <b>Solaris 10 Update tar</b><br>OMCarchive_Update_10_8.cpio<br>cksum : 978248364<br>size : 1373315072   | DVD   |
|           | Application SW for OMC-H Server for Release R7.7 (In support of USDS7.3, 7.2 and 7.1) | <b>Main tar</b><br>OMC-H-7.7.2.5.tar<br>cksum: 1655178452<br>size: 1256392192   | DVD   |
|           |   | <b>OMC-H Patch tar</b><br>OMC-H-PATCH-7.7.2.5.6.tar<br>cksum: 3963957813<br>size: 236058112   |       |
|           |   | <b>GNU Utilities for installing Sybase</b><br>libgcc-3.4.6-sol10-sparc-local.gz<br>cksum: 265816990<br>size: 527922<br>libiconv-1.11-sol10-sparc-local.gz<br>cksum: 1363373264<br>size: 1464363<br>tar-1.16-sol10-sparc-local.gz<br>cksum: 3408792613<br>size: 978987 |       |

|                  |   |  |              |
|------------------|---|--|--------------|
|                  |   | <b>Correlation rules package</b><br>CAomch.tar.gz<br>cksum: 2262387408<br>size: 8707   |              |
|                  | OMC-H Release R7.7 (In support of USDS 7.3) On-Line User Documentation in English Language on CDROM | omch_r77_v1_helpfiles.tar.gz<br>cksum: 560512390<br>size: 14077068   | CD ROM       |
|                  | Sybase application software ASE 12.5.4  | <b>Sybase installation file :</b><br>ase1254sol32.tgz<br>cksum : 4171938801<br>size : 456648373<br><b>Sybase documentation :</b><br>ase1254docs.zip<br>cksum : 267831134<br>size: 77937304 | LI Website   |
| <b>301002556</b> | OMC-H Release R7.7 Base Set of Customer Documentation on US Paper                                   | <a href="#">Refer to Table 2.1</a>   | IP&T Website |

### How to obtain software

- ❖ All the software deliverables are accessible in ALED server officially. The link to LED server is as follows:

<http://download.support.lucent.com>

- ❖ The software deliverables are also available in LI website (ALU TSS only) from the below link:

<http://inuweb.ih.lucent.com/~spapag/SPA/SDHLR/nr/OMC-H/OMC-H7.7/OMC-H-07.07.02.05/>

- ❖ OS Archives and update deliverables are available in LI website:

<http://inuweb.ih.lucent.com/~spapag/SPA/SDHLR/nr/OMC-H/OSArchive/>

# Documentation deliverables

Documentation available for this release

Table 2.1 Documentation list

| Document ID      | Document title  |
|------------------|---|
| 401-380-841-R7.7 | Operations, Administration, Maintenance, and Provisioning |
| 401-380-084-R7.7 | System Installation                                       |
| 401-380-080-R7.7 | Object Description  |
| 401-380-831-R7.7 | CORBA Northbound Interface                                |
| 401-380-832-R7.7 | SNMP Northbound Interface                                 |
| 401-380-833-R7.7 | ASCII Northbound Interface                                |

## How to access customer documentation

- ❖ The customer documentation for OMC-H 7.7 can be downloaded from following link (ALU only):

<http://usilap37.ndc.lucent.com/infosrc2/data/OMCDocs/HTML/home.htm?OMCH-77-Issue1.htm>

- ❖ Customer documentation is officially delivered and posted on:

<https://infoproducts.lucent.com/aces/cgi-bin/dbaccessproddoc.cgi.edit?entryId=1-0000000001604&doctype=DOC>



# 3 New features

## Overview

### Purpose

This chapter describes the new features introduced in OMC-H 7.7 release.

### Contents

This chapter covers these topics.

|                   |     |
|-------------------|-----|
| New features      | 3-1 |
| New feature title | 3-2 |
| Functions         | 3-3 |
| Enhancements      | 3-4 |

## New features

Following are new features included in this release:

Table 3.1 New features

| Feature ID | Feature Title                         | Description   |
|------------|---------------------------------------|---|
| 67180      | OMC-H Email Critical Alarms           | This feature provides a facility to send e-mails to multiple email destinations. This allows the operator to be alerted as soon as alarm appears on OMC-H and therefore operator can give immediate attention to service maintenance required to minimize the impact on the network due to the issue raised by the alarm. |
| 67181      | Login banner prior to Login for OMC-H | This feature is to support security requirements in RFP for AT&T. A login banner is presented to all users prior to login. This applies to GUI, also applies on service console for telnet/ftp/SSH.   |
| 67183      | OMC-H 7.7 MIB Alignment Feature       | OMC-H 7.7 aligns with MAS R27SU2 and USDS 7.3 for HCF and HDF.  |
| 67184      | OMC-H 7.5 to 7.7 Upgrade              | OMC-H supports release upgrade from OMC-H 7.5 to OMC-H 7.7 for OMC-H application. It provides backward compatibility to USDS version 7.1 and upgrade to USDS version 7.3.   |
| 69920      | Memtool to Verizon site               | 1440 USDS-HLR Traffic Analysis Tool For Verizon (New added feature from L2B5 Patch5)  |

## New feature title

Refer to the above table.



# Functions

None

## Enhancements

1. OMC-H provides login banner prior to login into OMC-H.
2. OMC-H allows creation and management of USDS7.1, 7.2 and 7.3 simultaneously.



## 4 Changes to interfaces, alarms, and messages

### Overview

#### Purpose

This chapter describes changes to interfaces, alarms and messages in this release.

#### Contents

This chapter covers these topics.

|                                   |                     |
|-----------------------------------|---------------------|
| <a href="#">Interface changes</a> | <a href="#">4-2</a> |
| <a href="#">Alarm changes</a>     | <a href="#">4-3</a> |
| <a href="#">Message changes</a>   | <a href="#">4-4</a> |

# Interface changes

## Changes to Northbound Interfaces

None

## Changes to Southbound Interfaces

None

## Alarm changes

Feature 67180 introduces two new EMF alarms, as showed in the below table.

Table 4.1 New Alarms

| Specific Problems         | Severity | Probable Cause                    | Event Type      |
|---------------------------|----------|-----------------------------------|-----------------|
| emailSendingError         | MAJOR    | underlyingResourceUnavailable     | processingError |
| emailServerNot Configured | MAJOR    | configurationOrCustomizationError | processingError |

## Message changes

None



# 5 Resolved issues

## Overview

### Purpose

This chapter describes resolved issues in this release.

### Contents

This chapter covers these topics.

## Resolved issues in this release

Following are resolved issues in this release.

**Table 5.1 Resolved issues**

| Fault ID (AR)                               | Description of issue   |  |
|---|--|--|
| AR6118 and CR113 security scan on AT&T site | Please refer to security scan report.<br><a href="http://bjomch1.bj.lucent.com:8080/omch_doc_view/omch_7.7.0_doc/v80.system_test/70.full_integration_results/L2B5Patch6/Local_Scan_wo_condor_7.7L2B5P6_OS10.8_0919.htm.gz">http://bjomch1.bj.lucent.com:8080/omch_doc_view/omch_7.7.0_doc/v80.system_test/70.full_integration_results/L2B5Patch6/Local_Scan_wo_condor_7.7L2B5P6_OS10.8_0919.htm.gz</a> |  |



## Resolved issues in this release

Following are resolved issues in this release.

Table 5.1 Resolved issues

| Fault ID (AR)                               | Description of issue   |
|---|--|
| AR6118 and CR113 security scan on AT&T site | Please refer to security scan report.<br><a href="http://bjomch1.bj.lucent.com:8080/omch_doc_view/omch_7.7.0_doc/v80.system_test/70.full_integration_results/L2B5Patch6/Local_Scan_wcondor_7.7L2B5P6_OS10.8_0919.htm.gz">http://bjomch1.bj.lucent.com:8080/omch_doc_view/omch_7.7.0_doc/v80.system_test/70.full_integration_results/L2B5Patch6/Local_Scan_wcondor_7.7L2B5P6_OS10.8_0919.htm.gz</a> |

## History list for resolved issues

Following are resolved issues in this release.

Table 5.2 History list for resolved issues

| Fault ID (AR) | Description of issue  |
|---------------|---|
| AR 1- 1819411 | SCL OMC-H 7.5 GUI is missing a AT&T Security Banner (BR120)<br>The new feature 67181 is for that. |
| ih_cr18033    | 1280 lab with 3310 disk array cannot be managed by OMC-H.   |

| Fault ID (AR) | Description of issue  |
|---------------|---|
| ih_cr18268    | When deleting imported files succeed, it will also give a failed error message.   |
| ih_cr18377    | Modify the SG(signaling Gateway)object from OMCH leads to NE out of sync with OMCH, and it prompt "Modification of SignalingGateWay failed on one or more HCFs...". Although the SG object is modified on OMCH, while on NE MAS doesn't allow SG form to be updated in cluster configuration. |
| ih_cr18393    | when install common software fails, OMCH should generate on Minor alarm,but now it is Major   |
| ih_cr18918    | For software administration feature, it will always show the server busy alarm.   |
| ih_cr18967    | When do "omc start", the "its" in the output should be "it's". This might be a typo error.  |
| ih_cr18986    | CommonOAM Sync with NE failed.  |
| ih_cr19001    | OMC-H fails to downgrade MAS  |
| ih_cr19014    | CA cannot start up when OMC-H fallback to 7.5 from 7.7.   |
| ih_cr19022    | CA version is still 7.5 after OMC-H upgrade to 7.7.   |
| ih_cr19157    | when upgrade or downgrade MAS, the SS7BoardTable in NE tree view is lost  |

| Fault ID (AR)              | Description of issue  |
|----------------------------|---|
| NA<br>(Site Issue)         | <p>Alltel ATC upgrade OMCH 7.5 to 7.7, after do “shutdown -y -g0 -i6”, OMCH application cannot start automatically</p> <p>Refer to <a href="#">appendix 2</a> for detailed information</p>  |
| NA<br>(Site Issue)         | <p>Alltel ATC upgrade OMCH 7.5 to 7.7, OMCH application cannot start 100% when manually do omc start</p> <p>Refer to <a href="#">appendix 3</a> for detailed information</p>  |
| ih_cr20290 /<br>ih_cr21594 | <p>OMCH7.7 only support 1M2PA link with the same BOARD_GROUP according the MAS IRD for R27SU2, now OMCH7.7 should support 2 M2PA linke within the same BOARD_GROUP in omch7.7.</p> <p>Since OMCH7.7, omch disable the support for the SCTP link according to MAS IRD for R27SU2, now it should enable the function for support SCTP link.</p> |
| Ih_cr24219                 | <p>Memtool to Verizon site. OMCH support a new memtool to parse measurement data based on collected by OMCH. Refer to <a href="#">Usage Guide</a> for the detail information.</p>   |





# 6 Known issues

## Overview

### Purpose

“This chapter describes known issues and workarounds if available for this release.”

### Contents

This chapter covers these topics.

|  |                     |
|--|---------------------|
| <a href="#">Known issues and workarounds</a> | <a href="#">6-2</a> |
|--|---------------------|

## Known issues and workarounds

Following are known issues and workarounds (if available) in this release.

Table 6.1 Known issues and workarounds

### Known Product issues

| Fault ID (CR) | Description of issue  | Workaround  |
|---------------|---|---|
| ih_cr17801    | <p>After a successful COMMON OAM sync with NE, "NE Status" of CommonOAM does not exclude the successful NE</p> <p>It is decided not to do the fix in OMC-H.</p>   | NEStatus will change from "All NEs" to list of NEs only when user does COMMON OAM sync with OMC by selecting the COMMON OAM group. It is supposed that user will do Sync with OMC from the COMMON OAM VNE later after a "COMMON OAM Sync with NE" action. |
| ih_cr17986    | <p>The PM files are generated in NEs successfully. The files are retrieved by OMC-H successfully after the scheduled task run. The files can be viewed on OMC-H too. But OMC-H still generates a warning as "PMRetrievalError" for the NEs.</p> | Ignore the warning.   |

| Fault ID (CR) | Description of issue   | Workaround  |
|---------------|--|---|
| ih_cr18113    | SS7 Board status is not updated dynamically in CMT HCF Hardware view.<br><br>It is EMF related issue.  | Close the hardware view, and re-open it, the current status of SS7 Board is showed correctly. |
| ih_cr18916    | After Major or Critical overload is cleared, we only see a Cleared log with minor overload severity in Alarm manager. So The customer will never know there is a major or critical overload alarm happened before, in his eyes, he only see a minor alarm. | None.   |
| ih_cr18917    | When Major or Critical Network NE/CPU overload, the OMCH should trigger the overload handling like discarding alarm, preventing the users login. But the overload handling didn't happen under the overload situation.                                     | None.   |
| ih_cr19092    | For case ap6018, the default email subject should be "From OMC-H:Alarms details forwarded".  | Configure the email subject from the system preference window.                                |

| Fault ID (CR)   | Description of issue  | Workaround  |
|---|---|---|
| ih_cr19103  | non-admin user can login after CPU become critical overload. This is a new introduced CR on 7.7.  | None.   |
| ih_cr19104  | OMCH has wrong description for overload alarm clear message.  | None  |
| <p>The success or failure of INSTALL or DELETE Routing key actions wont be notified to OMC-H by NE.</p> <p>After configuring the OMC-H server for fully qualified domain name, the machine is not accessible.</p> | <p>This is a MAS issue, but MAS has decided not to implement this functionality.</p> <p>This is because the <code>/etc/&lt;server_interface_file&gt;</code> is having multiple entries in it.</p> | <p>The user has to check the Routingkey tables on each NE to verify whether it has succeeded or failed.</p> <p>The OMLog will contain details of the errors incase command has failed.</p> <p>Please modify the existing line to long name instead of adding new line to file <code>/etc/&lt;server_interface_file&gt;</code>. Where <code>&lt; server interface file&gt;</code> is the file name of the server interface. For example, <code>hostname.hme0</code> is the server interface file name.</p> |

#### Known Vendor issues

| Fault ID   | Description of issue   | Workaround                           |
|--|--|--------------------------------------|
| Sybase installation will fail if Unix hostname contains “-“ (Hyphen) | Correlation Asset functionality will not get activated as Sybase installation will fail. | Don’t put “-” in the unix host name. |



| Fault ID   | Description of issue   | Workaround   |
|--|--|--|
| Increase in global memory usage during first run of Nessus scan software on OMC-H system   | It has been observed that if Nessus scan software is run on OMC-H for first time global memory gets increased and does not get released. If any subsequent runs are done there is no increase in the memory usage is seen. This increase in memory does not impact any normal functionality of OMC-H and memory is released once the OMC-H server is re-started. | It's advisable to restart the OMC-H server once Nessus scan software is completed to get the memory released, if it's observed that memory usage on the system is reaching high due to run of Nessus scan. Reason for re-start is under the assumption that this scanning would not be run in the production but would be done in test-labs of customer before hand. |
| If the user tries to open any Report (like Audit report) or PM file from OMC-H using IE 6.0 SP2 browser, then it throws an error message "Access is denied. Error processing resource 'https://<IP address of OMC-H>:12000/reportsWeb/default.xml'". | This issue is seen only if the default page of IE 6 browser is set to 'blank'. This issue is observed in IE 6.0 SP2 but works fine with IE 7.0   | Click on 'Refresh' in the browser and the report can be viewed.  |
| OMC-H DB process core dump during security scan  | During IMS security scan, it was found that some process core dumped and then OMC-H server re-started. It was found in AT&T security scan CR113 too and it was marked as a critical issue in their report.   | Disable Condor service detect service plugin (condor_service.nasl) in Service Detection plugin family.   |

### Known MAS issues

The MAS/USDS known issues and workarounds, if any, are available in the following path:

[http://bjomch1.bj.lucent.com:8080/omch\\_doc\\_view/omch\\_7.7.0\\_doc/v80.system\\_test/70.full\\_integration\\_results/01.network\\_element\\_cr\\_status.xls](http://bjomch1.bj.lucent.com:8080/omch_doc_view/omch_7.7.0_doc/v80.system_test/70.full_integration_results/01.network_element_cr_status.xls)



# 7 System requirements

## Overview

### Purpose

This chapter describes software and hardware requirements and compatibility restrictions.

### Contents

This chapter covers these topics.

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| <a href="#">Software requirements</a>                              | <a href="#">7-2</a> |
| <a href="#">Hardware requirement</a>                               | <a href="#">7-3</a> |
| <a href="#">Compatibility restrictions</a>                         | <a href="#">7-4</a> |
| <a href="#">Third-party or other software/hardware requirement</a> | <a href="#">7-5</a> |

## Software requirements

Refer to the OMC-H System Installation guide (401-380-084R7.7) [\[2\]](#).

OMC-H 7.7 requires SunOS 5.10 operating system. The OS version with jumpstart version 10.3 and OS archive 10.6 needs to be installed prior to installation of the OMC when installing the OMC-H 7.7 application. The jumpstart 10.3 and OS archive 10.6 are combined and available in DVD in '.iso' format. OS archive needs to be updated to 10.8 before OMC-H 7.7 L2B5 Patch6 applying.

If Alarm Correlation feature is required, need to install Sybase and activate the CA. For details refer to the OMC-H System Installation guide (401-380-084R7.7) [\[2\]](#)

## Hardware requirement

Refer to the OMC-H System Installation guide (401-380-084R7.7) [\[2\]](#).

## Compatibility restrictions

This patch has been certified during OMC-H R7.7 upgrade feature.

## Third-party or other software/hardware requirement

Refer to the OMC-H System Installation guide (401-380-084R7.7) [\[2\]](#).







# 8 Installation and upgrade notes

## Overview

## Purpose

This chapter contains notes on installation and upgrade procedures.

## Contents

This chapter covers these topics.

|   |                     |
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| <a href="#">Performing first-time installation</a>            | <a href="#">8-2</a> |
| <a href="#">Performing upgrades</a>                           | <a href="#">8-3</a> |
| <a href="#">Upgrade paths</a>                                 | <a href="#">8-4</a> |
| <a href="#">Obtaining and installing third-party software</a> | <a href="#">8-5</a> |

## Performing first-time installation

For installation instructions, refer to the OMC-H System Installation guide (401-380-084R7.7).

## Performing upgrades

OMC-H supports release upgrade from OMC-H 7.5 to OMC-H 7.7 for OMC-H application. It provides backward compatibility to USDS version 7.1 and upgrade to USDS version 7.3

Please refer to upgrade procedure

[http://bjomch1.bj.lucent.com:8080/omch\\_doc\\_view/omch\\_7.7.0\\_doc/v02.standards\\_procedures/01.general\\_information/04.OMCH\\_R7.5\\_R7.7\\_Upgrade\\_MOP\\_ATT.doc](http://bjomch1.bj.lucent.com:8080/omch_doc_view/omch_7.7.0_doc/v02.standards_procedures/01.general_information/04.OMCH_R7.5_R7.7_Upgrade_MOP_ATT.doc)

## Applying Patch6

The steps for applying patch4 in the new installed omch7.7 server are totally same with the steps for applying patch6 in the upgraded omch7.7 server.

### 1. Pre applying steps:

(Notes: This is not the mandatory steps for applying Patch6, but it is strongly recommended.)

① If there is the automated omch backup cronjob is enabled in the crontab, please first disable it before applying Patch6

② Execute the omch full backup from omch gui or omch unix command line.

How to do the omch full backup through omch gui?

Select **System--->Maintenance--->OMC Backup--->Full**

How to do the omch full backup through omch unix command line?

```
# cd /omc/bin/system/bar
```

```
# iEMSBackup.sh -t FULL
```

### 2. Download **OMC-H-PATCH-7.7.2.5.6.tar** to omch server directory **/omc** using root user.

### 3. Verify the checksum and the size of the tar,

```
# cd /omc
```

```
# cksum OMC-H-PATCH-7.7.2.5.6.tar
```

The output should be as follows:

```
3963957813    236058112    OMC-H-PATCH-7.7.2.5.6.tar
```

### 4. Stop the omch application using omcadm user.

```
# omc stop
```

### 5. Executed the applying patch script using root user.

```
# cd /omc/bin/products/common
```

```
# ./patcher.sh 2>&1 | tee patcher.out
```

Enter **y** to **continue** or **n** to **exit** the patch installation.

(Don't disturb the system during patch installation.)

6. Reboot the omch server using root user.

```
# shutdown -y -g0 -i6
```

7. Approximately 5 minutes after reboot, try to monitor the PM(process manager) until omch application 100% up.

```
# $COMMONPATH/pm/bin/state.sh
```

8. if you have disabled the automated backup cronjob in the crontab in step 1, then you should enable the automated backup cronjob as the last step.



## Uninstall Patch6

This is the backout procedure for uninstall the Patch6 after applying it.

1. Log on to the OMC-H server as root.
2. Execute the following command to change the directory to /omc/bin/products/common:  
**# cd /omc/bin/products/common**
3. Execute the following command to run the unapplyOMCHpatch.sh script  
**# ./unapplyOMCHpatch.sh**
4. Execute the following command to reboot the OMC-H server:  
**# shutdown -y -g0 -i6**

## Obtaining and installing third-party software

Refer to OMC-H System Installation guide (401-380-084R7.7).



# Procedure for System Hardening of OMC-H 7.7

## 1. Harden the system using script

1) Log on the OMC-H server as root

## 2) Execute the following commands to harden the system

```
# cd /omcsw/7.7.2.5/bin/products/omch
```

```
# ./os_hardening.sh
```

Enter Your choice and press ENTER:

- 1) Disable unused services
- 2) Optimize system parameters (need reboot to take effective)
- 3) Enable Services
- 4) Restore default system parameters (need reboot to take effective)
- 5) Restore default service
- 6) List active services
- 7) AT&T Others
- 8) Exit

please enter you choose : **1**

Enter 1 to disable un-used services, and answer y to the next question.

Result: All the services that are not used by OMC-H are disabled.

Enter Your choice and press ENTER:

- 1) Disable unused services
- 2) Optimize system parameters (need reboot to take effective)
- 3) Enable Services
- 4) Restore default system parameters (need reboot to take effective)
- 5) Restore default service
- 6) List active services
- 7) AT&T Others
- 8) Exit

please enter you choose : **2**

Enter 2 to optimize system parameters

Enter Your choice and press ENTER:

- 1) Disable unused services
- 2) Optimize system parameters (need reboot to take effective)
- 3) Enable Services
- 4) Restore default system parameters (need reboot to take effective)
- 5) Restore default service
- 6) List active services
- 7) AT&T Others
- 8) Exit

please enter you choose : **7**

Enter 7 to invoke other system hardening scripts to harden the system.

Enter Your choice and press ENTER:

- 1) Disable unused services
- 2) Optimize system parameters (need reboot to take effective)
- 3) Enable Services
- 4) Restore default system parameters (need reboot to take effective)
- 5) Restore default service
- 6) List active services
- 7) AT&T Others
- 8) Exit

please enter you choose : 8

Enter 8 to exit

2. Follow other procedures in OMC-H 7.7 Installation Guide section 5 Installation of OMC-H application, "To harden the system" EXCEPT for the below two.

To remove weak ciphers from tomcat

To remove weak ciphers from apache

3. Fix some dynamic ports to avoid the SSL vulnerabilities.

#### **Purpose:**

There are 3 SSL vulnerabilities (SSL Anonymous Cipher Suites Supported, SSL Medium Cipher Suites Supported, SSL Weak Cipher Suites Supported) reported on some Corba-IIOP ports. By default, the Corba-IIOP ports are dynamically allocated when OMC-H is started. The below procedures are to fix those previous dynamic ports, so that the ports can be configured in firewall to inhibit external access and so eliminate the 3 vulnerabilities.

**Important:** Before making changes to the configuration files, please make a backup for them.

In the following 6 files

[\\$IEMSPATH/lib/3pt/bes/var/domains/base/adm/properties/management\\_vbroker.properties](#)  
[\\$IEMSPATH/lib/3pt/bes/var/domains/base/configurations/EMF/mos/presentation/adm/properties/management\\_vbroker.properties](#)  
[\\$IEMSPATH/lib/3pt/bes/var/domains/base/configurations/EMF/mos/element/adm/properties/management\\_vbroker.properties](#)  
[\\$IEMSPATH/lib/3pt/bes/var/domains/base/configurations/EMF/mos/alarmmgr/adm/properties/management\\_vbroker.properties](#)  
[\\$IEMSPATH/lib/3pt/bes/var/domains/base/configurations/EMF/mos/infrastructure/adm/properties/management\\_vbroker.properties](#)  
[\\$IEMSPATH/lib/3pt/bes/bin/bscript/bmsh\\_vbroker.properties](#) (create it if it does not exist)

Add a property as below to make the CORBA-IIOP ports fixed.

[vbroker.se.iioptp.scm.ssl.listener.port=<port-number>](#)

Note: Different port number for different file.

4. Block the above configured 6 ports on firewall to inhibit external access to the ports .

For example, if you configured the 6 ports as 20001~20006, you can configure ipfilter service in Solaris to work as a firewall.

1) In /etc/ipf/ipf.conf, configure the below:

```
block in proto tcp/udp from any to any port 20000><20007
pass in proto tcp/udp from localhost to localhost port 20000><20007
```

2) Enable ipfilter service

```
# svcadm enable ipfilter
```

5. Block other ports on firewall to inhibit external access to the ports  
The ports that can be blocked for external access are: 5000, 5001, 5021, 8001, 8002
6. Following the below steps to correct the permissions that do not have an owner or group name.

```
@ cd /omc/patches/.installed
@ chown omcadm:omcadm *installed
```

```
@ cd /omc
@ chown omcadm:omcadm *.sh
```

```
@ cd /omcsw
@ chown omcadm:omcadm *.sh
```

7. Re-start OMC-H server to make the above changes effect

```
@ omc stop
# shutdown -y -g0 -i6
```





# Appendix

## Overview

### Purpose

This section covers Acronyms and Definitions

### Contents

## Glossary- Acronyms and Definitions

**GUI** – Graphical User Interface

**HCF** – Home Location Register Control Function

**HDF** – Home Location Register Data Function

**DG** – Data Grid

**HLR** - Home Location Register

**HSS**- Home Subscriber Server

**MAS** – MiLife Application Server

**NE** - Network Element

**CA** - Correlation Asset

**OAM** - Operations, Administration & Maintenance

**OMC-H** - Operations and Maintenance Centre for HLR and HSS.

**SDHLR** - Super Distributed Home Location Register

**UMTS** - Universal Mobile Telecommunication System

**USDS** – Unified Subscriber Data Server

**CLI** – Command Line Interface

**ALED** – Alcatel Lucent electronic Delivery