

Telvent

[Config@WEB](#) RTU Firmware Update Instructions

Rev.	Date	By	Comment
0.0	17-Jul-2003	DGM	Created for A7 release.
0.1	30-Jul-2003	DGM	Revised for A8 release.
0.2	09-Sep-2003	DGM	Revised for A9 release.
0.3	11-Dec-2003	DGM	Revised for AA release.
0.4	19-Dec-2003	DGM	Revised to instruction the user to first archive the XML and to now enter Username and Password at the login screen.
0.5	02-Sep-2004	DGM	Revised to load GUI first to get good FTP Active X control.
0.6	22-Feb-2005	DGM	Revised for B0 release.
0.7	28-Mar-2005	DGM	Added Appendix A, Conversion Tool Overview, updated text font to Telvent standards.
0.8	20-Jul-2005	DGM	Revised for C1 release.
0.9	02-Sep-2005	DGM	Revised for C2 release.
1.0	20-Oct-2005	DGM	Revised for C3 release.
2.0	28-May-2008	BG	Revised for CD release

WARNING: Although the Configuration Converter program will work with any configuration from A5 firmware on up, it is designed to be used on the SAGE 2300 RTUs only.

Note: You cannot convert a configuration from a newer version of firmware to an older version of firmware.

Overview:

See the Appendix for an overview and quick instructions for the experienced user.

Description of File Types:

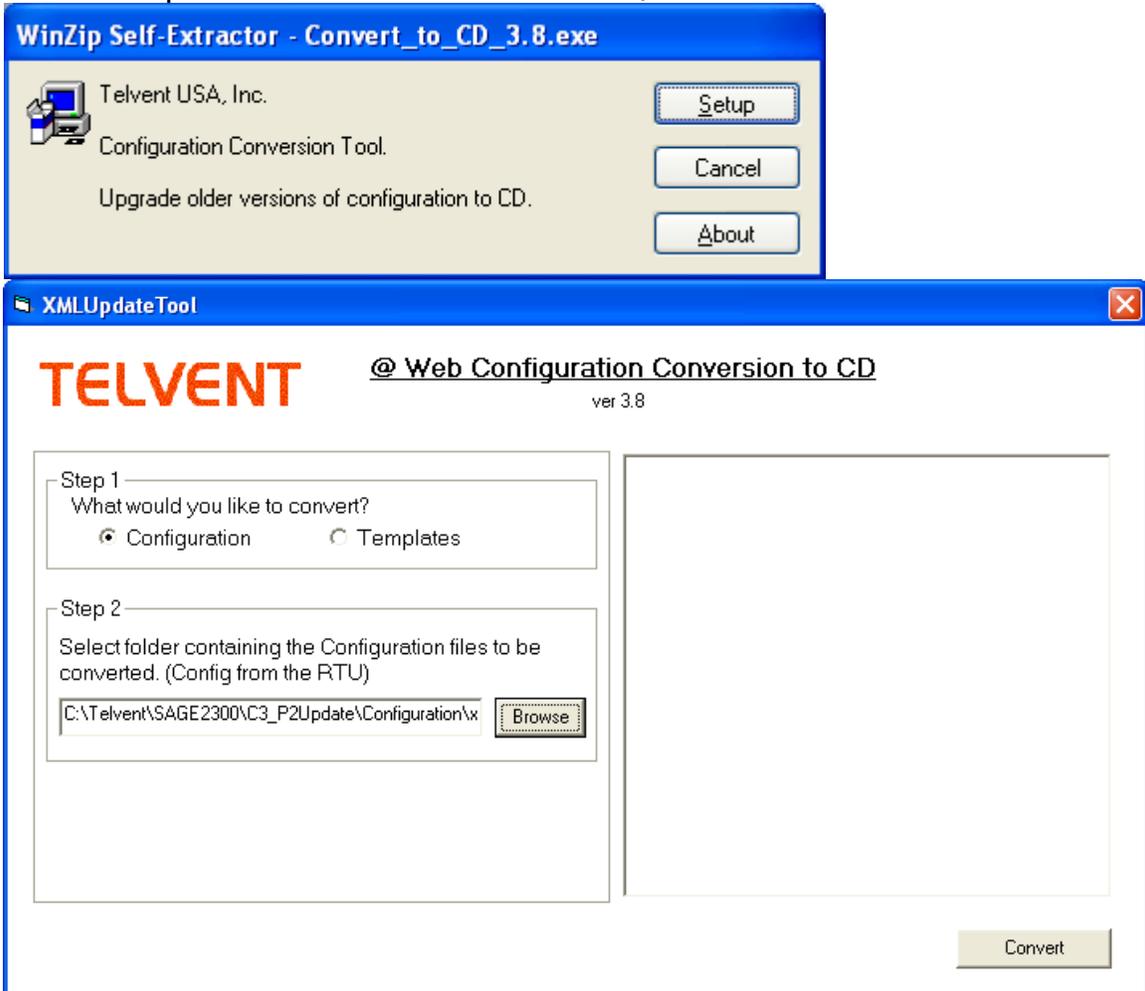
See the Appendix.

Step by Step Instructions:

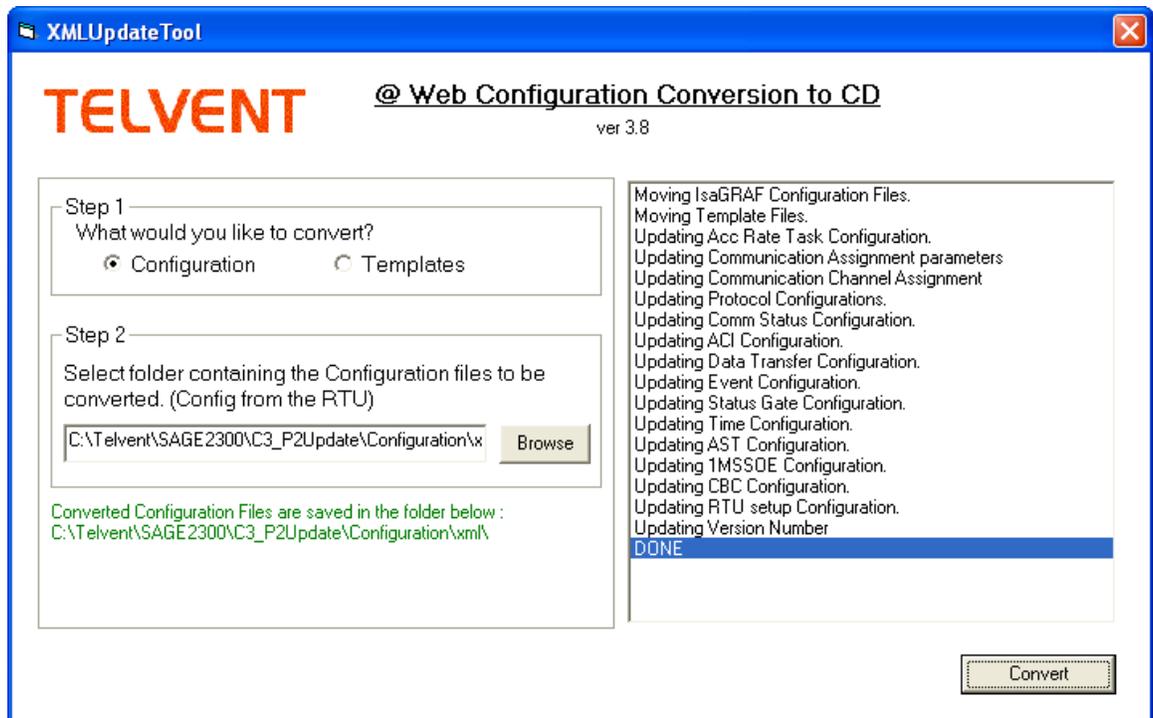
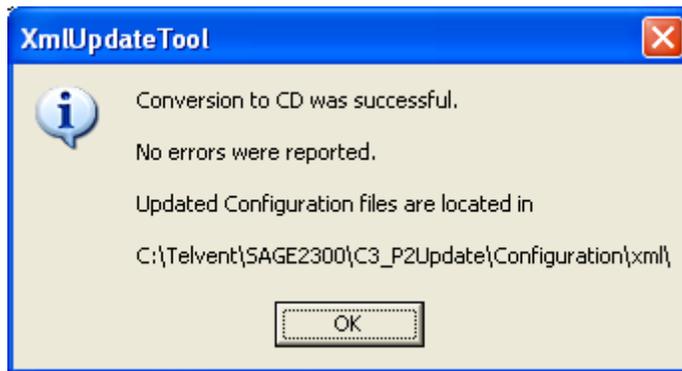
All the files needed to update an RTU's firmware are in a "zipped" file called C3413-500-00XYY_Update_Files.zip, where X= firmware number and YY=revision number (again, firmware number is usually 001).

1. Unzip (extract) all files into root (C:\) directory. Be sure to select "Use folder names", this will create a path as follows:
C:\Telvent\SAGE2300\YYUpdate, where "YY"=revision of update.
2. See user manual on physical connections and navigating the interface. Click the "Up/Download" tab on RTU user interface.
3. Select "GUI" from the drop-down combo box labeled "File Type" on the RTU user interface.
4. Click on "Send to RTU" button. You will get a pop-up file navigation screen. Navigate to C:\Telvent\SAGE2300\YYUpdate\GUI.
5. You will see a "C3413-500-001XY.gui" file. Select this file. Click on "Open".
6. A dialogue box will pop up asking if you want to over-write the existing GUI files. Click "OK".
7. When the "Result" window shows "OK", refresh the Up/Download page by pressing the F5 key. This will allow the new FTP control to load.

8. Select "Configuration" from the drop-down combo box labeled "File Type" on the RTU user interface.
9. Click on "Get from RTU" button. For this step, allow the RTU to send the files to the default path, which will be:
C:\Telvent\SAGE2300\rtuname\Configuration, where rtuname is whatever the RTU is named in the CPU setup screen.
10. Run the configuration conversion tool. The tool will be found at:
C:\Telvent\SAGE2300\YYUpdate\CfgConverter. This step will allow the user to merge an existing configuration (RTU firmware revision A5 or greater) with the latest XML released configuration format. (NOTE: The result of the conversion will over-write your old configuration files with the new updated configuration files, but before converting, the converter will automatically make a backup of the old configuration.)
11. The first window to appear will be the following splash screen: Click Setup to continue to the next screen, shown below.



12. In Step 1 in the figure above, select whether you want to convert Configuration files or Template files (you can come back and do the other when you finish with either type).
13. In Step 2 in the figure above, type in the path, or browse to the folder, for the old configuration files, as shown above. The conversion program automatically creates a backup copy of the old configuration files.
14. To convert files, click the convert button. The result is shown below.

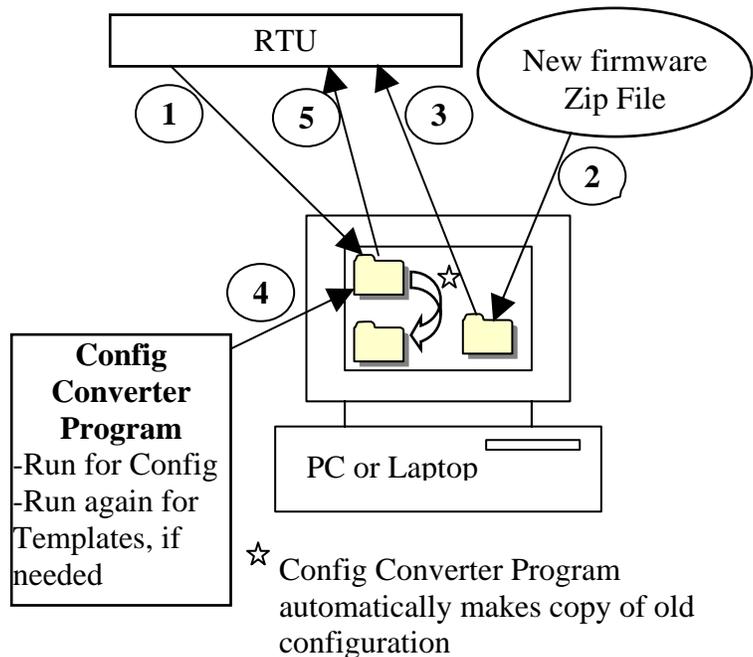


15. Once the conversion is DONE, use the GUI "Up/Download" feature to 'Send to RTU' the converted configuration. Note: The directory to be selected should be the default one containing the current RTU

- configuration files that were originally downloaded from the RTU in step 9. This directory now contains the modified files after the conversion. When prompted to "Replace" existing files, Click "OK".
16. You can continue to use the source directory (C:\Telvent\SAGE2300\YYUpdate\Configuration\xml) that contains the latest released XML as your source for other RTU updates.
 17. To exit the program, click the "X" in the upper right hand corner of the Conversion Tool window.
 18. Ensure "Application" is visible on drop-down combo box labeled "File Type" on RTU user interface.
 19. Click on "Send to RTU" button. You will get a pop-up file navigation screen. Navigate to C:\Telvent\SAGE2300\YYUpdate\Application\C3413-500-00XXY.
 20. Click on that file to highlight it and click on "Open".
 21. A dialogue box will pop up asking if you want to over-write the existing application. Click "OK". The transfer should take under 30 seconds.
 22. Repeat steps 18 -21 for sending the "Template" file(s). (**Note:** For template files, run the converter again with 'Templates' selected in Step 1 in the converter program.) Navigate to the appropriate directory in step 19 (i.e. Templates).
 23. Press "Reset" button and confirm you wish to reset when the pop-up dialogue box asks. The RTU will reset in about 60 seconds.
 24. The RTU is now updated with the newer firmware and should still be configured as it was before the update process.

Appendix A Configuration Upgrade Quick Instructions

1. GET Config (and/or Templates) from RTU to PC
2. Unzip new firmware to PC
3. SEND new firmware GUI and Application to RTU
4. Run Config Converter program on items from step 1 (see details below)
5. SEND Config (and/or templates) to RTU



Description of File Types:

The **Application** is the actual firmware that runs the RTU. This is a binary file (has extension .out) and has the name S2300-500-00XYY, where X is the firmware number and YY is the revision number. Usually the firmware number will be 001.

The **Configuration** is a series of XML (extended markup language) files that contain all the configuration of the RTU. Whenever you configure an RTU and wish to save the configuration for future reference, these are the files you would Get from the RTU. Before a firmware update you should "Get" these files and store them in a known location to use with the configuration conversion program. During an update to a new revision of firmware you will need to run these configuration files through the Convert_to_nn program to ensure compatibility with the new Application and GUI files.

The **Template** files are XML files that are created in the RTU that are used as a basis for common configuration parameters. The latest Convert_to_nn program includes an option to also convert template files. The Template(s) must be run through the conversion program separately from the configuration.

The **GUI** is a series of HTML (HyperText Markup Language) and other files that are used to give the RTU the graphical user interface that appears in Internet Explorer. These files should always be loaded into an RTU whenever the application is loaded or sent to ensure they match.

End of File