

## Replacing Primary System Controller on ESC1

Item Number	Item Name	Description
100 9202 100	AMC-IP	Exigo Primary System Controller Board



**Disconnect all power from the ESC1 System Controller before removing or installing the Primary System Controller (PSC) board.**

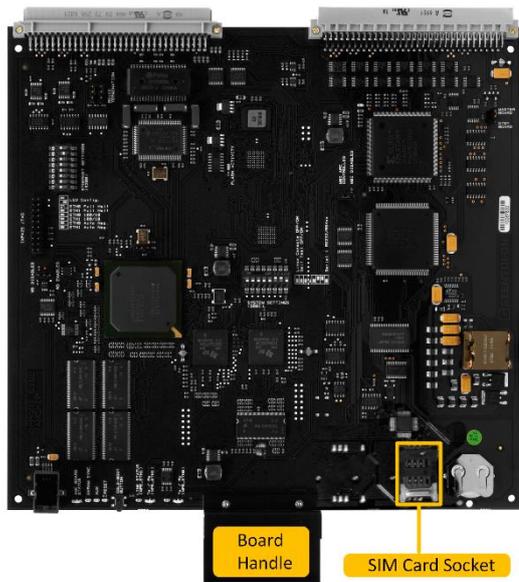


Figure 1: PSC Board

Before you replace the old PSC board, take note of its IP address and other configuration settings in the system so as to ensure that these are retained in the new board.

- Use the menu selection knob on the system controller to select **Information > Network** to find the Primary Controller IP address on the display.

### 1 Accessing the Primary System Controller Board

The Primary System Controller board is located inside the ESC1 System Controller.

Before you start the procedure:

1. Switch off and disconnect the system controller from the power mains.
2. Open the front cover by unscrewing the two socket screws (hex key 2.5 mm) about 15 mm out.



Figure 2: Front Cover Screws

3. Using extractors to hold the screws, pull the front cover out and tilt it down firmly to access the inside of the unit.

The Primary System Controller board is located in the lower slot position.

## 2 Removing the Primary System Controller Board



**Observe precautions for handling Electrostatic Discharge (ESD) sensitive devices when handling the PSC board!**

1. Grip the handle of the board.
2. Pull the PSC board out of the slot.



Figure 3: PSC Board in System Controller

## 3 Installing the New Primary System Controller Board

### 3.1 Inserting the SIM Card

Before installing the new PSC board into the ESC1 system controller, the SIM card containing the MAC address must be inserted in the socket located in the lower-right corner of the board (Figure 1).

To insert the SIM card into the socket:

1. Slide the metal retention clip in the direction shown to open the socket (Figure 4 & Figure 5).

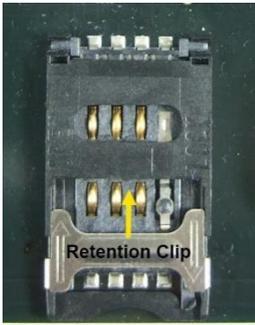


Figure 4: Retention Clip Closed

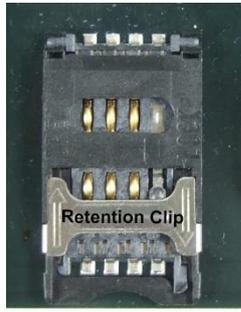


Figure 5: Retention Clip Open



Figure 6: Lid Open



Figure 7: SIM Card in Socket

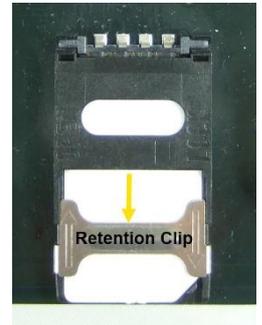


Figure 8: Socket Closed

2. Flip the socket lid open (Figure 6).
  - The lid itself comprises the socket
3. Insert the SIM card into the socket (Figure 7).
4. Close the lid and slide the retention clip back to lock the socket (Figure 8).

### 3.2 Inserting the PSC Board

To insert the PSC board:

1. Grip the handle of the board.
2. Insert the PSC board into the lower slot position.
3. Slide the PSC board along the slot until it plugs into the connectors at the back.
4. Power up the system controller.

## 4 Configuring the New Primary System Controller

To log into the PSC board:

1. Connect your PC to the internal service port npe\_eth0 inside the system controller (Figure 9)

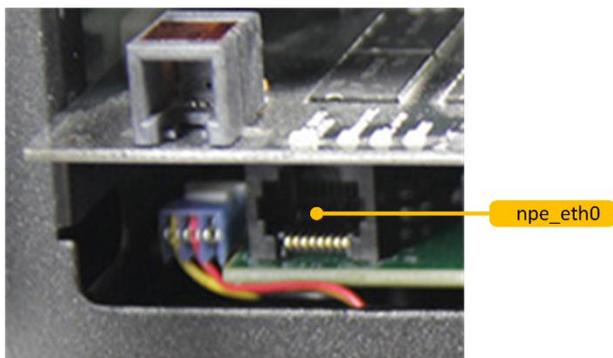


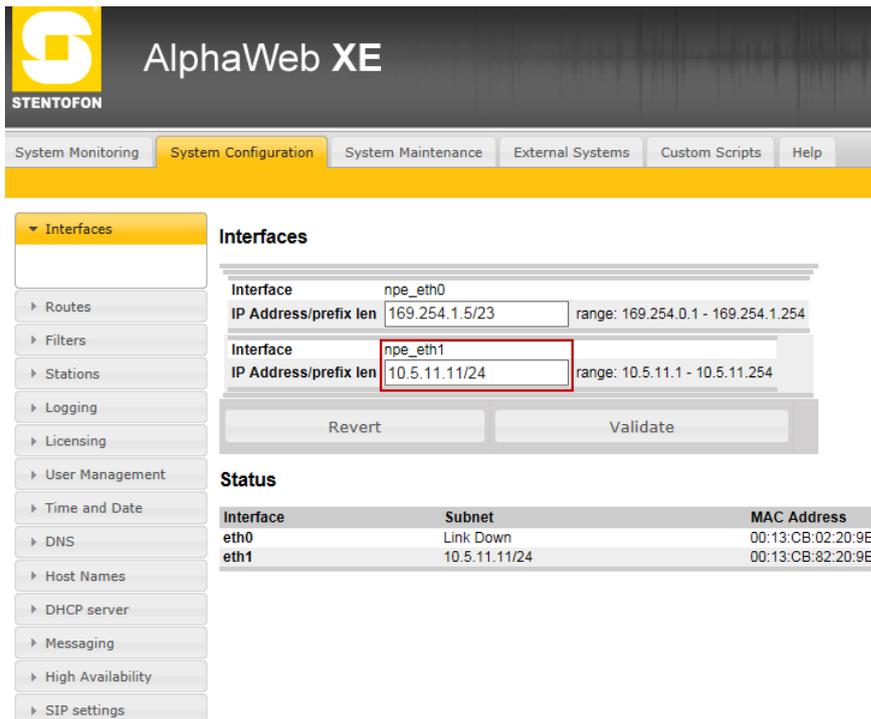
Figure 9: Service Port in System Controller

2. Open a web browser and enter the default IP address of the service port: **169.254.1.5**
3. Log in with username: **admin** and password: **alphaadmin**

## 4.1 IP Address Settings

To set the IP address of the PSC:

1. Select **System Configuration > Interfaces**



The screenshot shows the AlphaWeb XE interface with the 'System Configuration' tab selected. Under 'Interfaces', there are two configuration rows:

- Interface: npe\_eth0, IP Address/prefix len: 169.254.1.5/23, range: 169.254.0.1 - 169.254.1.254
- Interface: npe\_eth1, IP Address/prefix len: 10.5.11.11/24, range: 10.5.11.1 - 10.5.11.254

Buttons for 'Revert' and 'Validate' are visible below the configuration fields.

**Status**

Interface	Subnet	MAC Address
eth0	Link Down	00:13:CB:02:20:9E
eth1	10.5.11.11/24	00:13:CB:82:20:9E

2. Enter the appropriate IP address (same as for the old PSC) in the **npe\_eth1** field



**Use the exact same npe\_eth1 IP address as the one for the old PSC that has been defined in the configuration plan.  
DO NOT change the IP address of the service port npe\_eth0.**

## 4.2 NTP Server Settings

To set the NTP server of the PSC:

1. Click **System Configuration > Time and Date**

The screenshot shows the 'System Configuration' page with the 'Time and Date' section selected in the left sidebar. The main content area is divided into several sections:

- Time and Date**: A summary table showing the current region and time.
- Select New Region**: A form with a 'New Region' dropdown (set to 'Europe') and a 'Submit' button.
- Set Localtime**: A form with 'Date' (23.09.2015) and 'Time' (13:38:03) input fields, and a 'Set Time' button.
- Configure Network Time Protocol (NTP) Server**: A form with 'Configured server IP Address' (10.5.2.19) and 'New server IP Address' (10.5.2.19) input fields, and buttons for 'Test Server', 'Set Server', and 'Get Time'.
- Configuration File**: A table listing configuration files and their last saved/applied dates.

Your Region	Local Time	UTC Time
Europe/Oslo	Wednesday 23rd of September 2015 13:38:03 CEST	11:38:03

New Region	Select Your Zone
Europe	▼

Date	Time
23.09.2015	13:38:03

IP Address
Configured server IP Address 10.5.2.19
New server IP Address 10.5.2.19

Configuration File	Last Saved	Last Applied
amc_ip_config.xml	2015-09-22 15:22:12	2015-02-16 10:41:21

2. Set the **Region** in the **Select Your Zone** dropdown box according to the one defined in the configuration plan.
3. Set the **IP Address** to the NTP server according to the one defined in the configuration plan.
4. Click **Apply**

The PSC will now enable the NTP server that the other devices use.

## 4.3 Firewall Filter Settings

Firewall Filter Settings of the PSC may require some adjustments.

To configure Firewall Filter Settings:

### 1. Click **System Configuration > Filters**

The screenshot displays the 'Firewall Filter Settings' page. At the top, there is a navigation bar with tabs: System Monitoring, System Configuration (selected), System Maintenance, External Systems, Custom Scripts, and Help. On the left, a sidebar contains a tree view with categories: Interfaces, Routes, Filters (selected), Stations, Logging, Licensing, User Management, Time and Date, DNS, Host Names, DHCP server, Messaging, High Availability, and SIP settings. The main content area is titled 'Firewall Filter Settings' and includes a search bar. Below the search bar is a table with the following columns: Protocol, Port (Lo:Hi), Eth0, Eth1, and Action. The table lists 21 entries, grouped by protocol (TCP and UDP). Each entry has a 'Delete' link. Below the table are 'Add Filter' and 'Save' buttons. A status bar indicates 'Showing 1 to 21 of 21 entries'. At the bottom, there is a 'Configuration File' section with a table showing the current configuration file and its last saved and applied dates.

Protocol	Port (Lo:Hi)	Eth0	Eth1	Action
<b>TCP</b>				
AlphaNet Data	50000	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
AlphaPro	60001	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
AlphaVision	55010	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
cmd	63334	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
DNS server tcp	53	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
HTTP	80	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
HTTPS	443	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
IP Stations	50001	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
Multimodule Data	50010	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
OPC Server 1	61112	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
OPC Server 2	61113	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
SSH	22	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
ZAP (Zenitel Applicaton Protocol)	50004	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
ZAP web	8080	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
<b>UDP</b>				
DHCPv4 client	68	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
DHCPv4 server	67	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
DNS server udp	53	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
NTP server	123	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
SIP	5060	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
SNMP	161	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Delete
VoIP Audio	61000:61150	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Delete

Showing 1 to 21 of 21 entries

Configuration File	Last Saved	Last Applied
amc_ip_config.xml	2015-09-22 15:22:12	2015-02-16 10:41:21

2. Enable or disable the firewall filter settings for the **Eth0** and **Eth1** ports as shown.
3. Click **Save** followed by **Apply** to enable the settings for the firewall filter.

## 4.4 Upload Message Files

To upload the message files in WAV format:

1. Click **System Configuration > Messaging**

**Custom Audio Message Files:**

Search:  Display 15 records

File Name	Size (kB)	Modified Date	Message group (Index)	Related Dirno	Action
[svp_030_001.wav] <input type="button" value="Play"/> <input type="button" value="Stop"/>	1065.2	2014-12-08 13:37:55	(30)Announcement message (1)	94001 Message 1	[Select for upload] [Delete]
[svp_030_002.wav] <input type="button" value="Play"/> <input type="button" value="Stop"/>	212.3	2015-06-10 12:56:26	(30)Announcement message (2)	94002 Message 2	[Select for upload] [Delete]
[svp_030_003.wav] <input type="button" value="Play"/> <input type="button" value="Stop"/>	212.3	2014-10-10 13:53:18	(30)Announcement message (3)	94003 Message 3	[Select for upload] [Delete]
[svp_030_004.wav] <input type="button" value="Play"/> <input type="button" value="Stop"/>	79.1	2014-10-10 13:53:28	(30)Announcement message (4)	94004 Message 4	[Select for upload] [Delete]
[svp_030_005.wav] <input type="button" value="Play"/> <input type="button" value="Stop"/>	407.6	2014-10-10 13:53:40	(30)Announcement message (5)	94005 Message 5	[Select for upload] [Delete]
[svp_030_006.wav] <input type="button" value="Play"/> <input type="button" value="Stop"/>	80.1	2014-11-03 14:07:20	(30)Announcement message (6)	94006 Message 6	[Select for upload] [Delete]
[svp_030_007.wav] <input type="button" value="Play"/> <input type="button" value="Stop"/>	19.8	2014-11-03 14:07:33	(30)Announcement message (7)	94007 Message 7	[Select for upload] [Delete]
[svp_030_008.wav] <input type="button" value="Play"/> <input type="button" value="Stop"/>	19.8	2014-11-03 14:07:48	(30)Announcement message (8)	94008 Message 8	[Select for upload] [Delete]
[svp_030_009.wav] <input type="button" value="Play"/> <input type="button" value="Stop"/>	19.8	2014-11-03 14:17:17	(30)Announcement message (9)	94009 Message 9	[Select for upload] [Delete]
[svp_030_010.wav] <input type="button" value="Play"/> <input type="button" value="Stop"/>	19.8	2014-11-03 14:17:31	(30)Announcement message (10)	94010 Message 10	[Select for upload] [Delete]
[svp_030_501.wav] <input type="button" value="Play"/> <input type="button" value="Stop"/>	46.9	2015-08-12 16:19:16	(30)Announcement message (501)	94501 Chime 1	[Select for upload] [Delete]

Showing 1 to 11 of 11 entries First Previous 1 Next Last

Free space for Wav files: 8057.3kB

**Upload Wav File:**

Message Group	Group Index	File To Upload
(30)Announcement message	<input type="text"/>	<input type="text"/> <input type="button" value="Browse..."/>
<input type="button" value="Upload"/>		

2. Select **Message Group** and **Group Index** according to the configuration plan.
3. Click **Browse** to locate the WAV file
4. Click **Upload**

These message files include custom alarms and chimes and hence it is of critical importance that the correct files are being uploaded.



***In an A-B system, the messages should be identical on both the PSC on System A and the PSC on System B. It is therefore possible to verify that the correct messages and chimes have been uploaded by comparing the replacement PSC with the PSC on the other system.***

## 4.5 Enabling Syslog

To enable Syslog on the PSC:

1. Click **System Configuration > Logging**

The screenshot displays the 'System Configuration > Logging' interface. The navigation menu on the left includes options like Interfaces, Routes, Filters, Stations, Logging (selected), Licensing, User Management, Time and Date, DNS, Host Names, DHCP server, Messaging, High Availability, and SIP settings. The main content area is titled 'Log Configuration' and features a table of destinations:

Destinations	Status	Action
Local Filesystem	Configured	[Edit]
Local Serialport	Not configured	[Edit]
Remote Syslog (UDP/TCP)	Not configured	[Edit] / [Add]
E-Mail	Not configured	[Edit] / [Add]
SNMP Trap	Not configured	[Edit] / [Add]

Below the table is a 'Log Test' section with an 'Action' button labeled 'Generate test log messages'. The 'AMC System Log File Storage' section shows 'Used/Free Log Space: 2841/22712 kB' and a table of log files:

File Name	Size (kB)	Last Log Date	Oldest Log Date	Action
AlphaSystem	2528.5	2015-09-17 14:19:40	2015-06-29	[ Delete]
AlphaDebug	312.7	2015-09-22 15:22:21	2015-06-29	[ Delete]

A 'Clean-up (Remove the oldest 10% of log)' button is located below the log file table. The 'Configuration File' section shows a table with the following data:

Configuration File	Last Saved	Last Applied
amc_ip_config.xml	2015-09-22 15:22:12	2015-02-16 10:41:21

An 'Apply' button is located below the configuration file table.

2. Click **Edit** on the various logs to configure each one.
  - Configure according to the configuration plan.
3. Click **Apply** to apply the logging mechanism.

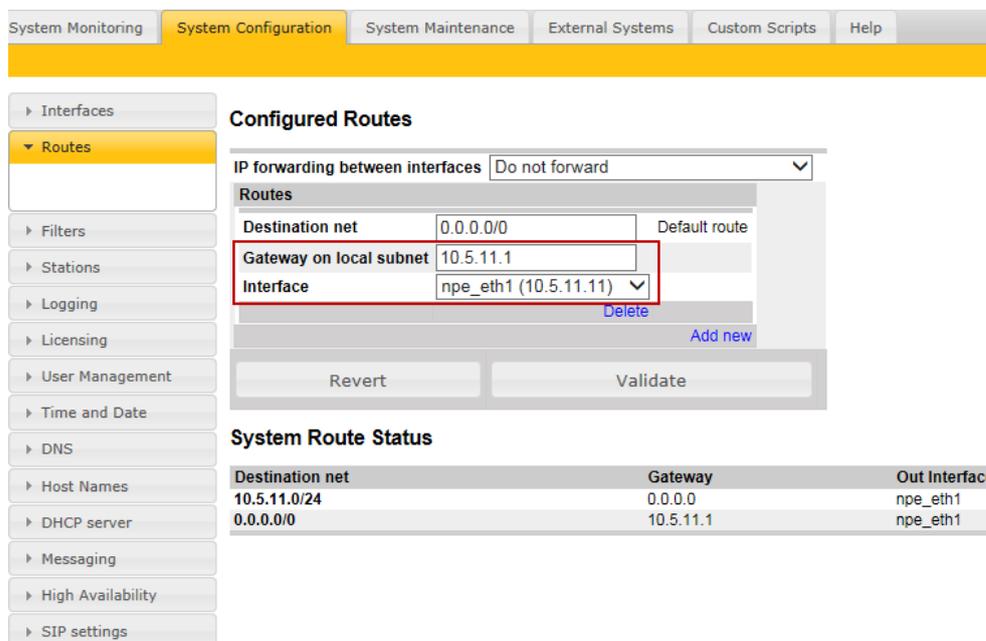


*In an A-B system, logging is usually identical on both the PSC on System A and the PSC on System B. It is therefore possible to verify that correct logging has been enabled by comparing the replacement PSC with the PSC on the other system.*

## 4.6 Routes Configuration

To configure the network routes for the PSC:

1. Click **System Configuration > Routes**



**Configured Routes**

IP forwarding between interfaces: Do not forward

Destination net	Gateway on local subnet	Interface
0.0.0.0/0	10.5.11.1	npe_eth1 (10.5.11.11)

Buttons: Revert, Validate, Add new

**System Route Status**

Destination net	Gateway	Out Interface
10.5.11.0/24	0.0.0.0	npe_eth1
0.0.0.0/0	10.5.11.1	npe_eth1

2. Set the **Gateway on local subnet** and **Interface** addresses according to the ones defined in the configuration plan.
3. Click **Validate**

After the replacement and configuration of the PSC board is complete:

1. Tilt the front cover up and slide it into the cabinet.
  - Make sure that the flat cable slides in properly.
2. Press the front cover to the flush position and refasten the two front socket screws.



The successful replacement of the PSC board is indicated by the network icon on the system controller display turning yellow.