

NWA Quality Analyst 6.1 Update Notes

April 28, 2005

NWA Quality Analyst Version 6.1 represents a significant new release of Quality Analyst, with several new features and significant changes in the underlying technologies. These notes discuss the issues involved in updating older versions of Quality Analyst to this new release. A list of new features with references to the Quality Analyst Version 6.1 User's Manual is included at the end of this document.

As with previous major Quality Analyst releases, updating to Version 6.1 will, for the most part, be automatic and require little extra work by most Quality Analyst users. However, some of the changes will require special attention by system administrators responsible for installing software and users who have written extensive Run Files and/or integrated Quality Analyst with other applications.

***It is essential that you review the following material
BEFORE updating to Version 6.1.
Contact Quality Analyst Technical Support if you have questions or
concerns before proceeding with the update.***

Retaining your current version of Quality Analyst

To retain your current version of Quality Analyst, install Version 6.1 into a new folder. Otherwise Version 6.1 will overwrite your current installation files.

After Version 6.1 is installed, double-clicking Data Sets and Run files will execute Quality Analyst Version 6.1. Double-clicking older graphics (PLT) files may not work. See "Running Version 6.1 and an earlier version on the same system" below for additional details.

To revert to your earlier version of Quality Analyst, use **Add/Remove Programs** in Windows Control Panel to remove Version 6.1. Even after it is removed, the icons associated with Data Sets may still be from Version 6.1. Additionally, the links to on-line documentation may be incorrect. If this is the case, go to **Add/Remove Programs** in Windows Control Panel and choose to **Repair** the earlier version of Quality Analyst; you should have your original Quality Analyst CD available.

NOTE: Quality Analyst 6.1 DOES NOT use configuration files from previous versions and does not convert them. If you have changed your Quality Analyst Settings from their default values, you will need to make the same changes after installing Quality Analyst 6.1. This means that you will need to print your current Settings **BEFORE**

uninstalling your current Quality Analyst. See the notes under **Configuration Files** below.

NOTE: *Any external programs that read, create or modify Quality Analyst Header (.HED) files will need to be changed to use the XML format of the new .NWH files. Contact Quality Analyst Technical Support for further information.*

Key differences with previous versions

One of the major changes in Version 6.1 is the conversion of key information files to XML format. This change makes it easier to incorporate new features into future releases of Quality Analyst, and simplifies integration with manufacturing and enterprise information systems. A format change this significant also necessitated changing the file name extensions to prevent conflicts and confusion with files from previous versions.

The new naming convention for these files is:

File Type	Versions 4.3, 5.1, 5.2	Version 6.1
Header files	filename.HED	filename.NWH
Graphics files	filename.PLT, PTX	filename.NWG
Settings file	QA.NWA	QA.NWC
QA Editor config	QAEDIT.INI	QAEDIT.CFG
Graphics Viewer config	QAGRAPH.INI	NWAGRAPH.CFG
Exception Report config	QAEXCEPT.INI	QAEXCEPT.CFG
Run File Interpreter config	QARFI.INI	QARFI.CFG
Run File Wizard config	QARFWIZ.INI	QARFWIZ.CFG

Conforming to Windows XP Security

Many of the changes in how Quality Analyst 6.1 is installed and where its configuration files are placed are due to the more extensive security features of Windows XP. These changes primarily affect installations involving “limited” users where installing software is an “administrator” function.

Tutorial Examples

There is one new tutorial example (Assignable Cause/Corrective Action, Exercise 6) and the others have been updated to include new features and capabilities. Experienced users may want to review these Exercises for examples of the new capabilities.

Updating Previous Versions

While much of the update process is automated, some planning will be necessary to ensure an uneventful conversion. Please review the following notes before proceeding with the update process.

Configuration Files

Version 6.1 will not use your existing configuration files (QA.NWA and QAEDIT.INI). Instead, Version 6.1 installs new configuration files (QA.NWC and QAEDIT.CFG) and places them in different locations. All Quality Analyst 6.1 configuration files are located in:

<All Users Profile> \Application Data\NWA

The actual path will vary depending on system configuration, but on most systems will be:

\Documents and Settings\All Users\Application Data\NWA

To retain your existing settings, you will need to modify the default settings for Version 6.1 after it is installed. This means that you should print your current settings **BEFORE** uninstalling your current version. The Settings forms are organized identically in all versions going back to 5.1.

To print your current Quality Analyst settings, select **Settings** from the Quality Analyst startup screen and click the **Print** button. You can either print the settings for the current form or all forms at once. You will then be ready to make the necessary Settings changes for Quality Analyst 6.1.

NOTE: If you have placed copies of QA.NWA in “Start In” folders to give individual users or Data Sets specific Settings, you will need to replace those files with copies of Quality Analyst 6.1’s QA.NWC file.

Installing Version 6.1

Review the *Quality Analyst 6.1 Installation Guide BEFORE installing.* For best results, follow these steps in order:

1. Review these Update Notes carefully
2. Review the Quality Analyst 6.1 **Installation Guide**
3. Read the **Configuration Files** section of these notes and print your existing settings before taking the next step.
4. Uninstall your existing Quality Analyst using the Windows **Add/Remove Programs** function. For LAN installations, uninstall each QA Workstation (you may need the Quality Analyst installation CD or the location of QASETLAN.MSI on your network). All existing Quality Analyst Data Sets will be retained.

5. Install the new Quality Analyst 6.1 according to the instructions in the **Installation Guide**.
6. Review your Quality Analyst 6.1 Settings and change as needed.

Icons and Start Menu entries

The install should create a Start Menu entry for Quality Analyst 6.1 and a shortcut icon on your desktop. If you have created additional shortcuts pointing to different “Start in” folders, you should remove the existing icons and create new ones.

Data Sets

Quality Analyst 6.1 will read existing Data Sets (DAT/HED files) and will automatically convert them to Version 6.1 format (DAT/NWH). Version 6.1 does not delete the HED file, but will not keep it updated – all configuration changes for the Data Set will be written to the NWH file.

Note that while the DAT file format has not changed, and can be read by any version of Quality Analyst, Header files have been changed to XML format and cannot be read by previous versions. However, Quality Analyst 6.1 can save Data Sets in the older format (see **Exchanging Data Sets with older versions** below).

NOTE: Although Quality Analyst 6.1 automatically updates Data Sets as they are used, NWA recommends that, where practical, all Data Sets be converted as part of the update process (by opening and saving them) instead of allowing them to be converted “on-the-fly”.

Connections to External Databases

Data Sets that include database connectivity definitions will be automatically converted and should work without modification.

Run Files

The basic Run File syntax has not been changed, and Quality Analyst 6.1 can read and execute Run Files created by previous versions (with some exceptions, see below). However, due to the changes in file naming conventions (NWH, NWG), **Run Files created by Version 6.1 can not be used by previous versions**. NWA also recommends converting Run Files created by previous versions to the new naming conventions.

NOTE: Run Files that use the COPY command to copy specific Quality Analyst files (such as swapping HED files) will need to be modified to use the new file extensions, changing HED to NWH, PLT to NWG, etc.

NOTE: The Quality Analyst 6.1 Run File Interpreter does not convert Data Sets to the new Version 6.1 format. If you are going to implement new features like Assignable Cause/Corrective Action, you should convert all Data Sets *before* using the Run File with

the new version (otherwise any AC or CA selected during Run File execution will not be saved).

Graphics Files

Version 6.1 Graphics files are now in XML format and use the extension NWG instead of PLT. The Version 6.1 Graphics Viewer can read PLT files created by previous versions, but previous versions cannot read the new NWG Graphics files. While Version 6.1 cannot produce PLT files, graphics can be saved in several standard graphics formats (BMP, JPG, PNG, WMF, PCX).

Other changes include the ability to save “Groups” in a single graphics file, and the consolidation of Text Output files (PTX files) with the standard graphics output. In this version, all output except Exception Reports is now in the NWG Graphics file format.

Other Issues

Exchanging Data Sets with older versions

While Quality Analyst 6.1 will read Data Sets created by earlier versions, Version 5.2 and earlier will not be able to read Data Sets as created by Quality Analyst 6.1. However, users of Version 6.1 can save complete Data Sets in Quality Analyst 5.2 format by opening the **File** menu and selecting **Save as Quality Analyst 5.2 HED file**. Note that this may not work for Version 5.1 if parameters have been set that were new in Version 5.2. In this case and for earlier versions, the DAT portion of the Data Set can be read by any version of Quality Analyst.

Using Quality Analyst 6.1 with Quality Monitor

Quality Monitor will not be updated to the new Quality Analyst 6.1 files and Graphics Viewer until later this year. Therefore, Quality Monitor Workstations will continue to use Quality Analyst 5.2 files and Graphics Viewer. This will require Quality Monitor administrators and developers who have updated to Quality Analyst 6.1 to always use **Save as Quality Analyst 5.2 HED file** when creating or modifying Data Sets for use by Quality Monitor.

Using Quality Analyst 6.1 with Quality Analyst Web Server

Since Quality Analyst Web Server delivers web-standard graphics content, you may continue to use Quality Analyst 5.2 and your existing Quality Analyst Web Server as long as it meets your needs. However, companies updating their users to Quality Analyst 6.1 should plan on updating to Quality Analyst Web Server Version 2.2 that incorporates Quality Analyst 6.1 to avoid potential problems caused by maintaining different versions.

Quality Analyst Web Server Version 2.2 will be available 3–4 weeks after the initial release of Quality Analyst 6.1.

Quality Analyst Web Server Graphics Viewers

Quality Analyst 6.1 uses a different Graphics File format and file extension (.NWG), but can read the PLT files created by previous versions. Companies that are serving Quality Analyst PLT files from Quality Analyst Web Server (requiring the Quality Analyst Graphics Viewers on client systems) will be able to continue to do so even if some of their client base has converted to Quality Analyst 6.1.

Running Version 6.1 and an earlier version on the same system

Although we do not recommend it, you can run Version 6.1 and previous versions on the same system if necessary (such as during an evaluation period). The major problems occur when using files whose filename extension is registered with Windows (specifically the .PLT extension for graphics files and .RUN for Run Files).

After installing Quality Analyst Version 6.1:

If you have shortcuts defined to launch Run files from the desktop or you double-click a Run File, the Version 6.1 Run File interpreter will be used.

If you double-click PLT files or have PLT files downloaded when using Quality Analyst Web Server, the Version 6.1 Graphics Viewer will be used. The new Graphics Viewer can read PLT files, so the charts should appear properly. However, if you subsequently display a chart in Quality Analyst 5.2, the older version will re-register PLT, which will cause an error when attempting to view downloaded PLTs from Quality Analyst Web Server.

If you wish to keep the older version on your system but make Version 6.1 your primary Quality Analyst, and you have run Quality Analyst 5.2 graphics after installing Version 6.1, you can correct the PLT problem as follows:

1. Go to **Add/Remove Programs** in the Control Panel and choose to **Repair** Quality Analyst 6.1.
2. Using an editor such as Notepad, edit the QAGRAPH.INI file in your \Windows directory (controls the older version of the Graphics Viewer) and add the following 2-line section:

```
[Start Up Options]
Register Shell Types=0
```

This will prevent the earlier Quality Analyst from “hijacking” the PLT files. If you wish to prevent this behavior before it occurs, do step #2 immediately.

Quality Analyst 6.1 New Features

The following list covers the major new features of Quality Analyst Version 6.1. References to the User's Manual are in *italics*.

Updated Graphics Viewer

(See *Chapter 6*)

Quality Analyst 6.1 includes all-new Graphics Viewer technology that retains the functional and usability features of previous versions while providing significant improvements and increased capacity. While the look-and-feel is similar to versions 5.1 and 5.2, the toolbar has been reorganized, new functions and capabilities have been added, and most of the functions are available using left-or-right-mouse-clicks.

Among the new graphics features are:

- Expanded control of fonts, colors, and plotting characters
- X-axis labels may be rotated up to 90 degrees
- Callouts display more information and are included in print output
- Drag-and-drop text comments
- Direct editing of Titles and Footers
- Rescale X and Y axes
- Graphics files are saved in XML format
- Assignable Cause / Corrective Action assigned directly to data points
- Improved point-and-click “zoom”
- Right-click menu for key functions
- Text output has been improved and may be included in Groups
- Groups can be saved as NWG files
- Graphics may be saved in other formats (JPG, PNG, WMF, BMP)
- Increased capacity (over 500,000 points on SPC charts)
- “Rainbow” chart zones
- User-selected graphical plotting characters

Assignable Cause / Corrective Action

(see sections starting at pages 59, 145, and 213)

Quality Analyst 6.1 includes specific support for Assignable Cause and Corrective Action. You define custom lists of Causes and Actions in the Settings form. In the Graphics Viewer, you select Causes and Actions from these predefined lists for specific chart points. The Graphics Viewer stores them, along with optional free-form comments, in the XML Header file keyed to specific rows in the Data Set. Assignable Cause & Corrective Action reports include tabular and Pareto formats.

SPC parameters synchronized with databases

(see sections starting at pages 57 and 561)

Previous versions of Quality Analyst linked parameters such as SPC limits and graphics comments to specific rows in the Data Set. If the Data Set was connected to an external data source, subsequent queries could cause the parameters to be assigned to the wrong row. In Version 6.1, **Assignable Cause**, **Corrective Action**, **Chart Comments**, and data **Tags**, are stored with key values from the data records, and are linked to the correct row each time a Data Set is opened, regardless of the source of the data. This requires that you identify specific key fields for each connectivity Data Set to enable proper synchronization.

Direct specification lookup from databases

(see section starting at page 46)

Data Sets in Quality Analyst 6.1 can now be configured to look up specifications directly from external databases (ODBC, Access, Excel). Once configured, the specification database will be queried each time the Data Set is opened.

Other New Features

- Full support for UNC (Universal Naming Convention) in paths/file names. This eliminates the need to use mapped drives over networks.
- Data Sets may now contain up to 500 columns. (Performance will vary for files approaching 500 columns depending on processor speed and available memory.)
- New features in the “denormalization” function of database connectivity make it easier and faster to create denormalized definitions. *(see page 539)*
- Single-variable Regression now includes a Stability Report option. *(see page 366)*
- Run Charts now allow up to 8 variables and allow descriptions on the X axis. *(see page 163)*
- Variable specifications now support the variable’s decimal format definition
- SPC charts may now display background (“rainbow”) colors for zones. *(see page 245)*
- The Editor now supports user-selected font size and type
- The new Tag Row function allows tagging of all cells in a row
- The Editor toolbar allows user selection of buttons to display and button size