

# Information Sheet IS21011

# Viewing and Logging Information from the Console Port for ARMbased Transmitters

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#### **Nautel Limited**

10089 Peggy's Cove Road, Hackett's Cove, NS, Canada B3Z 3J4 T.877 6 nautel (628835) or +1.902.823.2233 F.+1.902.823.3183 info@nautel.com

U.S. customers please contact:

#### Nautel Inc.

201 Target Industrial Circle, Bangor ME 04401 T.877 6 nautel (628835) or +1.207.947.8200 F.+1.207.947.3693 info@nautel.com

e-mail: support@nautel.com www.nautel.com

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# IS21011: Viewing and Logging Information from the Console Port for ARM-based Transmitters

INFORMATION SHEET

# **1 INTRODUCTION**

This document provides instructions to gather data on an ARM-based transmitter, to assist in troubleshooting activities. Specifically, this document describes how to:

- configure the terminal program PuTTY for logging and provide settings for other serial terminals.
- navigate to the ARM login screen.

### **1.1 Equipment Affected**

This procedure applies to VS Series FM transmitters, NVLT Series FM Transmitters, and NX3, NX5 and NX10 AM transmitters.

### **1.2 Responsibility for Implementation of Procedure**

This procedure should be carried out by qualified station maintenance personnel who are familiar with the transmitters included in paragraph 1.1 and terminal programs such as PuTTY.

### 1.3 Scheduling

The transmitter will need to be "off air" during this procedure.

#### **1.4 Manpower Requirements**

Implementing these instructions will require approximately 15 minutes.

## **1.5 Special Tools/Test Equipment**

- PC or laptop to serially connect to the transmitter
- DB9 straight-through serial cable with a male connection for the transmitter end
- USB to Serial adapter cable (dependent on PC / laptop capabilities)
- Internet connection is required to download terminal access program (e.g., PuTTY)

## **1.6 Publications Affected**

This information does not affect the transmitter's documentation.

#### 2 PRELIMINARY SETUP

- (a) Using the transmitter's front panel or remote AUI, set the transmitter to its 'RF Off' state.
- (b) <u>If applicable to your transmitter series</u>: Using the transmitter's front panel UI, navigate to the Main Menu ► System Settings ► Host Watchdog OR Main Menu ► System Settings ► Arm Watchdog screen. Use the right arrow then the up arrow. Select OFF and press the check mark.
- (c) Using the transmitter's front panel UI, navigate to the Main Menu ► System Settings ► Console Select screen. Use the right arrow then the up arrow. Select Host/ARM Console and press the check mark.



# **3 CONNECTING THROUGH PuTTY**

#### <u>NOTE</u>

Ensure adequate internet connection is available for step 3 (a) or download PuTTY prior to arriving at the transmitter site.

- (a) Ensure PuTTY is installed on the PC or laptop used for the upgrade. If not, download PuTTY.exe from <u>http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html</u>. Choose the first download in the list and save it to your desktop.
- (b) Connect the PC or laptop (with PuTTY installed) via the serial port to the following port for your transmitter, noting that modern laptops may require a USB to Serial adapter cable:
  - VS Series: J5A (RDS/RBDS) on the rear panel
  - NVLT Series: J5A on the back of the NAE106\* Controller Module
  - NX3/NX5/NX10: J2 Debug jack on the NAPC168\* Control/Interface PWB.

#### <u>NOTE</u>

Correct COM port can be confirmed through the use of Device Manager (see Figure 7).

(c) Double click the PuTTY.exe icon and configure for the settings shown in Figure 1. Select Serial for Connection type. Enter the appropriate COM port in the Serial line field. Enter 115200 in the Speed field.

#### Figure 1: PuTTY configuration settings

🕵 PuTTY Configuration		<b></b>
Category:		
- Session	Basic options for your PuTTY se	ssion
Logging	Specify the destination you want to conner Serial line	ct to Speed
Keyboard Bell	COM1	115200
Features     Features     Window     Appearance     Behaviour     Translation     Selection     Colours     Connection     Proxy     Telnet     Rlogin     SSH     SSH     Serial	Connection type: ◎ <u>R</u> aw ◎ <u>T</u> elnet ◎ Rlogin ◎ <u>S</u> SH ◎ Serial	
	Load, save or delete a stored session Sav <u>e</u> d Sessions COM1 Default Settings 10.0.96.5 COM1 COM3	Load Sa <u>v</u> e Delete
	Close <u>w</u> indow on exit:	
About	Open	<u>C</u> ancel



(d) See Figure 2. Enable logging by clicking Logging in the Category section. Select the All session output radio button. To set the directory and filename of the log, click the Browse button beside the Log file name: field.

🕵 PuTTY Configuration	? ×
Category: 	Options controlling session logging         Options controlling session logging         None       Printable output         All session output       SSH packets         SSH packets and raw data         Log file name:       Browse         (Log file name can contain &Y, &M, &D for date, &T for time, &H for host name, and &P for port number)         What to do if the log file already exists:         Always overwrite it         Always append to the end of it         Ask the user every time         Flush log file frequently         Options specific to SSH packet logging         Omit known password fields         Omit session data
About Help	Open Cancel

#### Figure 2: Enabling Logging

(e) See Figure 3. Choose an appropriate directory and filename and click **Save** in the bottom right corner of the dialog box. This will return you to the configuration settings in Figure 2.



🕵 PuTTY Configuration	?	×				
🔀 Select session log file name						×
$\leftarrow$ $\rightarrow$ $\checkmark$ $\uparrow$ $\blacksquare$ $\rightarrow$ This PC $\rightarrow$ Desktop $\rightarrow$ logs	;		ڻ ~	, P Search log		
Organize 🔫 New folder						?
💻 This PC		Name			Date modified	
3D Objects			No items r	natch your search.		
💻 Desktop						
🔮 Documents						
🖊 Downloads						
👌 Music						
Pictures						
📰 Videos						
🚝 Local Disk (C:)						
🚍 VOL1 (H:)		<				
File name: osrecovery.log						~
Save as type: All Files (*.*)						~
∧ Hide Folders				Save	Cancel	

#### Figure 3: Saving Log File Name

(f) Click **Open**. The window in Figure 4 should appear, verifying that connection has been established. If no connection error occurred, press the **Enter** key once, and the window will update to display the screen shown in Figure 5. If a connection error occurs, you may see a screen like Figure 6. Make sure you have an error-free connection.







Debian GNU/Linux	6.0	vsarm	ttyS0
vsarm login:			
Figure 5: ARM Console	Logi	n Scree	n

PuTTY I	rror	×
×	Unable to ope COM5 Unable to ope	n connection to n serial port
		OK

**Figure 6: Connection Error** 

Action View Help	
<ul> <li>Imaging devices</li> <li>Jungo</li> <li>Keyboards</li> <li>Mice and other pointing devices</li> <li>Modems</li> <li>Monitors</li> <li>Network adapters</li> <li>BlackBerry Virtual Private Network</li> </ul>	
Iungo         Keyboards         Image: White and other pointing devices         Image: Moderns         Image: Monitors         Image: Network adapters         Image: BlackBerry Virtual Private Network	
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BlackBerry Virtual Private Network	
🕵 Cisco Systems VPN Adapter for 64-bit Windows	
😰 Fortinet virtual adapter	
📲 Intel(R) 82579LM Gigabit Network Connection	
📲 Intel(R) Centrino(R) Advanced-N 6205	
🪽 Microsoft Virtual WiFi Miniport Adapter	
Microsoft Virtual WiFi Miniport Adapter #2	
PPPoP WAN Adapter	
TAP Adapter OAS NDIS 6.0	
Other devices	
Des las little (encor	
Ports (COM & LPT)	
ECP Printer Port (LPT1)	
Prolific USB-to-Serial Comm Port (COM12)	
RIM Virtual Serial Port v2 (COMS)	
Processors	
- 🚆 Processors	
- Sound video and game controllers	

Figure 7: Device Manager

- (g) The procedure is complete. The terminal program is now configured for logging and providing transmitter settings.
- (h) Resume normal transmitter operation as follows:
  - Disconnect the serial cable from the transmitter.
  - Set the Host Watchdog or Arm Watchdog screen, if applicable [see step 2 (b)], to ON.
  - Set the Console Select screen to DSP Console [see step 2 (c)].
  - Set the transmitter to its 'RF On' state.

