

Number	Summary	Details	Topic	Type	Version Introduced	Severity	Ticket #	Versions Fixed
FFDC-8257	Use legend for long Chamber/Tool IDs in Tool Overview bullseyes for Analysis Server	In FabGuard Web Tool Overview tab for an Analysis Server, chambers represent Tools and can have long names instead of numbers. As was previously done for Tool IDs in Group Overview, bullseye spokes are now labeled with letters of the alphabet and a legend if any of these IDs is longer than 8 characters.	Web	Feature		Minor		18.05.00-p, 18.11.00-b, 18.11.01-b
FFDC-8237	Miscellaneous minor improvements		General	Feature		Minor		18.11.00-a
FFDC-8225	Various improvements to the Golden model		Analysis	Feature		Minor		18.11.00-a
FFDC-8224	User-entered SML in SECS IO output channels	The user interface for SECS IO output channels has a new parameter: SML, which stands for SECS Markup Language. If the SML parameter is not empty, it overrides the ID parameter in determining the contents of the SECS message that FabGuard sends (the Stream and Function parameters are still used). SML is a common, but loosely defined term in the semiconductor industry. In a SECS IO output channel in FabGuard, SML is interpreted as follows: The supported SECS item format designators are: L[n], A, B, Bool, I1, I2, I4, U1, U2, U4, F4, F8. Each item must start with a left parentheses and end with a right parentheses, e.g., (U4 23). Lists must include the number of items in the list, e.g., (L[0] or (L[4]...). ASCII elements do not need quotes, e.g., (A Quotes Not Needed); if quotes are included in the SML, they will be sent in the SECS message. The values in Binary items, which are designated by B, are interpreted as decimal (base 10). Bool values should be 0 for false or 1 for true. It is assumed by default that a reply to each message is required, i.e., the W-bit is set; if a reply is not wanted, the SML should end with "IW" (without the quotes). An example of a valid SML parameter is: "(L[2] (A STOP) (L[2] (L[4] (B 32) (U4 10686) (Bool 1) (A One Space)) (F8 1.234))) IW" (without the quotes). Placeholders can be used within the SML, so that things such as Lot ID can have dynamic values when sent in a SECS message. Unlike SECS IO output channels that use a specific ID with a specific SECS DLL, a SECS IO output channel that uses SML can be sent by any SECS DLL to any type of tool or to the SECS Host. This means that care must be taken to enter SML that the recipient of the SECS message will understand. Any valid SECS message can be sent; the requirements are that Stream be from 1 to 127, Function be from 1 to 255, Function be odd, and the SML be correctly constructed.	Connections	Feature	Medium	2017	18.11.00-a	
FFDC-8215	Add to FgClientNetwork.reg and FgClientLocal.reg to include the setting to turn off the warning in Edge	This suppresses the warning when clicking on a manager link in FabGuard Web when using Microsoft Edge browser. There is no user interface to turn it off, so every time clicking on a link a warning that would say "Did you mean to switch apps" Yes or No. This registry setting suppresses this message on all browser clients that use the web. They need to re-run .reg for it to take effect.	Program UI	Feature		Minor		18.11.00-a
FFDC-8214	Installing and configuring IIS should be done by a separate installer to prevent the main installer from taking a very long time	Starting in version 18.05.00-a, the installers for FabGuard Executive (non-silent installer only), FabGuard Help, and FabGuard Explorer install and configure the IIS web server. On some computers, installing IIS takes a very long time, which was inconvenient because the main installer (FabGuard Executive, FabGuard Help, or FabGuard Explorer) would be stuck waiting for IIS to finish installing. Now the main installer launches the new InstallAndConfigureIIS installer and then ends without waiting for IIS to finish installing. In the InstallAndConfigureIIS installer, the user can choose whether or not they want to continue to install and configure IIS. The FabGuard Executive, FabGuard Help, and FabGuard Explorer installers put the new InstallAndConfigureIIS installer in folder C:\Inficon\InstallAndConfigureIIS\; it can be run manually at a more convenient time by double clicking the file setup.exe in this folder. Note that the files needed for the FabGuard Guide component of FabGuard Help are now contained in the InstallAndConfigureIIS installer instead of the FabGuard Help installer, because these files are needed to configure IIS.	Installer	Feature		Minor		18.11.00-a
FFDC-8212	Improve FabGuard Web Computer Summary	Added columns for Tool Group, Tool Description and Tool Area, computer name and IP	Program UI	Feature		Minor		18.11.00-a
FFDC-8211	Improve FabGuard Web Multiplexer	Added columns for Tool Group, Tool Description and Tool Area, computer Name and IP.	Program UI	Feature		Minor		18.11.00-a
FFDC-8210	Improve FabGuard Web Sensor Summary	Added columns for Tool Group, Tool Description and Tool Area, Chamber ID and # and Sensor ID and #	Program UI	Feature		Minor		18.11.00-a
FFDC-8209	Improve FabGuard Web Connection Summary	Added new look columns for Tool Group, Tool Description and Tool Area (double high column headings like the other summaries)	Program UI	Feature		Minor		18.05.00-n, 18.11.00-a
FFDC-8208	Improve FabGuard Web Maintenance Summary	Added columns for Tool Group, Tool Description and Tool Area	Program UI	Feature		Minor		18.05.00-n, 18.11.00-a
FFDC-8207	Rename two links in Fabguard Web - Administration tab from Web Users to Web Sessions and Manage IPMs to Acquisition Connections	The title for the Results matches the link names as well. Web Sessions says FabGuard Web Sessions and Acquisition Connections says FabGuard Acquisition Connections.	Program UI	Feature		Minor		18.05.00-o, 18.11.00-a
FFDC-8191	Build installers with InstallShield 2018 R2		Installer	Feature		Minor		18.05.07-b
FFDC-8190	Add to API the option to reset a Maintenance Indicator		API	Feature		Minor		18.05.00-m, 18.05.07-a
FFDC-8183	Summary or Recipe source by Chamber, Tool and Tool Group	Accessed from the second tab in 'Multi Tool Recipe Plan Manager', with a new tab "Recipe Source Summary".	General	Feature		Minor	2082	18.05.07-a
FFDC-8182	The RVS DLL "TIBCO RVS_5 7.2" now supports messages named either TOOLDATA or TOOLIO as messages that contain data from the tool	Previously, only TOOLDATA was supported.	Connections	Feature		Minor	2175	18.05.07-a
FFDC-8180	Prevent subtabs in the Web from scrolling		Web	Feature		Minor		18.05.07-a
FFDC-8161	Do not allow multiple instances of AutoStartPrograms	This applies to FgAutoStartProgramAcquisition.exe, FgAutoStartProgramMultiplexer.exe, and FgAutoStartProgramExecutive.exe. The intent is to reduce the chance that the AutoStartProgram is started by the wrong Windows user and it therefore starts the target program under the wrong Windows user, which is only possible if multiple Windows users are logged into the computer at the same time.		Feature			906	18.05.00-m, 18.05.07-a
FFDC-8159	Global preference governing how Fault Code is generated	Allows both "Position independent (all Components must be unique)" and "Position dependent (Components per Topic must be unique)" configurations.		Feature			2115	18.05.07-a
FFDC-8157	Add global preference to override if Runs are exported during save	Recipe Plan shows if the Run save or Run Export are overwritten and which path are used.		Feature			2191	17.10.00-y, 18.05.00-l, 18.05.06-a
FFDC-8156	Support Edge as a default browser			Feature				18.05.00-l, 18.05.06-a
FFDC-8153	Allow I/O Channels to be disabled without being deleted			Feature				18.05.06-a
FFDC-8147	Modify SECS DLL for Host CSOT.WH.17	Change value of DCTYPE to "ASC".		Feature			1649	18.05.06-a
FFDC-8144	New Report 'Analysis Quality Recalculation Summary'	Analysis quality calculation by Report, Tool and Chamber based on recalculation of user selected data using current SPC parameters. The calculation can take a very long time, many hours. Thus, it is highly recommended to be executed for reasonable time range, small set of tool, and using a task.		Feature			2182	17.10.00-y, 18.05.00-l, 18.05.05-b
FFDC-8139	SECS DLL for STP CHA Evaporator	Supports TOI using S2F41-START.		Feature			1839	18.05.05-b
FFDC-8138	Tool type SCREEN: CW2000	Added support for Tool type SCREEN: CW2000.		Feature			2163	18.05.00-l, 18.05.05-b
FFDC-8136	Add Tokki QLED A4 V2 tool layout modification			Feature			2134	18.05.06-a
FFDC-8134	Modify Track Tool plot	'Track by Tool' now shows a tool on its own row, similar how 'Track by Slot' shows a slot on each row and 'Track by Chamber #' shows a Chamber on each row. Added a 'Track by Concurrence' that is similar to the old plot and where Y represents lot concurrence (i.e. lots processing at the same time).		Feature				18.05.05-a
FFDC-8133	Add ability to split history of an SPC report by any combination of logistics	Split by Recipe ID, Part ID, Layer ID, Technology ID, Extra 1 ID - Extra 8 ID, FOM Name, and Full FOM Name (with Step number and Model Name).		Feature			2024	18.05.06-a
FFDC-8130	Allow Executive Backup to be local on each Executive	Replacing the computer name in the backup path with a * will force the backup to replace the * with the name or IP of the Executive performing the backup. Thus, the location of the backup can be specific to each Executive even if Executives are part of the Board.		Feature				18.05.05-a
FFDC-8129	Add I/O channel output for missing but required Figure of Merit analysis	The I/O Channel will have an output just once per process and will be reset at the end of the process. The output channel is called "Fault Missing Required Analysis"		Feature			2086	18.05.05-a
FFDC-8128	Save Alarms for Lot-by-Lot analysis to the database	The Alarm entry in the database is attached to the last process record in each chamber that has enable Lot-by-Lot analysis.		Feature			1076	18.05.00-k
FFDC-8127	Tool Type CHA Evaporator			Feature			2139	18.05.05-a
FFDC-8126	Renamed FOM Lot to Lot Average in user interface	'Figure of Merit Lot' is 'Lot Average'. 'FOM Lot' is 'Lot Average'. 'SPC of a Figure of Merit Lot' is 'SPC of Lot Average'		Feature				18.05.05-a
FFDC-8125	Remove Backup Tasks and replace with automatic backup configured in global preferences	FabGuard Executive will automatically perform a backup for itself, each IPMs, and Reports and Models from the database. The backup will also generate a Configuration Summary for each IPM. All configuration is in "Backup and Recovery" tab in global Preference dialog. As part of the Backup process, directories older than user configurable number of days will be deleted. Log file contains backup progress and any errors that are detected.		Feature			1867	18.05.00-k
FFDC-8124	Include Bin Default Selection... in Display tab of Manual Acquisition template edit			Feature			1973	18.05.00-k
FFDC-8123	Improvements to advanced SECS Multiplexer Log Viewer			Feature				18.05.05-a

FFDC-8120	Support for new MSOLEDBSQL driver for connection to MS SQL Server database	The old SQLOLEDB driver is still supported. When opening a connection to an MS SQL Server database, FabGuard tries MSOLEDBSQL, if that fails FabGuard tries SQLOLEDB. Note that unlike SQLOLEDB, the MSOLEDBSQL driver is not built in to Windows and must therefore be installed on each computer where it should be used instead of SQLOLEDB. For reference, the MSOLEDBSQL driver can be used to connect to SQL Server 2012, SQL Server 2014, SQL Server 2016, SQL Server 2017 databases. Also, the MSOLEDBSQL driver can be installed on computers running Windows 10 , Windows 8.1, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016.	Feature		18.05.00-k
FFDC-8119	Brookside XML file importer		Feature	2098	18.05.00-k
FFDC-8116	Installer improvements	Install and configure IIS only if first time install or installing a higher version number. In PreventPopupOnCrash for WER registry values, add DontShowUI=1; also set relevant values in HKCU in addition to HKLM. Set IUSR permissions for C:\Inetpub\wwwroot (and actual folder if using junction).	Feature	2101, 2102	18.05.05-a
FFDC-8115	Add option to not create Start Menu Shortcuts to FabGuard IPM, Executive, and Multiplexer installers		Feature	1850	18.05.05-a
FFDC-8114	Add per Bin choice to use only new data in Bin Statistics		Feature	2133	18.05.00-j
FFDC-8111	Add choices to Required Analysis in Bin Statistics that allow user to determine if the FOM must be analyzed in every step or in any step		Feature	2129	18.05.06-a
FFDC-8110	Add support for TCS QSS as a SECS Gauge	This supports getting SVID data from a TCS QSS SECS "server".	Feature	2091	18.05.05-a
FFDC-8109	Modify SECS DLL for GPTC UBM UFO Etcher	Add S2F41 output command for PAUSE.	Feature	2126	18.05.05-a
FFDC-8108	Modify SECS DLL for LPI Robusta	Add S16F5 output commands for STOP, ABORT, PAUSE, and CANCEL, which require FabGuard's IO output channel Text parameter to be the <ProcessJobId> placeholder.	Feature	2126	18.05.06-a
FFDC-8105	SECS DLL for Host CSOT WH 17		Feature	1649	18.05.05-a
FFDC-8104	In Multi Run Viewer allow custom color based on one or more Logistics		Feature		18.05.05-a
FFDC-8103	Exclude Reports that are not to be used in Metric calculation from Effectiveness calculation	In Enable dialog, select include in Metrics "Do not included in Process Metrics" to not include Effectiveness in calculation.	Feature	2085	18.05.05-a
FFDC-8102	Add global preference for excluding Reports by name from use in Effectiveness		Feature	2085	18.05.04-a
FFDC-8101	Custom Color to include Extra1 to Extra8	Primarily applies to Extra1 ID to Extra 8 ID, and Tool Area ID.	Feature	2104	18.05.04-a
FFDC-8098	Generate an Alarm if Trigger does not happen	User configurable in I/O Channel. Separate choice whether to generate an alarm if trigger did not pass Secondary check or of the trigger did not occur within certain time of the last trigger. Note, Trigger Time is reset if the any I/O Channels are configured by the user.	Feature	2088	18.05.04-a
FFDC-8097	Add ability to drill down to Acquisition Setup and Recipe from Alarm Manager		Feature	2079	18.05.04-a
FFDC-8096	Add more Logistics	Extra6, Extra7, and Extra8 logistics added to all tables.	Feature	2018	18.05.04-a
FFDC-8095	PV MassSpec can no longer be installed on Windows XP or Server 2003		Feature		18.05.05-a
FFDC-8094	FabGuard Acquisition, Executive, and SECS Multiplexer can no longer be installed on Windows XP or Server 2003		Feature		17.10.00-y, 18.05.00-i, 18.05.04-b
FFDC-8091	Discontinue RVS_5.3	The flavor of the RVS DLL that is based on Tibco RV 5.3 has been discontinued. This was necessary because the new compiler (Visual Studio 2017) does not support it.	Feature		18.05.04-a
FFDC-8090	Discontinue Embedded Multiplexer	The flavor of the SECS Multiplexer that runs on Windows CE 6.0 has been discontinued. This was necessary because the new compiler (Visual Studio 2017) does not support it.	Feature		18.05.00-i
FFDC-8089	Switch to Visual Studio 2017		Feature		18.05.00-i
FFDC-8088	New Softing OPC Toolbox, version 4.46		Feature		18.05.00-i
FFDC-8084	Add new type of MPE genus RGA sensor	MPE genus is a RGA that I-Cologne for the E3000 leak detector. There is only one configuration of the MPE, 200 amu, faraday cup only, no EM.	Feature	2057	17.04.00_af
FFDC-8083	MCD calibration factors to be entered manually	New dropdown in Signal bin creation for MCD bins under the Calibration column for by File or by Manual. Click on Set to configure.	Feature	1523	18.05.04-a
FFDC-8078	Add ability for FabGuard IPM to compress a data directory and move the compressed archive to a destination	Each individual FabGuard IPM compresses the data directory once per day and moves the zip (.rar, etc.) file to a desired location for backup. At the end of compression, the archive column is updated for each Run in the database. If something goes wrong, an Alarm should be generated and email can be sent. Setup parameters, configured in "Back and Recovery" tab of global preferences, are: Which compression program to use (7zip, WinZip, or WinRar); Destination directory (FabGuard will make the required subdirectories by Data and Tool ID); Time of day to perform the backup. This feature replaces previous choice to "Zip in addition to Save".	Feature	2071	18.05.04-a
FFDC-8075	SECS DLL for Ultratech AP300	Has S2F41 output commands for STOP, ABORT, and PAUSE. Also has S16F5 output commands for STOP, ABORT, PAUSE, and CANCEL, which require FabGuard's IO output channel Text parameter to be the <ProcessJobId> placeholder.	Feature	2061	17.04.00_af, 17.10.00-x, 18.05.00-i
FFDC-8074	Modify SECS DLL for GPTC UBM UFO Etcher	Add S16F5 output commands for ABORT and CANCEL, which require FabGuard's IO output channel Text parameter to be the <ProcessJobId> placeholder.	Feature	2061	18.05.00-i
FFDC-8073	Modify SECS DLL for TAZMO CSX3382NP	Add S2F41 output commands for CS_STOP on cassette/port 1 or 2.	Feature	2061	18.05.04-a
FFDC-8072	Modify SECS DLL for AMAT Nokota	Add S2F49 output commands for STOP, RETURNWAFERS, and HALARM. Add S16F5 output commands for STOP, ABORT, PAUSE, and CANCEL, which require FabGuard's IO output channel Text parameter to be the <ProcessJobId> placeholder.	Feature	2061	18.05.04-a
FFDC-8071	Modify SECS DLL for Ulvac NA1300	Add S2F41 output commands for STOP, ABORT, and PAUSE. Add S16F5 output commands for STOP, ABORT, PAUSE, and CANCEL, which require FabGuard's IO output channel Text parameter to be the <ProcessJobId> placeholder.	Feature	2061	18.05.04-a
FFDC-8070	Modify SECS DLL for LPI Robusta	Add S2F41 output commands for ABORT and OFFLINE.	Feature	2061	18.05.04-a
FFDC-8065	FFT in Signal Bin	"FFT Maximum Amplitude" and "FFT Frequency at Maxim Amplitude" in Time Range Summaries functions. The function must be the last function on the stack. Data for FFT is preprocessed to remove average. It is possible to see the FFT spectrum, but only in Multi Run Viewer's FFT tab.	Feature	2016	18.05.02-e
FFDC-8064	ModBus/TCP IO event output		Feature	1804	18.05.04-a
FFDC-8063	Allow user to set plot clean display parameter for Scan X, Sscan Y and Bin Y in Recipe Setup Display tab		Feature	2060	17.04.00_af, 17.10.00-x, 18.05.00-h
FFDC-8062	Allow user to set scan display X axis parameters in Recipe Setup Display tab and no longer force the X axis to be auto scale		Feature	2060	17.10.00-x, 18.05.00-h
FFDC-8061	Make sure the values for RGA calibration mass is not zero		Feature	2054	17.10.00-x, 18.05.00-h, 18.05.02-d
FFDC-8060	Acquisition Dictionary entries for all tool types		Feature	695	18.05.00-h, 18.05.02-d
FFDC-8056	Add calculation for Figure of Merit coverage to Figure of Merit Health Summary	Several Coverage values are determined: A) a ration on number of FOM with at least one analysis to total number of FOMs; B) a ration of number of FOM with at both an X and S type analyses to total number of FOMs. Each coverage is determined independently for any analyses and interdictable analyses. Coverage is shown in Figure of Merit Health Summary Data Group tab. Note: X coverage refers to FOM being analyzed by a Report that is on some X value. E.g. X-bar, X-min, X-max, EWMA X-bar, etc. CUSUM, Delta, Derivative, etc. Real Time Reports are not considered. S coverage refers to FOM being analyzed by a Report that is on standard deviation or range. X and S coverage requires both types of Reports.	Feature	2056	18.05.02-c
FFDC-8051	Add multiple Reports requirement in Required Analysis in Bin Statistic	Requirements for "X and S" and "X and S Interdictable". "X" refers to any analysis on X-bar, X-min, X-max as well as EWMA od X-bar, Moving Avg od X-bmin, etc. Delta, Derivative, etc. is not considered. "S" refers standard deviation or range Reports.	Feature	2056	18.05.04-a
FFDC-8050	Display how many Reports have not been applied to the data	Web Table tabs and in the Executive Summary two new columns show how many Reports have not applied for the past 24 hours and the past 7 days. This information is available per Chamber, per Tool, per Group, and per Executive. Also, email of the Executive Summary, contains the list all the Reports that have not been applied in the last 24 hours.	Feature	2048	18.05.00-g
FFDC-8047	Implement persistence in Real Time SPC Reports	Persistence is based on time and requires that a violation be persistent for at least the user specified seconds be a fault is detected. Violation must be continuous. Setting persistence to 0 disables the feature. Persistence is configured in SPC parameters.	Feature	2039	18.05.00-g, 18.05.02-b
FFDC-8046	Global Preference for default Tasks maximum time	This time will be sent for newly created tasks only. It will not force older tasks to change the Maximum time in seconds.	Feature	1723	18.05.03-a
FFDC-8045	Tool Type Gentex Coater	Add support for new tool type Gentex Coater.	Feature	2028	18.05.03-a
FFDC-8044	Disable TOI with error message if there are active critical Alarms	In the "Operator Interface" tab in FabGuard Web, display a large red error message and disable submitting a TOI request if the IPM has any active red Alarms.	Feature	1986	18.05.03-a

FFDC-8043	Option to create EPI from Each Time Point, with All Logistics	This is an addition to the existing choices in the "Extra EPI/MI" column in the Bin Statistics dialog in a Recipe. Unlike the other choices, this creates a separate EPI for each time point in real time as the Run is being acquired. In addition, all Logistics for the Run are copied to the EPI. It also is possible to override any of these Logistics with values that can be different for different time points by creating specially named Bins that contain the desired Logistic override values. The name of a Logistic override Bin must be the same as the placeholder (used in IO channels) for the desired Logistic, e.g., <Ltid>, <PartId>, etc.; the <> characters at the beginning and end of the Bin name are required.	Feature		18.05.02-b
FFDC-8041	Ability to suppress analysis per chamber	Two triggers, one for Analysis Suppress Enable and one for Analysis Suppress Disable.	Feature	2038	18.05.03-a
FFDC-8038	Report plots X axis by Hour of the Day, Day of the Week, Day of the Month		Feature		18.05.03-a
FFDC-8037	Allow Report Locate from Alarm Manager	Right click on the Alarm to access capability.	Feature		18.05.02-b
FFDC-8036	Signal Bin copy using a template to replace Bins used in the formula	FabGuard analyzes the Bins present in the formula of the Source Signal Bin and creates a table where users can enter replacement Bins. On exit of the dialog, one Signal Bin is created per replacement row.	Feature	2032	17.10.00-x, 18.05.00-g, 18.05.02-b
FFDC-8033	Recreate the EpiState table if it is empty	Last 90 days from EPI table are used for the data. Epi State table should be erased by the upgrade script.	Feature		18.05.03-a
FFDC-8031	Allow for independent calibration of Sensitivity and Electron Multiplier	Merge "Sensitivity" and "Sensitivity and EM" calibration screens. User has a choice what to calibrate: Sensitivity, EM or Sensitivity and EM. Only changed values are stored in the sensor.	Feature	1982	18.05.03-a
FFDC-8030	Make Analysis Server search for files to import more often	Analysis Server now searches for files to import every 1 second for all types of import files. Previously, Analysis Server searched for files to import every 10 seconds, unless there were any WD... file import types in which case it searched every 1 second. Note that if FabGuard IPM is configured to import files, it searches for files once every 10 seconds.	Feature		18.05.03-a
FFDC-8027	When dragging a folder into another folder in Report and Model Manager folders if the subfolders have the same name merge the folders	Source has folders "Parent1-Child2", Destination has "Parent2-Child2", if you drag Child2 from Parent1, to Parent2 it will merge the two folders.	Feature		18.05.02-a
FFDC-8026	Allow Western Electric rules if only one control level is selected	Assumes that the Control center line is still correct and uses only one side of the Zone(s).	Feature	2021	18.05.03-a
FFDC-8025	Count upper and lower violations together when counting for M of N in T	Global preference in Database tab.	Feature	2020	18.05.03-a
FFDC-8023	Allow resize of Automated Acquisition Manager dialogs		Feature		18.05.03-a
FFDC-8022	IO Channel Manager to shows channels in a grid with sort and filter		Feature	1409	18.05.00-i, 18.05.03-a
FFDC-8021	Allow History Reset in SPC Reports on EPIs		Feature		18.05.02-a
FFDC-8020	More Choices in Dynamic SPC charts	Three more choices 1) Training value: takes the calculated center line as Target; 2) One time average: 1 to 25 (user configurable) first wafers after after reset are used to determine target. Faults are possible while Target is being updated; 3) One time average with ignore: 1 to 25 (user configurable) first wafers after after reset are used to determine target. Faults are NOT possible while Target is being updated. Select SPC Report Type Dynamic Target, the choices are available in the History Tab.	Feature	2009	18.05.03-a
FFDC-8019	Allow Dynamic SPC Chart Types for EPIs		Feature		18.05.03-a
FFDC-8018	Verification in Automated Acquisition Manager to also verify applicability of Reports	Verification checks which Required Bins do not have Reports that can apply and shows Reports that can apply but do not have any Figures of Merit to apply to.	Feature	2001	18.05.03-a
FFDC-8017	In Automated Acquisition Manager, when selecting Recipe in the Recipe Plan, cancel should cancel all the previously selected menu choices		Feature	2004	18.05.03-a
FFDC-8015	Global preference regarding how the user is informed that some of the data or levels shown in the Report are simulated due to use of history for calculations	Preference has the following choices: 1) Banner (same as previously); 2) Banner and large text "SIMULATED VALUES" on top of the plot; 3) Banner and do not show levels (gray background) for data that is simulated; 4) Banner, large text "SIMULATED VALUES" on top of the plot, and do not show levels (gray background) for data that is simulated. Global Preferences >> Display >> Database Reports and Models >> Simulated data warning	Feature	2003	18.05.03-a
FFDC-8012	Implement Abatement Command API	Added new API request Abatement Command that sends an abatement message to the hardware. Currently implemented commands are "Abatement_On" and "Abatement_Off".	Feature		18.05.02-a
FFDC-8011	Modify SECS DLL for Host Innolux 6/8	(1) The S6F3 message sent by FabGuard now has GLASS_START_TIME equal to the time when the Run ends. Also, GLASS_PREN_TIME, CHBINTIME, and CHBOUTIME in S6F3 are blank. (2) Allow SSF1 to be sent for alarms that are already Set, when using the "Alarm Analysis Message Output" IO output channel.	Feature	1562	18.05.03-a
FFDC-8007	Add Output Event channel for Abatement State On and Off.		Feature		18.05.03-a
FFDC-8006	Add a global preference to force Verify in Automated Acquisition Setup.	Global Preferences >> Display >> Automated Acquisition Manager >> Verify Setup: Do not Ask, Force, Ask	Feature	2001	18.05.02-a
FFDC-8005	Allow global preference to configure what name is shown for Operator ID, Control Job, and Process Job.	Global Preferences >> Display >> Logistics Labels	Feature	2008	18.05.02-a
FFDC-8004	Create a new Acquisition dictionary entry to hold a value that is given to the Bin in the Run		Feature	631	18.05.00-f, 18.05.02-a
FFDC-8001	Add Configure button on the Main screen display for each sensor		Feature	1621	18.05.00-f, 18.05.02-a
FFDC-8000	Add Display tab to Manual Acquisition template edit	The tab is identical to the one visible when editing a Recipe.	Feature	1973	18.05.02-a
FFDC-7999	Allow the user to login on Executive start and thus allow Executive to run in Demo mode		Feature		18.05.02-a
FFDC-7998	Eliminate 60 minute override of pending I/O and Recipe Plan deploys	If the user modifies I/O or Recipe Plan and requests that the changes occur after the current process, the system will no longer ignore the request if the chambers take longer than 60 minutes to stop.	Feature	2002	18.05.00-e, 18.05.02-a
FFDC-7997	Triggers based on Time connection allow the time to be specified as 'Day of the Week' or 'Day of the Month		Feature	1409	18.05.00-e, 18.05.02-a
FFDC-7996	Locate Report in the Report and Model Manager	On the Web and in some dialogs that allow viewing a Report interactively, this allows the user to find and select the Report in the Report and Model Manager, so that the user can perform other functions on the Report, such as edit, rename, delete, etc.	Feature		18.05.00-e, 18.05.02-a
FFDC-7987	Add check for 'not' in Report filter to Analysis Effectiveness		Feature		18.05.00-e, 18.05.02-a
FFDC-7986	In Active Analyses dialog, mark Reports and Models that are later revision or are missing in the database	The Audit cell will be yellow if the Active Analysis is earlier in the FabGuard IPM then in the database. The Audit cell will be red if the Active Analysis does not exist in the database. This calculation will slow down how fast the dialog is shown due to the query of the database. The compare to database option is set in Global Preferences >> Display >> Active Analyses.	Feature		18.05.02-a
FFDC-7981	Change appearance of Fab tab in FabGuard Web	Changed the Fab tab (Board of Executives) in FabGuard Web to contain a grid of Executive icons instead of a circle.	Feature		18.05.01-a
FFDC-7980	Update logic to minimize wait cursor display		Feature		17.04.00_ee, 17.10.00-w, 18.05.00-d
FFDC-7979	Add FPS global preferences so that there is no need to create Run Start/Stop and Fault Output triggers for every Chamber on every FabGuard IPM		Feature		18.05.01-a
FFDC-7977	For RGAs that support it, allow user to change Ionizer Type and Detector Type in Sensor Hardware Configuration.		Feature	1932	18.05.00-c
FFDC-7975	Allow MCD Species and Reference to have different units.		Feature		18.05.00-b
FFDC-7970	MCD allows user selection of concentration units	The user can choose the concentration units from a droplist; the choices are: Fraction, %, ppm, ppb. Previously, units were always Fraction.	Feature	1931	18.05.00-c
FFDC-7969	Add SQL Connection type to IO Trigger Secondaries so that Metrology or EPI values can be retrieved from an External Database	"Used in Equipment Triggers functions: Metrology from Secondary, EPI from Secondary, Maintenance Indicator from Secondary"	Feature		18.05.00-c
FFDC-7968	Show (ms) for Dwell and Lead In in RGA Sensor Bin grid heading in Recipe setup		Feature	1930	17.04.00_ac, 17.10.00-v
FFDC-7966	Add Ocean Optics STS spectrometer	The STS spectrometer uses the same Ocean Optics OmniDriver as other Ocean Optics USB-based spectrometers already supported by FabGuard.	Feature	1804	17.10.00-v, 18.05.00-c
FFDC-7965	FabGuard IPM and Executive installers prevent FabGuard and 64-bit Executive from being installed on the same computer	This is necessary because FabGuard IPM and FabGuard Executive use the same library for password encryption and only one bit-ness of this encryption library can exist. Previously, if FabGuard IPM and 64 bit FabGuard Executive were installed on the same computer, then the one that was installed last would work correctly, but the one that was installed first would usually crash on program start.	Feature		18.05.01-a
FFDC-7956	Change the number of maximum points in Monitor and Maintenance screens	The Monitor and Maintenance screens now set the number of data points based on time between scans, ignoring the global preference. Never bigger than 120000. Remote Real Time Viewer always uses 120000.	Feature	1875	17.04.00_ac, 17.10.00-u, 18.05.00-a
FFDC-7955	Add ability to split Report History by Layer ID	Add a filter to Analysis History Report for Layer ID.	Feature	1893	17.04.00_ac, 17.10.00-u, 18.05.00-a
FFDC-7950	Show Acquisition Trigger in tables on the Web in Process State column and in billboard display		Feature	1732	18.05.00-a
FFDC-7944	Build installers with InstallShield 2018 Service Pack 1		Feature		17.10.09-d
FFDC-7942	Allow OPC and EDA Tool Bins to be edited in Tool Bin grid		Feature		17.04.00_ab, 17.10.00-t, 17.10.09-d
FFDC-7940	The installer for FabGuard Executive now enables and configures the Windows IIS web server to work with FabGuard Web	Note that a reboot is required the first time IIS is enabled on a computer.	Feature		17.10.00-s, 17.10.09-c
FFDC-7939	FabGuard Guide included in FabGuard Help and FabGuard Explorer Help	FabGuard Guide provides step-by-step guidance for various activities (Initially Tune and Sensitivity & EM Calibrate for RGAs). There are buttons labelled "Guide" in the user interface for which there is a topic in FabGuard Guide. FabGuard Guide is based on FabGuard eOAP. FabGuard Guide requires a web server, so the installers for FabGuard Help and FabGuard Explorer enable and configure the Windows IIS web server to work with FabGuard Guide. Note that a reboot is required the first time IIS is enabled on a computer.	Feature		17.10.09-c

FFDC-7938	Allow user to shutdown FabGuard Executive from the web	"In Administration tab, Manage IPMs, Executive will not be listed. Options you can perform on the FabGuard Executive will be Restart Autostart Services, Exit, Force Exit and Reboot."	Feature	1806	17.10.09-c
FFDC-7931	Modify SECS DLL for Host Innolux 6/8	Add support for 56F3 CEID=1, SUBCD=0 and 56F3 CEID=1, SUBCD=99, which are sent at the end of each process (56F3 CEID=1, SUBCD=99 includes Figure of Merit data). Also renamed the SECS DLL from "Innolux 6" to "Innolux 6/8", since the two are identical regarding SECS communication with FabGuard.	Feature	1562	18.05.01-a
FFDC-7925	Determine RGA Ionizer Type and use it to limit which Ionizer parameters are available for user configuration		Feature	1831	17.10.00-r, 17.10.09-a
FFDC-7922	Allow subtract and ratio in Multi Run Viewer when looking at multiple Scans	Two new options in the X Axis dropdown: Overlaid (subtract to first selection) and Overlaid (ratio to first selection).	Feature	1823	17.10.09-a
FFDC-7919	Inform user if a database query intentionally stops retrieving to prevent running out of memory	"Previously, retrieving was stopped to prevent running out of memory, but the user was not informed that this had happened."	Feature	1827	17.10.09-a
FFDC-7917	Make PK Constraint for AnalysisState and EpiState tables nonclustered for MS SQL Server in code and script		Feature		17.10.00-q, 17.10.09-a
FFDC-7910	Tool type Hitachi-Kokusai Tanduo		Feature	1769	17.10.09-a
FFDC-7909	Add a dialog for user to create a Fault Comment based on components with a   delimiter	In SPC Output parameters, new Generate button on the I/O Fault Comment field will bring up a new grid dialog to enter values. Creating values in this grid will create a compound comment with a   delimiter. Note. If you want to change the ""Parameter"" number in the grid, edit the Options table in the database and use type values 150-159 to customize the Parameter name. The Value will not be stored in the Options table.	Feature	1718	17.10.09-a
FFDC-7906	Remove special characters from key in epi_state database table	This change is a workaround for a problem that can occur on some databases (primarily Postgres). When upgrading partitioned Oracle, Postgres, and MS SQL Server databases, the appropriate prep script must be run ("Oracle FabGuardSchema1 - Prep pre 17.10.09.sql", "Postgres FabGuardSchema1 - Prep pre 17.10.09.sql", or "SqlServer FabGuardSchema1 - Prep pre 17.10.09.sql")	Feature		17.10.09-a
FFDC-7905	Change program icon to newer style	New icon on the Windows taskbar and windows title bar.	Feature		17.10.08-a
FFDC-7904	Allow MCD Signal Bins in Runs and Recipes for OES sensors		Feature	1745	17.10.08-a
FFDC-7903	More options to generate an MI reset in Real Time Analysis	There are now three options (rather than one): "MI Tool Reset", "MI Tool, Chamber Reset", and "MI Tool, Chamber, Recipe Reset".	Feature		17.10.08-a
FFDC-7902	Allow user to enter Auto Startup Delay in FabGuard Acquisition, Executive, and Multiplexer installers	For IPM: Auto Startup Delay must be greater than or equal to 0 and less than or equal to 170 seconds. For FGE: Auto Startup Delay must be greater than or equal to 0 and less than or equal to 290 seconds.	Feature	1811	17.10.08-a
FFDC-7900	For S10Fx output messages to Equipment, set Wbit=0 so the Equipment does not have to send a reply		Feature	1820	17.10.08-a
FFDC-7899	More details in generic SECS errors for TOI and TRM		Feature		17.10.08-a
FFDC-7898	Tool type Tazmo CSX3400	Added support for tool type Tazmo CSX3400.	Feature	1791	17.10.08-a
FFDC-7897	Tool type SMEE SSB500	Added support for tool type SMEE SSB500.	Feature	1791	17.10.08-a
FFDC-7896	Tool type Ultratech AP300	Added support for tool type Ultratech AP300	Feature	1791	17.10.08-a
FFDC-7895	Build installers with InstallShield 2018		Feature		17.10.08-a
FFDC-7894	Do not allow PYMS to connect to an MPx		Feature		17.10.08-a
FFDC-7893	Generate an alarm if more than one tool recipe is used on different wafers in the same lot in the same chamber	"Tool recipes are tracked separately for different acquisition triggers in each chamber. The Alarm category is Acquisition. The Alarm name is ""Chamber's Tool Recipe not constant for a lot""."	Feature	438	17.04.00-z, 17.10.00-q, 17.10.08-a
FFDC-7891	Prevent Real Time Data Viewer from showing data out of order	This is additional protection, which should not be necessary under normal conditions.	Feature	1755	17.10.08-a
FFDC-7890	Support for ToolPro flavors of Quantus		Feature		17.10.08-a
FFDC-7889	Remove Relay 1 from user control and always have it indicate emission status		Feature		17.10.08-a
FFDC-7887	Global Preference for Exclude by matching process comment that can be used when excluding data in a report		Feature		17.10.08-a
FFDC-7886	In FabGuard Web, add Alerts column to Overview tabs		Feature		17.10.08-a
FFDC-7885	SPC reports now contain separate comment fields for SPC Parameters and Analysis Health Parameters	Comments should show up in the SPC Report Summary	Feature		17.10.00-q, 17.10.08-a
FFDC-7884	Add Analysis Quality Summary report	The Analysis Quality Summary report is a replacement for the Analysis Health Rollup table that was added to the Analysis Health Summary report in version 17.10.07-a. The Analysis Health Rollup table has been removed from the Analysis Health Summary report. A new Report called Analysis Quality includes: Two tables, one per Analysis, one per Tool/Chamber location	Feature	1545	17.10.08-a
FFDC-7882	Add three options related to the Fast Window Range Signal Bin	The Fast Signal that used to be called "Fast Window Range" is now called "Fast Window" and it now has four possible types: Range (the default), Minimum, Maximum, and Average.	Feature	1645	17.10.08-a
FFDC-7880	Allow user to control RGA Analog Output and Digital Output for every channel available in the Sensor from Sensor Configuration Monitor screen		Feature	1711	17.10.08-a
FFDC-7878	Add ability to generate an MI reset in Real Time Analysis	In Real time analysis, in the ""Meaning"" drop down there is a new MI reset?	Feature	1773	17.10.08-a
FFDC-7876	IO Trigger Secondary method Lookup from Lot and Slot	This uses Lot ID and Slot ID to look up logistics sent by the SECS Host in S3F17 and optionally S14F9 and/or S16F11/F15.	Feature	1631	17.10.08-a
FFDC-7874	Web billboard display that shows key information for the tools in groups the user is assigned to	The display does not allow interaction. Tools are shown in group order with maximum number of tools per page determined based on screen size. For each chamber in the tool the following information is shown: Lot ID, Slot ID, Substrate ID, Alarm counts Alert counts, Maintenance fraction. Each page is shown for 10 seconds.	Feature	1732	17.10.08-a
FFDC-7873	Towa FFT file importer		Feature	1309	17.10.07-c
FFDC-7872	For SECS Gauge connections, use name of gauge type rather than Equipment in log entries and alarms.		Feature		17.10.08-a
FFDC-7870	Modify Tool type ASM XP8	Added several load chambers.	Feature	1774	17.10.08-a
FFDC-7869	Tool type ASM XP4		Feature	1774	17.04.00-y, 17.10.00-p, 17.10.07-c
FFDC-7868	Tool type Veeco IBE420 Gen2		Feature	1757	17.10.00-o, 17.10.07-b
FFDC-7866	Option in RVS communication to not use the standard formula for output SVIDs	There are currently two options: "Standard Formula" and "1 to 100 for OES, Standard Formula for non-OES". The default is "Standard Formula", which means SVID=3CfSKNSvof. These options are available only for the "TIBCO RVS_5.7.2" and "TIBCO RVS_5.3.3" RVS DLLs; other RVS DLLs always use the standard formula.	Feature	1786	17.10.00-o, 17.10.07-b
FFDC-7865	Independent serial communication polling threads		Feature	1719	17.10.07-b
FFDC-7864	SECS DLL for Host SK Hynix M14	"FabGuard IPM sends S1F3 to its Host channel rather than its Equipment channel. The Host is expected to reply with S1F124, rather than S1F4. The format of S1F124 should be identical to the SEMI SECS-II standard S1F4. The S1F124 reply message must have the same System Bytes as S1F3, because all reply messages must have the same System Bytes as the primary message they are a reply to."	Feature	1656	17.10.08-a
FFDC-7860	Modify Plot right click menu	Move all the Show choices into its own sub-menu. Combine Grid and Legend sub-menus into Appearance sub-menu.	Feature		17.10.08-a
FFDC-7857	Support for National Instruments NI 9425 Spring cDAQ module board	This board probably only works with the NIDAQ DLL for NIDAQmx 17.6.0.	Feature		17.10.08-a
FFDC-7854	Modify SECS DLL for SPTS CPX/LPX/VPX to have numeric SVIDs and ECIDs	The tool itself must be configured to use "Numeric mode" for SECS. Note that any Trigger Channels or Tool Bins that used the previous ASCII format with non-numeric values for SVIDs and ECIDs must be changed to use the correct numeric SVIDs and ECIDs. Also note that the SVID and ECID lists that were previously included with the FabGuard installer are no longer correct, so new SVID and ECID lists should be downloaded from the tool.	Feature	1708	17.10.07-a
FFDC-7853	Optional support for NIDAQmx 17.6.0	There is now an additional FabGuard Acquisition installer option for the NIDAQ Type "Mx 17.6.0", which requires that NIDAQmx 17.6.0 be installed on the computer. Note that the following boards that are supported by FabGuard are apparently no longer supported in NIDAQmx 17.6.0: NI ENET-9421, NI WLS-9421, NI ENET-9421 (DSUB), NI WLS-9421 (DSUB), NI ENET-9205, NI WLS-9205 (DSUB), NI ENET-9205 (DSUB), NI WLS-9205 (DSUB), NI ENET-9215, NI WLS-9215, NI ENET-9215 (BNC), NI WLS-9215 (BNC), NI ENET-9211, NI WLS-9211, NI ENET-9213, NI WLS-9213.	Feature		17.10.07-a
FFDC-7852	SECS DLL for DNS LA-3100	Has S2F41 output commands for ABORT, SIGNAL, and BUZZER.	Feature	1668	17.10.07-a
FFDC-7851	Allow user to determine when output occurs for sensors that have IO output control in Step Start	The option is for the output to occur Before or After the step starts. The default is Before, which is the same behavior as in previous versions. This applies to relays and digital outputs. It also applies to inlets and heaters for RGAs that have them.	Feature	1759	17.10.07-a
FFDC-7850	Add support for Edward EcoLink/SECS as a SECS Gauge	This supports getting SVID data from devices that use Edwards EcoLink/SECS communication.	Feature		17.10.07-a
FFDC-7849	Add history plots for dashboard on the web	History is available for Throughput, Utilization, Fault Rate, Coverage, and Configuration. The history plots appear when the user clicks on one of the small bar charts in Executive Overview, Group Overview, and Tool Overview tabs on the web.	Feature		17.10.07-a
FFDC-7848	For OPC use the time any data arrived for all data from the server to calculate Data Age		Feature		17.10.07-a
FFDC-7847	Add global preferences in Database tab to not copy SPC parameters and Output parameters when copying a Report	Applies to individual Reports, not when copying a Model with attached Reports.	Feature	1473	17.10.07-a

FFDC-7846	Merge Tool Bins, Signal Bins, Bin Statistics and Real Time Logic Analyses from a user selected Recipe into the currently edited Recipe	Allow for elimination of any duplicates or keeping of duplicates for user review. Note, duplicates will show up as errors on Tool Bin and Signal Bin tabs. The feature allows for a Recipe file to be merged into currently opened Recipe. (1) Prior to performing the merge, user can see a side by side comparison of Recipes using standard comparison capability currently used for reverting to previous version. (2) The user can select whether to keep all the merged Bins or eliminate illegal ones. (3) If user chooses to eliminate Bins, all duplicates by Name, IDs, or formulas are not merged in. (4) If user chooses to keep all, the conflicts are marked as errors using previously existing infrastructure. The user needs to click through all the pertinent tabs to see conflicts and look for legal, but not desirable duplicates.	Feature	753	17.10.07-a
FFDC-7845	Add a user role that can only manage users	New Access role called Manage User Accounts. This user with this access role can Add, Edit, Copy and Delete all user accounts.	Feature	1255	17.10.07-a
FFDC-7844	Add Analysis Health Rollup table to Analysis Health Summary report	Analysis Health Rollup is displayed as an additional droplist in the report's Summary tab. It contains a sortable list of report applications that need review, based on user-configurable criteria.	Feature	1545	17.10.07-a
FFDC-7843	For RGAs that support it, make user interface for LeadIn be an integer multiple of 256 milliseconds to match what the firmware does		Feature		17.10.07-a
FFDC-7842	Allow user to set upper and lower Capability levels for FabGuard Web	Added upper and lower levels for Capability in Web tab in Global Preferences	Feature		17.10.07-a
FFDC-7841	Add missing History Rest Bin name to the Alarm.		Feature	1746	17.10.07-a
FFDC-7840	Allow Reports of Reports to Export Data table to a spreadsheet with only Included or All		Feature	1481	17.10.07-a
FFDC-7838	Allow Reports of Reports to Include and Exclude some of the Reports in the Data Table tab	Include/Exclude by Selected, All, include/Exclude by Filter(exclude non-matching) and Include/Exclude by Text Marker match	Feature	1481	17.10.07-a
FFDC-7837	Show a filter icon in the upper left of the plot if any of the data is Excluded by the user	"Exclusion included selection on the ""Include/Exclude"" tab and Exclusion by Text Marker match."	Feature	1612	17.10.07-a
FFDC-7836	Include / Exclude based on matching the text in the user entered Data Marker for the process	1) Added the ability to Exclude by matching the text in a Text Marker (i.e. the comment a user can add to any process or substrate record in the database). Note that the Text Marker is shared for all FOMs. Also, Exclusion does not effect any statistical calculations. This means that if a history-dependent SPC chart is used, the history, and thus the plot of other data, is not effected. 2) Added the ability to Reject for SPC statistics calculation by matching the text in a Text Marker.	Feature	1612	17.04.00-x, 17.10.00-n, 17.10.07-a
FFDC-7835	Add Ferrotec Genius protocol		Feature	1654	17.04.00-x, 17.10.00-n, 17.10.07-a
FFDC-7834	Modify Tasks to save group, rather than record, information in the tab delimited file for Reports that are group based: Equipment health, Substrate Health, etc.		Feature	1703	17.04.00-x, 17.10.00-n, 17.10.07-a
FFDC-7832	In filters for Analysis Health Summary allow selection of Analyses by Fault information not just Report Name	The query uses current settings of the Report and not the settings at the time the Analysis Health was calculated.	Feature	1630	17.10.06-a
FFDC-7831	Support for Thermoflex Chiller via RS-485 communication as a gauge		Feature	1465	17.10.06-a
FFDC-7830	Modify SECS DLL for SPTS CPX/LPX to include VPX	VPX is now included in the display name for the SECS DLL and output commands are available for the SPTS VPX tool type.	Feature		17.10.06-a
FFDC-7827	Add 'Last 12 Hours' to the Report time filter		Feature	1724	17.10.06-a
FFDC-7823	Tool type SPTS VPX	Added support for tool type SPTS VPX	Feature	1708	17.10.06-a
FFDC-7822	Various improvements to Industrial Engineering Lot Tracking		Feature	1301	17.10.06-a
FFDC-7821	For MPX RGAs, display filament status in FabGuard Web and in IPM's Sensor Hardware Configuration	Note that this requires that the MPX RGA be running firmware version 1.5.1 or higher.	Feature	1613	17.10.05-c
FFDC-7820	Option to include json content-type in HTTP IO output channels		Feature		17.10.05-c
FFDC-7819	Add IO output channel Chamber Acquisition Process Off Output		Feature		17.10.06-a
FFDC-7818	Tool type DNS LA3100		Feature	1668	17.10.05-b
FFDC-7817	Tool type Tegal 90X	Intended to work for Tegal 901 and 903 tools.	Feature	1650	17.10.06-a
FFDC-7815	Allow Restore API to only specify Tool ID and not Computer IP	The following URL installs an IPM on a target computer and configures it using a previously backed up configuration: "http://HOSTNAME/FabGuardDll/FgWebDll.dll?755=86&804=2&740=MachinedFrom&803=ToolId&717=MachinedTo&775=WindowsUserDomain&776=WindowsUserName&777=WindowsUserPassword". The parameters are: HOSTNAME is the network name or IP address of the FabGuard Executive computer running FabGuard Web. MachinedFrom is the IP address of the FabGuard IPM whose backup to use. ToolId is the Tool ID of the FabGuard IPM. MachinedTo IP address of the FabGuard IPM to install to. If not specified, Machine ID is taken from the backup. WindowsUserDomain is the Windows domain of the user performing the restore. WindowsUserName is the Windows login name of the user performing the restore. WindowsUserPassword is the Password required for this user to log into Windows. (MachinedFrom and ToolId are optional but at least one must be specified so that the backup can be identified.)	Feature	1363	17.10.06-a
FFDC-7813	Allow the FabGuard Web URL to switch to a designated Tool and a designated Tab	Invoke FabGuard Web with the following URL: "http://[ExecutiveComputer]/FabGuard/FgWeb.htm", where [ExecutiveComputer] is the DNS name or IP address of the computer on which FabGuard Executive is installed. Optional arguments can be appended to this URL following a question mark and separated by ampersands. Either or both can be specified: "http://[ExecutiveComputer]/FabGuard/FgWeb.htm?tool=[ToolId]&tab=[Tab]", where [ToolId] is the Tool ID of the equipment to be selected when FabGuard Web starts. [Tab] specifies a tab and sub-tab to be selected when FabGuard Web starts. Possible values are: ExecutiveOverview, ExecutiveLayout, ExecutiveTable, ExecutiveEffectiveness, GroupOverview, GroupLayout, GroupTable, GroupMaintenance, GroupEffectiveness, ToolOverview, ToolLayout, ToolTable, ToolAlarms, ToolAlerts, ToolMaintenance, ToolEffectiveness.	Feature	1632	17.10.00-m, 17.10.05-b
FFDC-7812	Database Performance Key Performance Indicator (KPI)	Global preference selects any Report to execute by Executive every hour and store the following EPIs into the database: 'FabGuard DB KPI Records per Second', 'FabGuard DB KPI Time First Record', 'FabGuard DB KPI Time All Records', 'FabGuard DB KPI Number Records'. SPC of EPI Report can view the EPIs but putting limits and sending faults will never be executed because there is no IPM to execute the analysis.	Feature	1534	17.04.00-w, 17.10.00-m, 17.10.05-b
FFDC-7809	DAT and DAP importers remember the locations in the files being imported across FabGuard restart or file connection edit		Feature	1005	17.10.06-a
FFDC-7807	User configurable Data Length for Serial communication		Feature	1683	17.10.05-a
FFDC-7806	Modify SECS DLL for Tegal 9XX	Add S2F21 Stop Processing and Activate Alarm.	Feature		17.10.06-a
FFDC-7805	Modify SECS DLL for NMC extIn	"The four existing S2F41 commands that use ""StationId"" to identify chamber are now valid for the NMC Booster A630 tool type, in addition to NMC extTin and NMC eVictor."	Feature	1053	17.10.06-a
FFDC-7804	Modify SECS DLL for Host Innolux 4 (previously named CMO4)	"When FabGuard sends S6F3, use CEID=4 instead of CEID=1. Also, renamed the CMO SECS DLLs as Innolux."	Feature	1672	17.10.05-a
FFDC-7801	In Executive, better handling of incoming IPM connection attempts with unknown IP Address or Computer Name	If an IPM attempts to connect to Executive with an empty IP Address or Computer Name, Executive ignores the connection attempt.	Feature	1496	17.10.05-a
FFDC-7799	Modify SECS DLL for Axcelis Gemini		Feature	1400	17.10.05-a
FFDC-7796	Replace the HTML-to-PDF converter and generate all PDF output in landscape mode	Landscape mode is better suited for plots and tables with lots of columns.	Feature	1456	17.10.06-a
FFDC-7795	Modify SECS DLL for Unaxis Versalock Versaline - sort S7F26 for TRM	This tool returns each list of parameters in S7F26 with parameters that start with "StepParameter=" in arbitrary order. This causes tool recipe verification in FabGuard to fail for identical recipes in which only the order of parameters is different. This modification solves this problem by sorting parameters that start with "StepParameter=", so that their order is no longer arbitrary.	Feature	1331	17.04.00-v, 17.10.00-l
FFDC-7794	Default Ionizer setting for Sensor Advanced Maintenance Functions for the XPR 3+ and XPR 3+ ADV is now Low Emission		Feature	1658	17.04.00-v, 17.10.00-l
FFDC-7793	Executive preferences for FPS Health URL and FPS Maintenance URL	Send a message once per hour that contains the Health per Chamber or Maintenance per Chamber to the designated FPS URL.	Feature	1633, 1634	17.10.05-a
FFDC-7792	Allow the user to edit Statistical Model and Family of Reports and not reload the training data		Feature	1603	17.10.05-a
FFDC-7791	Add Reset Value and Logic to IO output channels for Sensor IO		Feature		17.10.00-l
FFDC-7790	Additional information in Executive Summary in FabGuard Web	Web tables can now show number of SPC report disabled and the last time each chamber acquired data. Number of SPC report disabled requires it to be enabled in preferences. User can also set the maximum time since chamber acquired data and have the status column turn red if the time is exceeded.	Feature	1613	17.10.00-l
FFDC-7789	In FabGuard Web, replace speedometer plots with bar plots		Feature		17.10.00-l
FFDC-7788	Workaround for update to Google Chrome that caused launching FabGuard Client from FabGuard Web in Chrome to stop working	Sometime in mid-January 2018, an update from Google changed the way Chrome sends links to external programs. One result of this update to Chrome is that clicking on a link in FabGuard Web that attempts to open the FabGuard Client fails with the error message "Please choose or enter FabGuard Executive's computer name or IP!".	Feature	1666	17.10.05-a
FFDC-7786	Audit entries in a separate tab when viewing a SPC Report	Allow adding and removing "User Comment" entries, but not automatically created entries. If an entry is a web link, user can open the link.	Feature	1607	17.10.05-a

FFDC-7783	SECS DLL for Tegal 9X tools	Has special decoding of S1F6 for SFCD = 0x80 (128 decimal) and 0x90 (144 decimal).	Feature	1650	17.10.05-a
FFDC-7782	Add user configurable Report defaults for History and SPC Levels	Configure the defaults in the Report and Models Manager in the Advanced button there are two options: Default Report History Setup and Default Report SPC Setup.	Feature	1490	17.10.04-b
FFDC-7778	Add scan export to Standard export when automatically exporting Runs acquired by a Recipe	Standard export now generates two files, one for bins and one for scans (if scans exist). The export file names are the Run file name + "- Bin" or "- Scan" as appropriate.	Feature	1636	17.10.05-a
FFDC-7777	Allow each sensor Bin in RGA recipe to have different EM voltage and Lead In time		Feature	1600	17.10.04-b
FFDC-7776	In Executive, better handling of incoming IPM connection attempts with identical IP Address or Computer Name, or Tool ID	If an IPM attempts to connect to Executive with the same IP Address or Computer Name as another IPM, Executive disconnects the original IPM (if it is connected) and replaces it with the new connection. If an IPM attempts to connect to Executive with the same Tool ID as another IPM, Executive disconnects the incoming IPM and appends "(DUPLICATE OF IP_ existing on IP_ incoming)" to the Tool ID.	Feature	1496	17.10.05-a
FFDC-7774	Indicate which OPC connection is set for output	only in the list of I/O Connections dialog, not possible to put an (Output) label when listing OPC connections in Tool Bins or I/O channel.	Feature	1641	17.10.04-a
FFDC-7773	Remove SVID from the Bin Name in Multi Run Viewer if it represents multiple Bins with different SVIDs because it is an Alias	If the display Bin represents only one Bin with unique SVID, then the SVID is shown. If the display Bin represents more than one Bin with different SVIDs, then the SVID is not show and "-Alias-" is appended to the name.	Feature	1629	17.10.04-a
FFDC-7768	Modify Run Export in Sapphire DCR 2.2.5 format	Various minor changes.	Feature		17.10.00-j
FFDC-7766	I/O output message when Maintenance Indicator is Reset either manually or based on logic	New I/O Output Fault Maintenance Reset. Reset is sent regardless if there is a Report for the MI.	Feature	1620	17.10.04-a
FFDC-7764	Include Executive computer name and IP address in subject of emails about Executive itself		Feature		17.04.00-t, 17.10.00-j, 17.10.03-c
FFDC-7763	Add options to Copy Training filters to View and Apply filters and Copy View and Apply filters to Training filters to Model user interface		Feature		17.10.04-a
FFDC-7762	Support for National Instruments NI 9482 and 9485 cDAQ module boards		Feature		17.10.04-a
FFDC-7761	Allow Report analysis suppression for EPI and MI Reports	On a EPI or MI Report, you can now suppression on a Fault or an Active Analysis.	Feature	1599	17.10.04-a
FFDC-7759	SECS DLL for SSEC M330x tools	The same SECS DLL should work for SSEC M3301, M3302, M3303, M3304, and M3305. Has S2F41 ABORT, STOP, and PAUSE. For TOI, this tool requires both a ProcessRecipe (uses standard PPID parameter) and a HandlerRecipe (uses Extra1 parameter).	Feature	1482	17.10.04-a
FFDC-7756	Show PV pressure gauge options for converting RGA analog input units		Feature	1427	17.04.00-t, 17.10.00-i, 17.10.03-b
FFDC-7753	Convert Connections Advanced Input/Output dialog to a grid		Feature		17.10.04-a
FFDC-7752	Display history of FDC Effectiveness in FabGuard Web Dashboard		Feature		17.10.04-a
FFDC-7751	Capability for TOI to get path on the tool to PPID from external database as Extra2 ID for certain tools	The supported tool types are: DISCO: DFD6340 Dicing Saw, DISCO: DFD6361 Dicing Saw, DISCO: DFL7160 Laser Saw, and ASML: PAS S500 200mm.	Feature		17.10.04-a
FFDC-7749	Add separate SECS Gauge polling time delay		Feature	1570	17.10.00-i, 17.10.03-b
FFDC-7748	Option in RGA total pressure plate calibration to use External Reference Pressure rather than user-entered Pressure		Feature	1528	17.10.04-a
FFDC-7747	Selectable Dark or Light theme for FabGuard Web and tool screen in FabGuard IPM	Previously, only the Dark them existed.	Feature		17.10.04-a
FFDC-7746	Modify Run Export in Sapphire DCR 2.2.5 format	Include additional SOAP header information.	Feature		17.10.04-a
FFDC-7744	Add a column for Reset all channels after too many critical errors in SECS Multiplexer Configuration Summary	The column is shortened to "Reset all on error"	Feature	1572	17.10.03-a
FFDC-7742	Ability to remove an email address from FabGuard	The address will be removed from email lists, Alarm setup, Expert analyses in Recipes, Reports, and Models. Note, for Expert analyses in Recipes only FabGuard IPMs attached to the specific Executive will be affected since Executive can only communicate to attached IPMs. Feature is accessible from the Advanced menu in the FabGuard Windows Client.	Feature	1533	17.04.00-s, 17.10.00-h
FFDC-7741	Add DatabaseStatus to values reported by FabGuard IPM's web service	As with SecsStatus, DatabaseStatus is reported only if the request is for ChamberNumber=0, SensorNumber=0, SensorFunction=-1. The possible values returned by FabGuard are: 1.0 (Off), 2.0 (Not Connected), or 3.0 (Connected).	Feature		17.10.03-a
FFDC-7740	Add output SVIDs for FabGuard IPM's connection to the database and to Executive	SVID = 3000000003 reports to a SECS Host the current state of FabGuard's connection to the database; the possible values are: 1.0 (Off), 2.0 (Not Connected), or 3.0 (Connected). SVID = 3000000004 reports to a SECS Host the current state of FabGuard's connection to Executive; the possible values are: 1.0 (Off), 2.0 (Not Connected), or 3.0 (Connected).	Feature	776	17.10.00-h, 17.10.02-b
FFDC-7738	Add CPM3 turbo current and temperature parameters as optional Special Sensor Bins	Requires MPx firmware version 1.5.0 or higher.	Feature	493	17.04.00-s, 17.10.00-h
FFDC-7737	MemoryCheck now uses AvailPhys for non-COMPLETE_FOR_FABGUARD compiles		Feature		17.04.00-s, 17.10.00-h, 17.10.02-b
FFDC-7736	Add S2F41 output commands to SECS DLL for Nikon NSR	The available commands are ABORT, STOP, PAUSE, and PANEL (which controls the buzzer).	Feature	1530	17.10.03-a
FFDC-7735	Additional option for auto-scaling plots Auto Fixed	This option requires user-entered Minimum and Maximum values. When this option is selected, auto-scaling the plot goes to the user-entered Minimum and Maximum values	Feature	1556	17.10.03-a
FFDC-7734	Modify Run Export in Sapphire DCR 2.2.5 format	Various modifications.	Feature		17.10.02-b, 17.10.03-a
FFDC-7731	Show in Alarm Summary Report logistics for Alarms that came from EPI faults		Feature	1552	17.10.03-a
FFDC-7726	Support for National Instruments NI 9201, 9203, 9230, and 9421 cDAQ module boards		Feature		17.04.00-r, 17.10.00-g, 17.10.02-b
FFDC-7725	FabGuardExecutive installer gives Full Control to specified Windows user and sets RUNASADMIN option for file FabGuardExecutive.exe	This is done because Windows might be configured so that these settings are required in order for FabGuardExecutive to save its configuration files and carry out certain other necessary actions. Also, if FabGuard Executive AutoStartProgram is used, the installer gives Full Control to Everyone and sets RUNASADMIN option for file FgAutoStartProgramExecutive.exe. This is done only on computers running Windows Vista or higher, since older Windows operating systems do not need it.	Feature	1515	17.10.00-f, 17.10.01-c
FFDC-7721	In consecutive time series data plots separate Runs by 10% of the first Run's duration		Feature	1540	17.04.00-q, 17.10.00-f, 17.10.01-c
FFDC-7717	Require matching of Tool Recipe ID for Tool Bins with Connection = Maintenance Indicator		Feature		17.10.00-e, 17.10.01-b
FFDC-7714	Better protection against customer networks where Windows is unable to determine computer name from IP address		Feature		17.10.00-e, 17.10.01-a
FFDC-7710	Real Time Expert System State output		Feature		17.10.01-a
FFDC-7706	Add Fault Code generation logic to Report		Feature	1026	17.10.01-a
FFDC-7705	In the Group and Executive tables on FgWeb, in Executive column, show the number of assigned connections by counting the number of Tools assigned to each Tool Group		Feature	1502	17.10.01-a
FFDC-7703	In a generic file importer if both RunTime and PollingDelay columns do not exist to use DateTime column for data time and not only for Substrate start time		Feature	1504	17.04.00-p, 17.10.00-d
FFDC-7702	In MultiRunViewer, add another option for aligning data by Step		Feature		17.10.00-d
FFDC-7701	Include demo Runs in non-demo PV MassSpec installer		Feature		17.10.00-d
FFDC-7700	Add Recipe Cache clear and Restart AutoStart Services to Managed IPMs on the Web		Feature	1184	17.04.00-o, 17.10.00-c
FFDC-7699	Tool type FSI Antares CX		Feature	1404	17.04.00-o, 17.10.00-c
FFDC-7698	Tool type Tokki OLED A4		Feature		17.10.01-a
FFDC-7697	Add Run Export in Sapphire DCR 2.2.5 format		Feature	1467	17.10.01-a
FFDC-7696	SECS DLL for FSI Antares CX		Feature	1404	17.10.01-a
FFDC-7695	Automatically plot an isolated point as a dot if it would otherwise be invisible		Feature	1479	17.10.01-a
FFDC-7694	The FabGuard, Multiplexer, and Executive installers offer an option to run all FabGuard AutoStart Services in the SYSTEM account or the designated user account		Feature		17.10.01-a
FFDC-7688	Global preference whether to use case-sensitive or case-insensitive pattern matching		Feature	1476	17.10.01-a
FFDC-7687	Add overview columns for Worst Health Last 24 Hours		Feature		17.10.00-a
FFDC-7686	Show Misc tab in Global preferences and allow user to select which drives are checked for free space		Feature		17.10.00-a
FFDC-7685	Additional option for sending SSF1 to SECS Host		Feature	1302	17.10.00-a
FFDC-7684	Add ability to use an RGA's Digital In 0 and Digital In 1 to start and stop Acquisition Steps		Feature	1430	17.04.00-o, 17.04.07-c
FFDC-7683	Global placeholders for HTTP and Promis HTTP for User ID and Password		Feature	1354	17.10.00-a
FFDC-7681	Global preference for the time range in the Alarm email Report link		Feature	1451	17.04.07-c
FFDC-7680	Client computer drop down shows the Executive description entered in Executive Board setup		Feature	1460	17.10.00-a
FFDC-7679	Updates to Help		Feature		17.04.07-b
FFDC-7678	Configure minimum user level for Auto Logout		Feature	1449	17.04.00-n, 17.04.07-b
FFDC-7677	Add Last Apply column to Active Analyses dialog		Feature	1408	17.04.07-a
FFDC-7676	Include tool-level information and IPM file importer information in FabGuard Web dashboard tables and plots		Feature		17.04.07-a
FFDC-7675	Initial support for FabGuard to function as an EDA Freeze 2 client		Feature	1268	17.04.07-a
FFDC-7673	Modify WD XML file import		Feature		17.04.00-n, 17.10.00-a
FFDC-7672	New HTML-based Help included with FabGuard Explorer		Feature		17.04.07-a

FFDC-7671	On 64-bit Windows, FabGuard Executive installer provides option to install 32-bit or 64-bit Executive	Feature		17.04.07-a
FFDC-7669	Add support for Electron Multiplier type 366B in MPx RGAs	Feature		17.04.00-n, 17.04.06-b
FFDC-7664	For LDAP authentication, no longer force secure behavior of default ports	Feature		17.04.05-a
FFDC-7663	Various improvements and fixes in FabGuard Web	Feature		17.04.06-a
FFDC-7659	Modify SECS DLL for Host CMO4	Feature		17.04.06-a
FFDC-7657	Option to not Browse for Tags when connecting to an OPC server	Feature		17.04.05-a
FFDC-7656	Add Tooling commands for Cygnus2	Feature		17.04.05-a
FFDC-7655	Add Lot Start Trigger	Feature		17.04.05-a
FFDC-7653	In PV MassSpec, rename firmware upgrade file to PrismaPro.bin	Feature	1291	17.04.05-a
FFDC-7652	Improve performance of FabGuard Web	Feature		17.04.05-a
FFDC-7651	Initial release of PV MassSpec	Feature		17.04.05-a
FFDC-7650	Added Aligner Chamber to ULVAC NA-1300	Feature		17.04.05-a
FFDC-7649	Tool type GPTC UFO-300	Feature		17.04.05-a
FFDC-7648	Additional user-configurable logistic Tool Area	Feature	1120	17.04.05-a
FFDC-7646	Tool type LPI Robusto 300	Feature		17.04.05-a
FFDC-7645	Tool type TAZMO CSX-3000	Feature		17.04.00-m, 17.04.05-a
FFDC-7644	Tool type AMAT Nokota	Feature		17.04.05-a
FFDC-7643	FDC Industrial Engineering Lot Tracking	Feature	1301	17.04.00-m, 17.04.05-a
FFDC-7642	Calculate FDC Effectiveness and display in Web Dashboard	Feature	1307	17.04.05-a
FFDC-7641	SECS DLL for GPTC UBM UFO Etcher	Feature		17.04.00-m, 17.04.05-a
FFDC-7640	SECS DLL for TAZMO CSX3382NP	Feature		17.04.05-a
FFDC-7639	SECS DLL for AMAT Nokota	Feature		17.04.00-l, 17.04.05-a
FFDC-7638	SECS DLL for Ulvac NA1300	Feature		17.04.05-a
FFDC-7637	SECS DLL for LPI Robusta	Feature		17.04.00-l, 17.04.05-a
FFDC-7636	Add Last 14 Days as a choice for Report train, view and apply	Feature	1373	17.04.05-a
FFDC-7632	Change database sampling to equally space the samples when user selects Count as Sample Type in the filter	Feature	1322	17.04.00-l, 17.04.04-c, 8.5.4 al
FFDC-7630	OPC Bin Scaling	Feature	1367	17.04.05-a
FFDC-7626	For Transceptor2 RGAs, Sensitivity and EM Calibration now has the same options as MPx RGAs	Feature	1105	17.04.05-a
FFDC-7617	Add grid filtering to Tool Bins, Signal Bins, Bin Statistics, Bin Selection in signal Bins, and Dictionary grids.	Feature	1336	17.04.00-l, 17.04.04-c
FFDC-7616	For DAP and DAT file importers, convert non-printable ASCII characters to printable ASCII	Feature	1005	17.04.00-l, 17.04.04-b
FFDC-7615	SECS DLL for TEL Eclipse MarkII	Feature	334	17.04.05-a
FFDC-7614	SECS DLL for Strasbaugh 7AF BackGrinder	Feature	1201	17.04.00-k, 17.04.02-g, 17.04.04-b
FFDC-7613	SECS DLL for Semitool Spectrum	Feature	1018	17.04.05-a
FFDC-7612	SECS DLL for Semitool Magnum	Feature	1018	17.04.00-k, 17.04.02-g, 17.04.04-b
FFDC-7611	Tool type Strasbaugh 7AF BackGrinder	Feature	1201	17.04.05-a
FFDC-7610	Tool type Semitool Spectrum	Feature	1018	17.04.05-a
FFDC-7609	Tool type Semitool Magnum	Feature	1018	17.04.04-a
FFDC-7608	IC6 commands for Tooling	Feature	1352	17.04.00-j, 17.04.04-a
FFDC-7604	Schedule SPC Training Target Shift on the next process	Feature	1330	17.04.00-j, 17.04.04-a
FFDC-7603	The listening mode of the SECS Multiplexer now caches Status Values that are lists	Feature		17.04.04-a
FFDC-7601	In PV MassSpec have a separate row in Hardware configuration for external pressure gauge	Feature	1320	17.04.04-a
FFDC-7599	Add user specified commands to database open	Feature		17.04.05-a
FFDC-7598	Add ATR command to ENI power supply communication	Feature		17.04.02-f, 17.04.03-c
FFDC-7597	If auto selecting Bins in a Run for plotting, only select mass Bins for RGA	Feature		17.04.00-j, 17.04.02-f, 17.04.03-c
FFDC-7594	For MPx RGAs, reset digital outputs on Sensor Connect (all), Run start (only those used in Run), and Step stop (only those used in Step)	Feature		17.04.00-j, 17.04.02-f, 17.04.03-c
FFDC-7591	In Equipment Health Summary report, change some of the vs. Time plots to plot individual records rather than hourly summaries	Feature		17.04.03-c
FFDC-7589	New RGA Genus for MPx series RGAs: SPS ADV	Feature		17.04.00-i, 17.04.02-e, 17.04.03-b
FFDC-7587	Support WinZip and WinRar for automatic Run file archiving and wait for the external programs to return before proceeding the next Run	Feature	1185	17.04.04-a
FFDC-7584	Create PV MassSpec Demo Installer	Feature		17.04.04-a
FFDC-7583	Add Control Job and Process Job to the database	Feature	494	17.04.03-a
FFDC-7581	Various improvements for the Prospector RGA	Feature		17.04.00-i, 17.04.02-d, 17.04.03-b
FFDC-7578	Include faulting Substrate IDs in Alarm For # Substrates, Processes per Substrate are not the same as the median count	Feature	1292	17.04.00-i, 17.04.02-d, 17.04.03-b
FFDC-7575	Add Include / Exclude commands to right click menu of plots in Reports	Feature		17.04.00-i, 17.04.02-d, 17.04.03-b
FFDC-7573	For MPx RGAs, allow the fan to be turned on and off in Sensor Hardware Configuration	Feature		17.04.04-a
FFDC-7572	Show info about the Sensor in RGA Sensor Hardware Configuration	Feature		17.04.04-a
FFDC-7571	For output to TTL channels on IO boards, additional I/O output channels now pulse the output On for 100milliseconds then Off	Feature		17.04.02-d, 17.04.03-b
FFDC-7570	Add Temperature as a peripheral Bin in Quantus and Ocean Optics spectrometers	Feature	1259	17.04.02-d, 17.04.03-b
FFDC-7564	Global preference to only show all database filters	Feature		17.04.04-a
FFDC-7562	In Health plots, if there are no analyses, color the bar gray, not green.	Feature	1242	17.04.04-a
FFDC-7561	Rename the drill downs available with a right click on data in various Reports	Feature		17.04.03-a
FFDC-7560	Allow drill down from Health plot to FOM Health Contributions	Feature	1242	17.04.04-a
FFDC-7557	Minimum User Access Level for changes to Analysis Server configuration	Feature	592	17.04.03-a
FFDC-7556	Rearranged the choices in the right click on Alarm in Alarm Screen.	Feature		17.04.03-a
FFDC-7555	Add a Title to the ECID Window showing Tool ID and IP	Feature	1246	17.04.00-i, 17.04.03-a
FFDC-7554	Global Preference to specify the number of Sensors shown in the Live Data screen	Feature	1052	17.04.03-a
FFDC-7553	Use categories to simplify selecting of Alarm Types in the filter of Alarm Summary Report	Feature	207	17.04.03-a
FFDC-7552	Remove ActiveX as a choice for starting Web Client	Feature		17.04.03-a
FFDC-7551	Remove separate Executive Web configuration and move the settings into Global Preferences	Feature		17.04.03-a
FFDC-7550	Add more robustness to FabGuard IPM Status Web Service	Feature	1152	17.04.00-h, 17.04.02-d
FFDC-7549	Group tabs in web show only Selected Tool is not in a Group if no Group	Feature		17.04.03-a
FFDC-7548	Add a token <LotIDSingle> to allow using only one lot when Lot ID contains multiple lots	Feature	1234	17.04.00-h, 17.04.02-c
FFDC-7545	Improvements for Tune print output	Feature	1209	17.04.03-a
FFDC-7544	In RGA Tune screen, allow changes to RGA ion source and some other parameters while acquiring data	Feature	997	17.04.00-h, 17.04.02-c
FFDC-7542	Add one more line to the top of the plot in database Report view that shows current SPC parameters	Feature		17.04.02-c
FFDC-7541	e-TaiTech O2 sensor communication	Feature	1164	17.04.03-a
FFDC-7540	New RGA Genus for MPx series RGAs: XPR ADV	Feature		17.04.03-a
FFDC-7539	Add I/O output channel Communication I/O Output Error that generates a separate I/O output if generating the original I/O output fails	Feature	996	17.04.00-h, 17.04.02-c
FFDC-7537	Add a sequence of linked EPI triggers that must occur in order or generate a fault	Feature		17.04.03-a
FFDC-7533	Ability to select which drives alarm for Low Computer Disk space in Computer Summary	Feature	1173	17.04.00-g, 17.04.02-c
FFDC-7531	Add I/O output channel I/O Off Generated from Trigger Output	Feature	1202	17.04.00-g, 17.04.02-b
FFDC-7528	Add in Recipe Plan Advanced a choice to auto create Slot ID from Lot's substrate count	Feature	1190	17.04.00-g, 17.04.02-b
FFDC-7527	In Lot tracking use Lot.Slot for Substrate ID if Substrate ID does not exist	Feature		17.04.00-g, 17.04.02-b
FFDC-7525	Allow right click Edit and right click Remove unused Recipes from the Recipe Plan in Multi Tool Recipe Plan Manager	Feature		17.04.03-a
FFDC-7524	Sensor IO status in Sensor Configuration Monitor Screen as a grid	Feature		17.04.00-g, 17.04.02-b
FFDC-7523	Only keep Tech, Engineer, and Supervisor user access levels for PV MassSpec	Feature		17.04.03-a
FFDC-7522	Add Substrate based summaries to the FabGuard Web	Feature		17.04.00-g, 17.04.02-b
FFDC-7521	Add parsing to Required State(String) Secondary	Feature		17.04.02-b
FFDC-7512	Global preference for Email source in analyses	Feature	1094	17.04.03-a
FFDC-7510	In Client in case of version mismatch, ask to install only once	Feature		17.04.02-a
FFDC-7507	PV MassSpec installer ships with .isu file that has No Security	Feature		17.04.00-f, 17.04.02-a

FFDC-7506	Add Executive information to Computer Summary on the web		Feature			1141	17.04.02-a
FFDC-7504	Add a column to Alarm table for Analysis information		Feature			722	17.04.02-a
FFDC-7503	Add Golden Deviation SPC Rule		Feature				17.04.00-f
FFDC-7500	Add Fault Outcome, Fault IO, Fault Code and Fault Comment to Alarms stored in the database		Feature			1065	17.04.02-a
FFDC-7499	Show Pfeiffer's icon for PVMassSpec.exe file		Feature			1097	17.04.02-a
FFDC-7498	Add Extra4 ID and Extra5 ID logistics		Feature				17.04.02-a
FFDC-7497	Build installers with InstallShield 2016 Service Pack 2		Feature				17.04.00-f, 17.04.01-d, 8.5.4 ak
FFDC-7496	Modify SECS DLL for SPTS CPX/LPX		Feature				17.04.02-a
FFDC-7495	Use Connection lock to determine if the user can remove missing sensors		Feature			1132	17.04.01-c
FFDC-7494	Modify tool type ASML Twin Scan		Feature				17.04.00-f, 17.04.01-c
FFDC-7492	Allow Modbus/Serial Register to indicate what Function Code to use to read data from Registers		Feature			845	17.04.00-f, 17.04.01-c
FFDC-7490	Global preference for Database Required Filters add to allow each to be set to Required with no wildcards (Strict), preventing these filters from having any wildcards		Feature			1123	17.04.02-a
FFDC-7487	Modify and rename Web Displays		Feature				17.04.02-a
FFDC-7486	For MPx RGAs, allow user to modify analog input Design Multiplier and Design Offset		Feature				17.04.00-e
FFDC-7485	PrismaPro RGAs now have scan resolution of 20ppa		Feature				17.04.00-e, 17.04.01-c
FFDC-7483	Allow 1ms dwell for QMG700		Feature				17.04.00-e, 17.04.01-c
FFDC-7480	Add user choice on how to calculate tool Throughput and Fault in the Dashboard		Feature				17.04.01-c
FFDC-7477	In Executive web configuration add parameters for Capability		Feature				17.04.02-a
FFDC-7474	Add an IO output event for Database exceptions		Feature				17.04.02-a
FFDC-7473	More logging in Executive database work check		Feature			1073	17.04.00-e, 17.04.01-c
FFDC-7468	Global Preference to only allow minimal capabilities in FabGuard IPM		Feature			1067	17.04.00-d, 8.5.4 aj
FFDC-7466	Add more choices for which Alarms to retrieve in database Reports		Feature			1063	17.04.01-a
FFDC-7465	Set new RGA minimum Exposures by Genus		Feature				17.04.02-a
FFDC-7464	Rename Analysis Change and Apply to OEE and Acquisition and Analysis Changes in Executive Web Configuration		Feature				17.04.00-d, 8.5.4 aj
FFDC-7463	Allow 10 OES spectrometers		Feature			1055	17.04.02-a
FFDC-7462	Global preference to put Manual Runs into the database with Sensor(electronics) serial number in Part ID logistic and LotID is Manual		Feature			1057	8.5.9-a
FFDC-7461	In Reports, retrieving All Alarms looks at Process, EPI and Alerts analyses		Feature			1063	17.04.01-a
FFDC-7457	In Executive Web Configuration renamed Analysis Change and Apply to OEE		Feature				17.04.02-a
FFDC-7456	Add Hold function to Signal Bins		Feature			1049	17.04.00-d
FFDC-7453	RVS DLL for BOE B7		Feature			877	17.04.00-d
FFDC-7452	Show Alarm disposition in a new column when showing a list of Alarms (Alarm tab) for all Reports		Feature			989	17.04.00-d
FFDC-7450	Tool type AMAT OLED EV		Feature			1036	17.04.01-a
FFDC-7449	Split off Golden Trace from the Univariate Envelope model into its own model		Feature				17.04.01-a
FFDC-7448	Make tool communication status be based on the worst of SECS, RV and EDA states.		Feature				17.04.00-c
FFDC-7446	Add Signal Bin function to extract a signal from RGA Tag scans		Feature				17.04.00-c
FFDC-7445	Allow user to set if an FOM from I/O Secondary is required to be analyzed		Feature			1042	17.04.00-c
FFDC-7444	Changed minimum ENI RPDG serial polling rate to 100 ms		Feature			831	17.04.01-a
FFDC-7437	Preference for TOI to get PPID from external database rather than from user input		Feature				17.04.01-a
FFDC-7436	Modify SECS DLL for Lam Alliance		Feature				17.04.01-a
FFDC-7431	When constructing Run file names, turn off Slot or Substrate when not useful only if the other one is turned on.		Feature				8.5.8-g, 8.5.9-a
FFDC-7430	Modify SECS DLL for VPEC		Feature				8.5.8-g, 8.5.9-a
FFDC-7427	Add TCP communication to SDAQ		Feature				8.5.9-a
FFDC-7423	Add a Web display that shows simplified view of tools in the fab sorted by number of red than yellow alarms.		Feature				8.5.9-a
FFDC-7422	Add global Preference for Web Service Input and Output URLs		Feature			680	8.5.9-a
FFDC-7421	Add Step acquisition control function that sets Sensor Tag Reference and Background scans		Feature				8.5.9-a
FFDC-7416	Tool type Tokki B7		Feature			1003	8.5.9-a
FFDC-7414	Add bullseye plots to web Maintenance tabs		Feature				8.5.9-a
FFDC-7413	Add TOI-only view to web		Feature				8.5.9-a
FFDC-7412	SECS DLL and file export with FTP for Host TianMa WH		Feature				8.5.9-a
FFDC-7411	New RGA Genus for MPx series RGAs: XPR 4, CPM 3 ADV, Prospector		Feature				8.5.9-a
FFDC-7410	I/O output Channel for when IPM detects that it disconnected from Executive		Feature				8.5.9-a
FFDC-7409	Generate Alarm if IO output fails		Feature			996	8.5.9-a
FFDC-7408	Add Emission and Multiplier trip counts to the Run for MPx RGAs		Feature			900	8.5.9-a
FFDC-7407	Add Filament 1 and 2 on time and trip counts to the Run for MPx RGAs		Feature			900	8.5.9-a
FFDC-7406	Add support for TOI to SECS DLL for Veeco PSP		Feature			540	8.5.9-a
FFDC-7405	Add support for TOI to SECS DLL for Novellus Concept 2 & Concept 3		Feature			432	8.5.9-a
FFDC-7404	Always calculate Analysis Health if Report decides to reset history based on History parameters		Feature			980	8.5.9-a
FFDC-7403	For TOI Submit and Start on AMAT 200mm Endura, Centura, Producer, send S2F41-LOAD after sending S2F27		Feature				17.04.03-a
FFDC-7402	Add Engineer Lead user		Feature				17.04.04-a
FFDC-7401	Ability to get Mi values into a Run		Feature			953, 994	17.04.01-a
FFDC-7400	Add options for how FabGuard Acquisition re-registers all SECS event reports every 30 minutes		Feature				17.04.05-a
FFDC-7394	Add Ion Source Calibration for CPM RGAs		Feature				17.04.05-a
FFDC-7393	Create a new DAT file importer by making it the same as DAP importer and rename existing DAT importer to DAT Old		Feature				17.04.05-a
FFDC-7388	Make Analysis Name more consistently used in Alarm Summary Report		Feature			950	17.04.05-a
FFDC-7386	Allow " in Lot ID and Substrate ID Report filters to fulfill the requirement that Apply filters apply to more than a specific Lot or Substrate		Feature			963	17.04.05-a
FFDC-7384	Parsing allows forward and reverse delimiter searching for both From and To delimiters		Feature			966	17.04.05-a
FFDC-7383	SECS DLL for SPTS CPX/LPX		Feature			892	17.04.05-a
FFDC-7382	Option in Bin Statistics to use only new data when calculating statistics		Feature				17.04.05-a
FFDC-7381	SPC Report History reset on change in FOM		Feature			952	17.04.05-a
FFDC-7380	In Compare I/O, Acquisition and Analyses show if there are duplicate definitions on a single IPM		Feature			954	17.04.05-a
FFDC-7330	SPC report to check email field upon save for validity		Feature			881	17.04.05-a
FFDC-7056	Lot End Trigger via custom S66F11 message from SECS Host		Feature			782	17.04.05-a
FFDC-6437	When browsing for OPC tags when adding I/O Channels and Tool Bins show the available tags in a tree		Feature			133	17.04.05-a
FFDC-6435	Add multiple LDAP servers with failover capability		Feature			145	17.04.05-a
FFDC-8260	Modbus/TCP as IO Secondary crashes the program		I/O Channels	Bug	8.4.4-a	Medium	18.05.00-q, 18.11.00-b
FFDC-8259	Clicking a Sensor row in the web Tool Table tab does not select the Sensor	After changing tabs to the Tool Table tab, clicking a Sensor row in the second table selects the Tool in the table above.	Web	Bug		Minor	18.11.00-b
FFDC-8258	Analysis Server is positioned wrong in web Tool Layout tab	Analysis Server is positioned incorrectly in the web Tool Layout tab. It needs to be moved to the right to clear the SECS and database icons.	Web	Bug	18.11.01-a	Minor	18.05.00-p, 18.11.00-b, 18.11.01-b
FFDC-8255	Database Task output file has wrong data in Maintenance Summary Report		Executive	Bug	18.11.00-a		2308, 18.05.00-p, 18.11.00-b, 18.11.01-b
FFDC-8254	History Split does not work		Analysis	Bug	18.05.06-a		18.05.00-p, 18.11.00-b, 18.11.01-b
FFDC-8251	For Models that use Metrology, the Filter Reset Figure of Merit parameter did not work correctly		Analysis	Bug	8.5.4-a	Major	2358, 18.05.00-p, 18.11.00-b, 18.11.01-a
FFDC-8250	EPI Stop triggers that were linked to an EPI Start/Stop trigger did not		I/O Channels	Bug	8.4.4-a	Minor	2325, 18.05.00-p, 18.11.00-b, 18.11.01-b
FFDC-8249	Information about Models was not displayed correctly in Active Analysis and Dashboard		Analysis	Bug	8.4.4-a	Minor	18.05.00-p, 18.11.00-b
FFDC-8248	The installer should not remove the FabGuardOpcSecuritySettings.exe file if either OPC DA Client or QMG RGA are selected for installation		installer	Bug	17.04.04-a	Minor	2235, 18.11.00-b
FFDC-8247	In FabGuard Web, the Leak Check link for RGAs was missing		Web	Bug	18.05.00-a	Minor	2336, 18.05.00-p, 18.11.00-b
FFDC-8245	MPH based CPM shows both "Process Gauge Type" and "Process Gauge Range"	MPH-based CPM should only show "Process Gauge Range", while Transpector2-based CPM should only show "Process Gauge Type".	Program UI	Bug	18.05.00-a	Minor	2337, 18.11.00-a
FFDC-8244	In Report export, protect comment in the Report definition from having carriage return characters		General	Bug		Minor	2332, 18.05.00-p, 18.11.00-a
FFDC-8243	Report "Load and View from File" does not load		General	Bug	18.05.05-a	Minor	18.11.00-a

FFDC-8242	Plot does not show data if the color value is above 225	FabGuard selects a symbol that is not visible, this preventing the data from being seen. Likely to occur if color is by "Alpha/Num" rather than "Order".	Program UI	Bug	18.05.00-a	Minor	2328	18.11.00-a
FFDC-8239	The output from an IO Abatement State channel went to logic low momentarily at the end of each FabGuard step when it should have stayed high		Connections	Bug	18.05.03-a	Minor		18.11.00-a
FFDC-8238	In the Connections dialog, deleting a Serial Gauge connection did not work if there were any Serial Sensor connections		Program UI	Bug	8.5.7-a	Minor	2321	18.11.00-a
FFDC-8236	Automatic backup only ever ran once	Previously, FabGuard Executive would automatically perform the backup correctly the first time that it was scheduled to occur after Executive was started, but it would not perform the backup every 24 hours afterwards (unless Executive was restarted, in which case it would again perform the backup only once). Now it will perform the backup once every 24 hours at the scheduled time.	General	Bug	18.05.06-a	Medium	2309	18.11.00-a
FFDC-8235	In reports, the dialog for selecting Custom Color By did not include the last logic		Program UI	Bug	18.05.06-a	Minor		18.11.00-a
FFDC-8234	Action IO output channels did not work correctly for Analysis Server		I/O Channels	Bug	8.4.4-a	Minor	2273	18.11.00-a
FFDC-8233	The "Generate an Analysis Alarm and Output Event Trigger" IO input channel should provide enough information to send SSF73 in a corresponding IO output channel	The corresponding IO output channel can be "/IO On Generated from Trigger Output" or "/IO On/Off Generated from Trigger". SSF69, SSF71, and SSF173 can also be sent, in addition to SSF73. This change is only relevant for output messages sent to a SECS Host.	Connections	Bug	8.0.4-a	Minor		18.11.00-a
FFDC-8231	In reports on Tool Alerts, sometimes ALTX in SSF1 is Alert ID, sometimes, Alert Message and sometimes both	Alert ID and Alert Message are now independently selected. Alert ID is the same as ALID in SSF1. Alert Message is the same as ALTX in SSF1.	Database	Bug	18.05.00-a	Medium	2301	18.11.00-a
FFDC-8229	Recipe Plan parameters disappear from the dialog box after Recipe Plan revert		General	Bug	18.05.00-a	Medium		18.11.00-a
FFDC-8222	Brookside XML imported did not set Substrate Stop Time		General	Bug	18.05.07-c	Minor	2290	18.11.00-a
FFDC-8221	Model Edit does not ask for comment		General	Bug	18.05.07-c	Minor	2261	18.11.00-a
FFDC-8219	SECS log viewer some filters not working	Viewing a SECS log in Client, filters for CEID and RPTID do not work correctly.	Program UI	Bug	18.05.07-a	Medium		18.11.00-a
FFDC-8217	Add option to turn off or on Reject substrates with Alarm to Quick FDC Protect by Iteration	Creating SPC reports by Filter iteration assumed if the substrates had alarms to reject it from training. This could have been confusing because the SPC reports would not have been created at all and users might have thought it was missing or a bug. Under the Advanced button, there is a new option "Reject substrates with Alarms" to check on or off.	Analysis	Bug		Minor		18.05.00-b, 18.11.00-a
FFDC-8216	Update "SqlServer Create Catalog.sql" to turn off password policy and expiration when creating the FabGuardUser login	This is only for new MS SQL Server installations.	Program UI	Bug		Minor		18.11.00-a
FFDC-8213	TOC links are the wrong color in Report Task output	A Report Task that produces a separate Table of Contents displays the links to individual Reports in blue instead of the theme's contrasting caption color.	Program UI	Bug	17.10.00-a	Minor		18.11.00-a
FFDC-8206	SECS Multiplexer could crash if it received an incorrectly constructed S2F37 or S5F3		Connections	Bug	7.1.2-q	Critical	2218	17.10.00-y, 18.05.00-n, 18.11.00-a
FFDC-8205	For all EPIs generate a fault only once for Check channels	If the user creates an I/O channel to check the time of an EPI, create only one alarm, rather than an alarm every minute, if the check fails. An alarm at the end of EPI will still be created.	Analysis	Bug		Medium	2232	17.10.00-y, 18.05.00-n, 18.11.00-a
FFDC-8204	Restoring a missing IPM did not work if network identification was by computer name	Attempting to restore a missing IPM would give the error "Backup does not exist", even if the backup did exist. This bug did not exist if network identification was by computer IP address.	General	Bug	17.10.06-a	Medium		18.05.00-n, 18.11.00-a
FFDC-8203	Signal Bin highlight does not work for Bins above the selected Bin	Make sure if you select a Signal Bin in a Recipe in the Signal Bin tab, that if that Signal Bin get's used in another Signal Bin it gets highlighted in green. If you restore list it corrects itself.	Program UI	Bug	18.05.00-a	Minor	2244	17.10.00-y, 18.05.00-n, 18.05.07-c
FFDC-8202	Group Maintenance tab not sorted by Tool ID	The Group Maintenance tab in web does not always sort IPMs in Tool ID order	Web	Bug	8.5.8-g	Minor	2251	18.05.00-n, 18.05.07-c
FFDC-8201	For Postgres database, Executive could take a very long time to retrieve the information needed for OEE, Configuration Change, Effectiveness, etc. display in FabGuard Web	This could result in the information displayed in FabGuard Web for Alarm Pareto, Chamber State, Maintenance, OEE, Configuration Change, Effectiveness, etc. being several hours old. This bug had no affect if the Web Background Information Generation preference for "OEE and Configuration Change" was set to Never. Oracle and SQL Server databases were not affected by this bug.	Web	Bug	17.04.00-b	Medium		18.05.07-c
FFDC-8200	Task error for each specified IPM not connected	Changed Tasks that operate on a set of specified IPMs to produce an error message for each specified IPM that is not connected when the Task is executed.	General	Bug		Minor		18.05.00-n, 18.05.07-c
FFDC-8199	If Lot Substrate Gap if the gap is less than 0, the value in Extrad3 needs to be less than 0	Lot Substrate Gap holds the value in minutes and therefore prior to change if the gap is less a minute, the value is 0. After change, the value will be "-0" if the gap is less than 0.	General	Bug	18.05.00-a	Minor	1301	18.05.00-n, 18.05.07-c
FFDC-8198	Layout editor does not scroll a background image correctly	In Client Configure Layout, if a user-supplied background image has been supplied, the editor does not correctly scroll the image along with the tools.	General	Bug	8.4.4-a	Minor		18.05.00-m, 18.05.07-c
FFDC-8197	Summary tasks that email PDF files do not email a file for Executive Summary		General	Bug	8.4.4-a	Minor		18.05.00-m, 18.05.07-c
FFDC-8196	Web caption "Maintenance data is not enabled" should be "No access to Tool"	Web tabs show the incorrect error message "Maintenance data is not enabled" when Maintenance data is turned off but also no access to view the Tool. They should say "No access to Tool".	Program UI	Bug	18.05.07-a	Minor		18.05.00-m, 18.05.07-c
FFDC-8195	In Windows 7 and Server 2008R2, the FabGuard, Executive, and Multiplexer installers did not correctly configure the option to run all FabGuard AutoStart Services in a designated user account		Installer	Bug	17.10.01-a	Minor		18.05.07-a
FFDC-8194	Filters were ignored in Alert Summary Report when doing "Get available from database"		Database	Bug	17.10.00-a	Minor	2240	17.10.00-y, 18.05.00-m, 18.05.07-b
FFDC-8193	In Advanced Connections, the "Output format for NA data" field did not save changes		Connections	Bug	17.10.04-a	Minor	2224	18.05.07-b
FFDC-8192	Modify SECS DLL for ASML PASS500	For TOI, the S2F41 SETUP_START command should send "B" rather than "S" for WFR_CSS_INTEGRITY.	Connections	Bug	8.5.8-a	Minor	660	18.05.07-b
FFDC-8189	The Correlation model calculated the Pearson correlation coefficients incorrectly		Analysis	Bug	8.5.4-f	Medium	1409	18.05.07-a
FFDC-8188	SPC Chart Types for Moving Average, Moving Drift, and Derivative used 2 more historical data points that they should have		Analysis	Bug	8.3.9-a	Minor		18.05.07-a
FFDC-8187	In IO output channels that use Executable, the path to the executable file should work if it contains spaces		I/O Channels	Bug	8.3.6-a	Minor		18.05.07-b
FFDC-8186	The Analysis database table did not work correctly in MS SQL Server	This bug only affected version 18.05.07-a.	Database	Bug	18.05.07-a	Medium		18.05.07-a
FFDC-8184	Merge button in Recipe Summary does not properly move with dialog resizing		Program UI	Bug	18.05.00-a	Minor	2217	18.05.00-m, 18.05.07-a
FFDC-8181	Data was not inserted into the Analysis and Analysis State tables for Oracle, Postgres, and partitioned SQL Server databases	Unpartitioned SQL Server was not affected by this bug. This bug existed only in version 18.05.06-a.	Database	Bug	18.05.07-a	Medium		18.05.06-a, 18.05.07-a
FFDC-8179	Misbehaving DNS can cause incorrect connections between IPM and Executive	When using Identify by Computer Name, prevent connection if performing reverse and forward DNS lookup do not return consistent results. This protection is not necessary when using Identify by Computer IP.	General	Bug	18.05.00-a	Minor		18.05.07-a
FFDC-8160	FabGuard Help would not find pdf files during search	FabGuard Help would not find pdf files during search.		Bug				18.05.00-m, 18.05.07-a
FFDC-8158	Chamber logistics captions in web are in the wrong place on a rotated tool	Captions that show Lot, Slot, etc. on an acquiring chamber in web are moved to the right 100 pixels if the tool is configured with load locks on the right (rotated).		Bug				18.05.00-l, 18.05.06-a
FFDC-8155	Analysis Name filter in Alarm Summary Report does not work			Bug			2195	18.05.00-l, 18.05.06-a
FFDC-8154	No comment for a single Report Enable/Disable and Lock/Unlock			Bug				18.05.00-l, 18.05.06-a
FFDC-8152	The Maintenance tab in FabGuard Web did not show previous values after upgrading from below 17.04.04 to 17.04.04 or higher or from below 17.04.06 to 17.04.06 or higher	For partitioned databases, fixing this requires running the appropriate prep scripts prior to the upgrade.		Bug				18.05.00-l, 18.05.06-a
FFDC-8151	Cannot change SPC History Parameter for Moving Average			Bug				18.05.00-l, 18.05.06-a
FFDC-8150	In FabGuard Web, the Maintenance bars for each Tool icon were green when they should have been yellow or red			Bug			2187	18.05.06-a
FFDC-8149	Model View does not show any dialog			Bug				18.05.00-l, 18.05.06-a
FFDC-8148	Missing ability to assign Real Time analysis I/O output to Chamber level			Bug			2153	18.05.06-a
FFDC-8146	Retrieving All Alarms as part of SPC Report may not actually retrieve all Alarms			Bug			2142	18.05.06-a
FFDC-8145	Filter may not have a drop down for which alarms to retrieve when user looks at all Filters in Report View Modified			Bug				18.05.06-a
FFDC-8143	Remove carriage returns from plot title display in Reports	Carriage returns are due to data returned by the tool being an array or having carriage returns in it. Replaced with " , ".		Bug			2179	18.05.06-a
FFDC-8142	Relay1 was not correctly tied to Emission status on Step Start or Stop			Bug			1763	17.10.00-y, 18.05.00-l, 18.05.05-b
FFDC-8141	Sensitivity and EM calibration screen would not open for RGAs that did not have an EM			Bug				18.05.06-a
FFDC-8140	Software Help load and search did not work properly in IE 11	Software Help load and search did not work properly in IE 11. There was a bug in RoboHelp 2017 update 2 that introduced incompatibility with IE 11. A fix provided by Adobe was applied and functionality tested for Edge, Chrome, IE 11, and Firefox browsers.		Bug				18.05.06-a
FFDC-8137	Global Preference for Web Service Output URL did not correctly append slash before sending			Bug				18.05.06-a
FFDC-8135	Board of Executives did not correctly show that the computer was disconnected			Bug				18.05.06-a
FFDC-8132	Model Visualize cannot switch tabs			Bug				18.05.06-a
FFDC-8131	Fix need for metrology in the database when creating Models that have outputs	Should not require metrology since Model can be built with only FOM outputs.		Bug			1409	18.05.05-a
FFDC-8122	In Monitor and Maintenance screens, data acquisition could stop earlier than intended			Bug			2141	18.05.05-a
FFDC-8121	IO output channels for Lot-by-Lot SPC should be allowed at the Chamber-level	Previously they were only allowed at the Tool-level.		Bug				18.05.05-a
FFDC-8118	Executive's user interface did not correctly label IPMs that were attempting to connect but had the wrong version number			Bug				18.05.05-a

FFDC-8117	TRM verification sometimes incorrectly decided that the Current recipe was different than the Golden recipe	Previously, if the Golden and Current recipes had the same number of elements and they differed only in elements that were ignored or excluded by range, TRM verification sometimes incorrectly reported that the recipe were different. This happened because the longest common substring algorithm decided that adding empty cells resulted in longer common substrings, which was true but not desirable. Now, if the Golden and Current recipes have the same number of elements, they are compared element-by-element. This prevents incorrect failures, but may make it more difficult to see what has changed when things are really different. No changes have been made if the Golden and Current recipes have a different number of elements; the longest common substring algorithm is still used.	Bug	1909	18.05.05-a
FFDC-8113	The targets for Emission or Multiplier state should be set to the current state for steps that start or stop with Emission or Multiplier As Is	Previously, the targets for Emission or Multiplier state were not set for steps that start or stop with Emission or Multiplier "As Is", which resulted in the Bin for Ionizer State have incorrect values if the Emission or Multiplier had never been turned on or off since the program started.	Bug	2106	18.05.00-j
FFDC-8112	For RGAs that display partial scans while acquiring data, the Ionizer State in the scan was incorrect while acquiring data	This affected values displayed in the scan plot when plotting partial pressure or ppm while acquiring data, but not when plotting raw current and not when viewing a Run that was acquired previously. This bug was only noticeable if the scan started at mass 0. Note that the Bin for Ionizer State was still correct, because Bin data is only updated when a scan completes.	Bug	2106	18.05.05-a
FFDC-8107	The API for Reports did not use the Chamber ID filter correctly		Bug	2110	17.10.00-y, 18.05.00-j
FFDC-8106	Alarm drilldown to report should include Time Range options for Last 7 Days and Last 30 Days		Bug		17.10.00-y, 18.05.00-j
FFDC-8100	Should not send fanState command to MPx RGAs with firmware version below 1.2.0	Previously, FabGuard sent the fanState command to all firmware versions, which resulted in an error and sensor disconnection if the firmware version was below 1.2.0.	Bug		17.10.00-y, 18.05.00-i, 18.05.04-b
FFDC-8099	Tune width target for XPR3+ RGAs should be 1.0 amu	Previously the tune width target for XPR3+ was 0.9 amu.	Bug		17.10.00-y, 18.05.00-i, 18.05.04-b
FFDC-8093	Make Report API accept either FROM or TO time argument as the basis for relative time ranges	FabGuard Web API for Report execution now accepts either TimeFrom (750) or TimeTo (751), whichever is specified and nonzero, as the basis for relative time calculations such as "any time after", "from 12 hours before to 12 hours after", etc. (TimeHow = 21, 22, or 50 through 62).	Bug		18.05.00-i, 18.05.04-b
FFDC-8092	FabGuard IPM could crash if a trigger with a secondary for Lot Substrate Count occurred before the Lot Start trigger and before any Runs had been acquired for the lot		Bug		18.05.04-a
FFDC-8087	Generate URL for a Report can create an invalid URL	Client has always allowed the user when connecting to Executive to type the computer name with leading backslashes. If a user later selects a Report in Report Manager and clicks Generate URL, the generated URL is invalid, beginning with http://\, Client has been changed to remove leading backslashes or slashes from the entered Executive computer name.	Bug		17.10.00-y, 18.05.00-i
FFDC-8086	Generating Gap of Lot by Tool and Overlap of Lot by Tool plots in Tracking and Utilization reports caused the program to crash	This affected both plots generated in the Client or IPM user interface and plots generated by Executive in a task.	Bug		18.05.04-a
FFDC-8085	TOI sometimes failed if using external database		Bug	1785	17.04.00-af
FFDC-8082	In the Acquisition Dictionary dialog, Generic One was not included in the list of Tool Types		Bug	2077	18.05.04-a
FFDC-8081	Tool ID for DAT and DAP importers should be DATXX for DAT or XX for DAP		Bug	1647	18.05.04-a
FFDC-8080	Real Time Data Viewer could stop responding	This was most likely to happen if two FabGuard Clients attempted to view real time data from the same sensor on the same IPM at the same time.	Bug		18.05.04-a
FFDC-8079	Control Job ID and Process Job ID did not work in the User Entered Logistics dialog		Bug		18.05.04-a
FFDC-8077	SECS output messages to Temescal UEFC-5700 and Unaxis Versalock tools did not work		Bug	1925	18.05.00-i
FFDC-8076	The Analysis Rejection Enable Trigger did not work correctly	Previously the Analysis Rejection Enable Trigger only worked if it occurred while the FabGuard chamber that was stopped, but it should work if the FabGuard chamber is stopped or waiting for a trigger or acquiring.	Bug	1792	18.05.04-a
FFDC-8069	Database performance tracking should execute in a separate session		Bug	1943	18.05.03-a
FFDC-8068	Recipes that had only placeholder Tool Bins for a specific connection type caused an error when executed	A Run created from such a Recipe had an alarm for "Mismatch between Tool Bin cache and Run ..." and the data in some or all Tool Bins was not correct. Such a Recipe was unusual, which is why this problem occurred rarely.	Bug	2037	18.05.04-a
FFDC-8067	The Database Delete task should not try to drop partitions in Run table that are newer than crossover time	This bug caused an error in the Database Delete task when it tried to drop a partition that did not exist in the Run table. The task still worked correctly, but the error was confusing. This could only happen on installations that previously used a version before 8.5.7 and were then upgraded to version 8.5.7 or higher.	Bug		18.05.00-i
FFDC-8066	Force rules for Fault Code generator	The following rules must be adhered to: 1) All Components must be the same length; 2) All Components must be unique; 3) No blank Components; 4) Every topic must have a selection when creating Fault Code, so if the topic does not have a selection on entry, the first one is selected.	Bug	1945	18.05.02-e
FFDC-8059	Logout to close of Client did not terminate Executive session		Bug	2052	18.05.04-a
FFDC-8058	Saving Sensor Hardware Configuration for CPM generates of MPx RGAs gave an error		Bug		18.05.04-a
FFDC-8057	Prevent user from changing RGA IonizerType until firmware allows it		Bug		17.10.00-x, 18.05.00-h, 18.05.02-d
FFDC-8055	The Figure of Merit Health Summary report had incorrect values in the Density tab		Bug		18.05.04-a
FFDC-8054	Should inform user in FabGuard Web and create IPM log file entry if TOI fails due to error using external database		Bug	1785	18.05.04-a
FFDC-8053	SECS output messages to Temescal UEFC-5700 and Unaxis Versalock tools did not work		Bug	1925	18.05.03-a
FFDC-8052	In RGAs that have Analog Inputs 8 and 9, the Trip settings did not work	This change requires that the RGA firmware be version 1.5.0 or higher.	Bug	2005	18.05.04-a
FFDC-8049	The Analysis Rejection Enable Trigger did not work correctly	Previously the Analysis Rejection Enable Trigger only worked if it occurred while the FabGuard chamber that was stopped, but it should work if the FabGuard chamber is stopped or waiting for a trigger or acquiring.	Bug	1792	18.05.03-a
FFDC-8048	The RGA's Rod Polarity could not be set to Reverse		Bug	2047	18.05.00-g, 18.05.02-c
FFDC-8042	Web tab caption incorrect when switching between an IPM and an Analysis Server	In FabGuard Web, when selecting between a connected IPM and a connected Analysis Server, the Tool tab says "Tool" for the AS and "Server" for the IPM - the reverse of what it should.	Bug		17.10.00-x, 18.05.00-g, 18.05.02-b
FFDC-8040	<Recipeld> placeholder is defined for FabGuard Recipe ID incorrectly	<FgRecipeld> is the correct placeholder.	Bug		18.05.00-e, 18.05.02-a
FFDC-8039	Oracle statistics gathering script is very slow	Added parallelism to stat gathering script.	Bug	2035	18.05.03-a
FFDC-8035	For MPx RGAs, the Detector Type was incorrectly changed to Faraday Cup if it had an Electron Multiplier	This bug existed only in version 18.05.02-a, which was not generally released.	Bug		18.05.03-a
FFDC-8034	The Maintenance tab in FabGuard Web could show old values after upgrading from a lower version number		Bug		18.05.03-a
FFDC-8032	MI percent in Web billboard hard to read		Bug	1947	18.05.02-a
FFDC-8029	PrismaPro RGAs should not reset digital outputs when connecting to the RGA or when leaving any calibration screen	Starting in version 17.04.04-a, the digital outputs were reset (set to logic low) when connecting to the RGA and when leaving any calibration screen, which was unnecessary and could be inconvenient.	Bug		18.05.02-a
FFDC-8028	MPx RGAs should not reset digital outputs when connecting to the RGA or when leaving any calibration screen	Starting in version 17.04.04-a, the digital outputs were reset (set to logic low) when connecting to the RGA and when leaving any calibration screen, which was unnecessary and could be inconvenient.	Bug		18.05.03-a
FFDC-8024	Latest health is not properly sent to FPS		Bug	1991	17.04.00-af, 17.10.00-x, 18.05.00-g
FFDC-8016	The Generic XML file importer did not work for XML files that contained only Figures of Merit and no time series data for Bins		Bug		18.05.03-a
FFDC-8014	Bullseye in Web Overview tabs grow small if captions are long	Bullseye plots in Executive Overview and Group Overview become very small if the captions are longer than 8 characters. As a result, captions overlap and are unreadable. Changed to use letter captions A, B, ... and display a legend if any names are longer than 8 characters.	Bug		18.05.00-f
FFDC-8013	Clicking the same bar chart twice in Web Overview displays blank history		Bug		18.05.00-f
FFDC-8008	64-bit FgClient Loading a Reports and Model dbf file crashes client	Warning included in topic "Report and Manager Main Screen" for all references to loading and saving database files, version 18.05.03-a.	Bug		18.05.02-a
FFDC-8003	Fix the difference between Report Grid and Report Advanced dialogs		Bug		18.05.00-f, 18.05.02-a
FFDC-8002	Fix the difference between the grid in Recipe Display tab and tree in summary tab.		Bug		18.05.00-f, 18.05.02-a
FFDC-7991	Log does not allow for association of various messages with a trigger		Bug		18.05.01-b
FFDC-7990	RVS DLL should be more flexible in determining Sensor Kind from SETSENSORDIRECT message	The RVS 7.2 and 5.3 DLLs now determine SensorKind from SENSORATYPE=(XYZ) or UNITYTYPE=(XYZ) in the SETSENSORDIRECT message, where XYZ is RGA or OES, etc.; this works with or without parentheses around XYZ. Previously, only SENSORATYPE=(XYZ) was supported.	Bug	1960	18.05.01-a
FFDC-7989	Modify SECS DLL for Host SK Hynix M14	Allow Host's reply to S1F3 (sent by FabGuard to Host) to be S1F124 or S6F69 with System Bytes that do not match the System Bytes in S1F3.	Bug	1840	18.05.02-a
FFDC-7988	SECS DLL for Tegal 9XX should send PPID in Binary format	In S7Fx SECS messages (used primarily for TRM), PPID should be sent in Binary format rather than ASCII format.	Bug	1909	18.05.02-a
FFDC-7985	Make click on Maintenance and Effectiveness bullseyes in Executive and Group Overview drill down not same level	"Changed the behavior of click on the Maintenance and Effectiveness bullseyes in Executive and Group Overviews to drill down to the Group or Tool representing the dot, rather than same level to the Executive or Group."	Bug		18.05.01-b

FFDC-7984	Drill up from Health bulls-eye uses an incorrect filter	"Clicking a white dot on a Health bulls-eye provides the ability to drill up to a Health Summary report or drill down to the Health components of the dot. Due to a bug, drilling up for Group in Executive Overview incorrectly specifies a Tool ID and Chamber rather than *."	Bug		18.05.01-b
FFDC-7983	Advanced Connections Output ALTX maximum Length, Visa Polling Wait and Visa Data Age fields did not save changes.	Entering new values in the ALTX Value field did not save user entries when clicking OK. Same goes for Visa Polling Wait and Visa Data Age value fields.	Bug		18.05.01-a
FFDC-7982	Group name title displayed incorrectly in FabGuard Web	Using the Navigation pane to select a Group whose name contains spaces or special characters causes the name to be garbled in the Group tab title.	Bug		18.05.01-a
FFDC-7978	Check that maximum step duration is less than the maximum number of data points in the Run		Bug	1950	17.10.09-a
FFDC-7976	Fix MCD creation if starting from scratch.		Bug	1931	18.05.00-c
FFDC-7967	Dashboard does not correctly use the global preference for which Acquisition triggers to include for days 2 to 7	The global preference is Web tab-Utilization source Acquisition Triggers	Bug		18.05.00-c
FFDC-7964	Analysis Quality Summary report did not output correct information to file when executed by a task		Bug		18.05.01-a
FFDC-7963	Modify SECS DLL for Host SK Hynix M14	FabGuard should accept S6F69 from the Host as a reply to S1F3, rather than S1F4. The format of S6F69 should be identical to the SEMI SECS-II standard S1F4. The S6F69 reply message must have the same System Bytes as S1F3, because all reply messages must have the same System Bytes as the primary message they are a reply to. Also, FabGuard should not send S9F3 (unknown Stream), S9F5 (unknown Function), or S9F9 (transaction timeout) messages to the Host.	Bug	1840	18.05.00-b
FFDC-7962	Lot Start Trigger should have no affect if a lot with the same Lot ID already exists	Previously, if a Lot Start Trigger occurred on an existing lot, Lot-by-Lot SPC was performed and the lot was removed (the lot would be created again if another process with the same Lot ID started). This also caused the option in Recipe Plan Advanced to auto create Slot ID from Lot's substrate count to reset the count.	Bug		18.05.00-b
FFDC-7961	Data could not be acquired from MPx RGAs with firmware version 1.4.1 or lower	Attempting to acquire data resulted in an error and the sensor being removed from FabGuard. This bug existed in FabGuard versions 17.10.05-a and higher. Transceptor2 RGAs and MPx RGAs with firmware version 1.4.2 or higher were not affected.	Bug		18.05.00-b
FFDC-7960	Option in RVS communication to not use the standard formula for output SVIDs did not work correctly		Bug		18.05.00-b
FFDC-7959	Runs could not be acquired in Scans mode from MPx RGAs with firmware version 1.4.1 or lower	Attempting to acquire Runs in Scans mode resulted in an error and the sensor being removed from FabGuard. Runs could be acquired successfully in Bins mode with any MPx firmware version. This bug existed in FabGuard versions 8.5.6-a and higher. Transceptor2 RGAs and MPx RGAs with firmware version 1.4.2 or higher were not affected.	Bug		18.05.01-a
FFDC-7958	Strip pipe character out of user entered Fault Comment sections of Report Output configuration	"Also, allow empty rows in between user entered text."	Bug	1910	17.10.00-y, 18.05.00-b
FFDC-7957	The Sensor IO status grid in the Sensor Configuration Monitor Screen did not work correctly for Transceptor2 RGAs	Analog inputs were not displayed correctly. Relays could not be opened or closed.	Bug	1908	18.05.00-a
FFDC-7954	Fix syntax in MS SQL Server script for PK Constraint for AnalysisState and EpiState tables		Bug		18.05.00-a
FFDC-7953	The Effectiveness table in FabGuard Web for Analysis Server should show only configured Tools		Bug		18.05.00-a
FFDC-7952	FabGuard Acquisition could crash when it attempted to delete lots older than 24 hours	"Anyone using versions 17.10.09-c, 17.10.09-d, or 18.05.00-a should upgrade to 18.05.00-b immediately."	Bug		17.04.00 ac, 17.10.00-u, 18.05.00-a
FFDC-7951	The Guide button launched browser with incorrect URL		Bug		18.05.00-a
FFDC-7949	The database record cache file was read incorrectly if it contained any entries created by versions before 17.04.00	Under normal conditions the database record cache file FabGuardCacheRecord.dbc is empty. It becomes non-empty if the connection to the database is lost, in which case it is used to temporarily store data that should be stored in the database. When the database connection is successfully established, FabGuard IPM reads the FabGuardCacheRecord.dbc file and moves entries from this file to the database.	Bug		18.05.00-a
FFDC-7948	Billboard display in FabGuard Web did not include information from some tools for some users		Bug		18.05.01-a
FFDC-7947	Update the grid in Expert Logic analysis after setting output		Bug		17.04.00 ad, 17.10.00-u, 18.05.00-a
FFDC-7946	Analysis Server should use filters for Chamber ID and Chamber Description when attempting to automatically apply reports and models	Previously, Analysis Server ignored filters for Chamber ID and Chamber Description, which meant that the report or model was automatically applied even if these filters did not match the Run created by importing from file.	Bug	1884	17.10.00-u, 18.05.00-a
FFDC-7945	Archive Copy and Archive Move tasks could fail to find some Runs to act on if the Task was trying to act on Runs newer than the database's Crossover Time		Bug		17.10.09-d
FFDC-7943	In SPC reports on Metrology, the Get button did not work for filters in the Metrology table		Bug		17.10.09-d
FFDC-7941	The image for the Managed Multiplexer was not displayed correctly on the Tool Screen of FabGuard IPM		Bug		18.05.01-a
FFDC-7937	HTTP and PROMIS HTTP Trigger Secondaries did not work	"This bug was introduced in version 17.04.00-z and 17.10.00-q, when fixing a bug in OPC and HTTP Trigger Secondaries."	Bug	1872	17.10.09-c
FFDC-7936	64-bit Executive never ungrayed the link in FabGuard Web to Upgrade Executive and all IPMs after the System Upgrade was installed		Bug		17.04.00_aa, 17.10.00-r, 17.10.09-b
FFDC-7935	The Fault Code Setup dialog did not work correctly for partitioned MS SQL Server database		Bug		18.05.01-a
FFDC-7934	Changing a Report's SPC parameters did not work for Postgres database	The symptom was that the FabGuard user interface allowed changes to be made, but saving the report to the database did not save any changes to SPC and related parameters. Other Report parameters, such as filters, were saved correctly. This affected both editing an existing Report and creating a new Report. This bug only affected Postgres databases. This bug existed only in FabGuard versions 17.10.08-a through 17.10.09-c. Fixing this bug requires upgrading FabGuard software.	Bug		17.10.00-r, 17.10.09-b
FFDC-7933	In Sensor Configuration Monitor the IO grid could sometimes become so wide that only the first column was visible		Bug	1849	17.04.00_aa, 17.10.00-r, 17.10.09-b
FFDC-7932	Insert procedures in Oracle script did not work	When another problem in the main Oracle script was fixed, a bug was introduced that caused insert procedures not to compile and therefore attempts by FabGuard to insert records into partitioned tables failed. This bug existed only in Oracle database scripts distributed with FabGuard versions 17.04.00-aa, 17.10.00-r, 17.10.00-s, 17.10.09-b, and 17.10.09-c. If you never used any of these scripts, you do not need this fix. If you did use one of these scripts, you need to rerun the script that contains this fix for your version number. You do not need to upgrade any FabGuard software to get this fix.	Bug		18.05.01-a
FFDC-7930	EPis and Mis were inserted into Oracle database with swapped values for Recipe ID, Control Job, and Process Job	This affected Equipment Performance Indicators and Maintenance Indicators that had non-empty values for any of these three logistics. Fixing this requires re-running the main Oracle database script or recompiling in Oracle the procedure ObjExtractEpi with the fix in the script. Note that only Oracle database scripts distributed with FabGuard versions 17.04.04-a through 17.10.09-b had this bug.	Bug		17.10.00-r, 17.10.09-b
FFDC-7929	The EPis created for Industrial Engineering Lot Tracking had incorrect Sequence ID and Recipe ID		Bug	1301	18.05.00-a
FFDC-7928	For some types of RGAs, in Sensor Configuration Monitor the IO grid did not include the channel with the highest number		Bug	1845	17.10.09-b
FFDC-7927	Include VC++ 2015 Redistributable in Executive installer	The HTML-to-PDF converter initially used in Executive version 17.10.06-a requires the VC++ 2015 Redistributable. This change includes the VC++ 2015 Redistributable in the Executive installer, in case the VC++ 2015 Redistributable is not already installed on the Executive computer.	Bug	1842	18.05.00-a
FFDC-7926	TRM comparison returns failure even when recipes are the same, under some conditions	This is an improvement to the fix in release history number 8193.	Bug	1841	17.10.00-r, 17.10.09-a
FFDC-7924	Do not limit the number of columns in the Data Unique tab of Summary Reports	Previously the limit was 500 columns.	Bug		17.10.09-a
FFDC-7923	Improve efficiency of inserting into database by FabGuard IPM for Postgres	The change is in the main script for the Postgres database. This should reduce the amount of memory and CPU consumed by the Postgres database.	Bug		17.04.00-aa, 17.10.00-r, 17.10.09-a
FFDC-7921	Gray CPM startup and shutdown buttons if another CPM on the same chamber is already performing startup or shutdown		Bug	1830	17.04.00-z, 17.10.00-q, 17.10.09-a
FFDC-7920	The values of the Recipe Plan Advanced parameters Slot ID Source and Which Logistical Information to use based on Trigger displayed in FabGuard Client were not correct	This meant that changing these values in FabGuard Client did not correctly make the corresponding changes in FabGuard IPM.	Bug		17.10.09-a
FFDC-7918	Fixes to External Total Pressure Gauge readings		Bug	1835	17.10.00-q, 17.10.09-a
FFDC-7916	The task Summary Task - Fab (all Executives) did not generate its output correctly		Bug		17.10.09-a
FFDC-7915	Option in Recipe Plan Advanced to auto create Slot ID from Lot's substrate count should only apply to Triggers that are configured to use the Slot ID logistic		Bug		17.10.09-a
FFDC-7914	Verify in Recipe Plan did not work correctly if any Real Time Analyses had Meaning = State		Bug		17.10.09-a
FFDC-7913	Do not limit number of records due to available memory when exporting Figures of Merit or EPis directly to file	This limitation is not necessary when exporting Figures of Merit or EPis directly to file because each record is deleted from memory immediately after it is exported.	Bug		17.10.09-a
FFDC-7912	Various fixes to Analysis Quality Summary report		Bug		17.10.09-a
FFDC-7911	Editing Dictionary in a grid deletes OPC entries		Bug	1825	17.10.09-a

FFDC-7908	When saving the registry as part of a backup task, do not ask for user input if InficonRegistry.hiv file needs to be overwritten	This is a fix for a problem that should never occur, because the old InficonRegistry.hiv file is deleted before the new one is saved. The request of user input occurs only if the attempt to delete the old InficonRegistry.hiv file failed and only on Windows Vista/Server2008 or higher. Note that this change should prevent the request for user input, but it will not necessarily cause the InficonRegistry.hiv file to be overwritten successfully.			
FFDC-7907	Changing the Minimum User Access Level for Analysis Server configuration did not work		Bug		17.10.09-a
FFDC-7901	Do not show options for Relay 1 in Step Start or Step Stop	Relay 1 is no longer used by PV MassSpec; the PrismaPro firmware uses it to indicate Emission status.	Bug	1763	17.10.08-a
FFDC-7892	Make TRM work correctly with tool recipes that contain XML prohibited characters	Invalid characters &, <, >, ", and '	Bug		17.10.08-a
FFDC-7888	Force RGA's External Pressure Gauge units to be the same for data and trip levels		Bug		17.10.08-a
FFDC-7883	OPC Trigger Secondaries did not work correctly if two Secondaries used the same Tag in the same OPC Server	A similar problem could occur if two HTTP Trigger Secondaries used the same URL	Bug	1771	17.10.08-a
FFDC-7881	Update Model Bin display name to show Sensor Type, Bin Type, and user name	Models have to be edited for the change to take effect. Does not effect analysis of names of Bins Created in Runs when Model is applied.	Bug	715	17.04.00-y, 17.10.00-p, 17.10.07-c
FFDC-7879	Force Model Bin definitions in Models to be based only on the first Sensor	The user can enable Bin Statistics for every Sensor attached to a Chamber in a single Model, but creation of Model Bins (Signal Bin definitions in a Model) is limited only to the primary Sensor, almost always the TDS sensor. If you need to create Models Bins for TDS2, create a separate Model for each Sensor type.	Bug	902	17.10.08-a
FFDC-7877	Allow Database Migrate to work after crossover date		Bug	1112	17.10.08-a
FFDC-7875	Calculate FabGuard Recipe unique for results retrieved from the database based on full path and name	Include/Exclude in Report plots do not include/exclude FabGuard Recipes if they have the same name but different path. To save space, FabGuard only shows name, but sometimes uses the path and name for internal calculations. We changed it so the Include/Exclude tree always shows the full path and name. On the plot we will continue to only show the name due to lack of space. Thus, it may still look like there is the same Recipe name with different colors.	Bug	1772	17.10.08-a
FFDC-7871	TRM had incorrect comparison of fields for Range limits, especially if the Golden and the Current values were the same		Bug	1795	17.04.00-y, 17.10.00-p, 17.10.07-c
FFDC-7867	Show better error if the Report is renamed or removed and the user tries to access the Report by drill down from an alarm in Alarm Manager		Bug	1784	17.10.08-a
FFDC-7863	Last 6 Output parameters in Connections Advanced dialog were not saved when leaving the dialog		Bug		17.10.08-a
FFDC-7862	Fix date order of group effectiveness history in web	Group Effectiveness History in FabGuard Web displays in wrong date order.	Bug		17.10.08-a
FFDC-7861	Sampling for Probability in Database Filters, First and Last does not work		Bug	1781	17.10.08-a
FFDC-7859	The Maintenance tab in FabGuard Web displayed information only for Maintenance Indicators that had changed within the last 24 hours	MIs that have changed within the last 90 days should be displayed in the Maintenance tab in FabGuard Web.	Bug	1779	17.10.08-a
FFDC-7858	Acquisition Trigger filter in SPC Reports is not being saved		Bug	1780	17.10.08-a
FFDC-7856	IO output for Alarm On Output, Alarm On/Off Output, and Alarm Red On Output did not work correctly		Bug		17.10.08-a
FFDC-7855	For RGAs that support it, fix bug in user interface for LeadIn being an integer multiple of 256 milliseconds		Bug		17.10.08-a
FFDC-7833	Reading filament status from MPx RGAs did not work correctly		Bug		17.10.07-a
FFDC-7829	More accurate column headers for RGA digital input/output channels in Sensor Hardware Configuration		Bug	1626	17.10.06-a
FFDC-7828	Duplicate key value violates unique constraint cs_pk_dashboard		Bug	1727	17.10.06-a
FFDC-7826	Data returned by Ebara A/AA pumps was not converted to numerical values correctly		Bug	1683	17.04.00-x
FFDC-7825	In Signal Bins, the Binary Operator to Extract Bit does not allow a value of 32		Bug	1712	17.10.06-a
FFDC-7824	In Signal Bins, after selecting the top line of the RPN Mathematical Expression, Paste of a copied line does not work		Bug	1712	17.10.05-c
FFDC-7816	Missing Extra 2 and Extra 3 in Color By drop down for EPI Reports		Bug	1705	17.10.06-a
FFDC-7814	When creating a Recipe from a Run, adding or editing Bins did not work		Bug	1702	17.10.06-a
FFDC-7811	Recipes that were configured to export Runs did not create export files for both Bins and Scans	Starting in version 17.10.05-a, when automatically exporting Runs acquired by a Recipe two files were supposed to be generated: one for bins and one for scans (if scans exist).	Bug		17.10.06-a
FFDC-7810	Recipes that were configured to export Runs did not export Runs when executed by a Sequence		Bug	1699	17.04.00-w, 17.10.00-m, 17.10.05-b
FFDC-7808	For RGAs that support it, ensure that LeadIn is in units of milliseconds in Scans and Bins modes	Note that the actual LeadIn used by the RGA firmware is an integer multiple of 256 milliseconds. LeadIn values entered by the user in Scans or Bins are rounded to the nearest multiple of 256 milliseconds when sent to the firmware. Also, if the user entered value is greater than 0, the value sent to the firmware is greater than or equal to 256 milliseconds. For example, user entered values of 0, 57, 195, 2600, and 3000 result in actual LeadIn times of 0, 256, 256, 2560, and 3072 milliseconds, respectively.	Bug		17.10.00-m, 17.10.05-a
FFDC-7803	The DAP importer should not prepend DAP to Tool ID extracted from the filename		Bug	1647	17.10.05-a
FFDC-7802	IO output thread got stuck if an IO output channel was configured to send Figure of Merit data via HTTP for an SVID that did not exist in a Run		Bug	1615	17.10.06-a
FFDC-7800	The Task Manager dialog in FabGuard Client would not open if any task contained status information was longer than 250 characters		Bug		17.10.05-a
FFDC-7798	Miscellaneous user interface fixes for Analysis Server		Bug		17.04.00-v, 17.04.02-h, 17.10.00-l
FFDC-7797	Analysis Server crashed on start	This bug was introduced in version 17.10.04-a; only Analysis Server was affected.	Bug		17.04.00-v, 17.10.00-l
FFDC-7787	When creating/editing a model, the Get available from database option did not work for the Metrology Description filter		Bug		17.10.05-a
FFDC-7785	The Standard/Inverted setting of RGA digital output channels was not read correctly	The setting was read as Standard, even if it was Inverted. Note that writing this setting was done correctly, only reading was incorrect.	Bug		17.10.00-k, 17.10.04-b
FFDC-7784	For RGAs, ensure that analog outputs and digital outputs are assigned only to mass channels that are used in the current scan		Bug		17.10.05-a
FFDC-7781	DAT and DAP importers should work correctly if a file with the same Tool ID exists in two File Connections that use different input folders	Note that having two files in the same input folder with the same Tool ID is not allowed.	Bug		17.10.00-k, 17.10.04-b
FFDC-7780	Fixes to Sensor Summary in FabGuard Web		Bug		17.10.04-b
FFDC-7779	PBI importer should not assume that Judgment is always the last column in the .csv file		Bug		17.10.04-b
FFDC-7775	Require the mouse to move by 10 pixels when moving or zooming individual axes		Bug	1640	17.04.00-u, 17.10.00-k, 17.10.04-b
FFDC-7772	Real Time Expert System output of State to Sensor IO did not work		Bug		17.10.04-a
FFDC-7771	Alarm drilldown on web mislabelled Extra 4 and 5 as Extra 3.	From the Alarm tab on FgWeb, clicking on an analysis alarm and drilling down to the informational page will show 3 "Extra 3 ID" it should be Extra 1-5.	Bug		17.10.04-a
FFDC-7770	Alarm drilldown on web mislabelled some new logistics	From the Alarm tab on FgWeb, clicking on an analysis alarm and drilling down to the informational page will show 4 logistics as "undefined". These should be "Fault Code", "Fault Comment", "Fault I/O" and "Fault Outcome."	Bug		17.10.04-a
FFDC-7769	Better handling of mistakes when leaving Report Enable dialog		Bug	1614	17.10.04-a
FFDC-7767	For RGAs, Step Start on Digital Input 1 selection did not work correctly	If Step Start on Digital Input 1 was selected, it was changed to Digital Input 0.	Bug	1605	17.10.00-j
FFDC-7765	In TRM, changing the heirarchy of a recipe removed the contents of the recipe		Bug		17.10.03-c
FFDC-7760	Starting and stopping Acquisition Steps using an RGA's Digital In 0 and Digital In 1 did not work		Bug	1595	17.10.04-a
FFDC-7758	FabGuard Web Refresh button was missing icon		Bug	1587	17.10.06-a
FFDC-7757	In FabGuard Web, the links pane should have scroll bars		Bug	1588	17.10.04-a
FFDC-7755	Upgrading RGA firmware did not work		Bug	1582	17.10.04-a
FFDC-7754	In I/O Channels, ModBus/TCP sets IP address to 0.0.0.0 if the Register is 3		Bug	1583	17.10.00-l, 17.10.03-b
FFDC-7745	Dragging a Report out of a Model or Folder might not work under some conditions		Bug		17.10.04-a
FFDC-7743	Report Filters for Tool ID, Chamber ID, and Chamber Number were ignored during execution of a Report Task		Bug	1571	17.04.00-s, 17.10.00-h
FFDC-7739	After RGA total pressure plate calibration set Emission and Multiplier to After Acquisition settings in Sensor Hardware Configuration		Bug	1563	17.04.00-s, 17.10.00-h
FFDC-7733	Executive should query partitioned database to retrieve information for OEE and Acquisition and Analysis Changes one partition day at a time	Previously this query was done for 6 days at once, which could be very slow for partitioned databases. Note that "OEE and Acquisition and Analysis Changes" was called "Analysis Change and Apply" in version numbers before 17.04.02.	Bug	1514	17.04.00-r, 17.10.00-g, 17.10.02-b
FFDC-7732	TOI Provision triggers did not send correct Port information from the trigger to the tool, which caused TOI to fail for tools that require Port	The triggers involved were "Tool Operator Interface Recipe Provision Trigger" and "Tool Operator Interface Recipe Provision and Start Trigger". In general, this bug caused TOI Provision from trigger to fail on tools that have more than one load port.	Bug		17.04.00-r, 17.10.00-g, 17.10.02-b
FFDC-7730	Industrial Engineering Lot Tracking might not have worked correctly in some conditions	In addition to fixing this potential bug, the display of Active Lots now contains more information.	Bug		17.10.00-g, 17.10.02-b

FFDC-7729	Sorting of Tool Bins with certain Connection types was not correct	The consequences of this were usually minor: The order of Tool Bins in a list could change. The consequences were significant under one condition: If there were Tool Bins with Connection = SECS (to the tool) and with Connection = SECS Gauge in the same Run and the Advanced I/O Input Trace Separation was "Dependent, split into four" or "Dependent, group by I/O and three Data", then the data values assigned to some Tool Bins could have belonged to different Tool Bins.	Bug	1491	17.10.00-g, 17.10.02-b
FFDC-7728	When adding Tool Bins from an IO board analog input using a list, ScaleLow and ScaleHigh should both be set to 0	Note that setting ScaleLow=ScaleHigh causes the value in the Tool Bin to equal the unscaled value from the IO board. Previously, when adding Tool Bins from an IO board analog input using a list, ScaleLow was 0 and ScaleHigh was 1, which caused the data to be scaled as if its range was 0 to 1, which was undesirable because most analog inputs have a range of -10 to 10. Previously, it was still possible to manually change ScaleLow and ScaleHigh after adding a Tool Bin from the list; now doing this manually is unnecessary if the unscaled value from the IO board is wanted.	Bug		17.04.00-r, 17.10.00-g, 17.10.02-b
FFDC-7727	No warning when dragging a Report out of a Model or Folder.		Bug	1536	17.10.02-a
FFDC-7724	Modify Function=159 option for sending 55F1 output to SECS Host so that ALCD=0xFC for moderate faults and ALCD=0xFD for critical faults		Bug	1302	17.10.02-a
FFDC-7723	The File Import thread retries opening the file to be imported if file open fails		Bug		17.10.00-f, 17.10.01-c
FFDC-7722	Model Apply did not add Figures of Merit to the database		Bug		17.04.00-q, 17.10.00-f, 17.10.01-c
FFDC-7720	Reports and Models that were trained using the Any Time Before time range did not have the correct Specific training time range when edited		Bug		17.10.02-a
FFDC-7719	Renaming a model should rename its reports rather than deleting them		Bug		17.10.00-e, 17.10.01-a
FFDC-7718	In Executive, protect against sending Client a machine that has empty msToolid and msMachinelp		Bug		17.10.00-e, 17.10.01-b
FFDC-7716	Figures of Merit added to database using Batch Bin Processing could not be retrieved in some conditions		Bug		17.10.02-a
FFDC-7715	Alternate web displays come up blank		Bug		17.10.02-a
FFDC-7713	Modify LGD TCP connection		Bug		17.10.02-a
FFDC-7712	For Ebara E series pumps, the Cooler3 Temperature parameter occurred twice in the droplist		Bug		17.10.01-a
FFDC-7711	The settings for Trip Actions, Levels, and Flex Mode for Analog Input 1 on MPx RGAs were lost after upgrading from versions below 8.5.8		Bug		17.10.01-a
FFDC-7709	Missing IPMs should be included in the Manage IPMs table in FabGuard Web		Bug		17.10.01-a
FFDC-7708	The PVMassSpec.scn configuration file was not read correctly when upgrading from versions 17.04.01 through 17.04.07		Bug		17.10.01-a
FFDC-7707	The FabGuard.scn configuration file was not read correctly when upgrading from versions 17.04.01 through 17.04.07		Bug		17.10.02-a
FFDC-7704	Incorrect Life Time timers were listed for some types of RGAs in Sensor Hardware Configuration		Bug		17.10.01-a
FFDC-7693	FabGuard crashed if there were any Time Since Trigger IO channels that used OPC or HTTP connections or Latch or Snapshot IO channel Secondaries that used OPC or HTTP connections		Bug		17.10.01-a
FFDC-7692	MPH HPR with Extended IO should allow Digital Outputs other than Relay 1 to be used in Steps		Bug		17.04.00-o, 17.10.00-c
FFDC-7691	For PrismPro RGAs, Step Start and Step Stop should use Digital 2 and Digital 3 rather than Relay 2 and Relay 3		Bug		17.10.01-a
FFDC-7690	Modbus/TCP and Inficon/TCP connections did not work if there was more than one TCP connection		Bug	1480	17.10.01-a
FFDC-7689	Add Peripheral Gauge Type to CPM Hardware configuration		Bug		17.10.00-b
FFDC-7682	The Alarm Report missing History Reset value did not include the name of the Report		Bug	1471	17.10.00-a
FFDC-7674	Batch Bin Processing did not insert new Figures of Merit into an MS SQL Server database after the Crossover Time		Bug	1436	17.04.07-a, 17.10.00-a
FFDC-7670	Step Start Mode and Step Stop Mode droplists were filled incorrectly		Bug		17.04.07-a
FFDC-7668	Modify RVS DLL for BOE B7		Bug	877	17.04.00-b
FFDC-7667	Metrology import does not work with Postgres database		Bug	1423	17.04.05-a
FFDC-7666	The dialog for External Pressure Gauge configuration had two columns for the gauge rather than one column		Bug		17.04.05-a
FFDC-7665	Executive crashed if there were Tool Alerts on any IPMs		Bug	1399	17.04.00-n, 17.04.07-a
FFDC-7662	IO output channels should not URL encode payload if using HTTP POST or PUT		Bug		17.04.04-a
FFDC-7661	When uploading exported Run to FTP site, create and change to multiple sub-directories on FTP site one at a time		Bug		17.04.06-a
FFDC-7660	Modify SECS DLL for Host TianMa WH		Bug		17.04.06-a
FFDC-7658	Extra1, Extra2, Extra3, Extra4, Extra5 logistics could not be retrieved correctly from EPI tables		Bug		17.04.00-n, 17.04.06-a
FFDC-7654	Task Manager network traffic too high		Bug	1389	17.04.05-a
FFDC-7647	Incorrect Bin connection for alias placeholder Bins		Bug	1392	17.04.05-a
FFDC-7634	Modify RVS DLL for BOE B7		Bug	877	17.04.00-l, 17.04.04-c
FFDC-7633	Possible program crash for SECS connection types SECS-I Raw TCP Client/Server in FabGuard IPM and Multiplexer if there was a socket error while receiving a message		Bug		17.04.00-l, 17.04.04-c
FFDC-7631	The Backup Configurations task did not backup Preferences (.isp file)		Bug		17.04.05-a
FFDC-7629	For LDAP authentication with a Server Account, use UID or CN in search		Bug		17.04.00-l, 17.04.04-c
FFDC-7628	Loading external database connections did not work correctly when upgrading to a higher version number		Bug		17.04.05-a
FFDC-7627	The SECS Gauge connection did not work correctly if more than one chamber on the same IPM used it		Bug	1360	17.04.05-a
FFDC-7625	For CPM3 RGA, Timed Bakeout did not work correctly		Bug	1361	17.04.05-a
FFDC-7624	When loading Alarm and Alert Summary Reports with data, Alarm Pareto and similar plots are not shown		Bug	1359	17.04.05-a
FFDC-7623	For CPM3 RGAs, the value reported for the Peripheral Bin for Heater State was incorrect		Bug	1348	17.04.05-a
FFDC-7622	For MPx RGAs, using Manual Delay in a FabGuard Run or Recipe Step did not work correctly		Bug		17.04.05-a
FFDC-7621	The Signal Bin for Area in a scan was negative		Bug		17.04.05-a
FFDC-7620	The Sensor IO labels in the Recipe Sequence dialog were incorrect		Bug		17.04.05-a
FFDC-7619	CPM3 label orifice as mTorr in Sensor Hardware Configuration		Bug	1356	17.04.05-a
FFDC-7618	In TRM if no Tool ID is specified, use information hierarchy to list possible Tool IDs		Bug	1333	17.04.00-l, 17.04.04-c
FFDC-7607	Fix Report Lot Duration table and file output		Bug	1334	17.04.00-j, 17.04.04-a
FFDC-7606	Fix the Web banner calendar picker in IE11		Bug	1345	17.04.04-a
FFDC-7605	Auto assign Report Names correctly in Model on edit		Bug	1338	17.04.00-j, 17.04.04-a
FFDC-7602	Allow IPM's web service to have multiple clients		Bug	1323	17.04.04-a
FFDC-7600	Retrieving System Alarms in reports other than the Alarm Summary report did not work correctly and leaked memory		Bug		17.04.00-j, 17.04.02-g, 17.04.04-a
FFDC-7596	In the History and Analysis Health dialog of SPC reports, the Shift Target when Reset checkbox should be allowed for all Reset types		Bug	1312	17.04.04-a
FFDC-7595	In Run/Recipe create/edit, the Browse button for Tool Bins from IO boards did not include Fast Data boards		Bug	1311	17.04.04-a
FFDC-7593	A large number of NIDAQ A/D error alarms was generated if an IO board was missing from the computer		Bug	1305	17.04.04-a
FFDC-7592	The NIDAQ integrity check did not work correctly		Bug		17.04.00-j, 17.04.02-f, 17.04.03-c
FFDC-7590	In FabGuard Web, drill down from Health Bullseye to Figure of Merit Health did not work correctly		Bug		17.04.04-a
FFDC-7588	Retrieving logistics from an external database did not work if SQL logging was enabled		Bug		17.04.00-j, 17.04.02-e, 17.04.03-b
FFDC-7586	Database Report Tasks that include Equipment Health Summary reports created table of processes rather than table of groups		Bug	1276	17.04.03-b
FFDC-7585	Potential crash in IPM when executing lot-level counting		Bug		17.04.03-a
FFDC-7582	Fix memory leak in Executive for tasks that are rescheduled after execution		Bug		17.04.04-a
FFDC-7580	The installer for FabGuard IPM, SC, and DS incorrectly changed the user-selected SECS DLL type None to Applied Materials Endura 200mm		Bug		17.04.00-i, 17.04.04-a
FFDC-7579	The XPR ADV Genus for MPx series RGAs was read from the RGA incorrectly		Bug		17.04.00-i, 17.04.04-a
FFDC-7577	The user interface for Trim in Bin Statistics did not allow a trim time longer than 100 seconds		Bug	1283	17.04.00-i, 17.04.02-d, 17.04.03-b
FFDC-7576	Importing Runs into the database did not work correctly if there was more than one Run per process		Bug		17.04.04-a
FFDC-7574	Prevent automatic acquisition start in FabGuard Explorer		Bug	1273	17.04.04-a
FFDC-7569	If an enabled report's Outcome is set to Do nothing, an email is still sent		Bug	1261	17.04.04-a
FFDC-7568	More complete errors in log file when uploading exported Run to FTP site		Bug		17.04.04-a
FFDC-7567	Modify SECS DLL for Host TianMa WH		Bug		17.04.04-a
FFDC-7566	Retrieving Runs in Multi Run Viewer using database ignored Sensor Type and FabGuard Recipe filters		Bug		17.04.04-a
FFDC-7565	Get available from database did not work for the Sensor Type and FabGuard Recipe filters		Bug		17.04.04-a
FFDC-7563	Should not include System - in list of Alarm Types when selecting Alarms in Alarm Summary Report		Bug		17.04.04-a

FFDC-7559	In FabGuard Web, the Maintenance tab for a specific tool could include information from other tools	Bug	1779	17.04.00-i, 17.04.03-a
FFDC-7558	Extracting values from HTTP Trigger Secondaries did not work unless the entire path to the desired tag was used	Bug		17.04.00-i, 17.04.03-a
FFDC-7547	Should not display information about Filament 2 for RGAs that only have one filament	Bug		17.04.00-h, 17.04.02-c
FFDC-7546	For CPM3 RGAs, the value displayed for CPM Turbo Pump On Time was too small by a factor of 3600	Bug		17.04.02-c
FFDC-7543	Acquisition Dictionary Table View's columns do not sort	Bug	1225	17.04.03-a
FFDC-7538	The grid in the TRM dialog did not resize	Bug	1226	17.04.03-a
FFDC-7536	Task reports were missing images when using the FabGuardOutput virtual directory to store files	Bug		17.04.03-a
FFDC-7535	The icon for SECS status was not correct if the IPM used both Equipment and Host SECS channels	Bug		17.04.03-a
FFDC-7534	IO was not restarted after opening and then closing the SECS or RVS configuration dialog	Bug		17.04.03-a
FFDC-7532	Cannot drill down from Tracking and Utilization from Process report	Bug	1200	17.04.00-g, 17.04.02-c
FFDC-7530	Modify RVS DLL for BOE B7	Bug	877	17.04.00-g, 17.04.02-b
FFDC-7529	Fix bug in Help with Training installer that prevented it from launching correctly	Bug	1181	17.04.02-b
FFDC-7526	For Transpector2 RGAs, the user interface did not allow Trip settings for analog inputs to be modified	Bug	1183	17.04.02-b
FFDC-7520	Fix problems related to editing Acquisition Dictionary	Bug	1169	17.04.02-a
FFDC-7519	Allow adding I/O Primary from list for ALIDs	Bug	1168	17.04.03-a
FFDC-7518	Three Minimum Security Level parameters could be set to incorrect values under some conditions	Bug	1162	17.04.00-g, 17.04.02-a
FFDC-7517	User interface for IO Channels with TCP connection did not work correctly	Bug		17.04.03-a
FFDC-7516	PV MassSpec 17.04.02-a (release only) did not even try to connect to any sensors	Bug		17.04.03-a
FFDC-7515	Global preference for Apply Required Filters cannot be changed from Always	Bug	1159	17.04.00-g, 17.04.02-a
FFDC-7514	In Clone and Restore, wait 10 seconds after creating directory and before creating junction	Bug	1153	17.04.03-a
FFDC-7513	PV MassSpec changes	Bug		17.04.02-a
FFDC-7511	For CPM 3, the Sensor Hardware Configuration dialog incorrectly labelled the Process Pressure Gauge as having its range in Torr rather than mTorr	Bug	1134	17.04.00-g, 17.04.01-d, 17.04.02-a
FFDC-7509	Allow adding I/O Primary from list for CEIDs	Bug	1150	17.04.03-a
FFDC-7508	For MPx RGAs, user configuration of Design Multiplier and Design Offset for analog inputs did not work correctly	Bug		17.04.02-a
FFDC-7505	Ion Source Calibration for CPM RGAs done in user interface might not work correctly if the inlet being used had a Pressure Reduction Factor different than 1	Bug	1124	17.04.00-f
FFDC-7501	The DAP and DAT file importers sometimes reimported lines in the file that had already been imported	Bug	1005	17.04.00-f
FFDC-7493	Do not automatically perform NIDAQ integrity check	Bug		17.04.02-a
FFDC-7491	Cannot type OPC Server and Tag in IO Channels	Bug	1121	17.04.01-c
FFDC-7489	Reverting to previous revisions of IO Channels, Recipe Plans, Recipes, and Reports did not work correctly under some conditions	Bug	791	17.04.00-e, 17.04.01-c
FFDC-7488	Allow to Browse from a list in I/O Event Channel setup	Bug	1121	17.04.00-e, 17.04.01-c
FFDC-7484	The S2F41 SET_LIGHT_TOWER command in the SECS DLL for AMAT Mirra did not work	Bug	1051	17.04.00-e, 17.04.01-c
FFDC-7482	External Database Connection settings were not saved	Bug		17.04.01-c
FFDC-7481	Alarms from IO Output failures did not work	Bug	996	17.04.02-a
FFDC-7479	Acquiring data from Cygnus2, ICB, and SQM160 did not work	Bug		17.04.02-a
FFDC-7478	PVMS software did not start because the SpEdaDll.dll file was missing from the installer	Bug		17.04.02-a
FFDC-7476	Global preference regarding how to order logistics in Report output to file	Bug	1078	17.04.02-a
FFDC-7475	History Reset in SPC Reports did not work	Bug		17.04.02-a
FFDC-7472	Various cosmetic fixes in FabGuard Web	Bug		17.04.01-b
FFDC-7471	Remove unexpected dots and/or lines from plots	Bug		17.04.01-b
FFDC-7470	Task calendar now displays only tasks belonging to the specific Executive the FabGuard Client is connected to	Bug		17.04.01-b
FFDC-7469	Prevent PVMS installer from installing wrong FabGuard type if run from command line with unexpected parameters	Bug		17.04.02-a
FFDC-7467	Modified ion source parameters were sometimes not saved to QMG RGAs	Bug		17.04.00-d
FFDC-7460	In Fault Email use logistics names overridden by global preference	Bug	1060	17.04.00-d
FFDC-7459	MCD should be available in the PVMS user interface	Bug		17.04.01-a
FFDC-7458	Crash when exiting FabGuard is SECS is on.	Bug		17.04.02-a
FFDC-7455	Potential crash when starting FabGuard Acquisition after upgrading from a version below 8.5.4-m	Bug		17.04.00-d
FFDC-7454	Allow Bins from Scan when there are no scans or data in Acquisition from Scratch and Recipe edit.	Bug		17.04.00-d
FFDC-7451	FabGuard IPM did not remove lots older than 24 hours for Lot-by-Lot SPC	Bug	859	17.04.00-d
FFDC-7447	The File Importer Thread heartbeat failure alarm could occur unintentionally if a user was editing IO Connections or Recipe Plan or IO Channels for a long time	Bug		17.04.00-c
FFDC-7443	The status of a currently executing task was sometimes not displayed correctly	Bug		17.04.01-a
FFDC-7442	The alarm for a NIDAQ analog input having Constant value for over 300 seconds should only occur once per error condition	Bug		17.04.00-c
FFDC-7441	In a database report, drill down from an alarm to time series data did not work	Bug		17.04.00-b
FFDC-7440	Fixes and improvements to Metric Comparison Report	Bug		17.04.00-b
FFDC-7439	Database report queries of processes with alarms did not work correctly for processes that started before the crossover time and had alarms after the crossover time	Bug		17.04.00-b
FFDC-7438	Various fixes to FabGuard Web	Bug		17.04.00-b
FFDC-7435	In FabGuard Web, force bullseye plots to be rounder for tools that have fewer than 12 chambers	Bug		17.04.01-a
FFDC-7434	Exception handling was missing from several file function calls	Bug		17.04.01-a
FFDC-7433	Add to database scripts: a commented out line for setting crossover date if planning to migrate data from another database	Bug		17.04.00-b
FFDC-7432	The tool layout in FabGuard Web displayed missing images for chambers that are turned off in FabGuard IPM under some conditions	Bug		8.5.9-a
FFDC-7429	The 'Any Time After' database filter was listed twice if the Allow Time Range 'Any Time Before' preference was set to No.	Bug		8.5.9-a
FFDC-7428	Tool Overview in web shows Chambers with no Sensors	Bug		8.5.8-g, 8.5.9-a
FFDC-7426	For MPx RGAs, FabGuard should tell the RGA to ignore analog and digital output channels that are not attached to Sensor Bins in the Run for which data is being acquired	Bug		8.5.9-a
FFDC-7425	When editing a Model, processes added for model testing via the FilterTest tab were ignored	Bug		8.5.9-a
FFDC-7424	Validate multi-Report grid edit of Acquisition Triggers DB filter	Bug	1015	8.5.9-a
FFDC-7420	Passive TCP connection types did not display their connection state correctly	Bug		8.5.9-a
FFDC-7419	Editing a specific File Connection and then pressing the Add Cancel button caused the selected File Connection to be deleted	Bug	1005	8.5.9-a
FFDC-7418	Slot ID values of '01' through '09' were not plotted in correct numerical order in some reports	Bug		8.5.9-a
FFDC-7417	Editing a model using the Reload Data option did not automatically put data into Model Bins	Bug		8.5.9-a
FFDC-7415	For MPx RGAs, loading the sensor configuration settings from file did not work	Bug		8.5.9-a