



Installing Dialogic® NaturalAccess™ Signaling Software Release 5.1

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Revision history

Revision	Release date	Notes
62747-10	June 2008	SRG, SS7 5.0 Beta
62747-11	September 2008	SRG, SS7 5.0
64-0428-01	May 2009	LBG, SS7 5.1 Beta
64-0428-02	July 2009	LBG, SS7 5.1 GA
Last modified: July 8, 2009		

Refer to www.dialogic.com for product updates and for information about support policies, warranty information, and service offerings.

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Contents of this package

Note: The product to which this document pertains is part of the NMS Communications Platforms business that was sold by NMS Communications Corporation ("NMS") to Dialogic Corporation ("Dialogic") on December 8, 2008. Accordingly, certain terminology relating to the product has been changed. Below is a table indicating both terminology that was formerly associated with the product, as well as the new terminology by which the product is now known. This document is being published during a transition period; therefore, it may be that some of the former terminology will appear within the document, in which case the former terminology should be equated to the new terminology, and vice versa.

Former terminology	Current terminology
NMS SS7	Dialogic® NaturalAccess™ Signaling Software
SS7 Software	NaturalAccess Signaling Software
<i>readme_ss7.txt</i>	<i>readme_signaling.txt</i>

Dialogic® NaturalAccess™ Signaling Software Release 5.1 includes the following products:

- TX Base 8.0
- MTP123 10.0
- MTP12 6.0
- SCCP 9.0
- TCAP 7.0
- ISUP 9.0
- TUP 9.0
- SIGTRAN 2.0
- Util 1.0
- MTPCore 1.0

NaturalAccess Signaling Software Release 5.1 software products support the following operating systems:

- Windows® Server 2003, Standard edition R2 and Windows® Server 2003, Enterprise edition R2
- Intel Solaris 10 (32 bit)
- SPARC Solaris 10 (32-bit mode/mixed mode)
Runs in either of these operating environments:
 - 32-bit applications, 32-bit libraries, 32-bit kernel, 32-bit drivers
 - 32-bit applications, 32-bit libraries, 64-bit kernel, 64-bit drivers
- SPARC Solaris 10 (64-bit mode)
 - 64-bit applications, 64-bit libraries, 64-bit kernel, 64-bit drivers
- Red Hat Enterprise Linux, ES, version 4.0 (Nahant update 4)

The NaturalAccess Signaling Software installation program installs the following components:

- NaturalAccess Signaling Software development and runtime software
- Device drivers
- TX board software
- Host applications
- Libraries
- Sample applications

Refer to www.dialogic.com for product updates and for information about support policies, warranty information, and service offerings. From this web site, you can download the NaturalAccess Signaling Software and documentation.

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Installing the software under Windows

Note: The NaturalAccess Signaling Software Release 5.1 installs the software files to a new location on your system: `\Program Files\Dialogic\tx\`

Complete the following steps to install the software under Windows:

Step	Action
1	Uninstall any prior versions of NaturalAccess Signaling Software. Refer to <i>Removing the software</i> on page 13 for more information.
2	Log on as a member of the Administrators group.
3	Download the Dialogic® NaturalAccess™ Signaling Software from www.dialogic.com .
4	Launch Windows® Explorer, and double-click on the downloaded file.
5	Click the <code>.msi</code> file to install the software. The Welcome screen appears.
6	Follow the prompts as the Installation Wizard guides you through the installation process. Note: Do not change the default install location.
7	If you have TX boards in your system, you will receive a Security Alert – Driver Installation warning. Click Yes to install the TX PCI Driver software. You will receive a warning to install the driver software for each TX board in the system. The wizard notifies you when the installation is complete.
8	Reboot Windows before configuring and using the NaturalAccess Signaling Software or power off the system if installing the TX boards.

For additional installation information, refer to the `readme_signaling.txt` file.

Activating the TX PCI device drivers

After you install the software and add the TX boards, start the system. Complete the following steps to activate a device driver for a Windows installation:

Step	Action
1	Log on as a member of the Administrators group. The Found New Hardware Wizard appears. You will need to install the TX PCI Driver software for each TX board and its type. Make note of which TX <####> Series PCI software you are installing. Each TX board driver software is located in different directories. For example: <ul style="list-style-type: none">TX 4000 Series PCI: <code>c:\Program Files\Dialogic\tx\lib\txdriver\tx4k</code>TX 5000 Series PCI: <code>c:\Program Files\Dialogic\tx\lib\txdriver\tx5k</code>
2	Click Install from a list or specific location (Advanced) , and click Next .

Step	Action
3	<p>At the Choose your search and installation options prompt, click Browse, select the directory location:</p> <ul style="list-style-type: none"> TX 4000 Series PCI: <i>c:\Program Files\Dialogic\tx\lib\txdriver\tx4k\tx4k.inf</i> TX 5000 Series PCI: <i>c:\Program Files\Dialogic\tx\lib\txdriver\tx5k\tx5k.inf</i> <p>Click Open, and then click OK.</p> <p>Note: If the displayed pathname is <i>C:\WINDOWS\inf\oem#.inf</i>, refer to the <i>readme_signaling.txt</i> file for procedures to clean up the old files, and repeat steps 2 and 3.</p>
4	<p>When Security Alert - Driver Installation appears, click Yes.</p> <p>The wizard installs the device driver.</p>
5	<p>When Complete the New Hardware Wizard appears, click Finish.</p> <p>The New Hardware Wizard repeats file requests for each new TX device it detects and then exits.</p>
6	Reboot Windows.

Verifying the TX PCI device driver status

Complete the following steps to verify the TX PCI device driver status:

Step	Action
1	Click Start > Settings > Control Panel .
2	In the Control Panel, double-click System .
3	Click the Hardware tab, and then click Device Manager .
4	Expand the Dialogic® TX Series SS7 Network Interface Board entry. TX PCI device drivers appear as TX <board type> Series PCI entries.

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Installing the software under Solaris

Note: NaturalAccess Signaling Software Release 5.1 installs the software files to a new location on your system: `/opt/dialogic/tx/`.

Complete the following steps to install the software under Solaris:

Step	Action
1	Uninstall any prior versions of NaturalAccess Signaling Software. For more information, refer to <i>Removing the software</i> on page 13.
2	<p>Update the environment variable settings in the <code>.bashrc</code> file:</p> <ul style="list-style-type: none">• Remove <code>/opt/nmstx/bin</code> from the PATH• Remove <code>/opt/nmstx/lib</code> from the LD_LIBRARY_PATH <p>Do not remove any variable settings for NaturalAccess Development Environment Software. The following environment settings should remain in the file:</p> <ul style="list-style-type: none">• <code>/opt/nms/bin</code>• <code>/opt/nms/lib/</code>• <code>opt/nms/hotswap/lib</code>
3	<p>After uninstalling any previous releases of software, enter the following command to remove the NaturalAccess Signaling Software <code>/opt/dialogic/tx</code> directory:</p> <pre>>rm -rf /opt/dialogic/tx</pre> <p>or</p> <p>Enter the following command to remove the old NMS Communications <code>/opt/nmstx</code> directory, if applicable:</p> <pre>>rm -rf /opt/nmstx</pre>
4	Log on as root.
5	Download Dialogic® NaturalAccess™ Signaling Software from www.dialogic.com .
6	<p>Enter the following commands to extract the NaturalAccess Signaling Software image from the file that you downloaded:</p> <pre>gzip -d filename .tgz tar -xvf filename.tar</pre> <p>where filename is the name of the file that you downloaded.</p>
7	<p>Run the <code>ss7_install</code> script located in the directory in which you opened the <code>tar</code> file, and follow the prompts from the script.</p> <p>Note: Do not change the default install location.</p>

For additional installation information, refer to the `readme_signaling.txt` file.

When the installation process is complete, proceed with any additional configuration as needed. For more information, refer to the product documentation.

Environment variable settings

To set up the system environment correctly, you must add the following system environment variables in the system login `.profile`:

```
DIALOGIC_ROOT=/opt/dialogic
export DIALOGIC_ROOT
TX_ROOT=$DIALOGIC_ROOT/tx
export TX_ROOT
PATH=$TX_ROOT/bin:$PATH
export PATH
LD_LIBRARY_PATH=$TX_ROOT/lib:$LD_LIBRARY_PATH
export LD_LIBRARY_PATH
```

Reboot the system to set these environment variables.

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Installing the software under Red Hat Linux

Note: The NaturalAccess Signaling Software Release 5.1 installs the software files to a new location on your system: `\opt\dialogic\tx\`

Complete the following steps to install the software under Red Hat Linux:

Step	Action
1	Uninstall any prior versions of NaturalAccess Signaling Software. For more information, refer to <i>Removing the software</i> on page 13.
2	Update the environment variable settings in the <code>.bashrc</code> file: <ul style="list-style-type: none">• Remove <code>/opt/nmstx/bin</code> from the PATH• Remove <code>/opt/nmstx/lib</code> from the LD_LIBRARY_PATH Do not remove any variable settings for NaturalAccess Development Environment Software. The following environment settings should remain in the file: <ul style="list-style-type: none">• <code>/opt/nms/bin</code>• <code>/opt/nms/lib</code>• <code>/opt/nms/hotswap/lib</code>
3	After uninstalling any previous releases of software, enter the following command to remove the NaturalAccess Signaling Software directory <code>/opt/dialogic</code> directory: <pre>>rm -rf /opt/dialogic/tx</pre> or Enter the following command to remove the old NMS <code>/opt/nmstx</code> directory, if applicable: <pre>>rm -rf /opt/nmstx</pre>
4	Log on as root.
5	Download the Dialogic® NaturalAccess™ Signaling Software from www.dialogic.com .
6	Unzip and untar the download file by entering the following commands: <pre>gzip -d filename.tgz tar -xvf filename.tar</pre> where filename is the name of the file that you downloaded.
7	Run the <code>ss7_install</code> script located in the directory in which you opened the <code>tar</code> file, and follow the prompts from the script. Note: Do not change the default install location.
8	Run one of the following commands to implement the environment changes: <ul style="list-style-type: none">• <code>./etc/profile.d/txbase.sh</code>• Reboot the system.

For additional installation information and for information about using the Red Hat Package Manager (RPM) to install individual packages, refer to the *readme_signaling.txt* file.

Note: Hot Swap is not supported with the NaturalAccess Signaling Software Release 5.1 for Red Hat Enterprise Linux, ES, 4.0.

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Using NaturalAccess Signaling Software documentation

NaturalAccess Signaling Software documentation is available on www.dialogic.com. You can:

- Download all NaturalAccess Signaling Software manuals in HTML format. To access a master list, view *Start_here_SS7.htm* in the \doc\ directory.
- Download or view individual manuals in HTML format.
- Print individual manuals using the Adobe Acrobat Reader available from www.adobe.com.

The following tables summarize the NaturalAccess Signaling Software documents according to subject.

Installing and configuring the hardware

For information about...	Refer to the...
Configuring and installing a TX Series board and verifying its installation	<i>Dialogic® TX 4000 PCI SS7 Network Interface Board Installation Manual</i> <i>Dialogic® TX 4000C CompactPCI SS7 Network Interface Board Installation Manual</i> <i>Dialogic® TX 5000E PCI Express SS7 Boards Installation Manual</i>

Configuring and managing the system

For information about...	Refer to the...
Configuring and operating the NaturalAccess Signaling Software	<i>Dialogic® NaturalAccess™ Signaling Software Configuration Manual</i>
Developing applications to monitor and control redundant and standalone configurations	<i>Dialogic® TX Series SS7 Boards Health Management Developer's Reference Manual</i>
Using TX utilities to load and configure a TX board, and to diagnose hardware and software issues	<i>Dialogic® TX Series SS7 Boards TX Utilities Manual</i>

Developing layer applications

For information about...	Refer to the...
NaturalAccess Signaling Software layers and a reference of functions, parameters, events, and errors	<p><i>Dialogic® NaturalAccess™ MTP2 Layer Developer's Reference Manual</i></p> <p><i>Dialogic® NaturalAccess™ MTP3 Layer Developer's Reference Manual</i></p> <p><i>Dialogic® NaturalAccess™ SIGTRAN Stack Developer's Reference Manual</i></p> <p><i>Dialogic® NaturalAccess™ SCCP Layer Developer's Reference Manual</i></p> <p><i>Dialogic® NaturalAccess™ TCAP Layer Developer's Reference Manual</i></p> <p><i>Dialogic® NaturalAccess™ ISUP Layer Developer's Reference Manual</i></p> <p><i>Dialogic® NaturalAccess™ TUP Layer Developer's Reference Manual</i></p>

Configuring and controlling protocol engines

For information about...	Refer to the...
Establishing communication channels between host applications and TX boards	<i>Dialogic® TX Series SS7 Boards CPI Library Developer's Reference Manual</i>
Developing applications that perform task loading	<i>Dialogic® TX Series SS7 Boards Loader Library Developer's Reference Manual</i>
Developing applications that control the H.100/H.110 switch fabric and the T1/E1 interfaces	<i>Dialogic® TX Series SS7 Boards TDM for SS7 Developer's Reference Manual</i>
Obtaining system-level information	<i>Dialogic® TX Series SS7 Boards TX INFO Library Reference Manual</i>

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Removing the software

Under Windows, you can remove all of the NaturalAccess Signaling Software at once or remove individual software components. The Solaris removal script removes all of the NaturalAccess Signaling Software components.

Windows

If removing SS7 4.3 or prior, refer to the *readme_signaling.txt* file for information about cleaning up residual system files.

Note: If you are saving old configuration files to the new release, copy those files to a safe location. After you install the new release, copy the configuration files to the corresponding directory at the new location.

Complete the following steps to remove NaturalAccess Signaling Software under Windows:

Step	Action
1	Make sure that no applications are using NaturalAccess Signaling Software components or libraries.
2	Click Start > Settings > Control Panel .
3	In the Control Panel, double-click Add/Remove Programs .
4	Select either NMS Communications SS7 or Dialogic® NaturalAccess™ Signaling Software Release X.X , and click Change/Remove .
5	Follow the prompts as appropriate for your system. Use the Remove option to remove the entire NaturalAccess Signaling Software package. Other options enable you to remove individual components.

The NaturalAccess Signaling Software Release 5.1 uninstall script automatically removes the TX PCI device drivers and automatically cleans up any residual files.

After you complete the software removal process, reboot the system before reinstalling or upgrading NaturalAccess Signaling Software.

Solaris and Linux

Complete the following steps to remove NaturalAccess Signaling Software under Red Hat Linux or Solaris:

Note: If you are saving old configuration files to the new release, copy those files to a safe location. After you install the new release, copy the configuration files to the corresponding directory at the new location.

Step	Action
1	Log on as root.
2	Make sure that no applications are using NaturalAccess Signaling Software components or libraries.
3	Run the <i>ss7_remove</i> script, located in the <i>/opt/dialogic/bin</i> directory. If you are removing a version prior to release 5.1, the <i>ss7_remove</i> script will be located in <i>/opt/nmstx/bin</i> . The removal script removes all NaturalAccess Signaling Software packages.

For information about using the Red Hat Package Manager (RPM) to uninstall individual packages, refer to the *readme_signaling.txt* file.