

CitectSCADA 7.20

Release Notes for Service Pack 3

The V7.20 Service Pack 3 includes several product updates and enhancements, providing improvements in stability, performance and functionality.

Important:

As per recommended practice, all projects should be backed up prior to commencing the Service Pack installation.

Important:

All projects must be upgraded and recompiled after installing this Service Pack. If not performed, it will result in 'conflicting database size' message occurring.

By default, the Project Editor will prompt to perform the upgrade after the configuration tools are launched. However, if you cancel the upgrade, you can select another upgrade to occur at startup by editing the Citect.ini file, setting [CTEDIT] Upgrade=1, and restarting the Project Explorer.

In some instances a full compile may be required after an upgrade. If using Incremental Compile (which is the default) then just re-run a compile and select to continue when prompted to perform a full compile.

For projects using CSV_Include templates, please run **Update Pages** (in Graphics Builder→Tools→Update Pages).

Hot Fixes

Customers who have hot fixes installed should check the release notes to ensure the applicable fix is included in V7.20 Service Pack 3 - please contact [SCADA Global Support](#) if in any doubt.

SCADA Global Support recommends V7.20 users apply the Service Pack as soon as practically possible.

Note For general information about service packs, see Knowledge Base article Q2181.

This service pack applies to three of the products shipped with CitectSCADA version 7.20:

- a) CitectSCADA
- b) CitectSCADA Web Server
- c) CitectSCADA IDC

Separate service pack installers have been created for each of these products, allowing you to choose which products you wish to upgrade to Service Pack 3, depending on your requirements.

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Service Pack Installation

The procedure for installing Service Pack 3 for CitectSCADA depends on whether you are an existing user of CitectSCADA version 7.20 or a new user.

Existing CitectSCADA version 7.20 Users

1. Run patch file "CitectSCADA SCADA 7.20 Service Pack 3.exe".
2. Open Citect Explorer, wait until upgrade has completed.
3. For any project using CSV_Include templates:
 - a. Select the project in Citect Explorer.
 - b. In Citect Graphics Builder, select Tools→Update Pages, then click Yes to continue.
4. Perform a full compile - when using Incremental Compile (which is the default) re-run the compile and select to continue when prompted.
5. For any webclient project whose graphics pages were updated in step 3, redeploy:
 - a. Run Citect Explorer→Tools→Web Deployment Preparation.
 - b. Follow the steps below for "Upgrading CitectSCADA 7.20 Web Server to Service Pack 3" and re-save the project deployment.

New CitectSCADA 7.20 Users

1. Install CitectSCADA 7.20.
2. Open Citect Explorer for the first time and then close.
3. Run patch file "CitectSCADA SCADA 7.20 Service Pack 3.exe".
4. Open Citect Explorer, wait until the upgrade has completed.
5. For any project using CSV_Include templates:
 - a. Select the project in Citect Explorer.
 - b. In Citect Graphics Builder, select Tools→Update Pages, then click Yes to continue.
6. Ensure the Incremental Compile menu option (in Project Editor→Tools→Options) is turned OFF then recompile each project.

Upgrading CitectSCADA 7.20 Web Server to Service Pack 3

Installing Service Pack 3 for CitectSCADA Web Server requires that you install Service Pack 3 for CitectSCADA as well otherwise the web client will not work correctly. You should perform this installation as per one of the above two scenarios, then:

1. On your web server(s) (machines running IIS), run patch file "CitectSCADA WebServer 7.20 Service Pack 3.exe". This will install an updated CAB file: CitectSCADAWebClient_7_20_3_280.cab, which will become available to all your web clients.
2. On all your web client machines, take the following actions:
 - a. Open ARP (Add or Remove Programs) by choosing Start→Settings→Control Panel→Add or Remove Programs.
 - b. Locate the entry 'Citect Web Client 7.20' and click 'Remove'. If this item is not listed in ARP, you should delete the %windir%\system32\citect\webclient\720 directory. (NB: %windir% indicates the default windows installation directory.)
 - c. In the CitectSCADA Web Deployment Configuration (in Internet Explorer):
 - i. Select 'CitectSCADAWebClient_7_20_3_280.cab' from the *Client Control* drop down menu.
 - ii. Save the deployment by selecting the action to save deployment.

Upgrading CitectSCADA 7.20 IDC to Service Pack 3

Installing Service Pack 3 for CitectSCADA IDC requires that you install Service Pack 3 for CitectSCADA on your servers otherwise the IDC will not work correctly. You should perform installation as per one of the scenarios mentioned earlier (existing CitectSCADA users versus new ones), and then run patch file "CitectSCADA IDC 7.20 Service Pack 3.exe" on each of your IDC machines.

Note CitectSCADA IDC is not supported on Windows Vista or Windows 7.

Service Pack Uninstall

The procedure for removing (rolling back) Service Pack 3 depends on which Operating System you are running.

All Windows Versions

Before following one of the procedures below, backup your citect.ini file to a temporary location. You can use the Computer Setup Editor (via Tools menu) to determine the location of this file. This step is required as the uninstall procedure may revert some settings back to their default. Additionally, unless you are restoring your projects to the backups made prior to Service Pack upgrade, you will also need to backup the citect.frm file from the Bin directory. Restore the citect.ini file (and possibly citect.frm) to their original location upon completion of the uninstall procedure.

During the uninstallation process the user will be prompted to specify the CitectSCADA 7.20 installer location if it is no longer accessible. The following message is shown if CitectSCADA 7.20 has been installed from a DVD: "The feature you are trying to use is on a CD-ROM or other removable disk that is not available". Hence when uninstalling SCADA service pack 3 the user will have to specify the CitectSCADA 7.20 installer location. Locate the MSI installer for the CitectSCADA 7.20 product via the Browse button, then click OK. The SCADA installer is located in the "Citect" folder under the main installation directory (e.g. your DVD drive).

Microsoft Windows Vista and Windows 7

Note On Microsoft Vista and Windows 7, the Web Server Service Pack cannot be uninstalled independently from the base application. Instead the CitectSCADA Web Server must be uninstalled to remove both the base product and Service Pack, and then the base product may be reinstalled. This has been documented in Knowledge Base article Q5450.

Follow these steps to uninstall products other than the Web Server:

1. Open "Programs and Features" by typing its name in the Start Search bar then selecting it from the list:

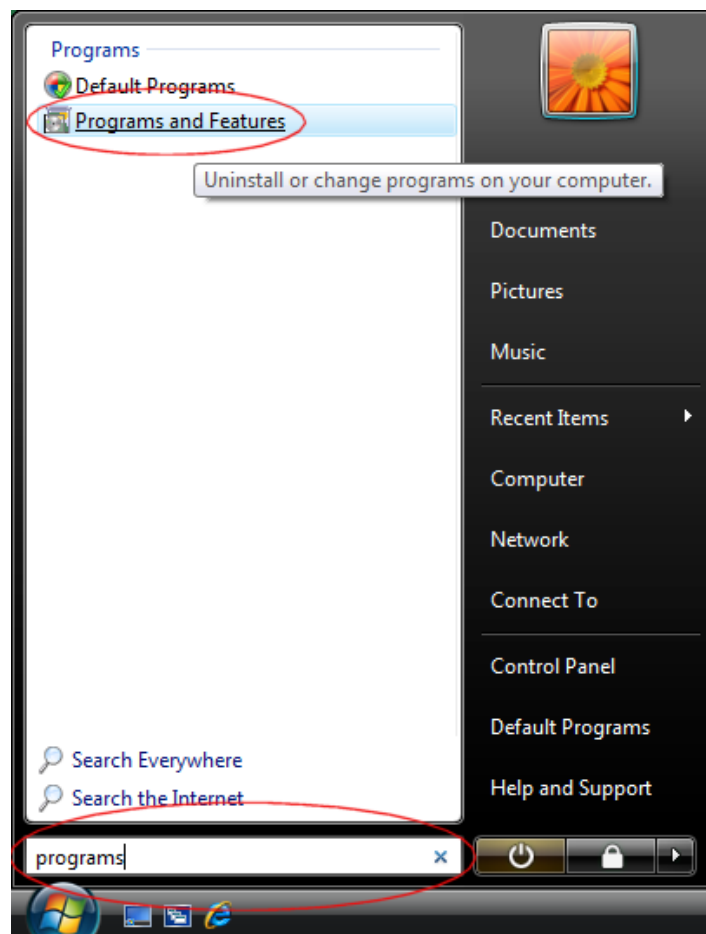


Figure 1: Programs and Features on Vista

2. Select “View installed updates” from the side panel that is presented:

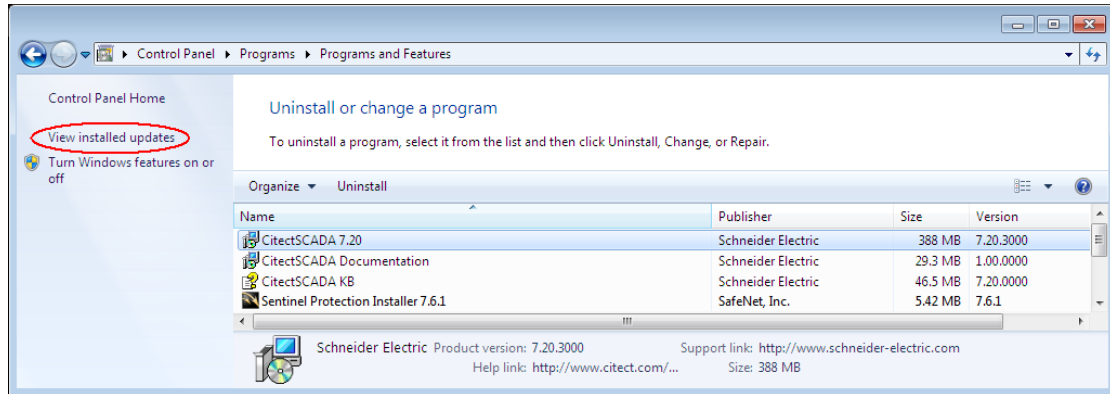


Figure 2: View installed updates on Windows 7 and Vista

3. Select “Service Pack 3” for the appropriate product then click Uninstall:

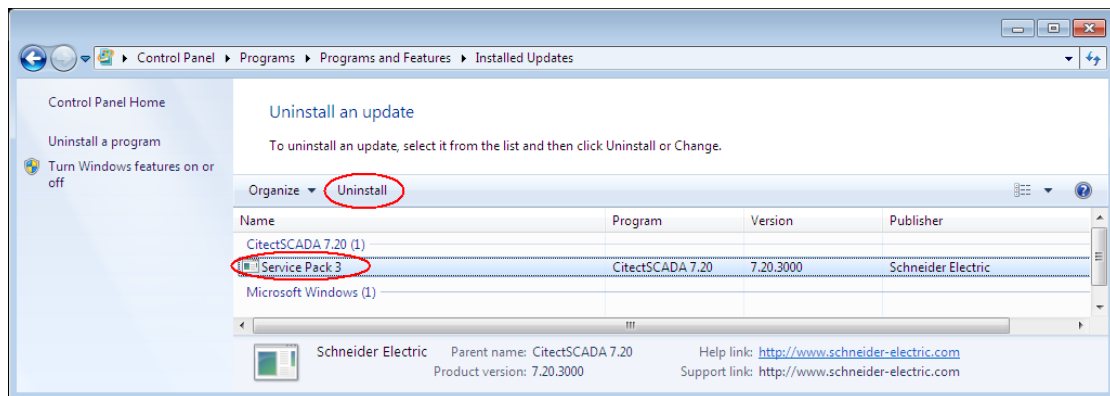


Figure 3: Uninstall an update on Windows 7 and Vista

Note If you have User Access Control switched on in Windows 7 and Vista, the orange UAC dialog will be displayed before the uninstaller is launched. Select allow and proceed with the uninstallation. This is a limitation imposed by the User Access Control and cannot be avoided.

4. Open Citect Explorer, wait until upgrade has completed.
5. For any project using CSV_Include templates:
 - a. Select the project in Citect Explorer.
 - b. In Citect Graphics Builder, select Tools→Update Pages, then click Yes to continue.
6. Ensure the Incremental Compile menu option (in Project Editor→Tools→Options) is turned OFF then recompile each project.

Microsoft Windows XP SP2 or Server 2003

Follow these steps to uninstall:

1. Open ARP (Add or Remove Programs) by choosing Start→Settings→Control Panel→Add or Remove Programs.
2. Make sure the 'Show Updates' checkbox is ticked as follows:

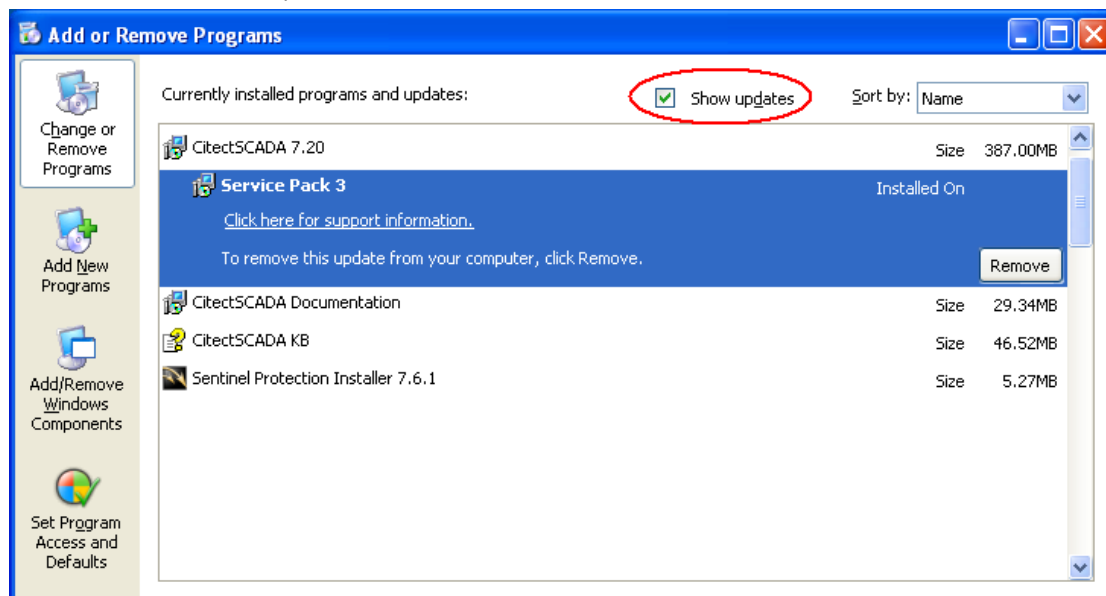


Figure 4: Service Pack 3 visible as an update

3. You should see the service pack listed as a sub-entry under the parent product.
4. Select this sub-item and click 'Remove'.
5. Open Citect Explorer, wait until upgrade has completed.
6. For any project using CSV_Include templates:
 - a. Select the project in Citect Explorer.
 - b. In Citect Graphics Builder, select Tools→Update Pages, then click Yes to continue.
7. Ensure the Incremental Compile menu option (in Project Editor→Tools→Options) is turned OFF then recompile each project.

Uninstallation of WebServer and WebClient(s)

The WebServer and WebClient(s) must be running the same service pack as CitectSCADA to operate successfully.

This means to uninstall CitectSCADA 7.20 Service Pack 3, it is necessary to uninstall the service pack from the WebServer that connects to CitectSCADA, and completely uninstall any WebClient(s) that connected to the WebServer. This will allow the WebServer to install the correct WebClient version when next used.

Files changed in this Service Pack

Listed below are the files updated or added to the CitectSCADA product after installing 7.20 Service Pack 3.

Files Added - CitectSCADA

Added Install Path and File - CitectSCADA
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\CSV_Include\eqstate.dbf
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\CSV_Include\eqtype.dbf
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\Include\eqstate.dbf
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\Include\eqtype.dbf
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\System\eqstate.dbf
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\System\eqtype.dbf
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\Tab_Style_Include\eqstate.dbf
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\Tab_Style_Include\eqtype.dbf
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\Citect32.exe.config
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtExplor.exe.config
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\EquipGen.exe
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\RuntimeManager.exe.config
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\SchedEng.chm
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\SchedOp.chm
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\sequityp.dbf
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\sresstat.dbf
Citect.Platform.Scheduling.dll

Updated Files - CitectSCADA

Updated Install Path and File - CitectSCADA	Notes
_CommonAppDataFolder_Citect\CitectSCADA 7.20\Config\MxPLCrange.ini	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\Config\tagdriv.ini	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\Data\Example.ctz	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\CSV_Include_FUNCSYM.OLD	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\CSV_Include\activex.zip	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\CSV_Include\CSV_Alarms.ci	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\CSV_Include\CSV_Database.ci	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\CSV_Include\equip.DBF	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\CSV_Include\tiway.plc	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\Include\citect.ci	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\Include\CTUTIL.CI	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\Include\equip.DBF	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\Include\graph.ci	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\Include\info.ci	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\Include\PADisplay.ci	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\System\equip.DBF	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\System\HARDALM.DBF	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\System\HARDALM.txt	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\Tab_Style_Include\activex.zip	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\Tab_Style_Include\equip.DBF	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\Tab_Style_Include\PROJECT.CIT	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\Tab_Style_Include\TabAlarm.ci	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\Tab_Style_Include\Tabmenu.ci	
_CommonAppDataFolder_Citect\CitectSCADA 7.20\User\Tab_Style_Include\tiway.plc	
_CommonFilesFolder_Citect\Analyst.dll	
_CommonFilesFolder_Citect\CiASCDrv.dll	
_CommonFilesFolder_Citect\CiDBFDrv.dll	
_CommonFilesFolder_Citect\CiDebugHelp.dll	
_CommonFilesFolder_Citect\CiMeterX.ocx	
_CommonFilesFolder_Citect\Cimitsubishdrv.dll	

Updated Install Path and File - CitectSCADA	Notes
_CommonFilesFolder\Citect\CiMitsubishiTagBrowse.dll	
_CommonFilesFolder\Citect\CiOPCDrv.dll	English
_CommonFilesFolder\Citect\CiOPCDrv.dll	German
_CommonFilesFolder\Citect\CiOPCDrv.dll	Spanish
_CommonFilesFolder\Citect\CiOPCDrv.dll	French
_CommonFilesFolder\Citect\CiOPCDrv.dll	Italian
_CommonFilesFolder\Citect\CiOPCDrv.dll	Japanese
_CommonFilesFolder\Citect\CiOPCDrv.dll	Korean
_CommonFilesFolder\Citect\CiOPCDrv.dll	Russian
_CommonFilesFolder\Citect\CiOPCDrv.dll	Chinese
_CommonFilesFolder\Citect\CiOPCTagBrowse.dll	English
_CommonFilesFolder\Citect\CiOPCTagBrowse.dll	German
_CommonFilesFolder\Citect\CiOPCTagBrowse.dll	Spanish
_CommonFilesFolder\Citect\CiOPCTagBrowse.dll	French
_CommonFilesFolder\Citect\CiOPCTagBrowse.dll	Italian
_CommonFilesFolder\Citect\CiOPCTagBrowse.dll	Japanese
_CommonFilesFolder\Citect\CiOPCTagBrowse.dll	Korean
_CommonFilesFolder\Citect\CiOPCTagBrowse.dll	Russian
_CommonFilesFolder\Citect\CiOPCTagBrowse.dll	Chinese
_CommonFilesFolder\Citect\CiSchneiderDrv.dll	English
_CommonFilesFolder\Citect\CiSchneiderDrv.dll	German
_CommonFilesFolder\Citect\CiSchneiderDrv.dll	Spanish
_CommonFilesFolder\Citect\CiSchneiderDrv.dll	French
_CommonFilesFolder\Citect\CiSchneiderDrv.dll	Italian
_CommonFilesFolder\Citect\CiSchneiderDrv.dll	Japanese
_CommonFilesFolder\Citect\CiSchneiderDrv.dll	Korean
_CommonFilesFolder\Citect\CiSchneiderDrv.dll	Russian
_CommonFilesFolder\Citect\CiSchneiderDrv.dll	Chinese
_CommonFilesFolder\Citect\CiSchneiderTagBrowse.dll	English
_CommonFilesFolder\Citect\CiSchneiderTagBrowse.dll	German
_CommonFilesFolder\Citect\CiSchneiderTagBrowse.dll	Spanish
_CommonFilesFolder\Citect\CiSchneiderTagBrowse.dll	French
_CommonFilesFolder\Citect\CiSchneiderTagBrowse.dll	Italian
_CommonFilesFolder\Citect\CiSchneiderTagBrowse.dll	Japanese
_CommonFilesFolder\Citect\CiSchneiderTagBrowse.dll	Korean
_CommonFilesFolder\Citect\CiSchneiderTagBrowse.dll	Russian
_CommonFilesFolder\Citect\CiSchneiderTagBrowse.dll	Chinese
_CommonFilesFolder\Citect\CiTagBrowse.dll	
_CommonFilesFolder\Citect\CiTextBox.ocx	
_CommonFilesFolder\Citect\CiTrans.dll	
_CommonFilesFolder\Citect\CiTreeView.ocx	
_CommonFilesFolder\Citect\CiTrendArchiveFileOffset.dll	
_CommonFilesFolder\Citect\CiTrendArchiveFileOffset8Byte.dll	
_CommonFilesFolder\Citect\CiTrendArchiveInterpolator.dll	
_CommonFilesFolder\Citect\CiTrendManager.dll	
_CommonFilesFolder\Citect\Ct_ipc.dll	
_CommonFilesFolder\Citect\CtApi.dll	
_CommonFilesFolder\Citect\CtEng32.dll	
_CommonFilesFolder\Citect\CTODBC32.dll	
_CommonFilesFolder\Citect\CtRes32.DLL	English
_CommonFilesFolder\Citect\CtRes32.dll	German
_CommonFilesFolder\Citect\CtRes32.dll	Spanish
_CommonFilesFolder\Citect\CtRes32.dll	French
_CommonFilesFolder\Citect\CtRes32.dll	Italian

Updated Install Path and File - CitectSCADA	Notes
CommonFilesFolder \Citect\CtRes32.dll	Japanese
CommonFilesFolder \Citect\CtRes32.dll	Korean
CommonFilesFolder \Citect\CtRes32.dll	Russian
CommonFilesFolder \Citect\CtRes32.dll	Chinese
CommonFilesFolder \Citect\CtUtil32.dll	
CommonFilesFolder \Citect\DatabaseExchange.ocx	
CommonFilesFolder \Citect\ItemList.exe	
CommonFilesFolder \Citect\ItemList.ocx	
CommonFilesFolder \Citect\MenuBar.ocx	
CommonFilesFolder \Citect\MsgBox.exe	
CommonFilesFolder \Citect\MsgBox.ocx	
CommonFilesFolder \Citect\Protection.dll	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\AlarmServer.dll	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CiDebugHelp.dll	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CiExceptionMailer.dll	English
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CiExceptionMailer.dll	German
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CiExceptionMailer.dll	Spanish
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CiExceptionMailer.dll	French
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CiExceptionMailer.dll	Italian
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CiExceptionMailer.dll	Japanese
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CiExceptionMailer.dll	Korean
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CiExceptionMailer.dll	Russian
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CiExceptionMailer.dll	Chinese
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CiExceptionmailer.exe	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\Citect.CitectSCADA.DSServers.dll	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\Citect.CitectSCADA.Kernel.KernelTaskQueue.dll	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\Citect.CitectSCADA.Migration.exe	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\Citect.CitectSCADA.RuntimeConfiguration.dll	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\citect.frm	English
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\citect.frm	German
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\citect.frm	Spanish
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\citect.frm	French
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\citect.frm	Italian
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\citect.frm	Japanese
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\citect.frm	Korean
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\citect.frm	Russian
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\citect.frm	Chinese
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\Citect32.exe	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\Client.dll	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\ComputerSetupEditor.exe	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CSAPSI.dll	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\Ct_ipc.dll	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CtApi.dll	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CtBack32.exe	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CtCicode.exe	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CtCmp32.exe	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\Ctcomdlg.dll	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CtDraw32.exe	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\ctdraw32.tlb	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CtEdit32.exe	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CtEng32.dll	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CtExplor.exe	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CtG32.dll	
ProgramFilesFolder \Citect\CitectSCADA 7.20\Bin\CtIndex.dll	

Updated Install Path and File - CitectSCADA	Notes
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtKC.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtMenu32.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtOpc32.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CTOPC32.exe	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtProj.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtRegion.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtRender.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtRes32.DLL	English
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtRes32.dll	German
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtRes32.dll	Spanish
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtRes32.dll	French
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtRes32.dll	Italian
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtRes32.dll	Japanese
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtRes32.dll	Korean
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtRes32.dll	Russian
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtRes32.dll	Chinese
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtSetup.exe	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CTTAGDB.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtUtil.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtUtil32.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtVersion.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\CtVersion.xml	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\DBFAccess.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\DIR.DBF	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\Diskdrv.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\Dlg32.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\DriverRuntimeInterface.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\ERRSTR.DBF	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\ERRSTR.NDX	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\ExprWiz.exe	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\FtpSvr.exe	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\FUNC0.DBF	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\IoServer.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\ManagedDep.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\ManagedUtil.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\ParameterLUT.xml	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\PlatformHost.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\PLUSADOCon.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\PolledDataSource.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\Protection.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\ReIndex.exe	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\ReportServer.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\Rscite32.exe	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\RuntimeConfiguration.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\RuntimeConfigurationDatabaseAccess.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\RuntimeManager.exe	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\SARGDIG.DBF	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\SchneiderIdentity.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\SentinelProvider.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\SEQUIP.DBF	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\Techdo32.dll	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\TimeSyncConfig.exe	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\tiway.plc	
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\Tools32.dll	

Updated Install Path and File - CitectSCADA	Notes
_ProgramFilesFolder_Citect\CitectSCADA 7.20\Bin\TrendServer.dll	
Citect.Platform.Logging.Formatters.dll	
Citect.Platform.PSI.Client.dll	
Citect.Platform.PSI.Interfaces.dll	
Citect.Platform.PSI.Server.dll	
Citect.Platform.Tasks.dll	
Citect.Platform.Transport.dll	
Citect.Platform.Transport.Interfaces.dll	
Citect.Platform.XmlUtils.dll	

Added Files - CitectSCADA WebServer

Listed below are the files added to the CitectSCADA *WebServer* product after installing 7.20 Service Pack 3.

Added Install Path and File - CitectSCADA WebServer
Citect\client\720\CitectSCADAWebClient_7_20_3_280.cab

Updated Files - CitectSCADA WebServer

Listed below are the files updated in the CitectSCADA *WebServer* product after installing 7.20 Service Pack 3.

Updated Install Path and File - CitectSCADA WebServer
Citect\locales\demsg.xml
Citect\locales\esmsg.xml
Citect\locales\frmsg.xml
Citect\locales\itmsg.xml
Citect\locales\jmsg.xml
Citect\locales\komsg.xml
Citect\locales\rumsg.xml
Citect\locales\zhmsg.xml

Added Files - CitectSCADA IDC

Added Install Path and File - CitectSCADA IDC
Citect.Platform.Scheduling.dll

Updated Files - CitectSCADA IDC

Updated Install Path and File - CitectSCADA IDC	Notes
_CommonFilesFolder_Citect\Analyst.dll	
_CommonFilesFolder_Citect\CiDebugHelp.dll	
_CommonFilesFolder_Citect\CiTextBox.ocx	
_CommonFilesFolder_Citect\CiTreeView.ocx	
_CommonFilesFolder_Citect\Ct_ipc.dll	
_CommonFilesFolder_Citect\CtApi.dll	
_CommonFilesFolder_Citect\CtEng32.dll	
_CommonFilesFolder_Citect\CtRes32.DLL	English
_CommonFilesFolder_Citect\CtRes32.dll	German
_CommonFilesFolder_Citect\CtRes32.dll	Spanish
_CommonFilesFolder_Citect\CtRes32.dll	French
_CommonFilesFolder_Citect\CtRes32.dll	Italian
_CommonFilesFolder_Citect\CtRes32.dll	Japanese
_CommonFilesFolder_Citect\CtRes32.dll	Korean
_CommonFilesFolder_Citect\CtRes32.dll	Russian
_CommonFilesFolder_Citect\CtRes32.dll	Chinese
_CommonFilesFolder_Citect\CtUtil32.dll	
_CommonFilesFolder_Citect\ItemList.exe	
_CommonFilesFolder_Citect\ItemList.ocx	
_CommonFilesFolder_Citect\MenuBar.ocx	

Updated Install Path and File - CitectSCADA IDC	Notes
_CommonFilesFolder_Citect\MsgBox.exe	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CiDebugHelp.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CiExceptionMailer.dll	English
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CiExceptionMailer.dll	German
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CiExceptionMailer.dll	Spanish
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CiExceptionMailer.dll	French
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CiExceptionMailer.dll	Italian
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CiExceptionMailer.dll	Japanese
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CiExceptionMailer.dll	Korean
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CiExceptionMailer.dll	Russian
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CiExceptionMailer.dll	Chinese
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CiExceptionmailer.exe	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\Citect.CitectSCADA.Kernel.KernelTaskQueue.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\Citect.CitectSCADA.RuntimeConfiguration.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\Citect32.exe	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\Citect32.exe.config	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\Client.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CSAPSI.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\Ct_ipc.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtApi.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\Ctcomdlg.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtEng32.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\Ctg32.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtKC.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtRegion.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtRender.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtRes32.DLL	English
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtRes32.dll	German
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtRes32.dll	Spanish
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtRes32.dll	French
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtRes32.dll	Italian
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtRes32.dll	Japanese
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtRes32.dll	Korean
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtRes32.dll	Russian
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtRes32.dll	Chinese
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtUtil.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtUtil32.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtVersion.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\CtVersion.xml	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\Dlg32.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\ManagedUtil.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\PlatformHost.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\Rscite32.exe	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\RuntimeConfiguration.dll	
_ProgramFilesFolder_Citect\CitectSCADA IDC 7.20\Bin\Techdo32.dll	
Citect.Platform.Logging.Formatter.dll	
Citect.Platform.PSI.Client.dll	
Citect.Platform.PSI.Interfaces.dll	
Citect.Platform.PSI.Server.dll	
Citect.Platform.Tasks.dll	
Citect.Platform.Transport.dll	
Citect.Platform.Transport.Interfaces.dll	
Citect.Platform.XmlUtils.dll	

Known Issues

The example project uses the OPC protocol so the OPC driver needs to be installed to be able to run the example project.

This Service Pack also contains the known issues described below.

<i>Issue Number</i>	<i>Issue Title and Description</i>
42749	WebServer Service Pack cannot be independently uninstalled on Windows Vista and Windows 7 On Microsoft Vista and Windows 7, the Web Server Service Pack cannot be uninstalled independently from the base application. Instead the CitectSCADA Web Server must be uninstalled to remove both the base product and Service Pack, and then the base product may be reinstalled. This has been documented in Knowledge Base article Q5450.

Issues resolved in this Service Pack

This Service Pack resolves the issues described below. If you have any hotfixes installed on your current version, please check if they are included in this service pack. If the hotfix is not included in the list below, or you have any concerns regarding the issues covered, please contact Support *before* installing this Service Pack.

Licensing

53078 - **Licensing. Version 7.20 Client cannot connect to the v7.20 SP2 Server.**

When fixes require an update of the Post Release Version, older versioned clients or servers required the [LAN]EarliestLegacyVersion setting to be used. This has been deemed to be overly strict and so we have now relaxed default message version checks to use only Product Major and Minor Versions.

Project Development Utilities

53731 - **Comm failure with sliders even if page has a default cluster**(Related references 53033)

In a multi-cluster project, sliders fail even if a default cluster was specified when opening a page. This applies to sliders using non-cluster-qualified tags only. This has been resolved.

Compiler

52959 - **Remapping using data type suffixes causes "Bad Raw Data Type" and "Tag Not Found" compilation errors**

Remapping with suffix data type on address field was not recognised properly so that compiler generated compile errors on V7.20 SP1. Since now the compiler has ability to apply data type suffixes on address fields as expected, it will not generate compile errors with suffix data types on remapping any more.

Process Analyst

52727 - **Blinking pens on Process Analyst**(Related references 50438)

Pens no longer blink on Process Analyst

53544 - **Properties ObjectView in ProcessAnalyst not refreshed or delayed.**

Properties, such as scale, in ObjectView of the ProcessAnalyst were not refreshed or delayed. This fix ensures that the scale is updated immediately after displaying page containing ProcessAnalyst.

Alarms

51051 - **User events do not appear in the tab-styles alarm summary page**

User events do not appear in the tab-styles alarm summary page. This issue has been resolved.

51761 - **In a redundant alarm system, if the local alarm server has an alarm server request that contains a record id that is not a valid SLID for that server it may cause the remote alarm server to crash.**

In a redundant alarm system, if the local alarm server has an alarm server request that contains a record id that is not a valid SLID for that server it may cause the remote alarm server to crash. This issue has now been fixed.

52794 - **Suppression does not work when alarms are triggered simultaneously**

Suppression of MultiState Digital Alarms does not suppress if higher priority alarm is off and unacknowledged as it should per Help, also suppression does not work with simultaneously triggered alarms of different priorities. If a high priority alarm and a lower priority alarm are triggered simultaneously, the lower priority alarm should be suppressed. The suppression code has been changed to suppress lower priority alarms being processed in the same alarm cycle as the triggered high priority alarm.

53839 - **Shutdown crash caused by a timing related issue in the networking layer.**

Shutdown crash caused by a timing related issue in the networking layer. This issue has been fixed.

Trends

52708 - **[CICODE] TrnAddHistory() fails to add a long month after adding the previous month.**

When adding periodic monthly Trend Files from an older recording period, files that follow months which do not have 31 days often fail to add. This has now been fixed.

IO System

50528 - **The IO Server crashes if a page has an invalid scan time**

If a page has an invalid scan time, navigating away from that page may cause the IO Server to crash. This issue has been resolved.

51970 - **DrvDebug() is not thread safe and leads to crashes.**

Certain drivers use a multi-threaded model. So enabling diagnostic tracing for these drivers can lead to incomplete\garbled trace messages, and can occasionally cause IO Server to crash. This has now been fixed.

53014 - **When Primary IO device is offline some Tags are showing as #BAD on all client machines**

When Primary IOdevice is offline some Tags are showing as #BAD on all client machines. However, other tags belonging to the same IOdevice are showing as GOOD quality. Doing a TagRead() to the offending tags, solved the issue. Affects projects with Primary and Stand-by IO servers that each have its own device (two IO Servers, with a two PLCs, one each)

53133 - **Stale value displayed on client after writing to a bit in PLC that automatically reset to '0'**

When the customer issues a start command the PLC will reset the start command. The old value will continue to display on the SCADA. The only way for them to fix the problem is to perform a tag read. Chain of events:

- From SCADA, writing to a bit in PLC: setting that bit to '1'. i.e: MyTag=1 -> Value of bit is set to '1' on Citect graphic page
- > Write command sent to PLC
- > Write command successful
- > PLC automatically reset that bit to '0'
- > Citect still displays '1' on graphic page for that specific bit (Stale value displayed) -> Customer does a TagRead() from Citect to that specific bit
- > Value of the bit gets correctly updated on graphic page

NOTE:

All tests are done with [Code]WriteLocal=1 set in the citect.ini file

When the value is written to the PLC we save the last value of the tag in the IOserver. Then when the value is read from the PLC we compare the read value with the last value; if they are different a notification is sent to the client. If the values are the same, no notification is sent. However there was a problem for digital tags values. The wrong bit was set when the tag was written and when the tag was read the comparison didn't find a change, therefore no notification was sent.

After the fix, the tag value shown on the graphic page should match the value in the PLC (or the PLC simulation).

53900 - **Unhandled exception when massive tag operations performed with long strings on non-English environments**

There was possibility for SCADA Runtime to raise an unhandled exception when massive tag operations have performed with long strings on non-English environment cause by miscalculation of data size. As the calculation has been fixed, now runtime can perform tag operations properly.

Cicode

52065 - **Negative array indexes causes exceptions (crashes).**

Negative array indexes causes exceptions (crashes).

Examples:

```
x = array[-1];
```

```
array[-1] = x;
```

```
x = TagRead("array[-1]");
```

```
TagWrite("array[-1]", x);
```

Negative index use should result in a 'hardware alarm'.

Hardware Alarm: "Generic General Value is out of range array"

52427 - **TaskKill must not kill the task it is running from**

In the original version of LogOutIdle and WaitIdle, the WaitIdle function calls LogOut which attempts to kill the current task it is running on. In this case we can avoid using KillTask by letting the WaitIdle function exit out of the wait loop by setting a flag.

52571 - **There is no way of getting the user name of a Windows user through cicode without it including the domain name.**

UserInfo(1), UserInfo(2), Name() and FullName() are Cicode statements to get user names from CitectSCADA but for Windows user names none of them returned Window user name only but combined with domain or machine name. Now a new parameter for Name() Cicode function is added, hence users are able to use Name(0) statement to get Windows user name without domain/machine name. Here is the new usage of Name() function:

Syntax: Name([bIncludeDomain])

bIncludeDomain = 0: Return Windows user name only

bIncludeDomain = 1: (Default) Return Windows user name with domain name

This parameter is ignored for normal CitectSCADA account.

Please note that this fix does not change UserInfo() and FullName() functions and has no effect on existing projects.

52661 - **SQL Functions occur data mismatch on recordset when braces, commas and/or spaces are used in field names**

SQLGetField() Cicode function returned mismatched data when braces, commas and/or spaces were used on field name of DB table. Although those fields on recordset are basically inaccessible on Cicode, their data still persisted on memory and caused this issue. Now those fields and their data are completely removed on recordset by runtime, SQLGetField() function works properly. In order to access fields which contain those characters, use "AS" (alias) keyword on SELECT query statement to change field name instantly on recordset.

52735 - **ProcessAnalystSetPen() Cicode function does not support Digital Trends and Alarms**

ProcessAnalystSetPen() Cicode function was for Analogue Trends and did not support Digital Trends and Alarms. Now this function has an optional parameter for pen types to create so that it is possible to add those pens programmatically.

53137 - **TagInfoEx(sName,0,...) sets no error even if sName does not refer to a valid Tag**

While calling TagInfoEx((sTagName,0,...), the tagnames were parsed for syntax and as the requested property was the tag name itself, it would return no error if the syntax of the tag name was OK, even if there is no valid tag by that name. Now no error code is set only if there is a variable tag, local variable or alarm tag by that name.

53433 - Valid but expired password returns Authentication Failed rather than Password Expired.

When logging into Citect using a Windows user that has expired the error code 439 (Authentication did not succeed) is returned rather than the expected 375 (Password Expired). This has been fixed.

Display System

52539 - Pipe objects get distorted when run in fullscreen mode

Pipe objects can be rendered incorrectly in fullscreen mode. This problem has been resolved.

Runtime Issues

52235 - AlarmServer was crashing on shut down - Exception 0xc0000005 occurred at location 0x638eaf70

Customer experienced crash on alarm process:
Exception 0xc0000005 occurred at location 0x638eaf70
It seems like the crash happened on shutdown.
As the system was shutting down AlmServerExit() seems to be executed before EventExit(). This causes AlmSLIDRTStructMap to be set to null before EventExit(). Introduced in v7.20 alarm changes.
The alarm shut down code has now been split to shut down the alarm processing tasks and clean up the alarm object allocations at appropriate times.

52695 - Long delays on startup or intermittent hang-ups in display client

Some customers might experience a delay of approximately 15 - 30 seconds on CitectSCADA startup, or intermittent hang-ups of the same duration at runtime when the display client becomes unresponsive. This issue has been resolved by adding the <generatePublisherEvidence> setting to files Citect32.exe.config and RuntimeManager.exe.config and moving the files from the Citect Config folder to the Citect Bin folder.

52793 - Crash on IO Server on shutdown when using cicode function IODeviceInfo()

The IOServer crashed (created an exception report) on closing down if it was running for more than a few hours. On shutdown the array, NetToHnd, was freed and nulled correctly, but some cicode was still running. That cicode called IODeviceInfo("2",12) which then (eventually) called UnitNetworkToHnd() which used NetToHnd (which was NULL by then), and this caused a crash.
UnitNetworkToHnd() was changed to check that NetToHnd was not NULL before being used. If NetToHnd is NULL, UnitNetworkToHnd() will return (invalid unit) - the same as if an invalid unit parameter was passed by the cicode function. Note: There may be other shutdown problems if user cicode is not terminated before the system is shutdown.

52920 - **Crash on shutdown (TrendServer)**

When a heavily loaded TrendServer is shutdown before the clients are shutdown, it could crash. This was due to internal components being shutdown and cleaned up in the wrong sequence. The internal shutdown sequence has been changed and the crash should no longer happen.

53019 - **Crash on shutdown - powerlogic driver (update from PLC after shutdown)**

VijeoCitect v7.20 spk3 (latest development version), using PLogic Driver v4.00.08.00001 *and an active device* crashes on system shutdown. Tag updates from the driver should not be processed during shutdown.

Tag Browsing

52713 - **Importing tags using OFSOPC driver hangs, greys out and stops responding**

No actual failure, but the program looked 'hung' while it was importing tags from OPC. The program now displays the number of seconds taken to load tag information in the progress dialog window. Example: "Loading... 24 Seconds"

Web Issues

52567 - **Pages with names containing non-alphanumeric characters are not accessible via the &StartPage parameter in Web Client.**

When using the &StartPage=PAGENAME URL parameter in the address bar of Internet Explorer, PAGENAME page might not be loaded as expected if the name contains non-alphanumeric characters such as underscore '_' or space '. This problem has been resolved.

52906 - **Page switching functions do not resize the popup window size on WebClient**

On WebClient, page switching functions did not resize popup window size properly after page switching when [Page]DynamicSizing parameter is 1, which caused distortion of the switched window. Now WebClient does not keep the original popup window size while switching page, all contents are correctly displayed after switching page by expanding the window size.

Remaining Modules

51037 - **Dynamic objects in some pages are not displayed**

In some instances, tags can get stuck waiting for initial data if local writes are enabled. This leads dynamic objects not being displayed in some pages. This issue has been resolved.

51062 - **Server processes stop unexpectedly earlier than allowed period on multi-process demo mode**

There was possibility to stop server processes on demo mode earlier than allowed running time due to miscommunication between client and server processes. Now the procedure has been fixed to have accurate information so that demo mode will work for expected time.

51491 - **Long delay opening Citect Explorer with no internet access.**

Whenever a signed managed assembly is loaded, Certificate Revocation List (CRL) checks are made. Systems that do not have a clear route to the Internet will then take a long time to fail with each CRL check. This has now been fixed by configuring the runtime to skip these checks.

51957 - **Crash (Exception 0xc0000005) in DifferenceCompare in Citect.Platform.PSI.Interfaces.dll.**

A crash (Exception 0xc0000005) in DifferenceCompare (Citect.Platform.PSI.Interfaces.dll) can occur under certain circumstances. This fix resolves the issue.

52667 - **Startup crash when using DRI with case mismatched ioserver names**

A crash related to unusual (manually modified) project setup is fixed

52712 - **String tag value becomes blank on Non-English environments.**

There was possibility to make string tags blank on Non-English Windows or "Language for non-Unicode programs" (as known as System Default Locale) is not English on Version 7.20. As string tag value is persisted on runtime in Unicode, when runtime gets string value it converts entered value to Unicode and vice versa. However the runtime used different locales to convert them in some cases, which caused blank tag value. Now this converting always uses System Default Locale setting, string tag value is persisted as expected.

52824 - **Crash when shutting down Citect**

Crash on Citect shutdown (by using cicode Shutdown() function, by using the close [X] button, or by selecting shutdown from the Runtime Manager).

52858 - Rotation of a group containing a vertical or horizontal line does not work properly

When a group contains a vertical or horizontal line, the computation of the centre axis offset (pivot) of the group does not take the line into consideration. This has been fixed.

53729 - Possible crash when using IODeviceControl(Related references 51997)

When you try to use the IODeviceControl() CICODE command with an action type of 16, CITECT can crash if the Primary and any Standby Devices go offline.

53924 - Speedlink doesn't support the creation of Time Stamped Digital Alarms

Speedlink did not support the creation of Time Stamped Digital Alarms due to required fields not existing in the configuration file (DBF). This problem has now been resolved by adding the required fields to the DBF.

Enhancements

Scheduler

Scheduler is a component of the Report Server with an ActiveX control that enables you to link your system to a calendar. Scheduler can be used to optimize energy usage and to plan maintenance days whereby any equipment that is not required can be turned off at a time which is pre configured. Please refer to Scheduler Read Me and User Guide for further details.

Issues resolved in Service Pack 2

The following issues were resolved in Service Pack 2.

Project Development Utilities

51086 - Project Upgrade does not flag changes in project RDB field sizes.

Project Upgrade does not flag changes in project RDB field sizes. This issue has now been addressed.

Example Project

50837 - On page based on the Hardware template from the tab_style_1 library, high CPU usage may be observed if parameter [Alarm]HeadingFont is not specified

On page based on the Hardware template from the tab_style_1 library, high CPU usage may be observed if parameter [Alarm]HeadingFont is not specified. This problem is now fixed.

51282 - New parameters are added for customizing tab style templates

New parameters are added for customizing the tab style templates. They allow the system integrators to implement their own Cicode functions / configuration to override some aspects of the templates such the text fonts of the menu bar, contents of the default menus, context menus for the alarm pages and display value of the alarm fields.

51639 - CSV and TXT file types are incorrectly listed as supported formats for alarm export

CSV and TXT file types are incorrectly listed in the "Save As" dialog of the alarm export button launched from alarm pages based on the tab style template library. These options are now removed from the dialog.

Compiler

50977 - Compiler incorrectly allows an alarm area value to be less than 0 or greater than 255

Compiler raises a compile error if the value supplied to alarm area is out of the range of 0 to 255

CTAPI

51748 - CtApi: Scrolling to the last record does not the correct record count

In CtApi, the function `ctFindScroll(hSearch, CT_FIND_SCROLL_LAST,)` is expected to return the record count but is offset by 1.

52389 - A memory leak can occur when calling the `ctTagRead` function

Process Analyst

51106 - Unable to save to `FileLocation_Local` when using `IProcessAnalyst.SaveToFile`(Related references 50161)

Mode 0 (`Filelocation_local`) on `SaveToFile` does raise hardware errors and does not save the file as expected.

51667 - Loading pen properties for an automatically added pen (and other changes) in process analyst takes a long time to be displayed.

Loading pen properties for an automatically added pen (and other changes) in process analyst was taking 30 seconds to display, but should be displayed almost immediately.

A memory leak occurs when calling the ctTagRead function to read tags from I/O devices in offline state. The function behaves correctly with devices in online state. This issue has been fixed.

Alarms

50282 - Newly added Multi-Digital Alarm was incorrectly in the alarm state while it should be off

Previously, when a Multi-Digital Alarm of state 000 was added via server side online change, its state 000 alarm condition was incorrectly interpreted. The issue has now been resolved.

50755 - A multi-digital alarm record modified via server reload would not trigger an alarm when its current state was changed to be active

A multi-digital alarm record modified via server reload would not trigger an alarm when the alarm condition of its current state was changed from 0 to 1. This issue has now been resolved.

a new alarm would be raised against the current state if the trigger condition of the current state is changed from 0 to 1; if the change is from 1 to 0, the previously raised alarm would disappear if it was acknowledged; or the alarm would be displayed as off and unacknowledged if it was unacknowledged.

51415 - The alarm server loads the alarm save file inefficiently

The alarm server loaded the alarm save file in an inefficient manner. This issue has been resolved.

51416 - HardwareAlarm loses focus in 7.20

Hardware alarm display objects assigned by AlarmDsp() Cicode function kept refreshing themselves and losing their focuses, which prevented users from doing any interactive controls such as clicking on them. Since these objects are able to keep the focus now, it is possible to handle user inputs like clicking to acknowledge the alarm. In addition, it is also possible to properly scroll alarm lists using AlarmSetInfo() Cicode function.

51544 - Changes made through AlarmSumSet are not replicated to the redundant alarm server

Changes made through AlarmSumSet are not replicated to the redundant alarm server. This problem is now fixed.

51552 - A new alarm is not captured if it has the same timestamp as when the alarm entered the off state

Timestamped analog and timestamped digital alarms were not capturing new alarms if they went to into the off state and then at exactly the same timestamp transitioned into an on state. This problem has now been resolved.

51968 - A memory leak occurs when calling the cicode functions AlmTagsOpen and AlmTagsClose multiple times

The cicode function AlmTagsOpen opens an alarm browse session, and the function AlmTagsClose closes the browse session. Not all memory associated with the browse was being freed in the AlmTagsClose, resulting in a small memory leak each time these functions are called as a pair. This problem has now been fixed.

52404 - Alarm field format {High} displays 6 decimal point constantly in active alarm page

When using alarm display field {High} in the alarm display format, the High setpoint of the alarm will always be displayed with 6 decimal point. For example, when we set the High setpoint of an analog alarm to 100.52, in runtime when alarm is triggered, active alarm page will show the High setpoint value as 100.519997. Variable tag is REAL data type and format is ###.##. The alarm tag format is also set to ###.##. Please note that the same issue may apply to field {HighHigh}, {Low}, {LowLow}, etc. The secondary problem is that unset alarm threshold values should not appear as 3.4e38.

IO System

49730 - The compiler does not raise an error when two IODevices are configured with the same persistence file path

Runtime was crashing if two IODevices were configured with persistence enabled and the same persistence file path. This problem could occur when the two IODevices were on the same IO server or in two different IO servers that were running on the same PC. The compiler should have been identifying this incorrect configuration and raising a compile error to stop the project from being run until the configuration was corrected. This compile error has now been added.

50732 - IO server runtime crash if specifies the non-printable characters in the persistence path

IO server runtime crashes if non-printable characters exist in the persistence path. Example:

[RUN]?DISK_PL.C.cache (the '?' is invalid)

The crash still occurs, but the invalid path is now logged so the erroneous configuration setting can be quickly identified and rectified.

51119 - IOserver crash at start up when the [Data] directory is removed and IODevices use default persist path

If a folder does not exist at runtime it is a general practice to create the folder automatically - this wasn't being done for the data folder when the project used persisted devices. Missing folders should be created if they do not exist. An error will be logged if the folder cannot be created. Not having the persistence data folder is more serious than the alternative of having a wrongly named data path.

51794 - A memory leak occurs when calling the cicode function DllCallEx multiple times

The cicode function DllCallEx allocates memory for the arguments passed into it when it is called. This memory should have been freed once the dll call had completed, but it was not. This problem has now been fixed.

52718 - Pop up menu is slow. It can be clicked again, and a second menu is created.(Related references 50130)

The semaphore used by the CICODE DspPopupMenu() to prevent re-entry during menu operation was not implemented correctly. Specifically, the CICODE DspPopupMenu() function leverages CTUTIL!DspPopupMenu which creates a native thread running it's own WndProc. On a busy system, this can take hundreds of milliseconds to launch/render the Menu, thus the need to properly protect against re-entry. This has now been fixed.

Cicode

50464 - Error 424 "Tag not found" at startup under heavy CPU load

This error code could be produced when a client timed out waiting for server responses to tag exists requests. A new error, 532 "Tag resolve timeout", is produced instead. The timeout is also now configurable via [Client]ResolveTimeout (in milliseconds, default 3000).

50963 - DevOpen causing crash when opening corrupt dbf

Using DevOpen to open a corrupt dbf causes the runtime to crash.
A H/W alarm ("File not Citect format") should be generated instead of the runtime crashing.

51056 - Wrong cicode function may be called if the same function name is defined multiple times.

Wrong private cicode function may be called at runtime if the same function name is used multiple times across several cicode files with the same file name. For example, private function ABC in Cicode.ci located in one of the included projects and another private function ABC in Cicode.ci located in the main project. This issue has been fixed.

51124 - Client process unhandled exception occurs when assigning string value in cicode

Directly assigning a long string in cicode under specific conditions will cause an exception to occur in the client process. No exception log is created, a windows popup informs that the process has stoped.

conditions:

initial string declaration such as:

```
STRING sStr1 = "2011-01-18 17:44:32.908 +10:00 [TRACE] [DCB ] [IODevice..
```

Cicode debugger attached.

Stack windows open in cicode editor.

51305 - v7.20 CSV_MessageBox in multi monitor environment displays a pop-up box on wrong monitor

CSV_MessageBox uses an ActiveX control written in Visual Basic 6.0. Unfortunately VB6's "Screen" intrinsic property is not multi-monitor aware, so it returns the width and height of the Primary monitor, only. This have now been fixed.

51743 - SuperGenie opened by AssWin() displays #ass if SetLanguage() is called

Super Genies opened by AssWin() function lost its associations after calling SetLanguage() function. When the Super Genies were closed and reopened to display new pages on the designated locale, the associations were closed as well during page closing. This meant the way to refresh existing pages had to change. SetLanguage() function now use new way to refresh Super Genies without closing them.

52064 - DsplInfo(hInfo, 9, 0) does not return the "Cluster" name, it is returned blank

A pointer to retrieve cluster names wasn't assigned properly by the function DsplInfo(hInfo, 9, 0) in some cases. Since the code path which occurred this issue has been fixed, now the client process can retrieve proper cluster names using DsplInfo() Cicode function.

52081 - PageProcessAnalystPens() function doesn't replace the pens but rather adds them

PageProcessAnalystPens() did not replace trend tags of existing pens on the given *.PAV file by user unlike Cicode Reference but rather adds new trend pens on the given pane, which made users impossible to utilize pre-defined *.PAV files in order to apply prepared pen styles. Since this function now replaces trend tags of the existing pens on *.pav file, it is possible to pre-define pen styles on *.PAV files. The other pens on the given pane will be removed but any other pens on other panes will be kept as are.

52215 - AssTag() with invalid cluster name causes exception

AssTag() Cicode function caused an unhandled exception when they were called with invalid cluster names. Since this exception is handled properly now, AssTag() function does not occur exceptions but returns proper return values when it is given invalid cluster names.

52572 - Cicode function ServerIsOnline() traps an error when the server is off-line

When the target server is off-line the Cicode function ServerIsOnline() generates a 'Citect hardware error' rather than returning the correct status. The Cicode function ServerIsOnline() should return 1 when the server is online and 0 when the server is off-line and not show a hardware error.

Display System

49251 - Parameter [Page]StartupMode does not take effect on monitors other than the primary monitor

Parameter [Page]StartupMode does not work well under Multiple Monitors setup. The startup mode only applies to the window on the primary monitor. Windows on other monitors starts up with the default mode. This problem is now fixed. The parameter applies to windows on multiple monitors (configured via parameter [MultiMonitors]Monitors) when Vijeo Citect starts.

Runtime Issues

49871 - Crash if COPY and RUN projects are very different.

While SCADA runtime is executing, if the Copy path in the CtEdit Section of the Citect.ini file in the Config folder, is changed to point to a completely different project the application malfunctions. This has been fixed by refusing to use a project in the Copy path if the project name is different.

50868 - Malformed data crashes a 7.20 server

Setting the "Port" field on a 7.10 project to same value as the "Port" field in a 7.20 project causes the old data format to be sent to a port expecting the new data format. In practise, the 7.10 "port" should be set to the same value as the 7.20 "Legacy Port".

51011 - Alarm server crashes eventually if it has a significant number of configured alarms

A single alarm server with around 150,000 configured alarms was not able to process some tasks in a timely manner. Those backlogged tasks eventually grew until the system was unable to allocate more space. This issue has been resolved.

51089 - Trend Server crashed due to Trend.Acq kernel task not allowing other kernel tasks (esp. CSAtoPSI.KernelTaskQueue) to run

A TrendServer with 50k+ trends was hogging the kernel processing. Processing all 50,000 trend tasks took over 40 seconds. This meant that other kernel tasks did not get a fair run and the number of tasks in the CSAtoPSI.KernelTaskQueue grew and grew. The trend acquisition task now runs for about 100 ms before allowing other kernel tasks to run. Trend acquisition continues from where it was left off on the next execution of the task. This means the statistics calculations had to change.

51430 - The title of the Cancel button in Japanese language might appear truncated

When using the Message Cicode function with the Mode parameter set to 1 in Japanese language, the title of the Cancel button appears truncated. This problem has been resolved.

52188 - Prompt message flickers/goes away/does not appear when trend popup is called through custom script

A Citect internal feature was over-writing the message a user wrote to the 'prompt' field with an error message and with "" (blank) when there was no error. Citect internal features should not (in general) display error messages in the 'prompt' field. The 'prompt' field is normally reserved for messages generated by the customers' projects. Error messages of this type should be displayed as Citect 'hardware' errors.

52230 - Use of global String variables in CiVBA code can cause Citect runtime to crash.

Use of global String variables in CiVBA code can cause Citect runtime to crash. This issue has now been fixed.

52348 - [CICODE] Subscription handle passed to TagSubscribe Callback function is truncated to 4 characters resulting in action on wrong tag.

If you use TagSubscribe's callback functionality, the subscription handle passed back is first converted to a string and then incorrectly truncated to the first four characters. Subscriptions whose handles are greater than 9999 will then be passed back an incorrect subscription handle when the event is fired. This has now been fixed.

Web Issues

51831 - The URL parameter StartPage=<page name> is not always working in WebClient

When the StartPage URL parameter is used in WebClient, the specified page might not be loaded, and the default page defined in citect.ini will be displayed instead. This issue has been resolved.

Remaining Modules

47659 - "Invalid Time Format" compile errors after upgrading v7.0 projects(Related references 42623)

Some period strings valid in French and German installs of Citect v7.0 could not be upgraded in v7.20. This would result in "Invalid Time Format" errors at compile time. This fix provides an addition to the Migration Tool, where all period strings contained in French and German v7.0 projects will be upgraded.

50293 - Accumulator does not work if all three counters are not defined

Accumulators only work if all three counters - number of triggered times, run time and totalised value - are present on the configuration, or they do not save accumulated data on variable tags. Now accumulators work with any possible combination of these three counters, it is possible to select one to three counters to use instead of configuring all counters on accumulator configuration.

50306 - Display Client V 7.20 start up is more than 3 times slower than in v7.10 using a multiple cluster project.

There was a performance problem with the Display Client in V 7.20 taking a very long time to start on a multi cluster project. Compared to V 7.10 it was taking 3 times more time for the Display Client to start. Performance optimizations have been done and the client start up time has been reduced substantially. Now it is slightly below the start up time in V 7.10 using the same project.

50435 - TZD field of the Timestamp present in the SYSLOG.DAT file is not showing the correct Local time offset from the UTC.

TZD field of the Timestamp present in the SYSLOG.DAT file was not showing the correct Local time offset from UTC when Windows was configured to observe Daylight Savings Time. This has now been corrected so that both SYSLOG.DAT and TRACELOG.DAT files show the same UTC offset.

50443 - IOserver process crashes during startup

A race condition was possible in the IOserver process that can manifest in a crash. This issue has been resolved.

50469 - INI entries surrounded with quotes are being misinterpreted

INI entry reading has been reverted to original behaviour

50545 - Corrected missing string substitution fields discovered in several of the Localized versions.

A handful of substitution string fields were discovered missing in the localization of Chinese, German, Japanese, Spanish and Russian. These have been put back in order.

50608 - Compile Error - Operand Expected and Close Bracket Expected with Blank Genie Substitution and non-default display value

When a genie parameter is not set (left empty) for a numeric object with a non-default format (e.g. "###"), an expression code of "():###" (TXT_STR) is generated and saved in the page .CTG file which then fails to compile.

Compile Error:

Field: TXT_STR

Table: PGDynObj.dbf

Error: Operand Expected

Context: Line [1]:():###

What should happen is the same thing if a numeric object with an empty numeric expression field is added to a page - ####.# is displayed

Note:

The problem was in the Citect Graphics Builder (it was saving the wrong information). An existing problem of this nature can't be 'fixed' automatically, the user will have to use the fixed Citect Graphics Builder to edit the page and re-save it to make it save the right thing. After doing that the compile will succeed.

50676 - IODeviceInfo does not reflect IO Device State changes made using IODeviceControl

In configuration with two redundant instances of the same I/O device configured on the same I/O server, the IODeviceInfo call on the client returns a value which is not consistent with the current I/O device state on the I/O server. After the code disables the unit, the code now initiates a heartbeat which will then update the server information.

50710 - Project dbf addin crashes when Master.dbf contains two or more projects with the same title.

When Master.dbf contains two or more projects with the same title (as a result of mucking around with EnvironmentManager, etc.) the project dbf addin crashes. Example Master.dbf:

JRS_1Rollup Hampton Conveyor Control System

JRS_2Nitric

JRS_3Include

JRS_4Legacy CitectSCADA generic features/templates

JRS_5Template CitectSCADA generic features/templates

50721 - Corrected missing string substitution fields discovered in the Chinese version.

This is a duplicate of bug 50545. A handful of substitution string fields were discovered missing in the localization of Chinese. These have been put back in order.

50809 - Bug 50809 - Citect.ini parameter [Kernel]WinShutdown should be online changeable

[Kernel]WinShutdown parameter was not online changeable, which made users impossible to change the policy to Windows session ending after startup of their projects. Since it is online changeable now, it is possible to change the way to respond to shutdown attempts using Computer Setup Editor after startup of user projects.

50892 - "Cannot Create Task <IO Server name>" at startup

Defining multiple primary IO devices with the same name would result in the error "Cannot Create Task <IO Server name>" at startup. This situation is now detected at compile time, with an error "Same primary IO device name used with two different network numbers".

50961 - The DisableConnection parameter in .INI file disables redundancy connections.

Users can set DisableConnection = 1 to prevent the display client from connecting to a particular server. However, if the server has redundancy configured, communications between the primary and standby servers are broken. This issued has been fixed.

50975 - Invalid error message, "Class does not support Automation or does not support expected interface".

When changing back and forth between pages that contained ActiveX object and when CiVBA code was being used, an invalid error message was logged. An internal variable was not being cleared correctly when the page was closed. This resulted in the invalid error message being logged.

51123 - Re-purpose the 'Citect 0' statistics to report on the cycle time and execution time of the page animation routine(Related references 48149)

Previously, the 'Citect 0' statistics recorded the time between page loads. i.e. The operator loads 'Page 1' and then 90 minutes later loads 'page 2'. This statistic was not very useful so it has been removed and replaced with two new statistics.

Page Table Stats

PageAnm 0 = page animation redraw time (Window 0)

PageLoad 0 = page load time (Window 0)

The first Citect window created (e.g. containing a main citect page) will have the number 0, the next Citect window created (e.g. containing a popup page) will be 1, etc.

(Cycle) Min Max Avg CPU (Exec) Min Max Avg Count PageAnm 0 0.020 0.355 0.177 02 0.001 0.022 0.003 1157
PageLoad 0 0.283 0.283 0.283 00 0.283 0.283 0.283 1

These example statistics show that one page was loaded in the main window and that it took 0.283 seconds to load the page elements, subscribe the tags and display the information.

The stats also show that it is taking 0.003 seconds on average to animate the page each animation cycle and that the animation cycles are occurring every 0.177 seconds on average.

51125 - Crash when using latest version of PlusADOCn with CSV_DB_* functions(Related references 50845)

Customers who had updated to a later version of PlusADOCn.dll (1.17.0.0+) were experiencing a crash when using the CSV_DB_* functions. This was because the interface to the DLL had changed. This issue has now been fixed.

51438 - DRI does not filter out memory-mode IO Devices

This bug can result in DNPR or other driver errors at startup, when both memory and non-memory-mode IO Devices are on the same channel.

51505 - Crash when performing kernel dump on TrendServer in CSAtoPSI.Subs list (length 50k+)

When performing a kernel dump on TrendServer with 50k+ subscriptions, the kernel dump failed in the middle of outputting the CSAtoPSI.Subs list. The length of the tables output to the kernel.dat files should be able to be regulated and should not result in excessive file size or CPU use. The new Citect.ini parameter, [Debug]MaxTableOutputLength (Default=200, Max=32000, -1=unlimited), will limit the length of tables when they are output to a kernel.dat file.

51585 - Carriage return and Line feed do not display properly in 7.20

Control characters (ASCII code less than 32) in string tags were replaced with space characters during tag read procedure of I/O server, which made it impossible to store control characters such as Carriage Return and Line Feed characters in string tags. Since tag read procedure do not modify control characters any more, it is possible to store and display control characters in string tags properly.

51671 - Client process crashed when calling InfoForm on a display tag with cluster name as prefix

A pointer wasn't initialised at declaration or by the function InfoGetClusterTag() in some cases. The function, InfoGetClusterTag() was changed to use arrays rather than addresses of pointers to null terminated char strings. The client process should not crash when calling InfoForm on a display tag with cluster name as prefix (fully qualified name).

51753 - The processing of a tag write callback on different thread to the Kernel Task main thread may result in an Unhandled ArgumentOutOfRangeException in Subscriptions List after startup.

The processing of a tag write callback on different thread to the Kernel Task main thread may result in an Unhandled ArgumentOutOfRangeException in Subscriptions List after startup. This issue has now been fixed.

51881 - Stand-by alarm server fails to pick up after primary goes down

When the primary alarm server goes down, the stand-by suffers a keep alive timeout and generates a MSG_CLOSE event. At this stage the standby should set itself to primary. In previous versions this was done on MSG_ERROR.

52131 - Graphics Builder Automation Interface broken by 7.20 service pack 1

Graphics Builder Automation Interface broken by 7.20 service pack 1. Specifically, seven new members were added to IGraphicsBuilder interface in an improper way, breaking backwards binary compatibility. That is with anything that uses early binding. A more robust implementation is now in place, with the new members added to the end of the existing interface.

52193 - For Category and Priority based alarm queries, the Alarm Server does not check whether there is a redundant peer available before sending the tran message.

For Category and Priority based alarm queries, the Alarm Server does not check whether there is a redundant peer available before sending the tran message, and the tran error logging produces a garbled trace. This issue has now been fixed.

52227 - Cicode using TaskKill on active Cicode could cause a crash

Cicode using TaskKill could be terminating Cicode which is currently active but pre-empted to run the TaskKill Cicode. In this situation, when the Cicode running TaskKill completes and the Cicode execution environment attempts to re-instate the previous Cicode, the execution environment will crash. This has been fixed.

52522 - Cannot remove or change saved credentials saved during modes 5 or 6 for [Client]AutoLoginMode.

When certain [Client]AutoLoginMode types are used, the details of a successful login are saved. When [Client]AutoLoginMode is changed to one which requires you to login via the login dialog, these previously saved credentials were not being deleted. This has now been fixed.

52719 - Accumulator startup crash on multi-cluster system(Related references 51389)

This problem has now been resolved.

Issues resolved in Service Pack 1

The following issues were resolved in Service Pack 1.

Installation

42873 - Service pack patches don't overwrite newer DLLs.

Applying a service pack to an installation containing a hotfix newer than the service pack would not overwrite the hotfix files. This has now been fixed.

43936 - Project status is not being set to "Uncompiled" after Service Pack Install.

Project status is not being set to "Uncompiled" after Service Pack Install. This issue has now been rectified.

Project Development Utilities

48864 - Graphics Builder runtime error when object links are missing on the page

Graphics Builder generated a runtime error when it opens a page with missing object links and a user tries to cancel the process. It has been fixed. Link updates cancellation does not cause the Graphics Builder error.

49585 - Objects on top of a Gradient Filled rectangle disappear from Graphics Builder

Graphics Builder display error has been fixed. Gradient filled objects used to disappear when another window or a dialog overlapped them.

50202 - Tag import fails for OPC tags with spaces in branch.(Related references 46491, 47730)

Tag import is failing for OPC tags with spaces anywhere in the branch name. This has now been fixed.

50204 - Only 7 of the 8 characters in EngUnits field are displayed at runtime(Related references 24451)

The compiler was failing to allocate enough space for all 8 characters of the engineering units field. This has now been resolved.

50228 - Cannot display any object larger than the computer's display resolution(Related references 47067, 47557)

Graphics Builder crops any symbol or graphic that is larger than the current display resolution. This issue has been resolved.

50278 - Moving a number or text object erases a gradient filled rectangle object underneath in the Graphic Builder

When moving a number or text object on top of a gradient fill rectangle object, the rectangle object appears erasing in the Graphic Builder. This problem has been fixed.

50454 - Upgrading a project causes Graphics Builder to crash

A substitution string was missing in two strings of the German version. This causes Graphics Builder to crash when upgrading an old project. This issue has been resolved.

50485 - Symbol set 'Array expression' field is not saved properly

The symbol set 'Array expression' field was not being saved properly. It should be saved properly.

50744 - Web Deployment creation fails using a non-default INI file(Related references 49547)

Web Deployment creation fails using a non-default INI file.
This has been corrected.

50745 - Opening a genie page with an ActiveX control may produce an error(Related references 50315)

Opening a genie with an ActiveX control may result in a popup with the following message:
"The ActiveX control is conflicting with Citect and may produce unreliable results.
It is strongly recommended that you remove this ActiveX control from the page, save the page and then close and restart Citect Explorer to avoid further problems."
This issue has been resolved.

Example Project

49412 - Phantom Tab menu toolbar is displayed on windows that are beyond the limit of 9

Up to nine (9) instances of the tab menu toolbar (one on each window) can be displayed on screen at the same time. On the windows that are beyond this limit, phantom items would be displayed on the tab menu toolbar. The limitation is now handled gracefully such that no items will be displayed on windows that are beyond the limit.

Compiler

50738 - Compiler crash compiling large CICODE fragments within Reports

When Reports containing using large amounts (>32KB) of CICODE are compiled, the Compiler would crash. This has now be fixed.

50836 - In remapping, "<UNIT>|<ADDRESS>|" gives compile error "Tag Expected"

"<UNIT>|<ADDRESS>|" syntax has been re-enabled for the remapping functionality

Alarms

40919 - Writing to a local variable configured as an integer array takes too long.

Writing to a local variable configured as an integer array takes 10 times longer than to a local variable configured as a string array, if that local variable is attached to the alarm description field in the digital alarm form. This issue has been fixed.

42023 - Setting the thresholds property of time-stamped analog alarms would not update the threshold value in standby alarm server.

When an alarm threshold property was set, the threshold value on the primary alarm server was updated, but the value of the same threshold on the standby alarm server was not updated. This issue has now been resolved.

44329 - AlmTagsGetField() function could not return the correct value of "GROUP" (Suppression Group) and "PRIORITY" (Suppression Level) fields.

The following issues only affect Multi-Digital Alarms.

AlmTagsGetField() function could not return the correct value of "GROUP" (Suppression Group) and "PRIORITY" (Suppression Level) fields.

The values in the configuration fields "Suppression" and "Level" were not correctly used by the runtime system.

This issue has now been resolved.

In this release, a new keyword "LEVEL" has been used to represent suppression level instead of "PRIORITY", because "PRIORITY" has been used to represent category priority.

The same keyword "GROUP" is used to represent suppression group.

50091 - Alarm servers startup is significantly slower in v7.20

To avoid on-the-fly alarm categories validation, the alarm categories' loading was changed from demand-driven to at-startup. This change reduces system load at runtime but it causes unwanted delay for projects with lots of alarm categories, so the loading is changed back to demand-driven after improving the run-time validation code.

50147 - A Multi-Digital alarm will trigger continuously when in an off state if state 000 is configured to trigger the alarm

When a Multi-Digital alarm was in a state that has been configured as an off state, the state was being incorrectly set to match that of state 000 (all three variable tags with value 0). So if state 000 was configured to trigger the alarm, the alarm was then triggering every alarm scan. This problem has now been resolved.

50232 - The millisecond component of alarms is always formatted to be zero(Related references 49958)

v7.10 SP3 introduced internally generated millisecond-resolution timestamps for digital and analog alarms, however this was not correctly formatted. This results in all alarms displaying a timestamp of .000. For PowerLogic SCADA customers this was also resulting in some event log entries being overwritten. This has now been fixed.

50720 - Alarm server crashing when an alarm becomes active

Alarm server may crash when the alarm area is not in the range 0 - 255, this has been fixed

Trends

50224 - When SPC Trend Plot is printed the span may not match the displayed span(Related references 43911)

SPC Trend Plot when printed shows the same span as the on-screen span even when the sub-group size is not 1

50494 - Trends setup to roll over monthly and yearly do not work in 7.20

Monthly trends would fail to reload if the previous month did not have 31 days. Similarly, yearly trends would fail to reload if the previous year did not have 366 days.

IO System

47983 - When using more than 256 modenet devices get "Channel Offline Cannot talk" for all channels(Related references 45339, 38535, 40418, 46257, 48669)

When a test project is with 512 channels configured, then the error "More than 250 Ports defined" does NOT appear. If the number of channels is increased to 513 or more, then the error "More than 512 Ports defined" appears.

Note: The Kernel tasks was set to 32767 and Kernel Queues was set to 8000. And if not then 'Kernel tasks exceeded' and 'kernel Queues exceeded' errors show up during starting, and the IOserver never starts.

The test project consists of 512 channels of which 4 channels are connected to Real PLC and the rest are connected to a MODBUS Simulator running in a remote machine. When this test project is run, NONE of the channels come ONLINE, and an error "Channel Offline Cannot talk" is logged in Syslog for all the channels.

If the number of Channels is reduced to 256, then all of the Channels and Units come ONLINE. If the number is increased to 257, then one of the channel goes OFFLINE and the rest come ONLINE. If it is further increased to 258, then two of them go OFFLINE and the rest come ONLINE. In summary, based on the test results, only 256 channels are being handled properly by the MODNET driver.

The driver was changed to allow for more than 250 devices, but the SCADA program also needed to be changed. The SCADA program was combining the board number and the channel number into one 16 bit integer (8 bits for each).

The fix is to use only the top 4 bits for the board number (max 16) and the bottom 12 bits for the channel number (max 4096).

Both the Modnet driver change and the SCADA change must be applied to allow the use of more than 256 modnet devices.

49977 - QualityToStr(q,3) is showing the "Device comm. Loss" instead of "Waiting For Initial Data"

The string representation issue has now been resolved.

50176 - Alarm server CPU usage is 20% higher than it should be

The timer responsible for timing out unresponsive client subscriptions was taking up more CPU usage than it should have been. This was causing higher than expected CPU usage, especially on the alarm server. This problem has now been fixed.

50201 - IODevice cache field has no effect(Related references 49676)

Setting Cache TRUE/FALSE dropdown on the IODevices form has no effect on whether reads are cached or not, only the Cache Time is used. This has been fixed - setting Cache to FALSE will now disable caching regardless of the configured Cache Time

50213 - Mismatched protocols, ports and/or memory modes between Primary and Standby devices should produce compile-time errors.(Related references 46861, 34122)

Mismatched protocols, ports and/or memory modes between Primary and Standby devices should produce compile-time errors. This has now been corrected.

50447 - Trends and Alarms are not updated when running an IO server containing multiple DRI based drivers

Only one driver was able to register to update trends and alarms through the DRI. This was causing alarms and trends to only update on one of the drivers in the IO server. This problem has now been fixed.

50766 - When many devices are configured, losing a connection leads to a non-responsive I/O server.

When the network disconnected for an I/O server, each device going offline caused an event which would send a heartbeat message. As the number of devices increased, the performance hit of this increased exponentially eventually leading to a system that does not respond for minutes. Heartbeat messages are now rate limited to prevent this scenario.

51214 - Alarm and Trend values can have incorrect time stamp for TagReadEx calls.

Alarm and Trend values can have incorrect time stamp for TagReadEx calls. This issue has now been rectified.

Cicode

46714 - LogoutIdle Cicode function is inaccurate.

LogoutIdle Cicode function is inaccurate. This issue has been resolved.

49542 - 0 was returned when calling ServerGetProperty using RDBMemTime on a Trend server with no trend tags defined.

0 was returned when calling ServerGetProperty using RDBMemTime on a Trend server with no trend tags defined.

This issue has been resolved. RDBMemTime on a Trend server now returns the time-stamp of _Trend.RDB that was loaded into the memory.

49835 - The "I/O Device Statistics" form does not display IO devices that have a "Number" over 4095

The "I/O Device Statistics" form does not display IO devices that have a "Number" over 4095. This issue has been resolved.

50200 - Cicode QueLength() returns incorrect value(Related references 49571, 48907)

QueLength() returned a 16 bit signed integer, rather than a 32 bit integer. This presents a real problem for queues longer than 32767 -> queue length may be reported as a negative number, or an incorrect positive number (eg for queues longer than 65534).

The issue has now been resolved.

50547 - Only one trend pen added when using pagetrend()

When illegally calling the blocking PageTrend cicode function on a foreground cicode task, the first pen was still added even though the cicode was aborted. This has been rectified, and now the aborted cicode will not result in any pens being added (and a Hardware Alarm will be generated). This blocking function should only be called on a background cicode task.

50910 - DIICallEx truncating LONG return type to SHORT causing incorrect data being returned from the DLL call.

DIICallEx truncating LONG return type to SHORT causing incorrect data being returned from the DLL call. This issue has now been rectified.

Display System

49893 - Static square object configured with gradient fill disappears at runtime

A static object configured with gradient fill on the tab template will disappear at runtime after the page has been resaved. This problem has now been fixed.

49994 - Fullscreen mode [Animator]FullScreen = 1 or 2 does not work when DynamicSizing is turned off

Fullscreen mode [Animator]FullScreen = 1 or 2 does not work when DynamicSizing is turned off. This problem is now fixed.

50007 - Under the parameter setting of [Page]DynamicSizing = 0, scrollbars may not appear / hide properly when switching between pages of different sizes

Under the parameter setting of [Page]DynamicSizing = 0 (which turns off dynamic sizing / scaling of page contents), when the user switches between page of different solutions, scrollbars may not show or hide as expected. This problem is now fixed. By default, scrollbars will appear if the page content does not fit the window and vice versa. The scrollbars can be permanently turned off by setting Citect.ini parameters [Page]AllowHScrollbar and [Page]AllowVScrollbar to 0.

50190 - Number or text object won't rotate within a group that has the rotation movement property set

When a number or text object is placed within a group and there is a value set for the angle within the group's rotation movement property page, the number or the text object will not rotate with the group in runtime. This problem has been fixed.

50203 - Button shows a stripe when the cursor is hovered over another graphic(Related references 44769)

XP-style buttons with custom fill colours may be rendered with a stripe when the cursor is hovered over another graphic object. This issue has been resolved.

50223 - Keyboard Commands (ENTER) does not register following a pop-up box / menu(Related references 42726)

When a popup menu is dismissed/cancelled by clicking away from it, the enter key no longer works properly. Specifically, you need to either press the Escape key, or click something that captures keyboard focus. There were also issues when used by touch screen systems. These problems have now been fixed.

Runtime Issues

42814 - [Code]WriteLocal=0 does not work for page or user subscriptions(Related references 42397)

Subscriptions automatically created for pages, as well as manually created by calling the TagSubscribe cicode function, were not honouring the [Code]WriteLocal parameter. Instead they were being forced to update the local cache on any write.

Tag Browsing

50214 - **Tag import from OFS was taking a long time if there were many tags.**(Related references 48890)

Tag import from OFS was taking a long time if there were many tags. This issue has been fixed.

50219 - **Tag import fails after recreating a deleted project**(Related references 44643)

If Tag Import is used to import tags into a project and that project is subsequently deleted and recreated, further attempts to import will result in an invalid template error. This error was caused by the template path being saved to the citect.ini file and not recreated with the new project. The issue has been resolved, if a template file does not exist the normal default is used.

Web Issues

48928 - **Web Client not updating components deployed via ACTIVEX.ZIP and/or MISC.ZIP**

When deploying new components to Web Clients via ACTIVEX.ZIP and/or MISC.ZIP, existing versions of these were not being updated. This has now been corrected.

50883 - **The URL parameter StartPage=<page name> is not working in WebClient.**

When the StartPage URL parameter is used in WebClient (eg. http://localhost/Citect/scada.htm?DeployDir=Example&ProjectName=example&ClientCAB=720/CitectSCADAWebClient_7_20_0_598.cab&AccessMode=RW&StartPage=LoopPage), the specified page is not displayed by the browser. This issue has been resolved. Note: the parameter name is case sensitive.

Remaining Modules

50062 - **A server may shutdown with a Software Protection Failure as a result of tran write failures**

When running some large projects, the following message was noticed in the IoServer Syslog file: TranWrite(0, 246): State != TRAN_STATE_ONLINE, state=0 This was due to an incorrect connection state transition on the connection established between the IoServer and the client. Eventually this error will cause the server to shutdown with the following error "Software Protection Failure. Cannot connect to Client.". This problem is fixed.

50105 - **CodeTrace causes a crash for some built-in CiCode functions**

if CodeTrace is active, some built-in CiCode functions may cause a crash by using values as pointers. This issue has been resolved.

50210 - **CtOPc32.exe crash when writing to tags or disconnecting**(Related references 48633)

Under heavy loads, or when deleting groups on client disconnection, Citect's OPC server would occasionally crash. This has now been fixed.

50211 - **Externally defined CiVBA functions are not executed in some circumstances**(Related references 48070)

After installing Hotfix HF710SP246889 to enable the CiVBA code to compile, some CiVBA functions that call other CiVBA functions in another BAS file may not run. This has been addressed by changes in our code to overcome a limitation in the 3rd party VBA code.

A hardware error has also been provided to provided notification if the situation happens again.

50217 - Windows cannot shutdown while Citect is running despite [Kernel]WinShutdown=1 (Related references 48866)

Windows shutdown sequence was blocked by Runtime Manager window while Citect is running despite [Kernel]WinShutdown=1. Runtime Manager has been fixed so that it will conditionally respond to WM_QUERYENDSESSION based on [Kernel]WinShutdown. The issue has now been resolved.

50218 - CSV_MessageBox() does not display the correct text for user-defined buttons on Vista (Related references 46354, 50746)

CSV_MessageBox() does not display the correct text for user-defined buttons on Vista and Windows Server 2008 operating systems. This was caused by change in sequence of child windows (controls) in the operating system MessageBox. The fix applies text on buttons irrespective of their sequence in the parent window.

50220 - Advanced Filters will not filter Alarm Summary by time and date (Related references 38852)

Advanced Alarm Filter Does Not Work on Alarm Summary List.

When filtering Alarm Summaries, the current Alarm's data was being used instead of the historical data recorded within each such Alarm.
The issue has now been resolved.

50225 - CiTextBox doesn't allow multiline (Related references 45495)

CiTextBox allows multiline

50226 - Foreground SQL is prevented by default. A hardware alarm is generated if an SQL Cicode function is invoked in foreground. (Related references 46692)

Foreground SQL is has always been problematic, but can also cause crashes in SCADA. By default, the user SQL Cicode calls are no longer allowed in foreground Cicode.

50227 - Runtime scales the expression for fill animations incorrectly (Related references 46736)

If a complex expression is defined for a fill animation, the runtime produces incorrect results. This issue has been resolved.

50231 - Windows Error Reporting prevents process restart after crash (Related references 49810)

A dialog asking to send crash information to Microsoft can appear after the runtime crashes, in which case the process will not restart. Note that [CrashHandler]NoEmail=1 must be set to prevent the analogous Citect dialog and ensure the process restarts.

50524 - Reports are not executed if a Standby Report is defined in the project.

If a Standby Report Server is defined in a CITECT project, neither of the Report Servers would run reports. This has now been corrected.

50743 - Retain column widths on refresh in DatabaseExchange ActiveX. (Related references 49776)

We did not implement any code to retain changes to column widths made by the user at runtime, so that when a table refreshes, the widths reset. This has now been fixed.

50746 - **CSV_MessageBox() does not display the correct text for user-defined buttons on Vista**(Related references 46354)

CSV_MessageBox() does not display the correct text for user-defined buttons on Vista and Windows Server 2008 operating systems. This was caused by change in sequence of child windows (controls) in the operating system MessageBox. The fix applies text on buttons irrespective of their sequence in the parent window.

50780 - **The SCADA system should record the non-default SCADA parameter settings**(Related references 50621)

A new file, "Params.dat" has been added to the log folder that contains a historical record of the non-default SCADA parameters.

Example:

[Params.dat]

2010/12/01-14:42:07.847 [Code] Threads= 128 Default= 64 2010/12/01-14:42:07.852 [Code] TimeSlicePage= 5000 Default= 500 ...

Also, the kernel dump has been extended to include a complete list of current SCADA parameter settings.

Example

CiCode: DumpKernel(0x0100, "Parameters")

[kernel.dat]

Citect Diagnostics Wed Dec 01 2010 02:43:53 PM

=====

-----Parameters

[ALARM.CLUSTER1.ALARMSERVER1] CLUSTERS= Cluster1

[ALARM.CLUSTER1.ALARMSERVER1] CPU= 0

[ALARM] ALARMDISABLE= 0

...

50983 - **Tag name is not printed in the log message if a Super Genie substitution contains type casting**

When a substitution for Super Genies contains both data type and association in the form of ?<Data Type> <Association>?, the actual variable tag name doesn't appear in log messages when the Super Genie is displayed or used. This problem has been rectified.