Information Sheet IS23016A

SC4 Software Upgrade Procedure

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IS23016A: SC4 Software Upgrade Procedure
INFORMATION SHEET

1 INTRODUCTION

This procedure covers upgrades to the SC4 units when new firmware, configuration and workspace files are available to provide bug fixes or enhancements to performance, safety, and reliability. This document describes how to perform the software upgrade.

The SC4 (U1 of the NAX281 or NAX282 Control Module) may be programmed with new 'Configuration', 'Workspace' and SC4 firmware files.

- The Configuration file is made up of the different settings, addresses and commands that control the SC4.

- The Workspace file is the view or Graphic User Interface (GUI) that is created by users to make the site information easier to visualize and understand.

- The SC4 firmware file is the underlying firmware that provides the operating system to execute the configuration and workspace files.

Typically, an upgrade will consist of an upgrade configuration and workspace files only. The SC4 firmware is upgraded less frequently.

1.1 Equipment Affected

This procedure applies to all SC4's installed in NAX281 or NAX282 Control Modules.

1.2 Responsibility for Implementation

This procedure should be carried out by qualified station maintenance personnel who are familiar with the SC4 System Controller. Nautel recommends you perform software upgrades at the transmitter site.

1.3 Scheduling

This procedure should be performed only when a software upgrade is required. If the SC4 low level firmware is upgraded, *it will re-boot at the end of the upgrade which will take all transmitters off-air for approximately one (1) minute*. Therefore, the upgrades should be performed at a time when the service interruption will have the least effect.

1.4 Manpower Requirements

Implementing these instructions will require approximately 30 minutes.

1.5 Special Tools/Test Equipment
- Local computer for direct connection or network computer with Web browser
- CAT5 Ethernet cable
- Upgrade software, provided via email or web download
- USB drive, minimum 1 GB, FAT32 formatted, to store upgrade software file

1.6 Publications Affected

This modification does not affect the VX transmitter or transmitter system documentation.

2 PROGRAMMING THE SC4 SYSTEM CONTROLLER

Access the Nautel FTP website (http://www3.nautel.com/pub/) to locate and download the required version of SC4 software. There first two files types are required for most upgrades, the third file type is needed if an SC4 firmware upgrade is required.

- a **.ctex*** file type which contains the SC4 "configuration"
- a **.dvw** file type which contains the SC4 "workspace"
- a **.dvz** file type which contains the SC4 low level firmware

NOTE

If you cannot locate the correct version of software, contact Nautel customer service (support@nautel.com).

2.1 Prior to Performing the Upgrade

Some user settings will be lost when a upgrade of the configuration file (**.ctex*** file) is performed. The following settings should be recorded prior to commencing the upgrade:

1) Transfer Thresholds (see system user manual, paragraph 3.4.5.1)
   - (a) Transmitter A - Transfer Threshold
   - (b) Transmitter A - Transfer Delay
   - (c) Transmitter B - Transfer Threshold
   - (d) Transmitter B - Transfer Delay
   - (e) Transmitter C - Transfer Threshold (if applicable)
   - (f) Transmitter C - Transfer Delay (if applicable)
   - (g) Transmitter D - Transfer Threshold (if applicable)
   - (h) Transmitter D - Transfer Delay (if applicable)
2) System ► Site ID – all settings (see system user manual, paragraph 2.4.5)
3) System ► Date, Time, and Location (see system user manual, paragraph 2.4.4)
   - (a) Time Zone
   - (b) Daylight Savings Time Setup (all settings)
   - (c) Synchronization (all settings)

Additionally, Auto Transfers should be disabled before performing an upgrade.

2.2 Upgrade of SC4 Low Level Firmware

To load a new SC4 low level firmware (**.dvz** file), perform the following steps:

NOTE

*If an upgrade to the configuration (**.ctex***) and workspace (**.dwv**) files is also being performed, the SC4 low level firmware upgrade __must__ be completed first.*

(a) To gain access to the web-based interface, connect an Ethernet cable between the PC/laptop and the Ethernet switch on the rear of the Control Module (see Figure 1).
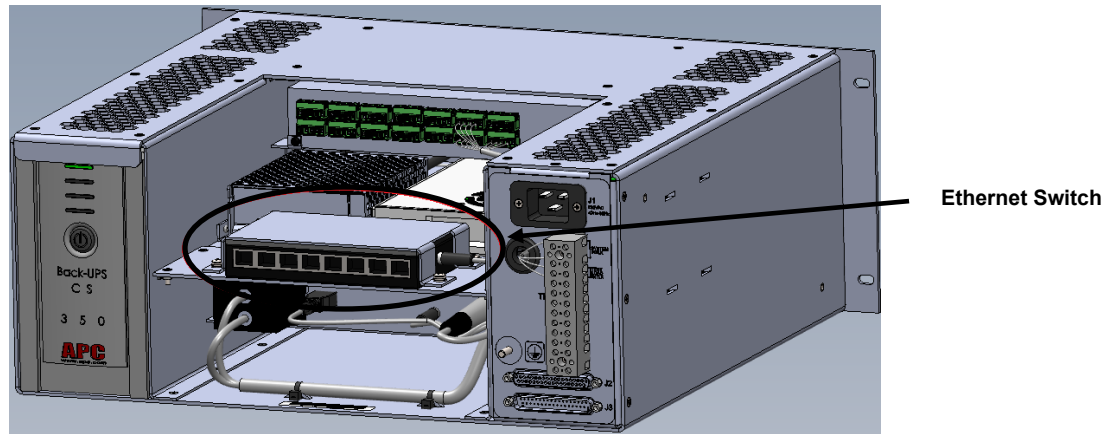
Ethernet Switch

**Figure 1: Ethernet Switch Location on the Control Module**

<u>NOTE</u>

The NAX281 Control Module has an 8-port Ethernet switch (see Figure 1). The NAX282 Control Module (for main-standby systems) has a 5-port Ethernet switch.

(b) Use a web browser to connect to the SC4 web page at the IP address for the particular system being upgraded. Log in using the following credentials:

- Username: **admin01**
- Password: **aaaaaaaa** [or user defined password (if it was changed)]

(c) Once logged in, note the top bar menu of the user interface (see Figure 2). This menu and its various dropdown selection options is referenced throughout the procedure.

Figure 2: User Interface top bar menu

(d) Select **System ► Administration** from the dropdown menu along the top of the screen. The menu in Figure 3 will appear.
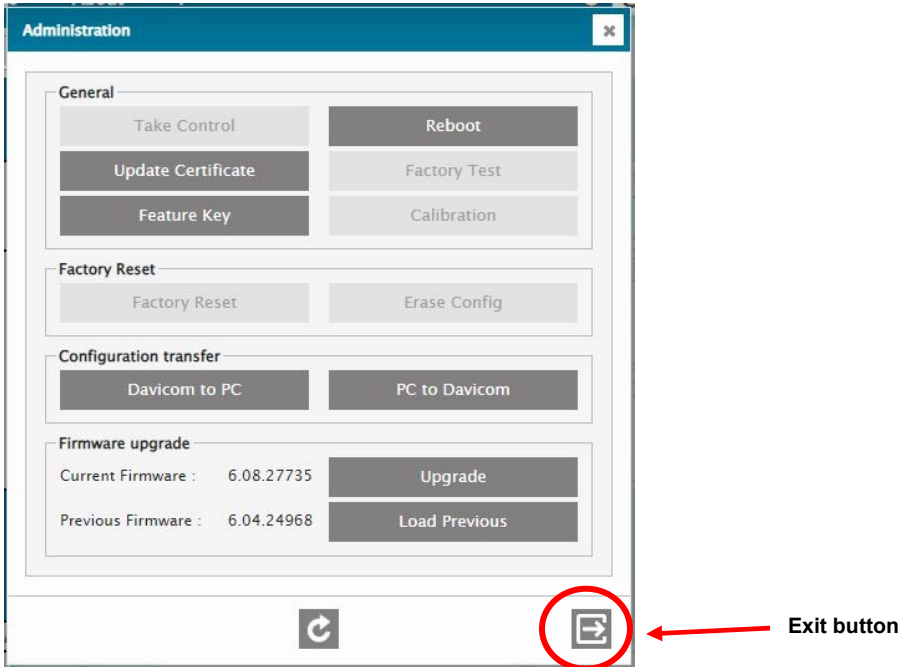
Figure 3: System – Administration screen

(e) In the Firmware Upgrade section of the menu select **Upgrade**. A File Explorer window will open. Navigate to the location of the configuration file (**.dvz** file type) that you wish to load and double click the file.

(f) The SC4 will validate and load the new firmware file. When this operation is complete, the SC4 will automatically re-boot and the user session will be disconnected.

(g) When the login screen returns, log in (as in step b). Select **System ► Administration** and verify the Current Firmware version matches the **.dvz** filename.

2.3 Loading the Configuration File

To load/program the new Configuration file, perform the following steps:

(a) To gain access to the web-based interface, connect an Ethernet cable between the PC/laptop and the Ethernet switch on the rear of the Control Module (see Figure 1).

(b) Use a web browser to connect to the SC4 web page at the IP address for the particular system being upgraded. Log in using the following credentials:

- Username: **admin01**
- Password: **aaaaaaaa** [or user defined password (if it was changed)]

(c) Once logged in, note the top bar menu of the user interface (see Figure 2). This menu and its various dropdown selection options is referenced throughout the procedure.

(d) Select **System ► Administration** from the dropdown menu along the top of the screen. The menu in Figure 3 will appear.

(e) In the Configuration transfer section of the menu select **PC to Davicom** (SC4). A File Explorer window will open. Navigate to the location of the configuration file (**.ctex*** file type) that you wish to load and double click the file.

(f) The SC4 will validate and load the configuration file. When this operation is complete, select the **Exit** button to close the Administration Menu. See Figure 3.

2.4 Loading the Workspace File
Perform the following procedure to load/program the new Workspace file:

(a) Select **System ► Workspaces** from the dropdown menu along the top of the screen. The menu in Figure 4 will appear.
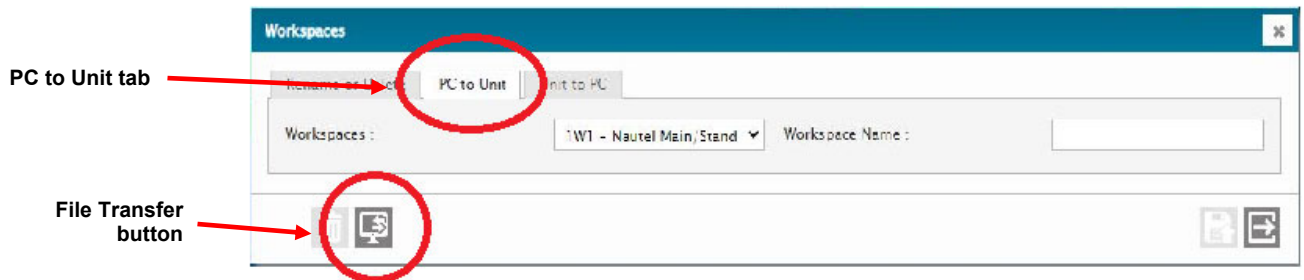
Figure 4: System – Workspaces screen

(b) Ensure the Workspaces: dropdown is set to 1W1-xxxxxxx.

(c) Select the **PC to Unit** tab and select the **File Transfer** button.

(d) Confirm that you wish to upload a new workspace and a File Explorer window will open. Select the workspace file (**.dvw**) here and wait for the upload to complete.

(e) Log out of the SC4 by clicking the **Logout** button in the top right corner of the main screen. Log in as admin01 [see step 2.2 (b)].

2.5 After Upgrades are Completed

If a configuration upgrade (**.ctex*** file) was completed perform the following steps:

- re-enter transfer thresholds and delays recorded in 2.1 1) (a) through (h), as applicable. Refer to system user manual, paragraph 3.4.5.1.

- re-enter the Site ID settings recorded in 2.1.2). See the system user manual, paragraph 2.4.5.

- re-enter the Date Time, and Location settings recorded in 2.1.3). See the system user manual, paragraph 2.4.4.

- re-enter the IP addresses of all transmitters in **Devices ► SNMP Devices**. See the system user manual, paragraph 2.4.6.

Reset the system to the desired operating mode and enable auto transfers.