Universal Service Node (USN) Troubleshooting Guide

Release 6.1.4

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1 INTRODUCTION

This document provides troubleshooting guidance for frequently found issues on the XOP conferencing and web collaboration product, the USN. This document is intended to be used by Tier 2 or higher support personnel and is meant to be used after the Installation of an USN has been completed.

1.1 ACRONYMS

USN: XOP Meeting Center can be on a SVRU blade, in an External Server, or virtualized.
NIC: Network Interface Card
ETH0:   The logical name for the NIC port on the USN server
Ports: Each port is equivalent to one caller which from a telephony perspective is a DS0.
GUI: Graphical User Interface
]#:   Linux terminal or SSH prompt
>   MySQL prompt

1.2 BASIC LINUX COMMANDS

To navigate the rest of this document you will need familiarity with the commands listed below:

ll – list directory
vi – open file editor
cd – change directory
ps – lists all processes similar to windows task manager
grep – when combined with a | filters results from previous command.

1.3 REFERENCES

The Linux Pocket Guide by Daniel J Barrett published by O'Reilly which can be found at www.oreilly.com is a very useful reference.

The file transfer utility WinSCP is useful. It can be downloaded from this link:
http://winscp.net/eng/download.php

The SSH client Putty is the most commonly used. It can be downloaded from this link:
http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html

2 TROUBLESHOOTING HINTS

This section provides trouble shooting hints for frequently found issues:

Item #	Description	Possible Cause	Action required
2.1	**NETWORKING ISSUES**		
1	On System Status Page Voice Service says Not Running	Full hard drive partition(s)	See section 5.3.4. If hard disk is full, contact XOP Customer Support for Assistance.
		System interruption	See section 5.1.2. If the restart fails, contact XOP Customer Support for Assistance.
2	Not able to log into the web server	Full hard drive partition(s)	See section 5.3.4. If hard disk is full, contact XOP Customer Support for Assistance.
		System Connectivity	See section 5.1.3. If the status is running, then there is a network issue, contact your IT support. If not running, see section 5.1.7 Then try to log in again. If unsuccessful contact XOP Customer Support for Assistance.
3	Not getting any emails from the server	The mail relay server IP address may not be configured properly	See section 7.5.1 and section 5.3.1
2.2	**CONFERENCING APPLICATION**		
1	After calling, I hear the 'Welcome to …' prompt, but USN does not accept any Access Codes.	License has expired	Check Licensing Tab under System Configuration Page. Confirm no expiration date is shown. Then use Webmin custom command to check for a date in HMP portion of license.
		Audio conference service may not be licensed.	See section 5.3.7 search for string ' handler'.
		Eth0 is not in service so license does not recognize system	See section 5.2 to confirm eth0 is in service
2	When I call into a conference room, I hear 'echo'	If callers are very close to each other and using speaker phones, the audio from active speaker also get fed from a secondary caller's phone into the	Maintain a minimum distance of at least 5 feet between phone users, especially if speaker phones are being used.

		bridge. This produces perception of echo.	
3	When I call into a conference room, I hear 'helicopter' noise	There may be calls from a previous conference that are still connected between the PBX and the USN. This can lead to a circular loop that will build up the noise in a conference room.	Please make sure that PBX drops a caller's line coming into the bridge after the caller has hung up. This condition can be verified by checking RealView. If there are calls that were not dropped, use the disconnect link on Realview to force a disconnect.
4	I tried to use iCAL button to send the meeting invitation, but no email was sent.	Your PC's Outlook Calendar function may have been reset or set inappropriately. The iCAL facility needs to be enabled.	In Calendar, on the Tools menu, click Options, and then click Calendar Options. Under Advanced options, select the "When sending meeting requests over the Internet, use iCalendar format check box".
5	Cannot dial out to bring additional people into a conference	The SIP trunk may be set up for inbound traffic only.	Please check with PBX/CO person. The trunks need to set for full duplex operation for this feature to work.
6	Hear bursts of noise after someone stops speaking in a conference.	HMP.Uconfig file is missing. HMP.Uconfig values need adjustment for that location	Reapply the license. This will reinstall the Hmp.Uconfig file Please bring this to the attention of XOP Customer Support for Assistance.
7	When I call into the bridge, it prompts me for an Access Code. The Access Code I enter gets rejected.	Access Code is probably for a scheduled conference so it is only valid during the time of the conference plus the Lobby time. The code will be rejected as invalid unless it is entered in the correct time window Some phones or phone systems distort DTMF, sending the system incorrect digits. The USN may not have correct license for the audio conferencing.	Confirm Access Code in question was tried during a time for which it was valid. Use the System Events in the GUI (BAD PIN) or **tlog** command to view the DTMF digits the system is detecting. Look for a single digit that was distorted into multiples or missing digits Please bring this to the attention of NTAC.
8	Intermittent choppy audio or other noise impairment in the audio conference.	Ethernet interface may be running in half duplex mode. Network not optimized	Confirm that all network elements the voice traffic crosses are configured to be full duplex. Confirm that the RTP packets

	TIP: Request a recording of the conference when the noise is present.	for voice	coming from the USN have been marked as voice.
		External Source injecting noise into the conference.	Try muting the conference using 43#, does interference stop? If so use RealView to unmute lines one at a time to find the source of the spurious noise.
9	I set up my conference for recording but nothing is getting recorded.	Recording capability needs to be enabled on the admin side	Confirm that system has recording enabled for the moderator.
10	I am not able to schedule conferences	Scheduling capability needs to be enabled on the admin side	Make sure that 'schedule port usage field' is selected on System Configuration page..

2.3 FIREBAR APPLICATION

| 1 | When I trigger a Firebar, the calls are being dialed out. If a call is picked up by an answering machine, I hear the answering machine welcome message | The USN allows a moderator to select 'disconnect answering machines' on the advanced page for FB application | Select 'disconnect answering machines' settings. The system will automatically prevent answering machines from joining an ongoing audio conferencing.

Alternately, select 'any digit' and only people who press a digit will be able to enter the conference. |
|---|---|---|---|
| 2 | I understand the system can SMS text messages | The system supports SMPP interface to external SMSCs. | This capability requires an account with a cellular network SMSC service provider. |

2.4 WEB CONFERENCING APPLICATION

1	Unable to upload a document	PDF is password protected and / or encrypted	Upload of secure PDF's is not supported.
		Document is too large	Maximum upload size is 10M or 300 pages
2	Document is 'Distorted' during upload / conversion. Fonts are changed, spacing is different, diagrams or objects are missing	All uploaded documents are converted to jpeg format to be displayed. Certain fonts and objects do not convert properly due to Microsoft Patent / Trademark issues	The best resolution is to use the Save as PDF feature that is standard in Office 2007 and 2010. PDF documents convert to jpeg without distortion. A third party pdf converter such as cute PDF can also be used.
3	Power Point animations / transitions are not working after upload	Animations and Transitions are removed during the conversion process.	To preserve transitions and animations, the presenter must share their desktop and use slide show mode.
4	Remote Desktop View is not full screen for participant	Resolution difference between displays	The participant can see the display in actual size. If the shared desktop is lower resolution or smaller, it will not expand past actual size
		Aspect Ratio difference	The aspect ratio of the shared

		between displays	desktop is maintained so if a 4:3 display is shared to a 16:9 display or vice versa, the height will be a limiting factor that can prevent the image from being displayed full size.
5	Noticeable Lag on Participant side when desktop sharing	Insufficient Bandwidth at USN	The USN will require 300Kbits/s for each participant. Total bandwidth required = 300Kbits/s * n where n is the number of participants. Run a speed test to determine available bandwidth
		Insufficient Bandwidth at Participant PC	The participant must have at least 300Kbits/s available. Run a speed test to determine available bandwidth
6	Methods for reducing the Bandwidth required for Web Conference.	Use Uploaded Documents whenever possible.	Uploaded documents require almost no bandwidth after the initial upload.
		Use Region Share	The bigger the area shared, the more bandwidth required. If viewing the whole desktop is not required use Region Share
		Reduce the resolution	The lower the resolution of the presenters screen, the smaller the bandwidth required. 1024 X 768 is a common size that should display well for all attendees
		Reduce the color depth	Reducing the screen color depth to 16 bit from 32 bit halves the required bandwidth
		Simplify the Image	Switch the desktop to a solid color, instead of a complex image. .
2.5	**CONSOLE ISSUES:**		
1	Error appears on Monitor saying "Cannot Display Image" or similar	This can happen if the system was built connected to a monitor that has a resolution set to too high or too low for the current monitor. It can also happen the system was built with no monitor attached	Under /etc/X11 you will find a file xorg.conf. Delete this file and reboot the system with the monitor attached.

3   ITEMS REQUIRED FOR CUSTOMER SUPPORT

When contacting XOP Support, please have the following items available to expedite resolution of the issue:

- Output of the 'Check Page' (see the Installation Guide)
- Copy of completed Table 1: Customer Site Parameters from Installation Guide.
- License ID number and MAC address for system
- Output of the Generate Diagnostics function under Maintenance > Advanced Maintenance
- Any applicable Wireshark traces that have been captured.
- For audio quality issues, a recording of the impairment is very helpful.
- If system is accessible via public IP, the URL and login credentials
- If system is not available via public IP then contact information, including name, phone number, and email address of a person who can access the system.
- Any copy of any correspondence that provides details or notes on the issue and steps taken.

4   COMMON CUSTOMIZATION PROCEDURES

This section provides help for frequently requested customization items.

4.1   CUSTOMIZING GREETINGS, PROMPTS, HOLD MUSIC, AND OTHER PRE-RECORDED ANNOUNCEMENTS

Many customers will request different hold music or greetings. At the location /home/voxd/data/voice there are two directories: one called 'announcements' and the other 'custom_announcements'. If there is a file of the same name in custom_announcements it will take precedence over the file in announcements. To customize a particular file, place a .wav file of the same name in the custom_announcements directory. A service voxd restart is required to load the new announcements.

WARNING: AN ANNOUNCEMENT THAT IS NOT IN THE PROPER FORMAT WILL CORRUPT THE STACK AND CAUSE THE USN TO STOP OPERATION. DO NOT OVERWRITE THE DEFAULT GREETINGS. ALWAYS LOAD CUSTOM ANNOUNCEMENTS IN THE CORRECT DIRECTORY.   THIS WAY IF THERE IS A PROBLEM WITH THE CUSTOM ANNOUNCEMENT IT IS A SIMPLE DELETION TO RESTORE FUNCTIONALITY

To check the file format use the following command:

```
]# file filename.wav
```

```
The correct format is:
filename.wav: RIFF (little-endian) data, WAVE audio, Microsoft PCM, 16
bit, mono 8000 Hz
```

4.1.1   Hold music

The hold music is kept in the file "music-on-hold.wav" in the /home/voxd/data/voice/announcements directory. To change the hold music, take a .wav file and copy it onto the USN and place it into the directory /home/voxd/data/voice/custom_announcements then run the following command to convert the file into the proper format.

```
]# sox infile.wav -r 8000 -c 1 music-on-hold.wav
```

```
Then use the command
]# file outfile.wav to make sure the proper format is displayed.
```

4.1.2   Welcome to the conference

The "Welcome to the Communications Server" announcement is the file welcome.wav in the /home/voxd/data/voice/announcements. With the new announcement in .wav format, stored in the custom_announcements directory execute the following commands:

```
]# sox infile.wav -r 8000 -c 1 welcome.wav
```

```
Then use the command
]# file welcome.wav to make sure the proper format is displayed.
```

4.2   ADDING ADDITIONAL ADMIN'S TO THE SYSTEM

If the customer needs additional admin accounts, or if you need to create one to access a web portal with a changed password, the procedure is:
1. Login to SSH or Webmin with root credentials.
   a. In Webmin go to Others > Command Shell
2. Change Directory to /home/wwwrun/bin.
3. Issue the command ./xopacct add admin <username>
4. The password will be set to the username.

5   FREQUENTLY USED COMMANDS

This section provides useful CLI commands that can be used for trouble shooting a system.

NOTE: Webmin Command Line Access does not work for tailing a file, editing a file, or any other commands that do not return to a prompt after echoing something to the screen.

5.1   APPLICATION RELATED COMMANDS

The voice service is responsible for handling signaling and actual combining of voice channels for setting up conferences. The service is referred to as 'voxd' in the rest of this document.

The web portal associated with the USN is called the web service and is referred to as 'webd' in the rest of this document.

The web conference service has a separate web portal that is imbedded into the overall web portal of the system. The web conference service is referred to as 'webconfd' in the rest of this document.

5.1.1   Check status of voice service

]# service voxd status

This command will return a value of either 'stopped' or 'running' for voxd.

5.1.2   Restart of voice service

It is necessary to restart the voice service if the VOIP settings, i.e., Stack Address have been changed.

]# service voxd restart

This command will stop the Dialogic HMP service as well as the conferencing application, then restart both. This is the same process as restarting the voice from the System Maintenance page of the Administrative GUI. It is also equivalent to the following string of commands

]# service voxd stop – stops the voice service
]# dlstop – stops Dialogic HMP firmware
]# dlstart – starts Dialogic HMP firmware
]# service voxd start – starts voice service

5.1.3   Check status of web service

If attempts to access the Admin GUI are unsuccessful, resulting in page not found or other error, check to make sure the Web Application is running. It is necessary to restart the web application after changing either the Admin or Redirect URL.

]# **service webd status**

This command will return the following if the service is working properly:

nginx (pid 3039 1467 1466 1465 1464 1463) is running...
mongrelmon (pid 14636 14628) is running...
recurd (pid
14638) is running...
postprocessd (pid
14642) is running...
lrpd (pid 14647) is running...
ldap_syncd is running: pid=14653
edrv is running: pid=14625
openoffice server is running
redis-server is running with pid 30893
Red5 Server is running with pid 30915
tomcat6 (pid 31058) is running...

Otherwise, one or more of the listed processes will show 'stopped'.

5.1.4   Check status of web conferencing service

If attempts to start a web conference are not successful, check to make sure that the web conference service is running. It is necessary to restart the web conference service after changing the Redirect URL.

]# **service webconfd status**

This command will return the following if the service is working properly:
openoffice server is running
redis-server is running with pid 30893
Red5 Server is running with pid 30915   [OK]
tomcat6 (pid 31058) is running...

Otherwise, one or more of the listed processes will show stopped.

Note that these are the same 4 lines as the last 4 lines in the service webd status.

5.1.5   Check Status of nginx service

If navigating to the web portal either via URL or direct IP address results in a 'Page not Found' error, this is an indicator that the nginx service is not running.

 ]# **service nginx status**

This command will return the following if the service is working properly:

nginx (pid 3039 1467 1466 1465 1464 1463) is running...

Note there should be 6 pid's in the list. 3 are the mongrels, 1 is the mongrel supervisor, and the other is the master nginx process.

5.1.6   Restart NGINX service

This will gracefully stop and then restart the web server application. This is necessary when there has been a change to one of the URL's or the host name, or HTTPS has been enabled.

]# **service nginx restart**

This command will return the following if the service is working properly:

nginx: the configuration file /usr/local/nginx/conf/nginx.conf syntax is ok
nginx: configuration file /usr/local/nginx/conf/nginx.conf test is successful
Stopping nginx:
Starting nginx:

5.1.7   Restart web service

This will gracefully stop and then restart the web application. This is necessary when there has been a change to one of the URL's.

]# **service webd restart**

This command will return the following if the service is working properly:

Starting webd:
mongrelmon: starting mongrel for socket 7000: pid=11891
mongrelmon: starting mongrel for socket 7001: pid=11892
mongrelmon: starting mongrel for socket 7002: pid=11893

5.1.8   Restart Web conferencing service

This will gracefully stop and then restart the web conferencing application. This is necessary when there has been a change to the Redirect URL.

]# **service webconfd restart**

This command will return the following if the service is working properly:

Stopping tomcat6:
Stopping redis-server: redis.
/etc/init.d/red5: Calling red5-shutdown
Running on Linux

Starting Red5
Attempting to connect to RMI localhost:9999
Red5 Tomcat loader was found
Calling shutdown
Stopping OpenOffice headless server.
Stopping tomcat6:
Stopping redis-server: redis.
Openoffice headless server is not running.
Starting redis-server: redis.
/etc/init.d/redis: redis started.
Starting Red5 Server red5

.
Starting OpenOffice headless server
Starting tomcat6:

5.1.9   Check status of dialogic (HMP) stack

]# **listboards**

This should return the following. If it does not then execute a service voxd restart described in 3.2

```
===================================================
 Listboards - Version 3.01  Build: 01
===================================================

MDI Library   version: 7.00  Build: 15
DM3pp Library version: 1.20 Beta 1 Build: 1
Driver version      : pQ¿ Build:
```

BrdNum	CfgId	Type	Bus	Slot	PhysAddr	RamSize	Irq	State
1	21	P	0	21	0	8000	0X0	DOWNLOADED

5.1.10   xopacct

This is the only method for creating additional admins, or removing an admin. It can also be used to disable or delete accts from the command line if Admin GUI access is not available.

]# /home/wwwrun/bin/xopacct <add admin | delete | lock | unlock > <username>
username is the login for the account being modified or created.

5.2 **NETWORK CONFIGURATION COMMANDS**

There are some commands that are not supported by Webmin that are necessary for troubleshooting. These commands are detailed below.

5.2.1   Checking NIC Configuration

Occasionally there will be an error in negotiation between the USN and the customer's network. This will lead to the NIC being configured for half-duplex. To check for this condition use this command:

]# ethtool eth0

The result should look like:

Settings for eth0:
      Supported ports: [TP]
      Supported link modes: 10baseT/Half 10baseT/Full
                      100baseT/Half 100baseT/Full
                      1000baseT/Half 1000baseT/Full
      Supports auto-negotiation: Yes
      Advertised link modes: 10baseT/Half 10baseT/Full
                      100baseT/Half 100baseT/Full
                      1000baseT/Half 1000baseT/Full
      Advertised auto-negotiation: Yes
      Speed: 100Mb/s
      Duplex: Full
      Port: Twisted Pair
      PHYAD: 1
      Transceiver: internal
      Auto-negotiation: on
      Supports Wake-on: g
      Wake-on: g
      Current message level: 0x000000ff (255)
      Link detected: yes

If the result looks like this:

Settings for eth0:
      Current message level: 0x00000007 (7)
      Link detected: yes

Then the system is running in a virtualized environment with a network driver that does not support the ethtool commands. Please consult the documentation for the Virtual Host on how to remedy this.

5.2.2   NIC Configuration File

]# cat /etc/sysconfig/network-scripts/ifcfg-eth0

BOOTPROTO=none
NAME=""
MACADDR=""
HWADDR=00:0C:29:43:6A:53
IPV6INIT=no
DEVICE=eth0
MTU=""
NETMASK=255.255.255.0
BROADCAST=192.168.1.255
DHCPCLASS=""
IPADDR=192.168.1.2
NETWORK=192.168.1.0
ONBOOT=yes
# ETHTOOL_OPTS="autoneg off speed 100 duplex full"

The ETHTOOL_OPTS="autoneg off speed 100 duplex full" line should be uncommented if the USN is connected to a 100Mbs network and ethtool shows that the connection is not 100Mbs or not Full Duplex. If the USN is connected to a 1Gbs (1000Mbs) network the line should remain commented

out. When dealing with a virtualized environment, this line should remain commented out, or be removed, since it is not supported by the default network drivers.

5.2.3   Resetting NIC

The Centos / Linux equivalent of a Windows / DOS ipconfig / renew is the following set of commands

]# ifdown eth0 – this closes down the NIC

]# ifup eth0 – this restarts the NIC

5.2.4   Host Name

WARNING – THE HMP STACK IS SENSITIVE TO HOST NAME DISCREPANCIES. USE CAUTION WHEN CHANGING THE HOST NAME TO MAKE SURE THE CHANGES ARE MADE IN ALL NECESSARY LOCATIONS

5.2.5   Checking Host Name Location 1: /etc/hosts

Check and make sure that 'newhostname' is listed in the hosts file

]# cat /etc/hosts

This command should return output similar to as shown below:
Do not remove the following line, or various programs
that require network functionality will fail.
127.0.0.1   localhost.localdomain localhost
192.168.1.2   nmc nmc.necam.com nmcredirect.necam.com

Where 192.168.1.2 is the IP address for the USN.

5.2.6   Checking Host Name Location 2 :/etc/sysconfig/network
Check and make sure that 'newhostname' is listed in the network file.

]# cat /etc/sysconfig/network

The above command should return output similar to following:

NETWORKING=yes
NETWORKING_IPV6=no
HOSTNAME=anx

The GATEWAY Parameter may appear here. If it does not appear in either this location or /etc/sysconfig/network/ifcfg-eth0 it needs to be added to this file. The syntax is
GATEWAY=192.168.1.254

5.3   TROUBLE SHOOTING COMMANDS/ UTILITIES
These commands are not compatible with the Webmin Command Line Utility because of their output structure. They must be entered from a console or SSH prompt.

5.3.1   Test SMTP operations using Telnet

This procedure checks to ensure that the port is open to the mail relay server and that the mail relay server is properly configured to receive emails from the USN, as well as send them to the recipients.
1. Telnet into Exchange server hosting IMS service using TCP port 25.
Command is:
 telnet <servername> 25

2. Turn on local echo on your telnet client so that you can see what you are typing.
On Win 9x and NT 3.5/4.0 Telnet client this done by selecting the "preferences" from the "terminal" pull down menu, and checking the local echo radio button. For Windows 2000 telnet client, issue command "set local_echo", from the telnet command prompt.

3. Issue the following smtp command sequence

helo <your domain name><enter>
response should be as follows
250 O
mail from: <your Email Address><enter>
response should be as follows
250 OK - mail from <your Email address>

rcpt to: <recipient address><enter>
response should be as follows
250 OK - Recipient <recipient address>

data<enter>
response should be as follows
354 Send data. End with CRLF.CRLF

To: <recipient's display name><enter>
From: <your display name><enter>
Subject: <Subject field of Email message><enter>
<Enter your body text><enter><enter> . <enter>
response should be as follows
250 OK

5.3.2   Command Line Email Test for SMTP / Sendmail Setup Verification

Test email as follows:

```
mail -s "subject1" support@xopnetworks.com
<type message body>
<ctrl-D>
<ctrl-D> (or just hit "enter" for the "cc" list)
```

5.3.3   Resetting SIP Stack for License Application

Occasionally, a license will not apply. Usually this happens when a system had a prior license installed. The underlying issue is a portion of the stack that gets stuck. To clear this issue, follow these steps:

1.]# service voxd stop
2.]# dlstop
3.]# pgrep lmgrd
   This should return a Process ID (PID) in this example 3631
   [root@anx ~]# pgrep lmgrd
   3631
4. If there is a PID, do a pkill on the process
   ]# pkill lmgrd
   If there is not a PID, proceed to step 8.
5. Redo the]# pgrep lmgrd
6. If it returns a PID do a kill -9 <PID>
7. Redo the]# pgrep lmgrd, if it is still returning a PID, contact Customer Support
8.]#dlstart (wait for it to finish, expected output is Dialogic Media Started) If the message 'Media Failed to Start' is seen, open a Ticket with XOP Customer Support.
9.]# listboards to confirm the stack is in the state DOWNLOADED
10. Retry applying the license through the web portal.

5.3.4   File System Utilization Check
]# df –h

5.3.5   Locate Large Files or Directories
]# du –sk * | sort –n

5.3.6   TCPDUMP – Protocol Capture from Command Line

To diagnose SIP signaling issues, capture a trace at the USN using the utility tcpdump. The command is:

]# tcpdump –s 0 –A port 5060 – this will put the output on the screen.

To capture in ASCII to a file modify the command to:
]# tcpdump –s 0 –A port 5060 > capturefile.txt

To capture in pcap format so that the file can be analyzed using Wireshark, modify the command to:
]# tcpdump –s 0 –A port 5060 -w capturefile.pcap

5.3.7   The TLOG Command – Tailing the Voice Process log

Often the SIP messages do not show the necessary details. To see the transaction level detail from the voice application use the command:

]# **tlog**

This is an alias / shortcut for tail –f /home/voxd/voiced.log This will allow the log to be viewed in real time. When investigating an event that has already occurred use the command

]# **view /home/voxd/voiced.log**

This will open the entire file and provide the vi editor search tools '/' and '?'

6 CONFIGURATION FILE LOCATIONS

6.1 SIP (HMP) CONFIGURATION FILES

The underlying HMP stack is provided by Dialogic. There are a few configuration parameters that should be checked as part of troubleshooting.

6.1.1 The Pyramid.scd file

This is the master file where the names of all the Dialogic config files are kept. To view this file use the following command:

]# **cat /usr/dialogic/cfg/pyramid.scd**

The output will look like

```
NumStreams                 : 4000
NumBindHandles              : 4000

[TDMBus  0] {
  TDMBusType                 : H100
  BusCR              : 8
  Group1CR            : 8
  Group2CR            : 8
  Group3CR            : 8
  Group4CR            : 8
  PrimaryLines         : CT_A
}

[Board 1] {
  PCDName                   : license_1264195610.pcd
  FCDName                   : license_1264195610.fcd
  PCMEncoding                : MULAW
  SlotNumber          : 21
  BusType             : PCI
  LogFile            : board1.log
  DisplayConfig          : YES
  TimeToSendMsg              : 50
  MasterStatus            : SLAVE
    IPAddress             : 192.168.254.110
  InstanceNumber            : 1
```

6.1.2 The Hmp.Uconfig File

With HMP Version 4.1, custom parameters must be stored in this file. It is mentioned here because if this file is missing, customers may complain of noise or echo in the conference. The file should be located in the /usr/dialogic/data directory.

6.1.3 The FCD and PCD CONFIG files

The PCDName and FCDName files share a common root file which is license_123456789.config. This file is stored in the /usr/dialogic/data directory. This file should not be altered. It is listed here because Engineering or Customer Support may ask for a copy of this file.

7   LOG FILE LOCATIONS

7.1   VOICE APPLICATION LOG FILES

Located in the /home/voxd directory

7.1.1   voiced.log

The primary log file of the voice application is voiced.log. It can be found at /home/voxd/

To look for events in the past:

1 Open with the view command]# view /home/voxd/voiced.log
2 Use the command :$ to go to the last line of the file.
3 Use the ? command to search backwards for a identifier, such as time stamp, dialed number, channel number, etc. Searching up from the bottom is faster than searching down from the top.

To see events as they happen:

From any directory type the command **tlog** at the prompt

7.1.2   vmon.log

Provides logs of the failsafe program that keeps voiced running

7.2   WEB APPLICATION LOG FILES

Web Application logs are located in the directory /home/wwwrun/log/

7.2.1   mongrel.<pid>.log

Provides log of mongrel errors (usually not useful, unless the mongrels have crashed)

7.2.2   lrpd.log

Provides log of long running processes, such as backups, voiced restarted, and license application.

7.2.3   production.log

The primary log file of the web application is production.log. It can be found at /home/wwwrun/log/production.log. There is very little that can be done from or with this file. It is listed because on rare occasions, Engineering or Support may request the file to trouble shoot an issue.

7.2.4   postprocess.log

Logs from the postprocessor for such tasks as sending summary emails to moderators, and purging old data from the system.

7.2.5   recurd.log

Provides log of recurring service activity. This log shows when scheduled services are started.

7.3   DIALOGIC LOG FILES

Located in the directory /var/log/dialogic/

7.3.1 board<n>.log
Boot log for the board.

7.3.2 rtflog - <date>
Trace messages from Dialogic.

7.4 NGINX LOG FILES

Located in the directory /usr/local/nginx/log/

7.4.1 access.log
Log of every web request.

7.4.2 error.log
Error log for web requests (nginx errors, like not being able to send to a mongrel).

7.5 SYSTEM ERRORS

Located in the directory /var/log

7.5.1 Maillog

This log file shows the status of each email the system attempts to send and if it was successful (sent) or not.

7.5.2 messages.log

Log of kernel and other OS errors.

8 LICENSE RELATED

8.1 LICENSING

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The USN has up to three separate License files that must be in place for the system to accept calls. The license file installation procedure varies depending on system and features involved. Please contact Customer Service with any license issues or questions.

8.1.1 XOP License

The XOP license is located in the directory

/home/voxd/config

The file license.dat is tied to the MAC address of eth0. Therefore if you change the MAC address, or use a different NIC port, the license may not be recognized.

8.1.2 Dialogic License

The Dialogic HMP license is tied to the MAC address of eth0. So changes to the MAC address or NIC port will cause license issues with the Dialogic stack as well.

8.1.3 Web Conferencing License

Web Conferencing is an optional feature. When ordered, this license will be included in the XOP portion of the license.