Release Notes

Chromeleon 7
Chromatography Data System

Software Version 7.2 SR5 • March 2017

thermoscientific

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1 Introduction

The Thermo Scientific™ Chromeleon™ 7 Chromatography Data System (CDS) is a new-generation chromatography data system that provides the fastest path from samples to results. Building upon market-leading innovations of prior Chromeleon software releases – such as dynamic interactive data displays, an integrated database for rapid data retrieval, and spreadsheet-based reporting – Chromeleon 7 features a modern user interface, comprehensive new tools for peak detection, and an innovative workflow management framework, all of which speed up learning, simplify operation, and deliver results with greater efficiency than any other chromatography data system.

This new version, Service Release 5 of Chromeleon 7.2 CDS, provides updated instrument control for instruments from Thermo Fisher Scientific and other vendors. This release also adds significant enhancements in data security and integrity, compliance, and enterprise administration as well as improved software rollout tools for use in enterprise environments. In addition the system performance in a number of different areas has been significantly improved. There are many other new features and improvements which are listed in more detail below.

The software is developed using modern software development tools and technologies that improve performance, sustainability and extendibility.

Backward compatibility with Chromeleon 6 is maintained to the greatest practicable extent and further improved with this release, to provide an easy migration path.

2 Other Documentation

Chromeleon is provided with many other documents that will help you to learn more about the software. Their scope is described in the Document Overview, which is delivered in printed form with the Chromeleon installation media, but also available in electronic form on the installation disk in the Documents folder.

Please refer to the Installation Guide for information regarding:

- System Requirements
- Supported Operating Systems and Databases
- Required Third-Party Software
- Compatibility with Previous Versions
- Installing and configuring the Chromeleon software

Tip: The Glossary describes Chromeleon-specific terms and common abbreviations used throughout the documentation.

3 What's New in Chromeleon 7.2 SR5

Chromeleon 7.2 SR5 implements a large number of new features with a lot of options and new possibilities including optimizations to its Wide Area Network performance in order to fully enable large global installations. This document will only give a short overview of all features without going into much detail. For more details, refer to the Online Help.

3.1 Thermo Scientific Instrument Drivers

This chapter lists updated Thermo Scientific™ drivers added to Chromeleon 7.2 SR5. For details on supported options, required licenses, installation, and control, refer to the Online Help or the List of Supported Instruments document found on the Chromeleon 7.2 SR5 DVD.

3.1.1 Thermo Scientific TRACE 1300E – Updated Driver [SWFR-2336]

With this Service Release, support is added for the Primary Auxiliary Gas Module.

Note: The TRACE™ 1300E GC only supports a Primary Auxiliary Gas Module and not a Secondary module.

Note: Support for this module requires an update of the GC firmware to FW Pack 29.

3.1.2 Thermo Scientific Analog to USB Adapter (A2D) – Updated Driver [SWFR-1476]

Maintenance Update 7.2 SR4 MUa introduced control for the new dual-channel models of A2D. This new model of the A2D adds a second data channel and four extra relays. The two data channels and eight relays can be assigned to a single instrument or can be shared between multiple instruments.

3.1.3 Thermo Scientific Integrion – Updated Driver [SWFR-2074, SWFR-2134]

Maintenance Update 7.2 SR4 MUa introduced support for dual-system configurations. With Maintenance Update 7.2 SR4 MUb, support has been expanded to include more Dionex IonPac™ columns and other Dionex consumables for the Integrion™ platform.

3.1.4 Thermo Scientific Vanquish HPG Flex – New Driver [SWFR-1905, SWFR-2064]

Maintenance Update 7.2 SR4 MUb introduced support for the Thermo Scientific Vanquish Binary Pump Flex (VF-P10-A). This pump has a pressure limit of 1034 bar and is compatible with all other Vanquish modules.

3.1.5 Thermo Scientific TRACE GC 1110 – Updated Driver [SWFR-1323, SWFR-1324, SWFR-1325, SWFR-1326]

With Maintenance Update 7.2 SR4 MUb the Thermo Scientific TRACE GC 1110 driver was updated to add support for the following modules:

- DID (Discharge Ionization Detector)
- PID (Photo-ionization Detector)

- Methanizer
- Valve Oven

3.1.6 Thermo Scientific Vanquish Charged Aerosol Detector – Updated Driver [SWFR-2057]

Maintenance Update 7.2 SR4 MUb introduced support for the new transducer board for the Thermo Scientific Vanquish Charged Aerosol detector (VH-D20-A, VF-D20-A). This update also allows for the new board to be installed in situ.

3.1.7 Thermo Scientific AS-AP and UltiMate WPS-3000 – Updated Drivers [SWFR-1283, SWFR-1329]

Since Maintenance Update 7.2 SR4 MUb, a blank injection will now trigger the inject relay, allowing mass spectrometers run with SII to execute start up and shut down instrument methods on the UltiMate™ WPS and AS-AP platforms. This feature was previously available (since Chromeleon 7.2 CDS SR2) for the Thermo Scientific Vanquish Autosampler.

3.2 IQ/OQ/PQ

3.2.1 HPLC IQ Enhancements [SWFR-2104, SWFR-2141]

Since Maintenance Update 7.2 SR4 MUb, HPLC IQ has been updated as follows:

- Support for Vanquish Binary Pump Flex
- Support for the previously released Omni Cell for the ECD-3000RS

Further details are available from the *HPLC Instruments IQ V.4.00 Release Notes* available in the **\Documents** folder of this release.

3.2.2 HPLC OQ/PQ Enhancements [SWFR-2104]

Since Maintenance Update 7.2 SR4 MUb, HPLC OQ/PQ has been updated to support the Vanquish Binary Pump Flex.

Further details are available from the *HPLC OQ PQ V 9.00 Release Notes* available in the **\Documents** folder of this release.

3.3 Firmware

This release adds support of new firmware for new and updated instruments and modules. For an overview of the firmware versions available with this release, please refer to the document \Documents\List of Supported Instruments – Chromeleon 7.2 SR5.pdf on the Chromeleon disk.

3.4 Third Party Instrument Drivers

This chapter lists new and updated drivers added to Chromeleon 7.2 SR5. For details on supported options, required licenses, installation, and control, refer to the Online Help and the List of Supported Instruments document found on the Chromeleon 7.2 SR5 DVD.

3.4.1 SofTA 2300 ELSD – New Driver [SWFR-609]

This release introduces a driver for the SofTA 2300 and 1300/1400 instruments. The 1300/1400 instrument is not compatible with European 50Hz power and therefore only available in Service Mode. Please contact your local Thermo Fisher Scientific representative if you are interested in controlling 1300 or 1400 modules.

3.4.2 Agilent LC – New Driver [SWFR-1784]

Chromeleon 7.2 SR5 includes a new suite of drivers, provided by Agilent Technologies, for control of Agilent LC instruments. By using drivers provided directly by the hardware vendor, Agilent Technologies and Thermo Fisher Scientific are able to ensure the fastest time to market for drivers for new Agilent instruments, tighter integration with Chromeleon and an improved user experience for Agilent LC instruments. The drivers are available as an optional component in the installation.

The new driver supports the vast majority of current Agilent LC instruments. For a complete list of modules, see the List of Supported Instruments.

For more details about the drivers see Agilent documentation on the Chromeleon 7.2 SR5 DVD in folder \Packages\Agilent Chromeleon Drivers\Documentation.

Note: This new driver will be the future platform for Agilent LC instruments. Thermo Fisher Scientific recommends using the new driver where possible. During a transition period the Agilent ICF driver provided by Thermo Fisher Scientific will still be available. However, the driver will be phased out in the next major version of Chromeleon 7. In addition the existing, obsolete Agilent 1200 driver will receive no further updates.

3.4.3 Agilent ICF – Additional Modules

This release of Chromeleon includes the Agilent Instrument Control Framework version A.02.04 which supports the latest HPLC instruments from Agilent, specifically the Infinity II series. The Agilent ICF driver has been tested with additional modules. For a complete list of supported modules see the List of Supported Instruments. For latest release information provided by Agilent Technologies, including release notes and validation certificates, please see \Packages\Agilent Instrument Control Framework\Documentation.

Note: Thermo Fisher Scientific recommends migrating to the new Agilent Chromeleon driver as soon as possible. During a transition period the Agilent ICF driver provided by Thermo Fisher Scientific will still be available. However, the driver will be phased out in the next major version of Chromeleon 7.

3.4.4 Agilent 6850/6890 GC – Additional Options [CM7-21508]

Support has been added for the auxiliary temperature and pressure controls.

3.5 Security and Infrastructure

3.5.1 Improved Security for XVault and local Data Vaults [SWFR-2114]

This service release introduces a dedicated database administration account “ChromeleonAdminLogin” that will be used by the system for administration purposes on local Chromeleon Data Vaults. Local administrators will no longer be added to the group of data base administrators. Existing Data Vaults and multi-user Data Vaults will not be changed.

3.5.2 Detect Manipulations on Raw Files [SWFR-2055]

Previous releases of Chromeleon could not detect if a user with sufficient Windows privileges manipulates files manually. This service release introduces cryptographic hashing for data objects so that Chromeleon can verify if an object has been tampered with outside of Chromeleon. The option is now available as a new Global Policy, “Raw Data”. The verification is triggered whenever a raw file is accessed, i.e. when a sequence or instrument audit trail is opened for review or report.

3.5.3 Default to MS SQL Server 2014 SP2 Express[SWFR-2054]

Chromeleon 7.2 SR5 will install MS SQL Server 2014 SP2 Express by default for local Chromeleon 7 Data Vaults.

Note: Existing installations of SQL server will not be changed.

3.5.4 Support for MS SQL Server 2014 SP2 [SWFR-2373]

Networked Data Vaults can now use MS SQL Server 2014 SP2.

3.5.5 Oracle Database 12c Support for Chromeleon 7 [SWFR-1663]

Networked Data Vaults can now use Oracle Database 12c.

3.5.6 Oracle Database 12c on Red Hat Enterprise Linux 7 Support for Chromeleon 7 [SWFR-2335]

Networked Data Vaults can now use Oracle Database 12c running on Red Hat Enterprise Linux 7.

3.5.7 Windows 10 Support for Chromeleon 7 [SWFR-1766]

This release adds support for Windows 10. Chromeleon 7.2 SR5 has been tested with **Windows 10 Enterprise 64 bit, Long Term Servicing Branch, Version 1607**.

Note: The Windows 10 Automatic Updates feature may occasionally stop certain system services and/or force a PC reboot, which will disrupt the operation of Chromeleon, including data acquisition. It is recommended to set the "Active Hours" (when Windows won't perform updates) to minimize the potential for interruptions to Chromeleon.

3.5.8 Citrix XenApp 7.6 using Windows Server 2012 R2 [SWFR-1818]

Chromeleon 7.2 SR5 is tested on Citrix XenApp 7.6 running on Windows Server 2012 R2.

3.5.9 Improved Client License Handling for NFP [SWFR-2128]

The Chromeleon 7 license system supports network failure protection to provide license features even during a network outage scenario. However, it was only possible to get a license during network outage if a valid license had been retrieved earlier during normal operation. This would not work for instrument PCs where users never logged on before.

To improve the situation during network outage Chromeleon 7.2 SR5 checks if an instrument controller is running and is consuming a Chromeleon Instrument Controller license that was retrieved before the network failure. For this use case client license features will be automatically granted locally during the network outage.

3.5.10 Microsoft .Net Framework 4.6.2 Support [SWFR-1767]

Chromeleon 7.2 SR5 requires Microsoft .NET Framework 4.6.2. The framework is included in the Chromeleon setup and installed automatically.

3.5.11 Updated Transport Security [SWFR-2099]

Prior versions of Chromeleon 7 are using certificates based on SSL 3.0 which has been obsoleted by Microsoft in .NET 4.6. Chromeleon 7.2 SR5 updates this to the latest standards using SHA-256 and TLS 1.2.

Components of Chromeleon 7.2 SR5 are always using the new transport security for communication. For backwards compatibility Chromeleon can be configured to also enable old transport security so that older Chromeleon components can connect. This setting is available in the local Discovery Configuration and can be configured per Chromeleon station.

When installed anew, without previous Chromeleon 7 installation, old transport security will be disabled by default. When updating a present installation old transport security will remain enabled so that older Chromeleon stations can still communicate with the updated Chromeleon instance.

3.5.12 Updated Cryptographic Strength for Electronic Signatures and Connection Strings [CM7-20699]

In previous releases, Chromeleon used RSA with 1024 bits for electronic signatures and connection strings. This is no longer considered secure. In preparation to move to updated encryption this release is able to decrypt new electronic signatures and connection strings based on 2048 bit RSA key pairs. For backward compatibility with previous versions of Chromeleon the weaker keys are still being used.

3.5.13 Reduced Number of Database Commits during Data Acquisition [SWFR-1726]

When using the replication framework the instrument controller continuously updates the database during the data acquisition. Database commits are replicated to the central Data Vault. It has been found that the number of database commits is unexpectedly high, thereby limiting the number of instruments that a Data Vault service can handle in parallel. Chromeleon 7.2 SR5 reduces the update frequency significantly to achieve a higher throughput for the Data Vault service. This will also result in a better overall user experience when reading data while acquisition is running on the same Data Vault.

3.5.14 Raw File Cache on the IPC for Sequence Download [SWFR-1525, CM7-19263]

This release introduces a raw file cache mechanism on the IPC to improve download performance.

There are situations when a previously downloaded raw data file may be required by another Sequence that is downloaded very soon after.

Example situations include rerunning an acquired Sequence with extra injections appended or running a "Fixed" Calibration Sequence where raw data is referenced in the Processing Method.

The raw file cache was available in Chromeleon 7.2 SR2 but was not available in Chromeleon 7.2 SR3/4 when using the replication framework.

The new feature also resolves CM-19263, WAN performance is slow when restarting partially acquired sequences, which was documented as a known limitation in previous versions of Chromeleon 7.

3.6 Support Central Rollout for Large Scale Installations

Rolling out updates and patches in large and wide-spread installations of Chromeleon 7 is a significant effort for administrators. The system therefore has been extended to provide means to support and enable automated updates.

Note: Features in this section are mostly relevant for large Chromeleon installations. This usually requires remote administration and management and makes it difficult to synchronize and control administration and update activities. With these new features Chromeleon strives to assist affected customers.

3.6.1 Support Deployment with OS Images [SWFR-2117]

The Chromeleon enterprise documentation for SR5 includes instructions for creating OS images for IPCs or Chromeleon client computers. For more detail refer to the document CM7ID_320--CM7-IPC-Image_Creation.docx.

3.6.2 Detect System Activity (e.g. Running Queue) [SWFR-2118]

It is undesirable to install updates to Chromeleon, Windows, or third party products while an instrument queue is running on the system. Such updates may stop the Instrument Controller or related services, or even cause a reboot and therefore interrupt data acquisition.

This release includes a command line tool “ChromeleonActivityCheck.EXE” for checking if Chromeleon is currently busy acquiring data. The tool can be found on the Chromeleon DVD in the folder \Tools\Chromeleon Activity Check.

3.6.3 Prevent / Defer Installation while System is Active (e.g. Running Queue) [SWFR-2113]

When attempting to install, modify or repair Chromeleon in interactive installation mode while instrument queues are running on the system, the installer will report a warning about the running queues. The user has the choice to ignore the warning and continue installation, wait for the queues to finish and retry installation, which will check the states of the queues again, or to cancel installation.

3.6.4 Maintenance Window for Chromeleon Stations [SWFR-2119]

In Chromeleon 7.2 SR5 Administration Console a maintenance window for any Chromeleon station in the Chromeleon Domain can be defined. Various settings are available. When the maintenance window is set, users working on that computer will get notified in the Console. When entering the Maintenance Window, running sequences are completed or stopped depending on what has been defined in the settings and new sequences cannot be started anymore. The new functionality is controlled by a new privilege “Manage Maintenance Window”.

3.6.5 Command Line Option for Chromeleon Domain Controller and OrgUnit Parameters [SWFR-1691]

The unattended setup of Chromeleon 7.2 SR5 supports new command line arguments to pre-define Chromeleon Domain, OrgUnit and related parameters.

3.7 Client Features

3.7.1 Save Query Results as a New Sequence [SWFR-764]

It is now possible to save query results as a new sequence. This feature is also governed by a new privilege “Create Sequence from Injection Query Results”.

3.7.2 RTS Processing Methods: Updated Tolerances for All Components [SWFR-2175]

All 4% RTS tolerances (anion and cation) for the Retention Time Standard (RTS) processing methods have been changed to 5% to ensure better identification of the expected components.

3.7.3 Allow Definition of a Print Range for Electronic Reports [SWFR-1433]

Maintenance Update 7.2 SR4 MUa introduced the ability to define which pages of an Electronic report will be printed. The Print dialog box now lists the available sheets and allows these to be included/removed from the current print task.

3.7.4 Extension for Report Variables peak.nCalpoints and peak.nCalDisabled [CM7-20981]

When using calibration with average values, it was not possible to report the (total) number of calibration points, only the number of averaged points could be seen. In addition, the number of disabled points would be reported as zero until all injections of a particular standard had been disabled. These can now be reported using new arguments provided for the report variables peak.nCalpoints and peak.nCalDisabled respectively.

3.7.5 GC-MS Environmental Water Analysis Extension Pack

This release includes a suite of report templates, processing methods and eWorkflows to facilitate water analysis by GC-MS using EPA methods 524, 525, 8260 and 8270. The extension pack and user manual may be found in the \Extension Pack\GCMS Environmental Analysis Templates\ folder of the Chromeleon DVD.

3.7.6 USP Tailing and Width for Riders and Poorly Resolved Peaks [SWFR-2187]

Chromeleon can now provide USP asymmetry or width (at 5%) for poorly resolved or rider peaks. The feature is only active when enabled in the Advanced Settings of the Processing Method.

3.8 Compliance Features

3.8.1 Global Policy

The following new Global Policies have been added:

- Privileged Actions (see 3.10.3)
- Email Configuration (see 3.10.7)
- Station Audit (see 3.10.1)
- Raw Data (see 3.5.2)

3.8.2 User Management Privileges

The following new user privileges have been added:

- Create Sequence via Save As (see 3.8.6)
- Create Sequence via Save As with Raw Data (see 3.8.6)
- Create Sequence from Injection Query Results (see 3.7.1)
- Manage Privileged Actions (see 3.10.3)
- Overwrite Standard Comment (see 3.10.3)
- Manage Maintenance Window (see 3.6.4)

3.8.3 User Management, Admin Console: Session Timeout [SWFR-244]

Chromeleon 7.2 SR5 implements a session timeout for Administration Console, Data Vault Manager, and Instrument Configuration to increase security of administration functions. When client locking is active it now affects all client applications.

3.8.4 Capture Logoff in Audit Trail [CM7-21883]

With this release Chromeleon now captures user logoff events from Console and Administration Console in the user management audit trail. The entry provides time and name of the user logging off, as well as additional detail when a privileged user closes a locked session or the logoff was caused by missing licenses.

3.8.5 Additional Detail in Audit Trail Entries [SWFR-1715]

Operations on Data Vault level are now better documented in the data audit trail entries which were previously only tracked as “changed”. This includes but is not limited to:

- Changes to access control
- Changes to or creation of custom variables and custom formulas
- Data Vault downtime and other settings
- Change/Move/Create folders.

3.8.6 Sequence Editor: Improvements to ‘Save as’ Privilege [CM7-20486]

Two new Sequences privileges have been added related to the Save As feature. ‘Create Sequence via Save As’ and ‘Create Sequence via Save As with Raw Data’ are now available, removing the previous dependencies on the ‘Create Sequence’ and ‘Copy Sequence’ privileges. This effectively prevents a previous situation where ‘Save As’ was possible without the ‘Copy’ privilege.

3.8.7 Object Version Display in File Listing [SWFR-2214]

The file section in the injection list and any other file listing can now show the version for the objects listed. Use the context menu of the header to enable the version column.

3.8.8 Improved Traceability for Sequences after Failed Upload [CM7-20508]

So far sequences that could not be uploaded automatically after a failure were hard to associate with the original sequence because the information must be searched for in the data audit trail of that sequence. To make it easier to find those sequences, the Sequence Audit Trail now has an entry about manual move of the sequence:

14 Remote1_manualmove Sequence 3 10/12/2016 9:31:12 AM -07:00 Autotest Copied From 'chrom://ussvl-sw1601/XVault/USSVL-SW1601_1/19/Remote1.seq' to 'chrom://ussvl-sw1601/ChromeleonLocal/Remote1_manualmove.seq'.

15 Remote1_manualmove Sequence 3 10/12/2016 9:31:13 AM -07:00 Autotest Moved Automatic upload failed on chrom://ussvl-35f7p12/ChromeleonLocal/Remote1.seq. It has been manually moved to chrom://ussvl-sw1601/ChromeleonLocal/Remote1_manualmove.seq.

In addition, a notification bar is shown for sequences that have been manually moved.

3.8.9 Logged-on User Name in Administration Console [CM7-21328]

The logged-on user name is now displayed in the status bar of the Chromeleon Administration Console.

3.8.10 Audit Trail Entries for Print & Export [CM7-7608, CM7-22422]

With this release Chromeleon now generates a data audit trail entry when printing or exporting a sequence or query report. Printing of an electronic report now also generates a data audit trail entry.

3.9 Time Zone Information

Chromeleon stores timestamps with time offset so that timestamps created in different time zones can be interpreted correctly. This release includes several improvements in this area.

Note: Features in this section are mostly relevant for large Chromeleon installations which are spread across different time zones. In this situation data might be acquired in one time zone but evaluated in another time zone. Single time zone installations with daylight saving time also benefit due to clear differentiation of time stamps inside and outside daylight saving time. By storing the time offset with timestamps Chromeleon assists affected customers.

3.9.1 Time zone information for every Time Stamp Display [SWFR-2123, CM7-20485]

Although previous versions of Chromeleon already displayed the time offset for most time stamps the time offset was missing from a few places in Chromeleon, for example user management audit trails. Chromeleon has been updated with time offset where missing.

3.9.2 New Report Category “Time Zone Information” [SWFR-1798]

Report variables for time values now support additional formatting options that can be used in reporting and custom functions in order to show time offset and to format the time stamp in universal coordinated time or local time zone.

3.9.3 Show Information about Time Zone [SWFR-1899]

It can be difficult to interpret the time offset information correctly. This release shows a tooltip for time stamps, explaining how to interpret the time offset and a comparison of local time vs. originally recorded time. This is available in the properties dialog, audit trails, injection list, and elsewhere where time stamps are shown.

3.10 Administrative Features

3.10.1 Audit Trails for System Events [SWFR-2048]

Chromeleon 7.2 SR5 introduces a Station Audit Trail capturing system events such as service startup and shutdown, sequence start and stop and errors.

The Station Audit Trail can potentially increase the network load and is therefore disabled by default. To enable the Station Audit Trail go to the Global Policies in The Chromeleon Administration Console. Similar to other Global Policies it is possible to define this per Organizational Unit.

3.10.2 Administration Console: Additional Audit Trails [SWFR-2025, SWFR-241, SWFR-1692]

Chromeleon 7.2 SR5 introduces new audit trails for Global Policies, Instrument Configuration, eWorkflow tags, and Data Vault management.

A combination of all Audit Trails within the Organizational Unit can be viewed using the Audit Trail node. The events are categorized accordingly.

It is also possible to view the Instrument Configuration and Data Vault Management audit trails for a specific Chromeleon station in the Chromeleon Domain from the context menu in the list of Computers, All Resources, Data Vaults, and Instruments respectively in the Domain Resources. The audit trail for Global Policies can be viewed in the Global Policies editor

3.10.3 Standardized Comments and Authorization for Specific Actions [SWFR-57, SWFR-1946, SWFR-1947]

Chromeleon 7.2 SR5 introduces standardized comments and authorization for specific actions, so called Privileged Actions. By providing predefined comments users will save time when commenting actions, and the comments will be more consistent across different users. The feature is made available as a new Global Policy and controlled by two new privileges, Manage Privileged Actions and Overwrite Standard Comment, which are disabled by default. This feature can be enabled per Data Vault in the Data Vault Properties dialog. It replaces the ‘Comment Required’ feature of previous releases.

3.10.4 Comments for Administrative Changes [SWFR-2203]

Chromeleon 7.2 SR5 provides an option to require comments on administrative actions. The new functionality is included in the Privileged Actions.

3.10.5 Schedule Tasks using Local Scheduler [SWFR-943]

The local scheduler of a Chromeleon IPC or Data Vault server can now also be used for scheduler jobs.

Note: The configuration is only available when logged on locally.

3.10.6 Extensions to Discovery List [SWFR-1907, SWFR-1901, SWFR-1949, SWFR-1908]

The “Domain Resources” node in the Administration Console (formerly known as “Discovery”) now offers various tables of Chromeleon resources. The lists include significantly more information, support grouping and filtering, reporting and a variety of context menu tools such as configuring an instrument remotely.

3.10.7 Notify Admin by Email when Account is Locked [SWFR-1561]

When a user account or signature password gets locked, Chromeleon can now send an email notification to the administrator. The configuration is available in the as a Global Policy in the Administration Console.

3.11 User Management

3.11.1 Audit Trail for User Account Cloning [SWFR-2024]

When a new user account is created in the Administration Console using the clone option in Chromeleon 7.2 SR5, there will be a dedicated record in the user management audit trail. In addition, further detail about additional changes made to the settings for the new user will be added to the audit trail entry.

3.11.2 Ability to Set User Account Inactive / Retired [SWFR-1271]

Chromeleon 7.2 SR5 allows administrators to deactivate user accounts for retired users or other users who are no longer working with the system.

3.11.3 Grouping and Filtering for the User List [SWFR-1272, SWFR-1062]

Chromeleon 7.2 SR5 allows grouping and filtering of user, role and access group tables in the Administration Console. The filter bar can also be used to search for specific criteria. In addition, the tables show more detail such as status active/inactive or password expiry.

3.11.4 Default Role for User [SWFR-1909]

Chromeleon 7.2 SR5 allows defining a default role for a user. This role will then be pre-selected for logon so that users don’t have to think about and pick a specific role on a daily basis.

3.12 Chromeleon 6 Migration

This release further improves data migration and backward compatibility for Chromeleon 6 data.

3.12.1 Chromeleon 6 Data Import in Chromeleon 7 – Signature Data from Signed Results [SWFR-1130]

When importing signed Chromeleon 6 sequences the eSignatures are now automatically transferred into Chromeleon 7.

3.12.2 Direct Import of Chromeleon 6 Backup Archives (*.cmb files) [SWFR-63]

It is now possible to import directly from Chromeleon 6 CMB files. The import allows the user to select which sequences should be imported in case that several sequences are contained in the CMB. It is also possible to bulk import more than one file at a time using the File > Import > Bulk Import menu in the Console.

3.12.3 Querying Chromeleon 6.8 Datasources with Chromeleon 7 [SWFR-507]

Chromeleon 7.2 SR5 can now query injections from mounted Chromeleon 6 Datasources.

4 Limitations and Known Issues

The following sections list known issues and limitations. The numbers in the first column of the table below refer to the Thermo Fisher Scientific tracking IDs.

4.1 Limitations with Thermo Scientific Instruments

ID	Description
CM7-16851	UltiMate 3000 MWD-3000 and DAD-3000: In the Instrument Method Editor for these devices, the script page offers one additional option for the data collection rate (20 Hz) that is not present in the Instrument Method Wizard. This additional option is a valid value for this parameter. Although it is possible to manually type in a value for the data collection rate that is not in the list, these values will be rejected by the Ready Check when a sequence is submitted.
CM7-17783	UltiMate 3000 WPS-3000FC: When using the WPS-FC, the needle will not automatically be flushed prior to collecting first fraction. To work around this limitation, add the following lines to the instrument method command script: Sampler.EndFraction Sampler.Collect Delay 10 Sampler.Drain
CM7-21342	Vanquish Variable Wavelength Detector: For acquiring data on a single channel only using the Vanquish VWD it is necessary to use channel UV_VIS_1.
CM6-21321	Accela Open Autosampler: When using this autosampler, a dot ('.') must be used as decimal separator.
CM7-18098	Accela Open Autosampler: Sequences cannot be run when the sampler does not include the DLW option. This configuration is not supported and requires a custom script.
CM6-23479	TriPlus RSH: When operating in SPME mode, the TriPlus RSH will schedule samples so as to overlap oven programs, but it will not optimize based on the various SPME incubation steps.
CM6-23614	TriPlus RSH: When using the TriPlus RSH in constant double pro headspace mode, starting a sequence that includes a constant double pro method will generate a validation error.
CM6-24043	TriPlus RSH: If firmware version 2.2 is installed on the TriPlus RSH autosampler, then tool changes on the instrument are not immediately recognized in Chromeleon. It is necessary to disconnect and reconnect the instrument after such changes are made; they will then be detected.
CM7-21564	TriPlus RSH: Although it is possible to condition the SPME fiber as part of an instrument method, it is not possible to do so manually.
CM7-20295	TSQ 8000 and ISQ Series: When a GC-MS instrument method includes a scan event containing multiple SIM ions (e.g. "SIM 115, 152, 188") then data from matching filters collected at different time ranges will not be combined into a single filter in the data for that injection.

ID	Description
CM7-15632	TSQ Quantiva and Endura: When removing the source from a TSQ Quantiva or Endura in mid-acquisition, the sequence does not abort.
CM7-16030	TSQ Quantiva and Endura: With these instruments the standby state reports that the instrument is on, regardless of the real instrument state.
CM7-16154	TSQ Quantiva and Endura: When creating an Instrument Method for the TSQ Endura or TSQ Quantiva, the MS run time is not the same as the Chromeleon run time. The user should enter the correct run time on the MS page of the Wizard.
CM7-17668	TSQ Quantiva and Endura: TSQ Endura and TSQ Quantiva instruments are usually shipped with a PC ("Endura/Quantiva PC") that includes all the necessary instrument data files, such as calibration files, for operating the MS instrument. If you want to control an instrument using a different PC, make sure that the specific instrument data files residing on the Endura or Quantiva PC are backed up and transferred to the new PC. For details on performing this process, please consult with your local MS field service engineer.
CM7-17500	Exactive Series: Exactive Series instruments are usually shipped with a PC ("Exactive PC") that includes all the necessary instrument data files, such as calibration files, for operating the instrument. If you want to control an Exactive instrument using a different PC, make sure that the specific instrument data files residing on the Exactive PC are backed up and transferred to the new PC. For details on performing the data backup on the Exactive PC, refer to the Thermo Exactive Series 2.5 SP1 Release Notes, section Backup provided on the Chromeleon installation disk in the Packages\Thermo Exactive\Documentation folder.
CM7-16557	MSQ Plus and Tune Application: When using the MSQ Plus with Chromeleon the user has to wait for the Chromeleon Instrument Controller to be in idle mode before opening the Tune application. Without waiting, the MSQ Plus will not be able to change the operating mode (On, Off, Standby), or it will not be possible to run injections. To recover from this error both the PC and the MSQ Plus would have to be restarted.
CM7-18129	TSQ Quantiva and Endura: After an upgrade of the TSQ Endura/Quantiva instrument driver, an error may occur when opening the Chromeleon Instrument Configuration. To resolve the error, remove the Chromeleon Mass Spectrometer driver from the configuration and then add it again. This will update the configuration information in Chromeleon to match the updated TSQ Endura/Quantiva instrument driver version.
CM7-21967	TSQ Quantiva and Endura: The TSQ Endura and Quantiva mass spectrometer method editor is supported on English operating systems with English/United States regional settings only.
CM7-22490	Exactive Series: When setting the divert valve parameters for an Exactive Series MS with a 2-position valve, the valve positions are recorded in the MS raw data opposite of how the divert valve parameters were configured.
CM7-23138	MSQ Plus: It is recommended to use only the MS driver provided on the Chromeleon installation medium. Other versions of the MSQ Plus driver may not be compatible with Chromeleon. Please consult your local field service engineer for additional details.
CM7-23295	Exactive Series: Due to differences in how the Exactive 2.8 SP1 driver writes the scan header in MS data files during acquisition, non-targeted peak detection will not work correctly when data generated from both the Exactive 2.8 SP1 driver and older drivers are present in the same sequence.

4.1.1 Compatibility of Chromeleon 7.2 SR5 and SII for Xcalibur

At current time, SII for Xcalibur (SII) has not been validated for use with Chromeleon 7.2 SR5. As such any installation combining SII with Chromeleon 7.2 SR5 is not supported. At a time when SII is compatible with this release, documentation outlining support will be released which will supersede this known limitation.

4.1.2 Mass Spectrometers and Windows 10

Thermo Scientific Foundation 3.0 SP2 is required for mass spectrometer support under Chromeleon. As Foundation 3.0 SP2 is not compatible with Windows 10, no mass spectrometers are supported under Windows 10 at this point in time.

4.1.3 Compatibility with Foundation 3.1

Chromeleon is only compatible with Thermo Foundation 3.0 SP2. Users may encounter situations where PCs provided with mass spectrometers come pre-installed with Foundation 3.1 or newer. In these instances, the factory procedure to uninstall any MS instrument control component software must first be followed before reinstalling Foundation 3.0 SP2 and the mass spectrometer driver.

This procedure must only be carried out by individuals that have completed the necessary software and hardware training.

4.2 Limitations with the Waters Driver Pack

ID	Description
CM6-21040	Waters Acquity: Should a Waters instrument detect an IP address conflict during start up, the Chromeleon CDS driver will log the error message in the Audit Trail. If this message is ignored, it will be displayed again after 2 hours, which can result in a running sample being aborted.
CM6-21112	Waters 2998 PDA: Localization to a non-English regional setting for the PC (e.g., German) does not function correctly for the timed events table, e.g., using a Waters 2998 PDA detector and setting a timed event in the program file (e.g., wavelength change at 5 minutes). The event is recorded, but without the event time.
CM6-24158	Waters 2489 PDA: After changing the Instrument Method from single to dual-wavelength mode (without changing Channel A wavelength), the data rate for Channel B is set incorrectly and incomplete data collection occurs.
CM6-23194	Waters Acquity: After removing the Sample Organizer from the Instrument Configuration, the plate setup is not updated correctly. Manually updating the plate settings in the plate setup configuration dialog avoids this issue. If the total length of the instrument name plus detector name is more than 32 characters, the sequence will abort shortly after initial injection. The affected detectors are: 2489, 2998, and Acquity FLR.
CM7-19830	Waters Acquity: When using the Waters Acquity driver in a Citrix environment, the Acquity console does not update correctly and therefore doesn't show current log file entries. This is due to a problem in the Acquity console, and can be mitigated by using the instrument audit trail on remote clients.
CM7-22872	Waters Acquity: When using the Waters Acquity driver, some Chromeleon screens may not appear properly, such that text from the previous screen is still visible. This has been observed with the Sequence Properties and the Chromeleon Log on screen.

4.3 Limitations with Agilent ICF

For a general overview regarding the Agilent Instrument Control Framework, please refer to the document Chromeleon and Agilent ICF - Quick Start Guide - Chromeleon 7.2 .pdf, found in the \Documents\ folder of the Chromeleon 7.2 CDS DVD.

ID	Description
CM7-19347	Agilent G1312B DAD: When using a G1312B DAD in combination with an old JetDirect card, the user may experience problems collecting data at 80Hz. If the user observes this, they should get in touch with their local Thermo Fisher Scientific representative for advice on possible solutions.
CM7-20047	Agilent VWD G1314B: When using a G1314B VWD, occasionally the chromatogram is half the expected length.
CM7-20991	Agilent ICF: Occasionally when performing injections with ICF controlled instruments the injection volume is incorrectly displayed, although the injection itself was performed correctly.
CM7-21172	Agilent ICF: If the user has the monitor DPI settings on their PC set at greater than 100%, then some parts of the Agilent LC system device ePanel are not visible.
CM7-23096	Agilent ICF: If a Fraction Collector with Thermostat is installed, the channel mapping is not correct. This can be resolved by removing the <Channel name="FC: Delay Sensor"> node from DefaultConfiguration.xml before adding the driver. After this, the user can configure the mapping for the two channels manually on the Signals (2D) tab of the configuration dialog.
CM7-19540	Agilent ICF: The Agilent GC System Configuration dialog includes entries to configure the 7697A Headspace, G1888A Headspace, 7890 GC, 6890 GC, 68550 GC, and 7820 GC. Currently, it is only possible to configure the 7697A Headspace sampler. Attempting to configure any of the other modules will result in a message indicating that the modules are not supported.
CM7-19863	Agilent ICF: The Agilent LC System Configuration dialog includes entries to configure the following devices, which are not supported by the release: All ELS Detectors (Drivers are not included, so they cannot be configured) Multi-sampler and DAD HDR (Although configurable, they have several known issues and are therefore not supported)
CM7-21427, CM7-18984	Agilent ICF with 1100 or 1200 LC DAD: When acquiring data from an Agilent 1100 or 1200 LC DAD, the signal trace may be shifted to the start of the run, and the end time is inconsistent. No data points are lost with a data rate of 10 Hz and slower (>= 0.025 min 0.5 sec) 20 Hz and a low number of spectra (all other than ALL Spectra) 20 Hz and spectrum range 190- 400 step 2
CM6-23980	Agilent 7697A: When starting a sequence while the 7697A Headspace Sampler is in an 'Error', 'Running', or 'Not Connected' state, the ready check does not give an error message. After the sequence starts, the following happens: If the sampler is in error state, the sequence starts without getting interrupted If the sampler is running, the sequence stops with audit trail message "Sequence stopped by user" If the sampler is not connected, the sequence interrupts with audit trail messages "Lost connection to Agilent 7697A Headspace Sampler", and "The instrument is offline. Check power to all modules, cabling between modules and whether the configuration matches the list of modules."

ID	Description
CM6-23992	Agilent 7697A: The 7697 Headspace Sampler has two versions; 111- and 12-vial capacity configurations. The Chromeleon driver is written and tested with the 111 vial capacity version. Though not tested, the driver is expected to work with the 12-vial capacity module. The user should not use vial positions greater than 12 in this case. The rack view always shows 111 vial positions.
CM6-24004	Agilent 7697A: Using the instrument front panel, the allowed range for Transfer Line Diameter is 200-600 microns. However, when setting this value in the Chromeleon instrument configuration the limit is 250-530 microns.
CM6-24005	Agilent 7697A: When 7697A headspace instrument method parameters are included in a report, the “fill pressure” parameter is rounded to the nearest integer.
CM6-24007	Agilent 7697A: Some parameters logged to the instrument audit trail are rounded to nearest integer. However, all values are downloaded to the instrument with the proper precision.
CM6-24008	Agilent 7697A: When editing an existing 7697A Headspace instrument method, if the values for Purge Flow, Purge Time or Leak Flow are changed, the Save button is not enabled until the user changes tabs.
CM6-24009	Agilent 7697A: When configuring an Agilent 7697A, there is an option in the user interface to “Upload Config from Instrument”. This option does not work. Instead, you will need to manually configure the instrument settings.
CM6-23996, CM7-19940, CM7-21324	Agilent 7697A: The 7697 Headspace Autosampler has two options for handling missing vials: Pause and Abort. An issue has been observed when the Abort option has been selected. In either mode, the autosampler overlaps sample preparation, i.e.: sample 2 is prepared while sample 1 is acquiring. If the autosampler finds that the sample 1 vial is missing, it will Abort or Pause the sequence at the point it discovers the vial is missing. However, if the autosampler finds that the sample 2 vial is missing, while sample 1 is already acquiring, and the Abort option has been selected, the entire sequence will be aborted, including the acquiring sample 1.
CM7-19975, CM7-20451	Agilent 7697A: The Soft Config option, available via the ICF for Agilent LCs, is not supported for the Agilent 7697 HS. It should not be added to any custom ePanel as its use can cause issues by allowing configuration changes to be applied to the sampler during acquisition.
CM7-19993	Agilent 7697A: If the 7697A loses its connection to the network, an audit trail message is added indicating this fact. However, the ePanel will still show the unit as ‘Ready’.
CM7-20259	Agilent 7697A: Although the vial position may be assigned in the instrument method script, unless this is done in the Instrument Setup Stage, the sequence table will not be updated. This can result in misleading information in reports and should be avoided.
CM7-23242	Agilent 7697A: Running multiple 7697A Headspace autosamplers on a single 247 Instrument Controller can cause Windows "Out Of Memory" errors, requiring a reboot of the 247 to resolve. Thermo Fisher therefore recommends that only one 7697A is connected to any 247 Instrument Controller.

4.4 Limitations with Other Third Party Instruments

ID	Description
CM7-17948	Shimadzu LC: Unlike most drivers, some Shimadzu UV detectors require that you select the Advanced filter in the Command (F8) window in order to access the Lamp On/Off command.
CM6-23947	Shimadzu LC-10A, LC-2010: If the user cancels the keylock state of the front panel of the instrument and then, for example, stops a manual acquisition, this is likely to lead to unexpected effects during the next operation such as sudden abort of the sample run.
CM7-15400, CM7-15556, CM7-15734, CM7-15736	Perkin Elmer LC200 Autosampler: When upgrading from earlier versions of Chromeleon 7 CDS to Chromeleon 7.2 CDS SR3, it is necessary to reload the Perkin Elmer LC200 Autosampler driver and configure the loop size within the configuration. The user should then check all instrument methods using this autosampler to ensure that they continue to function correctly.
CM7-15716	PerkinElmer Clarus 400 GC: Some users must select Autosystem XL in configuration in order to communicate with the PerkinElmer Clarus™ 400.
CM7-20464	Varian 3800 GC: It is not possible to start a manual data acquisition if the GC is not ready (i.e. all temperatures, pressures and so on are at their set points). Trying to do so will generate a Ready Check message detailing what is not ready.
CM7-12366	Agilent 5890 DICE Card: Please note the following when using the19257 DICE card with the Agilent 5890 GC: Control and acquisition using the DICE card is only supported via the serial interface. The GPIB interface is not supported. Digital data acquisition via the serial interface of the DICE card is only supported for a single channel; dual channel digital acquisition is not supported. Currently, it is possible to select certain illegal combinations in the Configuration Dialog such as: Digital acquisition with the 19254 card. This is not supported. Digital acquisition on one detector and analog acquisition on the other. Acquisition needs to be exclusively digital or exclusively analog. When using the DICE card to acquire data digitally, the 5890 INET mode must be set to “GLOBAL” not “LOCAL”. Failure to do so will result in a “No response from GC” message following the AcqOn command in the audit trail. Note that when performing analog acquisition, the 5890 INET mode should still be set to “LOCAL” (as described in the online help).
CM7-9675	Agilent 7890 GC: There is a backward compatibility issue that affects the Agilent 7890 GC Sampler Positions. When using a 7890 GC in combination with a 7693 sampler, certain positions in the sampler could give a misspelled value to a move command. This has now been corrected and could in rare cases lead to Instrument Method files needing to be updated to avoid errors.
CM7-15293, CM7-18463	Agilent 1100 Obsolete Driver: Occasionally, when using a combination of older and newer modules, the raw data was not correctly acquired.

4.5 Other Limitations

ID	Description
SWFR-2543	Sampling Devices That Do Not Use uL As Units for Volume: Although most liquid injection devices expect volumes to be entered in uL, there are a few devices (e.g. Thermo AS-HV and Perkin-Elmer GC Autosampler) which do not use µL as their default volume unit. If one of these devices is configured in the same instrument that also includes an injection device that uses µL, problems may be observed with volume validation in the sequence table as well as units associated with volumes in reports.
CM7-21780	NIST MS Search and Demo Library No Longer Automatically Installed: Incompatibilities of the NIST 2008 MS Demo Library installer with Window 7 and 10 could cause the main Chromeleon installer to hang or crash. To address this, the NIST Demo library, and the associated AMDIS and MS Search software are no longer automatically installed when you install Chromeleon. If desired, this package may be installed manually using the setup program found in the /Tools/ folder of the Chromeleon DVD. Alternatively, one may install AMDIS and MS Search using the full (licensed) NIST library installer. Note that MS library searching within the Chromatography Studio is not affected by this issue.
CM7-20335	Comparison of Old Report Versions Shows Change in CmbxExportParameters: If a report which was created in CM 7.2 SR2 or earlier, and modified in SR3, has its history compared in SR4, the history will appear to show that the "Cmbx Export Parameters" value has changed from True to False. This is due to a change in the default value of this field, and does not represent any user-modification of the report.
CM7-20449	User Management: Login "Role" dropdown box becomes empty after upgrading to Chromeleon 7.2 SR4. This is due to the fix for CM7-18178 "Roles were offered in the Logon dialogue, even if they were not specified as Logon roles". To work around this issue, enable the "Logon Role" property in the user database for all logon roles that users need to be able to select.
CM7-21783	Performance When Importing Fixed Calibration Standards for MS Sequences: When working with sequences of MS data, importing injections for use in a fixed calibration can take 1-2 minutes to complete, depending on the data.
CM7-17203	Report Designer: With some date/time formatting settings in the report, the order of month and day changes for some formats automatically. The settings in the Report Template can change based on the windows regional settings. For example it is not possible to set m.d.yy as format with German regional settings. The Report Template replaces this with d.m.yyyy. The substitution occurs for report variables and non-report variable entries.
CM7-17841	Report Designer: If using a non-Chinese format as the regional setting in Windows, and Chinese as the setting for Non-Unicode programs, then the header on a Chromeleon report is not correctly displayed for variables. If the format is changed to Chinese, then everything is correctly displayed.
CM6-23886	Exception Error When Removing USB->COM Port Adapter: If a USB-to-RS232 adapter is used to provide COM communication between an Instrument PC or 247 Instrument Controller and an instrument, and the USB connection is unplugged, Chromeleon reports a Fatal Error in the Instrument Audit trail. The USB-to-RS232 adapter should not be disconnected from the Instrument PC or 247 Instrument Controller while it is powered-on.
CM7-18252	Export MS Raw Data: When acquiring MS data, Chromeleon acquires MS data and all other signal data, such as UV, FLD, and pump pressure signals, in separate formats. As a result, when MS data is exported, non-MS data is not exported with the MS raw data file.

ID	Description
CM7-19336	Chromeleon 6 Import: Due to changes in Auditing between Chromeleon 6 and Chromeleon 7, when a Chromeleon 6 Sequence is imported into Chromeleon 7, some of the text displayed in the Instrument Audit trail will not appear exactly as it did in Chromeleon 6. Refer to the topic "Viewing Chromeleon 6 Data" in the online help for further information.
CM7-21331	Report Variable chm.massSpectrum("...").resolution always shows "0,5000": The mass spectrum resolution report variable returns an internally used processing value instead of the resolution setting defined in the MS instrument method. It is recommended to discontinue use of this report variable until further notice.
CM7-21399	Injection Variables 'Auto Dilution Ratio' and 'Retention Time Standard': Auto Dilution Ratio and Retention Time Standard columns are not available in the custom filter conditions for injection records (e.g., in the IRC editor or summary report).
CM7-22111	Mixed Installations with Chromeleon 7.2 SR5 Domain Controller: If you have an existing installation of Chromeleon < 7.2 SR1, the following limitations apply during an upgrade: Stations that have Chromeleon 7.2 or below installed will not see any data vaults or instruments that have been created with Chromeleon 7.2 SR5, until after those stations are upgraded to 7.2 SR5. It is not possible for a Chromeleon 7.2 (and below) station to join a Chromeleon 7.2 SR5 domain. Stations that have Chromeleon 7.2 or below will not receive any updates from the Discovery Service after the Chromeleon domain controller has been upgraded to 7.2 SR5, and will only see resources that were already in existence and cached. Please refer to the Enterprise Documentation for guidance on upgrading an older installation of Chromeleon 7 to Chromeleon 7.2 SR5.
CM7-22145	Discrepancy in “Last Modified” Time: Owing to differing rounding methods used, it is possible that the value of the "last modified" time for an object in a sequence has a difference of 1 second between the client display and the value shown in a report. For more details, please see the on-line help.
CM7-20637	Logon with Current Windows Account after Disconnecting Network Fails with Misleading Error Message: In the event of a loss of network connection on a system using LDAP logon, attempting to logon to Chromeleon again with the same account details results in a misleading error message "The user name or password are incorrect."
CM7-23033	Legacy Upload: With replication framework disabled, when trying to modify a sequence while the automatic upload is already in progress the upload may fail in very rare cases and it is not possible to remove the sequence from the instrument queue by retry of the upload. To recover the sequence a copy of the sequence has to be stored manually. Chromeleon 7.2 SR5 adds an audit trail entry to the manually uploaded sequence that refers to the original sequence so that traceability is ensured. Thermo Fisher Scientific recommends to enable the replication framework with Chromeleon 7.2 SR5 to avoid the problem.
CM7-23481	Fatal Error in Chromeleon 7 Real Time Kernel Service: When leaving the Instrument Configuration Manager open over extended periods of time the Chromeleon Real Time Kernel Service might stop unexpectedly with a fatal error in the Windows Event Log.

4.6 Obsolete Drivers

Chromeleon includes a number of obsolete drivers in order to provide backward compatibility of existing installations:

- Agilent/HP 1200 HPLC System
- AI 1310/3000 GC Sampler - 10ul
- AI 1310/3000 GC Sampler - 5ul
- AI 1310/3000 GC Sampler - 5ul - 155 Vials
- AI 1310/3000 GC Sampler - 5ul - 105 Vials
- AI 1310/3000 GC Sampler - 10ul - 155 Vials
- AI 1310/3000 GC Sampler - 10ul - 105 Vials
- PAL Sampler for GC
- PAL Sampler for LC
- TRACE 1300 Series GC (First generation driver that has been superseded by TRACE 1300 Series GC II driver)

Please note that issues reported for any of these drivers will no longer be addressed. If you are using one of these drivers Thermo Fisher Scientific recommends migrating to a supported driver as soon as possible.

4.7 Defects Under Investigation

The following defects have only occurred very rarely, and data necessary for investigation, such as log files and backups, are insufficient to reproduce the problem. Despite significant testing efforts in various configurations we could not reproduce this behavior in systems that are set up and configured as recommended by Thermo Fisher. Thermo Fisher is therefore unable to identify the root cause of the problem and provide technical modifications of the software that would allow us to confidently state that we prevent future incidents of such behavior. We are continuing investigation of these issues but would like to share symptoms of this behavior with our customer base and give recommendations to remediate from the behavior if it occurs.

Note: If you are affected by any of these defects, please collect a System Status Report immediately and contact your local Thermo Fisher representative for further assistance.

4.7.1 Empty Inject Time and GUID Fields in the Injection Record [CM7-22738]

Empty Inject Time and GUID fields have been seen in a few single injections. Raw data have been successfully acquired and stored on the local Instrument PC. The Injection Audit Trail on the Instrument PC contains complete information, including the missing details. Too few instances have been reported to identify the root cause of this problem.

Note: If you are affected by this problem, please contact your local Thermo Fisher representative for assistance with recovery of the missing injection details.

4.7.2 Instrument Audit Trails Are not Properly Saved/Written on the local Data Vault [CM7-23051]

In one installation, a few Sequences aborted with the following error messages in the audit trail:

“The audit trail was unavailable for some time. Several audit trail messages are lost. They have been logged to the file "Dionex\Chromeleon\Log\AuditTrailMessages.log" in the (common) application data folder.”

During investigation of the log files of affected Instrument Controller PCs errors of slow file operations on the local hard drive have been found:

“SQL Server has encountered 1 occurrence(s) of I/O requests taking longer than 15 seconds to complete on file [C:\ProgramData\Dionex\Chromeleon\DataVaults\XVault\XVault_log.LDF] in database [XVault] (6)“

It has been confirmed that the failure was caused by poor disk drive performance and only occurred over a limited period of time. Chromeleon 7.2 SR5 introduces additional error handling and reporting so that similar errors can be identified more easily.

4.8 Functional Differences between Chromeleon 7.2 and Chromeleon 6.8

Chromeleon 7.2 SR5 implements the vast majority of Chromeleon 6.8 features, and in general, has a richer feature set than Chromeleon 6.8. However, a few Chromeleon 6.8 features remain to be implemented on the Chromeleon 7 platform and a few will never be implemented, since they are now obsolete or no longer relevant. If a particular missing feature is important to you, please contact your local Thermo Fisher Scientific representative to find out if that feature is in the product development plans.

5 Resolved Issues

This chapter describes the issues that have been resolved with the release of Chromeleon 7.2 SR5.

Many trivial and minor issues have been resolved, but are not mentioned here. If you require information about the status of an issue observed in a Chromeleon 7 release, but which is not listed here, please contact your local Thermo Fisher Scientific representative for more information.

The numbers in the first column of the table below refer to the Thermo Fisher Scientific tracking IDs.

ID	Description
CM6-23310	Corona Veo: The range for the Signal Calibration Factor was incorrect. The range has now been corrected to 0.800 - 1.200.
CM6-23362	Shimadzu GC-2014: The injection time out was a fixed value, resulting in an abort message if an injection took more than five minutes to occur. A time out parameter was added to the method user interface to address this.
CM6-23589	Shimadzu GC-2010/2014: If the pressure unit was set to psi, never-the-less values were sent to the instrument in kPa.
CM6-23854	A2D: Entering invalid characters (any character other than A-Z, a-z, 0-9 or _) into the A2D name field, and then pressing <Enter> would cause a 'Fatal error' to be displayed.
CM6-23859	A2D: When a Stop Flow / Hold command was performed, instead of displaying the time at which the Stop Flow / Hold command was performed, the A2D LCD screen incorrectly reset the time to 0.0.
CM6-23871	TRACE GC Ultra: If an instrument method with an isothermal part at the beginning was used for a sample type blank, the isothermal section was ignored.
CM6-23876	A2D: If the A2D was connected to an Autosampler which only provided a very short Inject signal (e.g. Agilent HPLC), the A2D could 'miss' the signal and remain at Wait Inject. If the A2D then captured the Inject signal of the next injection, the Chromeleon sequence could become 'out of synch'.
CM6-23880	A2D: Occasionally, when pressing the < or > (left or right) buttons on the A2D, the LCD would appear to 'skip' one screen.
CM6-23952	TRACE 1300 GC II: The driver attempted to connect to port 2551, although this had been changed on the driver properties page to port 4900. This led to an error message.
CM6-23977	Shimadzu GC-2010/2014: Chromatograms collected from a Shimadzu GC-2010/2014 were saved with units of 'Absorbance', resulting in an incorrect Y-Axis label in reports.
CM6-24026	TRACE 1300 GC: The 'Peak Width' instrument method parameter was not properly applying digital filtering in the detector hardware. This resulted in the observed noise in chromatograms with a low concentration of sample being higher than the hardware specification.
CM6-24028	Perkin Elmer GC: If using the output detector type to collect data from unsupported detectors, the driver would reject the connection.
CM6-24037	Agilent 6890 GC with 7693 AS: A sequence could abort with an "Error in injection setpoints" message if the instrument method contained invalid Solvent Saver settings, even if the settings were not used. This occurred because it was possible to download unsupported settings from the hardware during the creation of an instrument method.

ID	Description
CM6-24044	Shimadzu LC-2010: In very rare circumstances it was possible for the CDX module to start in simulation mode after an Instrument Controller start, leading to the Chromatogram being recorded using demo data. This was visible form the different data rate compared with that expected, leading to a stretched RT axis.
CM6-24051	Agilent 7697A HS: Disconnecting the sampler while a sequence was running would cause a long series of audit trail messages, requiring the instrument controller to be restarted in order to recover
CM6-24114	Waters Acquity: The acquired signal of the pressure channel would show bar as the unit, regardless of the settings in the configuration.
CM6-24115	Agilent LC (ICF): Repeatedly changing the instrument configuration parameters could result in an "LC System returned an invalid configuration! Default configuration is used instead" error.
CM6-24122	Agilent 7890 GC: When a Cryogenic Oven Cooler was configured, the minimum oven temperature was not properly saved, and attempting to manually update it resulted in an exception error.
CM7-3687	Chromeleon 6 Import: When importing certain reports from Chromeleon 6 corrupt view settings were created, causing an 'Error - Invalid argument' to be displayed in the Studio.
CM7-10662	Console - Sequence Editor: When copying and pasting table data into the sequence editor, selection of the same number of cells as the source table was required. The behavior has been changed so that only selection of the first cell for correct pasting is required.
CM7-11571	Data Vault Manager: In certain circumstances it was possible that a user might mount a Data Vault and not be aware that it was already mounted on another Data Vault server. Improvements have been made so that the user is now notified and in addition the data audit trail information has been improved when mounting and dismounting data vaults.
CM7-12682	Console - Custom Variables Manager: The Finish button was always enabled, even if no variable was selected in the grid. The button is now disabled until a variable has been selected.
CM7-13611	Console - Data: Clicking on the [+] button to expand a Remote Data Vault could cause Chromeleon to become unresponsive if the Remote Data Vault was not available or was still in the process of connecting.
CM7-13761	Studio - Report Designer: Formulas on the Time and Signal Axis properties pages in the chromatogram object weren’t applied correctly when using German regional settings
CM7-14193	Studio - Processing Method: When the Calibration type was set to Polynomial, the Order dropdown list would only accept a value of 1, instead of the range of values 1 - 7.
CM7-14244	ICS-3000/ICS-5000 EG: Entering upper limit value (e.g., 50 mM) in Instrument Method, then viewing Smart Startup would throw "concentration out of range" errors, even though the permitted range was 0 to 50 mM.
CM7-14636	Console - Custom Variables Manager: Custom Variables containing spaces cannot be used in Instrument Methods. However, if a Custom Variable was created which contained a space, Chromeleon gave no warning or indication that this could result in an issue if it was subsequently used in an Instrument Method. Chromeleon now shows a tooltip to warn the user.
CM7-15119	Sequence Editor - Custom Variable Wizard: Even if a sequence was set to read-only mode, it was possible to run the custom variable wizard to create a new custom variable. However, it was not possible to save the custom variable created in this manner afterwards.

ID	Description
CM7-15150	eWorkflows: Under certain uncommon situations, an individual user wasn't able to see any available eWorkflows available, even though other users were unaffected.
CM7-15539	Studio - Processing Method: Trailing spaces after component names or unidentified peak groups were allowed, resulting in identical looking components and unidentified peak groups being treated separately, such as "Component1" versus "Component1 ".
CM7-15993	Services: During an upgrade the account under which the Data Vault service or Scheduler service is run would be reset to Local System. If either service is set to run under a different user account, this is now preserved during an upgrade.
CM7-16146	Services - Discovery: Following an unexpected reboot, after a power-outage for example, the Discovery Service could sometimes fail to start correctly.
CM7-16378	Reporting - MS Spectrum Plot: It was not possible to select a component to plot based on a peak name when the MS quantitation channel was selected.
CM7-16454	Console - Custom Variables Manager: Chromeleon Custom Variables Manager would incorrectly allow the re-selection of already-imported Custom Variables, and would then report an error "The Custom Variable name is already in use" when it attempted to import these variables.
CM7-16526	Agilent 7890 GC: Column ePanel did not properly report the actual pressure value from the instrument
CM7-16691	Console - Sequence Editor: It was not possible to use the sequence editor fill-down function when the table was filtered.
CM7-16746	Audit Trails: Printing very large instrument or injection audit trails would generate a 'Parameter Not Valid' exception error.
CM7-16942	Instrument Configuration Manager: When two users both tried to modify the configuration of the same instrument at the same time, misleading error messages were generated. The error messages incorrectly claimed that the user needed to login in order to change the configuration.
CM7-17073	Administration Console - Scheduler: Optimizations have been applied to improve the performance when importing Chromeleon 6 data to a Chromeleon 7 Data Vault.
CM7-17156	Data Vault Manager: Attempting to dismount a Data Vault with a name written in a left-to-right script could sometimes fail to dismount, with inaccurate error messages raised.
CM7-17186	Instrument Configuration Manager: After making changes in the Instrument Configuration Manager, if you exited and selected "Don't Save", then if you reopened the Instrument Configuration Manager, the changes still appeared. Although the changes were actually discarded, unless the instrument controller service was restarted, the changes still appeared in the Instrument Configuration Manager user interface.
CM7-17273	Console - Sequence Editor: Attempting to run a sequence where a numeric field (such as Weight", Dilution" or "IntStd") for an injection was empty resulted in a "Nullable object must have a value" error message.
CM7-17328	Reporting: If the user attempted to view a Chromeleon 6 diagnostic report directly in the Chromeleon 6 datasource, the results were not reported correctly.
CM7-17352	Services - Discovery: If the Console was left open while adding new Data Vaults in the Data Vault Manager, the new Data Vaults would not immediately appear in the Console.
CM7-17365	Setup and IQ: Installation of Chromeleon Help would not be performed if the Help file was open while the installation was running. This would then cause the IQ to fail due to the help having not being updated.

ID	Description
CM7-17496	Studio - Data Processing: Creating extracted ion chromatograms in some instances did not generate a permanent channel. The functionality has been improved in various locations to allow for creation of permanent channels based on user enablement of the functionality.
CM7-17610	Administration Console - Discovery: Applying a new Chromeleon Domain name while multiple other Chromeleon application are running causes a warning message, which lists all the running Chromeleon applications, to be displayed. If the Domain name change is retried, with one (or more) of the other Chromeleon applications still running, the warning message should now only contain the remaining open applications, not the original full list.
CM7-17674	ePanel - Exactive Series: Depending on the order in which the Exactive Series driver and Chromeleon are installed, the button to launch the Tune application in the ePanel did not work.
CM7-17689	Client - General: In some circumstances, opening a Report from one Sequence while already editing a Report in a different Sequence could cause an unhandled exception in Chromeleon.
CM7-17705	UltiMate Drivers - Fraction Collection: If using fraction collection by time, the last tube was not handled correctly, resulting in an aborted sequence. This would then prevent any further injections or sequences from starting even if enough tubes were available.
CM7-17820	Console - Injection Query: Imported sequences which have not yet been converted for processing in Chromeleon could not be queried. A seq.imported report variable has been added which, when set to "true", allows for query of imported sequences.
CM7-17842	Reporting: Foreign characters in report headers and footers in some instances did not correctly export to Microsoft Excel format.
CM7-17870	ICS-4000: Region-specific decimal syntax would throw a "value out of range" error for certain controls. Occurred when using a comma (e.g., 4,567) in an OS environment where commas represent a decimal point.
CM7-17894	Setup: If the username of the administrator performing the installation contained invalid XML characters such as '&', the installation would fail. These usernames are now supported.
CM7-17930	Administration Console - Scheduler: Setting up a scheduler task including a Chromeleon 6 query, would sometimes force the user to enter credentials.
CM7-17931	Administration Console - Scheduler: Running a scheduled task involving a Chromeleon 6 query of a Chromeleon 6 datasource, with the Chromeleon 6 user mode disabled, resulted in the task failing due to "ERROR - Access is denied". The scheduled task will now complete successfully even when the Chromeleon 6 user mode is disabled.
CM7-17937	Administration Console - Scheduler: The Browse dialog box did not always appear in the visible area of the screen when selecting a CM6 Query.
CM7-17938	Console - Import/Export: CMBX Export of large sequences would sometimes fail with an 'Out of memory' error.
CM7-17939	Administration Console - Scheduler: After changing the service account under which the Scheduler was set to run the service did not restart and had to be started manually via the Windows Services dialog. The Scheduler service now restarts as expected after changing the service account.
CM7-18073	Services - Discovery: The Domain Controller could get into a situation where it was running, but would no longer accept the addition of any further Workstations without being restarted.

ID	Description
CM7-18083	Setup and IQ: The Chromeleon installation would sometimes 'hang' during installation, due to an unhandled issue in the NIST installation package. Installation of NIST has therefore been removed from the Chromeleon installation, and should be installed separately using the installation kit provided on the Chromeleon 7.2 SR5 DVD.
CM7-18208	IQ/OQ/PQ: The signature fields in the report templates for Chromeleon OQ, and Instrument IQ/OQ/PQ were not in the same order in which they were signed.
CM7-18321	Console - Version Comparison: When a Calibration Level was renamed, the Comparison Report showed this action as separate Delete and Add actions, instead of a single Rename action.
CM7-18322	TRACE 1300 GC: When running long sequences, the sequence would potentially hang before the start of acquisition for an injection. The fix for this issue involved software as well as upgrading to GC firmware package 28 or higher.
CM7-18326	Console: Two custom variables with the same name could be created, which could prevent connection to a data vault that contained one or more of the identically named variables.
CM7-18352	UltiMate Drivers - Fraction Collection: When using the "collect outside peaks" option during "collect by peak," the option would only start after the first peak had been collected.
CM7-18356	Administration Console - Global Policies: On a system with multiple Organizational Units, and different Multi-User Logon policy settings for each Organizational Unit, the Multi-User Logon policy of the first logged-on user was applied, instead of the policy for the Organizational Unit to which the computer belongs. If these were different, then the policy could be applied incorrectly.
CM7-18368	Studio - Processing Method: When copying an item into a table (e.g. a component name into a component table) it was not possible to select several cells and paste into them all simultaneously.
CM7-18391	Electronic Signatures: In certain circumstances it was possible that Signature Verification of a sequence that was signed using a Chromeleon version less than but not including 7.2 could fail if the verification was done using a later release. The issue that caused the signature verification to fail has been resolved.
CM7-18406	AFC-3000: If using fraction collection by time, one more tube than necessary was used.
CM7-18567	Client - General: If the client was locked while the Performance Qualification was running, it was not possible to unlock the client until the qualification had finished. The Unlock Client dialog now asks for initial user to re-logon instead of the Qualification user.
CM7-18645	Data Vault Manager: Renaming a Data Vault to contain certain characters (e.g. "µ") would result in an inaccurate error message, and could result in the Data Vault becoming inaccessible.
CM7-18658	Console - Data: Attempting to rename a copied View Settings item, immediately after moving, could cause an incorrect error message to be displayed.
CM7-18898	Studio - Processing Method: In certain tables (component table, SST/IRC table, detection table, and peak properties pane), partial copy/paste did not work properly. Instead the entire string was pasted or replaced, depending on the selected action.
CM7-18908	Help & Manuals: Chromeleon help incorrectly depicted the Signal-to-Noise RMS formula. The lower bound of the summation was shown as i-1 instead of i=1.
CM7-18956	Studio - Spectral Plot: If another ion was converted into a quantitation ion, the label for the existing quantitation ion was not correctly updated.

ID	Description
CM7-18992	Console - Injection Query: When querying for sequences not created by an eWorkflow, Chromeleon returned false positive hits.
CM7-19044	Performance: Sequence upload used to be slow in Wide Area Network when a large number of sequences are being uploaded concurrently. Upload performance has been significantly improved in this release.
CM7-19080, CM7-19081	Console - Data: When modifying a sequence or child object, if an object was then copied into the sequence and modified directly thereafter, the data audit trail did not capture the modifications for the recently copied item. The audit trail now includes an entry to document the change but refers to the same version.
CM7-19093 - CM7-19097	TRACE GC Ultra, Perkin Elmer GC, Agilent 7890 GC, Shimadzu GC, Varian 3800 GC: When an instrument method was created with a detector acquisition range other than the default (0 – run time), the acquisition range would revert to the default values when the method was closed and re-opened
CM7-19105	eWorkflows: When creating a sequence from an eWorkflow, the Re-injection field's maximum value was incorrectly set to 99 instead of a larger value.
CM7-19206	Studio - Data Processing: Cell borders of rows and columns of Integration and Summary Tables were not always maintained if the tables were resized, for instance while switching between injections. The cell borders now persist as set by the operator.
CM7-19209	Console - Import/Export: After importing Atlas workbook data, then converting to be processable in Chromeleon, the Save button was not enabled, requiring users to click another sequence or folder to be prompted to save the conversion.
CM7-19216	Console - Sequence Editor: If an injection status is changed from Finished to Idle, a stale GUID persists in the GUID field until injection is re-run.
CM7-19222	Console - Import/Export: Importing a Chromeleon 6 Quantitation Method into Chromeleon 7 would cause a "Value out of range" error to be displayed if the method contains Maximum Wavelengths >900.
CM7-19225	Studio - Peak Properties Pane: Changes made to the Peak Properties pane were not properly saved to the View Settings
CM7-19239	Studio - View Settings: It was not possible to resume a sequence with unsaved view settings.
CM7-19264	Administration Console - Discovery: It was possible to remove local Data Vault Services using the Delete key on the client's keyboard.
CM7-19288	Console - Data: If a Sequence was left open in the Console for an extended period of time (e.g.: overnight) and then, before performing any other actions, a different sequence was opened, a "Collection was modified; enumeration operation my not execute" error could be observed.
CM7-19300	Studio - Report Designer: When printing a sheet of a report template, the corresponding row heights could be affected by row height settings of a previously selected sheet.
CM7-19354	ICS-3000/ICS-5000 PDA: Several non-functional ePanel features have been removed, e.g., lamp age, limits, etc.
CM7-19374	Console: Adding a new instrument PC to a Chromeleon domain could result in improper display of remote data vaults on that PC or of the new PC's local data vault on remote PCs.
CM7-19435	ICS-2100: Configured with to EGCs, the second EGC (EGC-2) panel would not display in SII for Xcalibur.

ID	Description
CM7-19443	Console - Data: If an IPC becomes disconnected from the network during acquisition, and the currently-running injection is then opened on a different computer, an exception error could be reported.
CM7-19446	ICS-4000: ED device panel would in some cases not display the ED signal.
CM7-19485	Studio - Spectral Plot: If the user re-arranged the order of stacked chromatograms interactively, then the order of the relevant spectra plots was not automatically re-arranged.
CM7-19487	ePanel - IC Systems: The measured temperature value on the ePanels for the ICS-1100, ICS-1600, ICS-2100, and Aquion systems was reporting incorrect information.
CM7-19532	Console - Import/Export: The .cmbx Save As dialog box did not clearly display which version of the .cmbx format was being created by the save.
CM7-19552	Studio - Processing Method: If a manual integration on a chromatogram was rejected for any reason, the relevant chromatogram was never-the-less marked as modified.
CM7-19556	Studio - Data Processing: SmartLink would not work for calibration plots when MS Quantitation was the selected channel.
CM7-19567	Studio - Processing Method: It was possible to create a peak list using the Chromeleon 6 detection algorithm and evaluating the “Find valley” method for unresolved peaks where one of the peaks was detected via a peak group start/end parameter set to Auto. In rare cases when using this method, this would lead to an invalid peak list where the next peak start is before the current peak end that would then produce an error upon reading the data in Chromeleon 7.
CM7-19571	Administration Console - Scheduler: Setting up a scheduler task including a Chromeleon 6 query, would sometimes force the user to enter credentials.
CM7-19573	Administration Console - Scheduler: When a Chromeleon 7 system had only one Chromeleon 6 Data Source mounted, the Data Source could not be selected in the Administration Console Task Dialog.
CM7-19575	Data Processing - Extracted Ion Chromatogram: When using regional settings which use commas for decimal places, Chromeleon improperly interpreted this as a value delimiter in the Extracted Ion Chromatogram dialogues. This resulted in error messages in some instances.
CM7-19581	Console - Instrument Queue: After a user submitted a sequence and checked the ‘export report’ option, if a second user attempted to view the queue for that instrument, it was possible that the error message “You must take over control before operating this instrument” was displayed many times.
CM7-19585	Data Audit Trail: If Data Vault versioning was not enabled at the point when an item (Chromatogram, Processing Method, etc.) was created (whether created directly or by importing a .cmbx), it was not possible for Chromeleon to compare subsequent versions against the initial version, because no initial version was available.
CM7-19587	Studio - Chromatogram View: When viewing overlaid plots in mirrored mode, the peak annotations on the mirrored plot were drawn incorrectly. This occurred in both the Chromatogram pane of the studio as well as the chromatogram plot object in reports.
CM7-19603	Studio - Intelligent Run Control: As the ‘Reinject’ IRC step was used repeatedly to create a very large sequence, the pause between injections would grow significantly (To several minutes after 4000 injections)
CM7-19644	Console - Data: A completed sequence would sometimes still be shown as running in the navigation pane data vault tree.

ID	Description
CM7-19648	Data Processing - MS Components View: When visualizing SRM with multiple transitions, the mass peaks at both extremities of the filter was also the MS plot m/z scale range limits. This prevented users from seeing the lowest and highest SRM peaks. Padding has been added so that the peaks at the extremities can also be observed.
CM7-19653	Studio - Processing Method: AvCF calibration would always average multiple levels with the same amount. This has been changed to an option.
CM7-19675	Console - Multi-User Data Vault: When the User Mode feature was disabled, the Downtime tab of the data vault properties was not available.
CM7-19711	Console - Sequence Editor: Attempting to open the Instrument Method of any Sequence on a Japanese version of Windows would result in a Chromeleon error being displayed.
CM7-19820	Method Editor - Exactive Series MS: Some copy, rename, and delete folder functions will result in stale tune file lists in the Exactive Series method editor which required a restart of the Exactive service when using Exactive Series versions older than 2.7.
CM7-19825	Instrument Audit Trail: When an instrument audit trail was corrupted (missing the raw file), the 'Instruments' category of the Console was unable to connect to the instrument and the system reported that it could not save the audit trail.
CM7-19832	Studio - Processing Method: When using a Processing Method outside a sequence, it was not possible to select or edit component names during creation or editing of an SST/IRC test case.
CM7-19843	Administration Console - Scheduler: Signed Chromeleon 6 sequences that were transferred to Chromeleon 7 using the Scheduler couldn't subsequently have the read-only check box cleared to unlock the sequence. If the user has the required privilege the read-only check box can now be cleared.
CM7-19845	Console - Sequence Editor: When attempting to assign an instrument that was not connected via the Assign Instrument option in the sequence control bar, Chromeleon stated it was unable to establish connection to the instrument. When clicking the Work Offline' option after that an exception was displayed.
CM7-19856	ISQ and TSQ 8000: Changing configuration settings (such as the pressure units) in the configuration dialog would cause a break in communications with the hardware
CM7-19872	Administration Console - Scheduler: An out of memory exception could be encountered when transferring large amounts of data from Chromeleon 6 to Chromeleon 7.
CM7-19907	UltiMate Pump Panels: If more than one UltiMate-3000 pump was configured, some eluent percentage controls were not visible on the device ePanel.
CM7-19909	Console - eWorkflows: When dragging and dropping an eWorkflow to a destination such as the PC desktop, a folder outside of Chromeleon, or an application such as Microsoft Word, the Chromeleon Console results in a crash.
CM7-19946	Studio: Opening large MS sequences caused a spike in memory usage, resulting in slow performance and "System out of memory" errors.
CM7-19955	AXP: Creation of an instrument method would sometimes add an unnecessary Wait Pump.Ready command.
CM7-19966	Setup and IQ: The <UseReplicationFrameworkOnIPC> element was not automatically added into the CmConfig.xml file following upgrade to a version of Chromeleon which supports Replication Framework.
CM7-19977	Console - Data Audit Trail: Saving a data item after restoring a previous version, could sometimes fail if any other Data Vault had become inaccessible during the time the Chromeleon Console was open.

ID	Description
CM7-20033	Integrion/ICS-4000/ICS-5000: When attempting to delete a custom waveform in the Integrated Amperometry mode, a "save" dialog would be displayed even if no changes were made.
CM7-20034	Integrion/ICS-4000/ICS-5000: When attempting to delete a custom waveform in the Integrated Amperometry mode, the expected "delete waveform" dialog would be unexpectedly followed by a "save" dialog.
CM7-20090	Console - Injection Query: The instrument column in the query results listed the instrument which was connected to the instrument method. It now lists the instrument captured in the injection audit trail or, if the sequence did not run yet, the one assigned to the sequence.
CM7-20138	Studio - Report Designer: In the Autorepeat Area Settings, attempting to select a custom variable from a list as part of the autorepeat conditions resulted an empty list and an 'Invalid arguments are converted to default values' message.
CM7-20155	Preconditions Log: Running a script or other activities that occur before an injection would cause the problems with extracting information from the preconditions log to display in a report.
CM7-20196	Studio - Report Designer: Custom Formulas were not listed as a category in the report formula editor of an SST summary table. They were however, available by typing in the formula field.
CM7-20197	Studio - Report Designer - Header/Footer: If the number of characters in a header or footer exceeded 255, the text would simply be truncated. This was hard to detect in advance if variables were used in the header/footer. More and better warnings are now provided, and the length is calculated for the current injection in order to provide an earlier indication to the user.
CM7-20205	Administration Console - Scheduler: The audit trail date range defaults were set to display dates in the past. The dates now default to the current date.
CM7-20240	Console - Sequence Editor - Retry Upload: After an upload failure of the automatic upload of a completed sequence the Retry function did not always work.
CM7-20252	A2D: If the Data Collection Rate was not set as part of the A2D instrument method, "Data out of sequence @ point #" errors would sometimes appear in the Injection Audit Trail.
CM7-20274	ICS-4000: EGC, CR-TC and CES controls on the home panel would show as active even when not configured. Clicking one of them would issue an unknown symbol error.
CM7-20305	Export: When exporting (e.g. to pdf) a plot containing overlaid chromatogram data from more than one sequence, the overlay order was different when exporting from ‘current sequence’ compared to exporting from ‘current injection’.
CM7-20323	Console - Import/Export: When attempting to import a cmbx containing linked sequences which themselves contain linked objects, the import would not complete.
CM7-20326	Network Installation: When running across different Windows sub-domains, the Global Policy setting for host name resolution "Always use FQDN" did not resolve hosts in those different sub-domains and Chromeleon stations in different sub-domains were not visible.
CM7-20327	Network Installation: When running across different Windows sub-domains, local Data Vaults of Chromeleon stations in those different sub domains were not visible.
CM7-20359	Installation - IQ: When the Instrument Server service fails to install, the installation went to completion resulting in an inoperable Instrument Controller. The installation process has been updated to roll back the installation when the Instrument Server service fails to install.

ID	Description
CM7-20381	Console - Data: It was not possible to delete a processing method containing a fixed blank run injection or fixed calibration injection.
CM7-20392	Console - Import/Export: When a sequence is exported to cmbx, Chromeleon provides an option to deselect one or more of the sequence's injections. If a cmbx created in this way is then imported into a different data vault, Chromeleon would report an error and the import did not complete.
CM7-20394	Shimadzu SIL-20A/SIL-30A: When using tray type "96 (deep) well plate" the positions 1_BAx to 1_BHx were incorrectly marked as invalid.
CM7-20395	Reporting: When using the Dissolution Templates from the extension pack, the chart for Stage 1 dissolution profile did not show Samples 1 & 2.
CM7-20400	Network Installation: When host name resolution is set to "Always use FQDN", startup performance has been significantly improved.
CM7-20429	Console - Injection Query: Creating and running queries with many custom variables was slow for large data sets. Chromeleon 7.2 SR5 includes several performance improvements for displaying queries in the Console, switching between "injection" and "sequence" categories in query definition, enumerating possible values for a custom variable (clicking the arrow-down-button to expand that combo box), querying for a certain custom variable value and querying for a certain inject time or inject time range.
CM7-20450	Studio - Data Processing: Opening a Chromeleon 6.8 processing method from a Chromeleon 6.8 data source to view the spectral library screening settings would sometimes throw a null reference exception error and prevent Chromeleon 7 from displaying the method.
CM7-20478	Console - Import/Export: When creating a backup (with versions) of a sequence containing certain injections (deleted, fixed blank run or fixed calibration) the raw data (file data) contained in the injections were not contained in the backup.
CM7-20481	ICS-3000 VWD: Control for Input 3 and for all Relay edit boxes were linked to the incorrect controls and were permanently disabled.
CM7-20482	CDF Import: When importing CDF files with improper units and/or scaling factor the resulting data in Chromeleon were not scaled correctly and x-axis was not labeled as expected.
CM7-20497	Studio - Data Processing: When peak grouping functionality is used for calibration combined with identical component names, if one component is not detected, Chromeleon incorrectly used the peak area from the first detected component instead of zero, resulting in incorrect summed peak areas being used for calibration.
CM7-20507	eWorkflows - Sequence Layout: After importing an eWorkflow with result variables in the injection list the sequence layout grid was not displayed properly.
CM7-20510	Studio - Processing Method: If using the AvCF calibration and any disabled points didn't have an amount, this would lead to a "value must be finite" error.
CM7-20516	Administration Console - Scheduler: Import of Chromeleon 6 Sequences used to fail if any components had names >64 characters long. Component names can now be up to 128 characters long, above which the importer will now truncate the name and record this in the CM6ImportLog.csv.
CM7-20522	Studio - Processing Method: If a peak delimiter had a small intersection (time difference <1e-12) with an inhibit integration region and a peak apex was on such a delimiter, this would prevent the chromatogram being shown.

ID	Description
CM7-20525	Console: It was possible that an upload of a sequence or copying of a finished injection between sequences could result in an error exception if the Windows long time format was set as HH:mm:tt. Any date and time format is now accepted without incurring an error exception.
CM7-20526	Audit Trail of Deleted Items: When an item e.g. a folder was deleted from the Data Vault Chromeleon moved the item to the "Deleted items" folder but the operation was not shown in the audit trail of the "Deleted Items" folder. Restoring the deleted item also was not shown in the audit trail of "Deleted Items".
CM7-20539	MS Instrument Control: When a method with a large number of SRMs (>1500) was acquiring, the ePanel would freeze and the client disconnect from the acquisition server
CM7-20544	Administration Console - Scheduler: In the Scheduler, when using a query to import Chromeleon 6.8 data from a Chromeleon 6.8 data source, one of the sequences would sometimes cause an invalid operation exception error and could not be imported.
CM7-20551	Administration Console - User Database: During the process of creating new Chromeleon accounts, especially in a network environment, the time taken to switch between tabs could be slow, sometimes resulting in a "Not Responding" error message being displayed and the Administration Console becoming greyed out.
CM7-20561	Agilent 7890 GC: Selecting an Auxiliary Pressure Controller in the Instrument Method Wizard prevented completion of the wizard
CM7-20570	Administration Console - Scheduler: The text used for some Column and Tab titles in the Scheduler section of the Chromeleon Administration Console was inconsistent.
CM7-20574	Spurious Files on the Instrument Controller: After resetting already acquired injections to "Idle" status before removing from the queue the related raw files remained on the disk.
CM7-20576	Services - Discovery: Issues with network and/or dependent network services (e.g. Windows' Net. Tcp Port Sharing Service) could result in the Chromeleon 7 Discovery Service failing to start, after which manual restart would then be required.
CM7-20577	Reporting: When reporting mass spectrum intensities, an incorrect intensity value was reported when there was no response for an m/z value
CM7-20579	Virtual Column: Opening the "Orange Juice Sugars" file no longer throws unexpected error.
CM7-20584	Studio - Report Designer: Unlocked cells in a protected sheet could not be edited or cleared. It is now possible to enter text, make an edit or clear any cells that are unlocked.
CM7-20609	TRACE GC Ultra: It was not possible to set the 'SVE Time' parameter for the LVOCI check valve. As a result, the SVE Temperature was not applied during acquisition.
CM7-20610	Data Acquisition - MSQ Plus: Aborting an injection mid-run while acquiring data with an MSQ Plus resulted in corrupted data that could not be opened.
CM7-20615	Licensing: During an outage of the central Domain Controller it was only possible to log on to a terminal server session of Chromeleon after several minutes.
CM7-20618	Setup and IQ: If a Chromeleon process needed to write to the Windows Event Log, but was not running as with Administrator privileges, the log would not be written, and in some cases this would cause a crash in the process.
CM7-20619	Setup and IQ: If Windows update KB3033929 was not installed, the IQ would present a misleading warning regarding driver functionality. The warning has been updated.

ID	Description
CM7-20633	Help and Manuals: The Help indicated that it was possible to extract a signal from a 3D field and specify the RefWavelength. This functionality is not yet available in Chromeleon 7, so the Help has been updated.
CM7-20639	Printing: Pressing the 'Cancel' button while a print job was in a 'computing results' state didn't cancel the print job.
CM7-20649	Console - Import/Export: When a sequence of AnDI / NetCDF (AIA / ALSSA) data was imported into Chromeleon, the conversion process incorrectly assumed that the acquisition time read from the AIA file was in local system time.
CM7-20652	Studio - Report Designer: A check has been added to ensure that a null-reference error is not thrown when accessing the Page Layout tab.
CM7-20653	Studio - Data Processing: When using the zoom function on a plot, drawing of the zoom area when clicking and then dragging the mouse does not accurately represent the intended start point or final zoom area. Attempting this in an environment that uses desktop virtualization would often greatly exacerbate this problem.
CM7-20659	Setup and IQ: The Chromeleon IQ report did not clearly show the time zone of the system on which the IQ had been run.
CM7-20665	Agilent LC (ICF): If using certain parameters in the Agilent method, the report variable LCSystem.ALS.Injection_Volume does not report the final volume used in the analysis. Thus it is not recommended to use this variable in a Chromeleon report.
CM7-20684	Studio - Chromatogram Pane: It was not possible to manually integrate overlaid chromatograms, if the chromatograms exactly overlapped.
CM7-20693	Studio - Processing Method: When using a Retention Time Standard processing method, adjusting the peak area ratio tolerances, then changing the method to evaluate a specific channel after being originally being set to evaluate all channels, could result the peaks not being labeled.
CM7-20715	Studio - Processing Method: If the apex of the last peak in a peak group coincided with the end of the peak group, the peak was not added to the group. This would result in an apparent overlap of the peak with the group, leading to the chromatogram not being displayed for the injection.
CM7-20716	Studio - Reporting: In some situations, a deviation could be observed between the electronic results and any printed results.
CM7-20721	Console - Import/Export: Importing Chromeleon 6 sequences containing instrument audit trails resulted in an unexpected error.
CM7-20728	Studio - Instrument Method: Some instrument-specific information was added to the Description field of the Instrument Method during creation. This information be incorrect if the method was then used for a different instrument. This information is no longer added to the description field.
CM7-20729	Instrument Controller: A sequence submitted by a client PC could disconnect from the instrument controller PC after being submitted. This occurred in a multi-zone DNS network (with at least 2 different DNS suffixes), where the Instrument Controller and Client PCs have different DNS suffixes.
CM7-20742	Setup and IQ: The Chromeleon 7.2 SR3 Release Notes and List of Supported Instruments were not included in the Documents\Previous Versions folder of the Chromeleon 7.2 SR4 setup DVD.
CM7-20750	Console - Custom Variables Editor: The Custom Variables Editor would allow the creation of multiple custom variables with the same name, and this would cause the Data Vault to become inaccessible

ID	Description
CM7-20762	Sequence Editor - Properties: When trying to change the properties of a downloaded but inaccessible sequence was attempted with the replication framework turned on, Chromeleon would throw an unhandled exception error.
CM7-20764	URG-9000: Last injection data would not display on home ePanel.
CM7-20769	Administration Console - User Database: Previously when selecting privilege categories or individual subordinate privileges of a Role, the selection could be made via clicking within any of the columns of the privileges row. Now in order to enable or disable a privilege the selection but be made in the Privilege column.
CM7-20770	Studio - Processing Method: It was not possible to save any changes to a processing method containing reference spectra if the sequence had been downloaded to a remote PC.
CM7-20789	Console - Instrument Queue: The setting for the 'Print Report' option in the 'Instrument' category of the Console was not synchronized setting in the 'Instrument View' window. This resulted in reports sometimes not being printed as expected.
CM7-20817	Studio - Report Designer: If using a consolidated table for reporting, unidentified peaks were added to all matching rows of rows of the table, which led in some instances to duplicate peaks.
CM7-20828	Studio - Chromatogram View: Customized Chromatogram colors were not correctly imported when a Chromeleon 6 Sequence was viewed in Chromeleon 7.
CM7-20830	Data Vault Manager: If the local Data Vault Service was not running, Data Vault Manager would still run, but would report an error when attempting to perform Data Vault management actions.
CM7-20836	Negative Peaks: When a negative peak was defined using manual integration, the retention time was reported as the peak start or stop time, not the peak nadir (negative apex).
CM7-20857	Integrion: The Integrion IC Knowledgebase would display the CDet panel, even when no CD detector had been configured in the Instrument Configuration Manager.
CM7-20875	Sequence Editor - Lock Injections: It was possible to lock injections in a sequence that was on the XVault even though the data vault did not allow versioning.
CM7-20885	Console - Import/Export: When attempting to import a cmbx containing linked objects not accessible from the user's PC, the import would not complete.
CM7-20893	Studio - Processing Method: The Cobra Wizard did not show any peaks if one component had the previous retention or RTS (Retention Time Standard) setting activated.
CM7-20903	Instrument Configuration Manager: Applying a long access control list (e.g. >15 users) to an instrument sometimes resulted in an internal communication error. Afterwards, unauthorized users were still able to access the instrument.
CM7-20904	Export: Exporting a pdf format report to a network location was much slower than exporting to a local folder on the PC when the network location was physically far (e.g. connected by a WAN) from the client PC doing the export.
CM7-20909	ICS-4000: Changing the CDet device name no longer prevents the CD signal from being displayed on the home panel.
CM7-20910	Console - Multi-User Data Vault: When a data vault with downtime defined was moved to a new data vault server, the downtime tab was no longer available.
CM7-20913	Instrument Configuration Manager: Submitting a sequence to an instrument with unsaved changes to the instrument configuration did not generate any warning or error

ID	Description
CM7-20929	Studio - Instrument Method: Save as for an instrument method without having the privilege did not save but also did not show an error message that the user doesn't have the privilege.
CM7-20930	Studio - Data Processing: An unhandled exception was observed when using Smart Peaks in combination with the previous retention setting for a component.
CM7-20933	Console - Custom Variables Manager: When creating a custom variable of type "list," it was not possible to set a blank value as default, even if empty values were allowed.
CM7-20935	Chromeleon 6 Import - Instrument Methods: Importing a Chromeleon 6 instrument method (PGM file) resulted in an additional "post run" step in the Chromeleon 7 method. Although this did not matter for most methods, it caused dual injection methods to fail.
CM7-20936	Studio: With user management enabled, copying a report template from another sequence in the Studio sequence would generate an error claiming “The privilege ‘Create Report Template’ is missing”, even though this permission should not be required.
CM7-20957	Reporting: It was possible to include leading or trailing spaces in a channel or component name when setting these properties for a whole report table or a single report column. In this case the report table or the report column showed ‘n.a.’ for all results. The corresponding input procedure in the report table properties dialog has been corrected now. Leading or trailing spaces for channels and trailing spaces for component names are now removed after the input. For already existing reports showing this behavior the corresponding properties channel / component name need to be reentered to get it fixed.
CM7-20963	Reporting: When using a Data Audit Trail table in any but the first sheet of the report for a printed or electronic report or export, the resulting table was always populated with details from the first injection.
CM7-20971	DC-5000+: CD and ED Analog Out Range, Full Scale and Offset Level (ED only) controls now allow user to set those parameters.
CM7-20982	Studio - Calibration Plot: If the calibration option "Average all response values for each calibration level before curve fitting" was selected, disabled points would disappear from the plot, instead of being displayed but crossed out
CM7-20983	Export / Report from Queue: Automatic generation of export files and reports from the Queue after the end of each injection sometimes skipped an injection.
CM7-20986	User Management: When the policy setting for LDAP is enabled, the User Database password complexity policies such as Password Complexity Sets and Minimal Password Length were not checked for a user that was excluded from LDAP authentication when resetting that users logon and signature passwords. This problem has been fixed for the logon password and the signature password of users excluded from LDAP authentication.
CM7-20988	Console - XVault: If a user tries to upload a finished sequence without taking control while another user is actively running another sequence, Chromeleon will throw an error message.
CM7-20989	Console - Data - Send To: It was possible that when trying to overwrite an existing Chromeleon data file that had Read-only attribute set, the Console would stop working. The Console no longer stops working and a dialog is now displayed that notifies the user that the existing file is read-only and that an alternative name for the .cmbx file is required.

ID	Description
CM7-20995	ePanels - DGP-3600(RS, SD): If a DGP was shared between two instruments, the Startup ePanel would show the left half on both instruments, and incorrect symbols on the right half. The panel has been improved such that the correct half is shown, and unused controls are greyed out.
CM7-21013	Console - Import/Export: When creating a backup (with versions) of a sequence containing certain injections (deleted, fixed blank run or fixed calibration) the raw data (file data) contained in the injections were not contained in the backup.
CM7-21015	Agilent Infinity II Multisampler: When using the Multisampler with 384 well plates in each slot an error "Error parsing tray layout" occurred.
CM7-21021	Agilent LC (ICF): If using a G7151A, or G7117A/B, it was not possible to configure the 3D within Chromeleon.
CM7-21042	TRACE 1300 GC: When using monitor baseline for the TRACE 1300 GC, the AcqOn commands were executed, but no data was acquired.
CM7-21043	Agilent 6890/7890 GC: When an instrument method using a Chromeleon version before 7.2 SR3 was opened using version 7.2 SR3 or later, the Column parameters were deleted
CM7-21046	Studio - Report Designer: It was possible to rename a Report Template within the Report Designer category of the Studio even though the Rename Report Template privilege was not granted. The option to rename a report template is now greyed out if the user's role does not have the Rename Report Template privilege.
CM7-21047	TRACE 1300 GC: On the PTV page of the method editor, once the Cryogenics option was disabled, it was not possible to enable it again
CM7-21050	AS-AP: Controls on the Relays sub-panel are now properly displayed.
CM7-21074	Console - New Sequence Wizard: When trying to create very large sequences the sequence wizard became unresponsive or reported an out of memory exception.
CM7-21076	AS: ICS-5000 OQ sequences were not generated with an AS module configured.
CM7-21078	Integrion: Smart Shutdown will now properly turn off the pump motor.
CM7-21082	Agilent 7890 and 6850 GC: If the Autozero command was removed from the instrument method script, it reappeared when the instrument method was reopened.
CM7-21083	Console - Import/Export: When importing a .cmbx file that contains a sequence that already exists in the destination that you are trying to import to, the existing sequence was overwritten. Now when importing if an existing sequence has modifications pending or is downloaded, running, electronically signed, has locked injections or is set as read-only, the existing sequence cannot be overwritten and either the import can be cancelled or the user can skip the import of the sequence and continue importing.
CM7-21085	Studio - Data Processing: When running in a Citrix session, graphical artifacts were left on the screen.
CM7-21094	Integrion: Smart Startup was unable to start the CR-TC.
CM7-21110	Sequence Data Audit Trail: When different objects inside a sequence were changed and then saved in one transaction the change records for the individual objects were not shown in the sequence audit trail.
CM7-21113	Console - Data: Sequences with electronic reports containing references to external spectral libraries could not be copied.

ID	Description
CM7-21119	Console - Data: In instances where the data vault contains a large number of file objects, the connection time could become excessively high when initially attempting to connect to the data vault.
CM7-21130	Agilent 7890 GC: The option to turn on the detector electrometer was missing from the method editor user interface
CM7-21131	Console - Import/Export: If a sequence was imported via a CMBX file, restored to an older version, deleted, and imported again to the same location, the next restore action would throw an exception error.
CM7-21139	Studio - Processing Method: peak.levelCheck and injection.levelCheck report variables no longer display differing results when using different curve fitting settings.
CM7-21159	Console - Import/Export: If the user attempted to export data where the x-axis units were not a time unit, an error was reported.
CM7-21187	User Management: When a <Global> Organizational Unit is imported, Chromeleon will resolve any conflicts with any existing <Global> Org Units, but this resolution process did not always complete correctly.
CM7-21250	Studio - Electronic Report: The Comment field when entering an Electronic Signature did not limit the number of characters, but would lead to an unhandled exception if more than 255 characters were entered.
CM7-21269	Export: Export of files (e.g., Excel, PDF) during long sequences (100+ injections) would take extremely long. Performance has been significantly improved.
CM7-21272	Services Manager: The Service Unavailable time stamp did not show the time zone offset, and was therefore inconsistent with other time stamps.
CM7-21285	Studio - Spectral Library: When attempting to use the "Find Spectrum in Library" function from the context menu of a chromatogram, the library search window did not appear.
CM7-21289	Setup - Data Vaults: Previously when running setup without any configuration the database schema of all local Chromeleon data vaults, including multi-user data vaults were updated. The setup by default now skips the data vault schema update when a data vault is a multi-user data vault.
CM7-21302	Studio - Chromatogram View: For some pumps (including the ICS-5000), the gradient graph overlaid on the chromatogram did not accurately plot the curve types from the pump method.
CM7-21309	Installation - Upgrade: When attempting to upgrade a Chromeleon instance pointing to a discovery server that no longer exists and the cached domain data is older than 7 days, installation would result in errors. The cache validity has been extended to 30 days.
CM7-21310	Console - Data: If any network issues caused Sequences to fail to download, the failed Sequences would not be removed from the download queue on the Data Vault server and would cause the downloaded of subsequent Sequences to be blocked.
CM7-21315	User Management: Previously the privilege 'Modify Status of Already Finished Or Interrupted Injections' applied to all injections regardless of whether they did or did not contain raw data. The privilege now only applies if the Finished or Interrupted injection has raw data.
CM7-21325	Instrument Configuration Manager: With access control set up for the Instrument Controller, adding, deleting or renaming an instrument removed access control for the entire Instrument Controller.

ID	Description
CM7-21340	OQ/PQ: In order to correct some minor typographical errors, the front page of the HPLC-IQ Release Notes was updated; the revision level remains at 4.00.
CM7-21348	User Management: In a Chromeleon system with a combination of LDAP and non-LDAP users, if an Administrator sets the "Must Change Logon Password" option for a non-LDAP user, that user would not get prompted to change their password.
CM7-21363	Electronic Report: Under rare circumstances a chromatogram plot in an electronic report showed an error message "Can't read channel UV_VIS_1 from injection #<#> - <injection name>. There is already a chromatogram cache write operation in progress."
CM7-21370	Sequence -Versioning: Restoring a previous version of a sequence form the data audit trail did not prompt the user to save the restored version if sequence was not highlighted in the data tree
CM7-21375	Aquion: With flow zero set in configuration, the status of Pump_ECD_Relay_2 would not change when the pump flow was set to on or off.
CM7-21376	AS: Switching an injection valve in a German Windows 7 OS environment is no longer prevented.
CM7-21383	Data Audit Trail: When a user submitted multiple sequences for acquisition using multiple roles having different folder permissions, it was possible for the data audit trial of a sequence to be lacking 'Started run' and 'Finished run' entries.
CM7-21385	eWorkflows with Custom Injection Variables: After importing a numeric Custom Injection Variable into an eWorkflow Variable the Value Type seemed to change to text and the properties could not be viewed upon saving and reopening the eWorkflow.
CM7-21391	Processing Method - IRC/SST: When attempting to use the number of re-injections as a custom condition for an IRC, the test would not execute correctly, owing to use of an incorrect formula by the custom condition editor.
CM7-21418	Console - Import/Export: Producing PDF and Excel exports simultaneously would result in incorrect page numbering in the exported files.
CM7-21442	Sequence Custom Variables: When a numeric custom variable was included in a sequence table, it was possible to change the valid limits of the variable such that the existing table values were invalid. However, no error was reported and closing and reopening the Console caused a "Could not load data for child item" error.
CM7-21446	Console - Import/Export: If a processing method containing a response factor of zero was imported from Chromeleon 6 into Chromeleon 7, the import would fail.
CM7-21453	Administration Console - User Database: In order to refresh the user database audit trail you would have to navigate away to another section of the administration console and back again to see any changes. It is now possible to refresh using either F5 or by clicking the Refresh button.
CM7-21455	Instrument Configuration Manager: If a PC did not have a 'My Documents' folder, the instrument configuration manager would crash immediately upon connecting to the instrument controller.
CM7-21459	Console - eWorkflows: Searching eWorkflows via the filter was slow due to automatic connection attempts to the instruments in the background.
CM7-21462	Report Variables: When working with a channel extracted using extraction type TIC from an MS filter with more than one SRM transition, the report variable chm.msExt.massRanges only reported the first transition range.
CM7-21491	Administration Console - User Database: User Management Audit Trail grouping was case-sensitive, potentially resulting in multiple 'group' rows for the same Operator, if the name had been entered with inconsistent cases.

ID	Description
CM7-21501	Studio - Processing Method: If a custom formula was used in the SST/IRC calculation, then the name of the analyte was not displayed correctly in a report.
CM7-21503	Custom Formulas: The limit for nested evaluations of custom formulas has been increased to 50.
CM7-21513	Studio - Reporting: If a component peak was missing from an injection, results such as calibration information, which does not require detection of a peak in an unknown injection, would not be calculated when associated report variables were used in single spreadsheet cells and result columns of injection tables in the console.
CM7-21514	Console - Injection Query: It was not possible to run a query that was using a Custom Variable that did not exist in the target Data Vault. The query is now valid and return no results as expected.
CM7-21516	Console - Data: When starting up the Data Vault service did not publish access control for Data Vaults so that Data Vaults were visible to users who should not see them.
CM7-21523	Console - Instrument Queue: After adding two sequences to the queue and starting the queue, when specifying a time in the "Start After" column for the second sequence and clicking on the "Start After" of the first sequence (which is empty), the "Start After" value of the second sequence disappeared.
CM7-21527	Studio - Data Processing: Performance was poor when reviewing MS sequences with large numbers of SmartLink'ed MS Component plots
CM7-21544	Console - Import/Export: When importing signed Chromeleon 6 data that was tampered with in Windows Explorer, Chromeleon 7 would throw an exception error.
CM7-21549	Data Audit Trail: After restoring a previous version of a sequence and then saving the injection and sequence separately, it was possible to sometimes have an incorrect version number for the entry appear in the data audit trail table.
CM7-21553	Report Variables: When built by using the categories/sub-categories dialog, the parameter chm.massSpectrum("","").* did not show the 'Interactive spectrum' and 'Peak spectrum' options available for that parameter.
CM7-21561	Console - Data - Sequence Properties: It was possible to change default report and view settings of a sequence contained in a read-only Data Vault.
CM7-21562	Agilent 6890/7890 GC: The S/SL Inlet ePanel did not properly hide some parameters based on the inlet mode despite them not being usable in that mode
CM7-21572	Performance - MS Data Processing: When calculating ion ratios for a large number of components (>50), Chromeleon enters an unresponsive state for an extended period of time. Performance of ion ratio calculations has improved and a progress indicator has been added to provide additional calculation state feedback to the user.
CM7-21574	AS-AP: In some cases, when running a sequence with the sample overlap function enabled, an unexpected "device is busy" error would be displayed in the audit trail of the last injection.
CM7-21576	Injection Audit Trail: In some cases an aborted injection caused the injection audit trail to be filled with abort error messages referencing an Object Null reference Exception.
CM7-21597	Chromeleon 6 Data Import: A single Electronic Report copied from a Chromeleon 6 Datasource into a Chromeleon 7 Data Vault caused an exception when opened in the Studio.
CM7-21654	Performance: On very large systems, if a large number of IPCs were attempting to upload sequences at the same time, the CPU usage of the lsass.exe process on those IPCs could be high.

ID	Description
CM7-21655	Reporting: When custom conditions were specified for the Autorepeat Area Settings and components, the repeat area was only reported once (it did not Autorepeat as expected)
CM7-21658	eWorkflows: With "Append Injection(s) if sequence already exists" enabled adding injections by re-running the eWorkflow reset values of Custom Sequence Variables that have been changed in the meantime. In such a case variables are no longer changed to the default value and a warning is displayed.
CM7-21662	Compliance - eWorkflow: Even when versioning and comments were required for any changes to data vault objects were enabled, creation, changes, or save as actions to the eWorkflow did not display a comments dialog.
CM7-21664	Studio - Report Designer: The ms.spec_count report variable reported incorrect values when applied to peaks.
CM7-21670	Studio - Processing Method: It was possible to have a whitespace (blank) character as the group name in a component table if a column was filled down using F9 prior to confirming the entry with the enter key. The fill down operation now removes the whitespace characters before executing the fill down operation.
CM7-21681	Shimadzu GC-2014: On the instrument method editor page for the AuxAPC, both the Pressure and Flow edit controls were disabled.
CM7-21704	Console - Signed Sequence: In certain cases it was possible to change the assigned instrument in a signed sequence.
CM7-21713	Console - Sequence Editor: With versioning enabled restoring a previously locked injection that has been unlocked in the meantime failed with an error when trying to save the restored version.
CM7-21730	Studio - UV Spectral Library: It was possible to edit comment and other fields without selecting a spectrum, leading to an exception.
CM7-21742	Reporting: If using AvCF calibration and having some disabled points, the peak variance and some related variables (peak.variance, peak.standard_deviation, peak.rel_standard_deviation, peak.confLowerLimit, peak.confUpperLimit, peak.predLowerLimit, peak.predUpperLimit) were calculated using the total count/number of all points. All reports created with a version prior to Chromeleon 7.2 CDS SR5 will contain different results for these variables from any reports created with this or a later version.
CM7-21744	Console - Import/Export: When importing to the "Original Location" an error "Invalid destination" was shown if the file did not exist.
CM7-21753	Performance - MS Data Processing: When processing and reviewing many sequences containing MS data in tandem, a memory leak would cause Chromeleon to hang or throw an out of memory error.
CM7-21775	Console - Import/Export: CMBX export previously allowed the "Include Versions" option to be unticked for Sequences containing locked injections, potentially resulting in incomplete data when the CMBX was imported. If a sequence contains locked injections, the CMBX must also contain versions. If versions are not being included in the CMBX, then any locked injections will be exported as unlocked.
CM7-21785	Console - Import/Export: When using drag and drop to create Chromeleon data files a memory exception could possibly be encountered if the originating sequence was large. The data is now streamed to a temp file rather than writing all the data to memory first.
CM7-21787	Data Audit Trail - Chromeleon 6: When viewing data audit trails for Chromeleon 6, from Chromeleon 7, processing methods containing spectral data resulted in display of multiple duplicate audit trail entries.

ID	Description
CM7-21791	Administration Console - Discovery: When attempting to join a Chromeleon Domain with 'Push Notifications' enabled, if a problem was encountered (e.g. with name resolution), Discovery would still appear to successfully join the domain. However, this would result in limited access to remote data vaults and other resources. The Discovery Service now reports the problem and reverts to the previous configuration.
CM7-21802	Administration Console - Scheduler: Restarting the Chromeleon 7 Scheduler service using the "Restart Service" option in Windows Computer Manager, rather than the separate "Stop Service" and "Start Service" options, would sometimes fail because the service hadn't fully stopped before Windows attempted to restart it.
CM7-21809	Data Vault Manager: If a square bracket character was used as part of a Data Vault name an exception would occur, for instance when trying to create the Data Vault. It is no longer possible to use square brackets as part of a Data Vault name when creating or renaming Data Vaults in the Data Vault Manager.
CM7-21810	Console - Import/Export: It was not previously possible to add file attachments to imported sequences.
CM7-21816	Console Version Comparison: When making an integration change to an MS component for the very first time after an injection or restoring an injection, it was not possible to compare the changes between the original and version immediately after the integration change.
CM7-21840	Instrument Configuration Manager: When using the instrument configuration manager to access an IPC that was part of a different Chromeleon domain than the client PC, access privileges were not properly checked against the IPC domain.
CM7-21846	Administration Console - User Database: A user with the privileges LockInjections and UnlockInjections might still be denied permission to lock/unlock injections. This occurred when the folder containing the sequence had an Access Control List with 'Deny' for a role without those permissions, even if the user was not a member of that role.
CM7-21848	Console - MS Data Import: When importing a large number of Xcalibur raw files (>150) into Chromeleon, the import process would be aborted with an out of memory error.
CM7-21876	Reporting: Trying to print from the Report designer following install of Windows Update KB3170455, caused an error.
CM7-21881	Performance - Reporting: When processing and reporting many sequences, a memory leak would eventually cause Chromeleon to hang or throw an out of memory error.
CM7-21914	Setup: Connecting a Chromeleon dongle to a Chromeleon domain controller via a USB2LAN converter now supports the dongle grace period in case of a power outage on the Chromeleon domain controller.
CM7-21918	Performance: Some modal dialogs were not disposed after closing thereby causing memory leaks and degraded performance over time.
CM7-21921	AS-AP: When a sequence was manually stopped, the autosampler would go into a not-ready state that would require a self-test to be run to bring it back to idle.
CM7-21923	Data Audit Trail Report: Creating a full data audit trail report for a sequence containing at least one chromatogram change of an MS signal caused an ArgumentNullException.
CM7-21944	Fraction Collection: When the 'collect outside peaks' option was selected, fraction collection continued even after the collection time window completed.
CM7-21947	Console - Sequence: When a sequence that has been downloaded to an IPC and is inaccessible is opened in the Chromeleon Console, the opened sequence was in a read-only state. No changes to the sequence was possible, but some controls remained active, giving the initial impression of a modifiable sequence.

ID	Description
CM7-21954	Console: If an acquired sequence became corrupted in some way, attempting to manually upload it to a remote data vault sometimes generated an error stating “A Custom field with the mappingname = …already exists in the collection”.
CM7-21957	Studio - Chromatogram View: Attempting to use the Time Spectra tool to create an average mass spectrum over a very long time range would generate a ‘Spectral plot could not be created’ error message
CM7-21968	Setup and IQ: For Enterprise systems, the recommended setting for notifications is "Poll for updates", but the installation kit selected "Receive push notifications" as the default, thereby requiring subsequent manual selection of Poll on each Chromeleon client.
CM7-21970	Console - Sequence Editor: In instances where a data vault uses an Oracle 12 database, but the client PC does not have the Oracle 12 client installed, Chromeleon would throw an exception error when trying to save a sequence.
CM7-21991	Console - Versioning: Save As (with and without Raw Data) both add a Save As item to the Data Audit Trail. Additionally, Save As (with Raw Data) now also copies the Data Audit Trail from the 'source' Sequence to provide full audit history of the data.
CM7-22005	Console - Data: Saving a data item after a version comparison, on a local Data Vault, could sometimes fail if any other Data Vault had become inaccessible during the time the Chromeleon Console was open.
CM7-22007, CM7-22008	ICS-5000/ ICS-4000: The ED waveform sub-panel has been rearranged to list the Ag/AgCl waveforms in the left column of buttons and the PdH and pH waveforms in the right column of buttons.
CM7-22031	Studio - Processing Method: A memory leak when calculating ion ratios for MS components multiple times results in an out of memory exception.
CM7-22032	Console - Data: It was not possible to rename objects such as instrument or processing method that were stored outside a sequence.
CM7-22040	Performance: When running in a slow or heavily loaded network the Chromeleon Console would become unresponsive during DNS lookup calls. DNS information is now cached for improved performance.
CM7-22054	Varian Prep Star 218: If pressure limits were set in the instrument method, changes in the values were not read correctly by the pump leading to pump control failing silently. The limits need to be set on the pump itself, please see the on-line help for further details.
CM7-22071	Administration Console - Scheduler: When a sequence was queued and downloaded to the respective Instrument Controller of the sequence's assigned instrument and it subsequently had the assigned instrument changed remotely to one that was configured on a different Instrument Controller; attempting to run the sequence on the newly assigned instrument resulted in a timeout error that could only be resolved by restarting the Scheduler service on the Data Vault server. Several handling improvements have been made such as preventing a user from changing the assigned instrument of a sequence that is already downloaded so that the timeout no longer occurs.
CM7-22082	Console - Import/Export: Chromeleon would report an error when importing a .cmbx containing sub-folders, and with Access Groups assigned, onto a system without User Management.
CM7-22083	Console - Data: When the copy operation of a large sequence was cancelled, the cancellation process took over 5 minutes in some instances.

ID	Description
CM7-22086	Console - Instrument Queue: When a sequence was submitted remotely to an instrument queue, no report was generated at the end of the sequence, even though that option was specified.
CM7-22095	Console - Injection Query: If the Chromeleon studio for an injection query is opened while the query is still ongoing, an exception error was thrown.
CM7-22109	Studio - Reporting: If the calibration mode in a Processing Method was changed to 'Fixed' the details of the change were not displayed in the Data Audit Trail comparison view of the Processing Method. Additional properties are now displayed and in addition two new Processing Method Report Variables are provided: Last Fixed Calibration Update Operator and Last Fixed Calibration Update Date & Time.
CM7-22119	Administration Console - Global Policies: The Global Policies report contained some terminology that was inconsistent with the equivalent terminology in the Chromeleon Administration Console.
CM7-22127	Studio - Report Designer: Excessive use of the chm.noise report variable in calculations may result in memory leaks and decreased performance.
CM7-22160	Setup and IQ: The post-installation steps performed after updating Chromeleon 7 could become 'stuck' on computers which also have Chromeleon 6 installed.
CM7-22161	Reporting: If using a custom condition to select peaks for which spectral plots should be shown in an autorepeated area, this would only work if a comma was used as a separator. It is now possible to use the separator defined in the Windows regional settings.
CM7-22163	Reporting: Enabling "Lock Sheet" for an entire report template worksheet while leaving "Lock Cell" disabled for each of the cells no longer degrades Chromeleon performance when opening the template.
CM7-22185	Console - Processing Method Creation: When creating a processing method from the Chromeleon Console in a downloaded sequence, unexpected behavior was observed. The initial creation location of the processing method was defined as the XVault. If the user then selected the network Data Vault, the newly created processing method would be saved without prompting the user.
CM7-22207	Administration Console - Discovery: The Time Stamp displayed for Last Update time of Domain Resources did not include Time Zone offset.
CM7-22208	Administration Console - Discovery: The Last Refresh column for Domain Resources was not sufficiently wide enough to display the full information contained within the field.
CM7-22214	Setup and IQ: If after installing Chromeleon, the user installs any other software which updates the Visual C++ 2013 Redistributable Package by installing only the 64-bit version, this would remove the 32-bit version of the package. This 32-bit version is required by several Chromeleon services, which would therefore no longer be able to start.
CM7-22220	Sequence in the Queue: When removing a sequence from the Queue that has been downloaded from a network Data Vault and that the current user has no control over it was not necessary to take control over that sequence.
CM7-22224	Setup and IQ: When Chromeleon was updated on a system where the Data Vault Service was running with an account other than the default "Local System" account, the installer would revert the Data Vault Service back to running as Local System.

ID	Description
CM7-22233	Injection Audit Trail: When a user modified an injection status from Finished to Idle, the data audit trail indicated that the user deleted the data even though the user only had the privilege to modify the injection. The data audit trail messaging has been improved to indicate that the raw data was deleted due to modification of the injection status to idle.
CM7-22240	Console - Sequence Editor: The Delete key did not clear a field of the injection list unless the user has the privilege "Delete Finished or Interrupted Injections".
CM7-22252	Setup and IQ: Following an upgrade of Chromeleon, the IQ would incorrectly report an error in the timestamp of the CM7Help_EN.CHM file.
CM7-22261	Administration Console - Discovery: Automatic refresh of the Domain Resources: Computers list in the Administration Console while selecting computers (e.g. prior to setting up a Maintenance Window) could result in the wrong computer(s) being selected.
CM7-22271	Sequence Download Failure: When restoring a versioned instrument method into a sequence the sequence history got corrupted and consequently the sequence could no longer be downloaded with an error message "Error reading the sequence...".
CM7-22273	Console - Data: Using a Data Vault with versioning and "comments required" creating an object outside a sequence did not require a comment.
CM7-22293	Sequence Data Audit Trail: Changing the order of the table columns of the injection list directly after creation of the sequence added a spurious "Table Columns" node to the data audit trail.
CM7-22294	Console - Import/Export: When a user attempted to import a sequence containing a spectral library from Chromeleon 6 to Chromeleon 7.2, Chromeleon 7.2 would throw an exception error.
CM7-22297	Console - Data Audit Trail: Changing the order of Sequence table columns after performing Station Operational Qualification would result in changes to hidden columns being reported in the Data Audit Trail.
CM7-22300	Console - Sequence Editor - Result Formula: The report variable injection.levelCheck always returned n.a. when used in a result formula.
CM7-22327	Compliance - Spectral Libraries: Even though administrative settings are set to require comment when creating a Spectral Library, a comment dialogue was not available when creating and saving a new Spectral Library from the Console's Create menu.
CM7-22328	MS Fixed Calibration Performance: Injections used for fixed calibration with MS were not written to the chromatogram cache so that results had to be recalculated whenever accessed causing extra delays.
CM7-22382	Console - Sequence Editor: When editing a cell in the Injection List changes were only applied after moving the cursor out of this cell.
CM7-22394	Services - General: Sequences would sometimes stop with the error "Data Vault Service is not available" and a corresponding .NET Runtime error with ID 1023 in the Windows Application Event Log.
CM7-22413	Console - Injection Query: When selecting any variable associated with Date&Time for Sequence/Injection and "is empty" or "is not empty" for comparison an error indicator "Invalid date/time value" next to the comparison value was displayed and the Injection Query could not be executed.
CM7-22415	Data Audit Trail: When using the data audit trial to show changes between versions for a chromatogram change of an MS channel, a GUID (alphanumeric string) was displayed instead of the component trace name.

ID	Description
CM7-22442	Administration Console - Scheduler: Sometimes completed Sequences would not get removed from the queue and the Instrument Audit Trail would report the error "The upload of the sequence "<Sequence Name>" failed. Error detail: At least one action of the task failed."
CM7-22447	Setup and IQ: Following an upgrade of Chromeleon, the IQ could incorrectly report an error in the timestamp of the InstrumentConfiguration_EN.CHM file.
CM7-22449	Network Data Acquisition: When an IPC running a sequence lost its network connection to the Chromeleon domain, clicking on a remote data vault generated an “Unexpected Error” message. Afterwards, the Console pane containing the data vault tree would crash.
CM7-22457	Services - Discovery: Polling for data could result in larger amounts of data than optimal being transferred over the network.
CM7-22474	Data Audit Trail Report: The Data Audit Trail Report generated an exception when there was a report with a line object included contained in the data.
CM7-22476	Studio - Report Designer: Chromeleon allowed for empty cells of protected sheets in the report designer to be formatted.
CM7-22484	Console - Import/Export: Importing a CMBX file which had been created with the "Include 3D and MS data" option unticked could result in an error being displayed in Chromeleon due to the presence of references to the excluded 3D or MS data.
CM7-22498	Console - Import/Export: When attempting to restore a CMBX which contained invalid linked objects, instead of skipping the invalid objects, Chromeleon would report an unhandled exception.
CM7-22511	Studio Performance: Changing between injections with many channels including non-evaluation channels was very slow.
CM7-22520	Administration Console - License Manager: The Chromeleon License Service performed more read/writes to the License.xml file than was necessary, especially on larger systems with many IPCs, and could have had a performance impact.
CM7-22528	Services - General: Following a reboot on some systems, the Chromeleon 7 Scheduler Service would sometimes fail to start due to timeouts in services on which the Scheduler depends (Chromeleon 7 Data Vault Service and Chromeleon 7 Discovery Service).
CM7-22533	Studio - Performance: If a network sequence is modified mid-run without saving and the completed sequence is uploaded, reloading the sequence results in the studio hanging for an extended period of time.
CM7-22534	ICS-5000: Selecting the Gold, pH-Ag-AgCl RE, AAA waveform in the device sub-panel for the ED detector would load the incorrect waveform parameters.
CM7-22546	Instrument Audit Trail: The instrument audit trail title bar displayed the date of the last audit trail entry instead of the date of the first audit trail entry.
CM7-22600	Console: Occasionally, when copying multiple sequences, an 'invalid operation' exception error would occur.
CM7-22620	Electronic Signature: It was not possible to submit a sequence containing cached Non Targeted MS results.
CM7-22629	Data Audit Trail - Non Targeted MS Processing: In some instances, saving non targeted MS processing results resulted in a spurious entry for an unnamed object without an operation.

ID	Description
CM7-22660	Instrument Audit Trail: On the 'Historical' tab of the instrument audit trail table, if an audit trial in the selected date range failed an integrity check, the error message was misleading. Depending on circumstances, it was either a generic message formatted as a normal audit trail entry or implied that the audit trail was empty.
CM7-22663	Instrument/Injection Audit Trail: If an instrument or injection audit trail failed an integrity check, it was still possible to create a report of the audit trail, but it did not indicate that there was a problem with the audit trail.
CM7-22674	Services Manager: The polling interval of the Chromeleon Services Manager, when minimized in the Windows System Tray/Windows Notification Area, was more frequent than necessary which, on large systems, created unnecessary network traffic.
CM7-22675	Console - Sequence Editor: When trying to change the channel to be displayed in the Injection List depending on the number of channels and injections it took several seconds until the drop-down menu for the is shown.
CM7-22676	OQ/PQ: Running Station Operational Qualification on a computer which is part of a Chromeleon domain, but is not currently connected to the Chromeleon Domain Controller would incorrectly result in a "Timeout during initialization of instrument" failure.
CM7-22696	Agilent LC (ICF): When running a sequence with overlapped injections and using the option to extract the injection volume from the method, it was possible that the injection volume from the sequence was shown in reports.
CM7-22702	Reporting: When reporting gradient values for non-linear gradients, the audit trail report variables would use an incorrect curve description for interpolation. This affected reporting only, and not execution of the gradients.
CM7-22703	Studio - Processing Method: When using the 'Import Compound Data' function to search MS peaks against a NIST library, clicking the 'Select All' button followed by the 'Import' button generated an error.
CM7-22709	Administration Console - Discovery: Performing a right-mouse click on a grouped header in a number of Administration Console grids could result in an "Object not set to an instance of an object" error message being displayed.
CM7-22713	Data Acquisition: Under rare circumstances, the Instrument Queue was aborted with a "Collection was modified; enumeration operation may not execute." Error.
CM7-22718	Administration Console - Discovery: Some columns in the Data Vault properties grid were inconsistent in their description of the Disabled/Enabled state of properties.
CM7-22720	OQ/PQ: Attempting to unlock a client session where Station PQ was running would cause the error message "This account does not have the privileges required to unlock the console." even when the user account did have the necessary 'Close Locked Clients' privilege.
CM7-22731	OQ/PQ: Running Station Performance Qualification could cause a memory leak, which could then result in "out of memory" errors when subsequently working with Chromeleon.
CM7-22742	Instrument Queue - Print & Export Settings: When changing the Print & Export Settings in the Queue these settings are not reflected consistently in detached and integrated ePanels. The settings are also not preserved when restarting the Console.
CM7-22744	Console - Import/Export: The CMBX comment field should only accept 255 characters. Chromeleon did not prevent >255 characters being entered in the comments field, and this would cause the export to CMBX to fail and an error message would be raised.

ID	Description
CM7-22745	Console - Import/Export: Comments entered in the Send To dialog when creating a CMBX were not saved to the CMBX and were therefore not visible when the CMBX was imported.
CM7-22755	Data Audit Trail - Injection Record: When creating a new injection, a record for creation and change of the injection were created in the data audit trail, resulting in confusion.
CM7-22770	Administration Console - Scheduler: Performing Save As with raw data on a currently-acquiring Sequence would cause a System.NullReferenceException. Save As, Copy and Paste, and Drag and Drop are all now prevented for acquiring Sequences.
CM7-22772	Console - Data: In some instances, copying a running sequence resulted in the running injection status being changed to idle but containing raw data which could not be overwritten in the newly created sequence.
CM7-22774	Console - Instrument Queue: Adding a Sequence to an instrument queue could result in an error "The sequence <name> does not exist." being displayed, especially when adding multiple Sequences in a short period of time, or if the sequence(s) contain a large number(s) of injections.
CM7-22794	Studio - Electronic Report: When creating an electronic report during data acquisition, Chromeleon would throw an error.
CM7-22812	Console - Data: When copying a running injection with raw data into another sequence, the run state was also copied over, resulting in an injection that could not be changed or deleted.
CM7-22824	Studio - Processing Method: When changing the properties of a calibration, it was possible to edit the Relative Response Factor, even when not using calibration of another component.
CM7-22875	Console - Sequence Editor: In some instances, saving an existing sequence resulted in added or deleted injections not being reflected in the UI without a refresh.
CM7-22876	Studio - MS Components View: When a component had a quantitation and confirmation peaks, the quantitation peak was sometimes mislabeled as the incorrect transition.
CM7-22884	Console - Import/Export: Data imported from Agilent ChemStation, on a pre-7.2 SR5 client, showed two errors: (i) the x-axis (Wavelength) was incorrectly labelled as ms instead of nm, and (ii) the data range minimum was always shown as 0.
CM7-22917	Console - Import/Export: Exporting large sequences to .cmbx could be very slow and the progress bar would appear to be 'stuck' at 100% while post-export checks were performed.
CM7-22920	Data Vault Manager: Data Vault Manager did not prevent the renaming of read-only Data Vaults.
CM7-22979	Data Vault Manager: Attempting to dismount a Data Vault which has been marked as Read-Only would result in an error message, and it would not then be possible to mount the Data Vault on a different Data Vault Server.
CM7-22988	Agilent 6890/7890 GC: In Constant Flow mode, the Inlet and Columns ePanel displayed the nominal flow value, even though it wasn’t applicable. A similar problem also existed for Constant Pressure mode
CM7-22991	Console - Import/Export: Sequences generated using eWorkflows in Chromeleon 7.2 SR1 MUa could not be imported.
CM7-22999	Console - Data Audit Trail: Instrument Method Comparison report would sometimes omit method changes under rare circumstances.

ID	Description
CM7-23014	Console - Sequence Editor: When updating the next injection of a running sequence, although the changes can be saved, when the next injection starts, sometimes the sequence was aborted with an error “The running or preparing injection cannot be saved… because it was changed by a different user since it was loaded”.
CM7-23037	Administration Console - Scheduler: Attempting to import Chromeleon 6 sequences could sometimes result in a "the handle is invalid" error message and the data would not be imported.
CM7-23038	Administration Console - Scheduler: Attempting to import Chromeleon 6 sequences containing spectra fields with less than 2 spectra result in a "the transaction has aborted" error message and the data would not be imported.
CM7-23079	Fraction Collection: When the 'collect outside peaks' option was selected, fraction collection continued even after the collection time window completed.
CM7-23133	Console - Import/Export: A defect in Chromeleon 6 allowed control characters (e.g. \n for line feed, or \r for carriage return) to be pasted into text fields. If a Sequence containing these characters in any grid was then imported into Chromeleon 7, the import would fail with a 'Fatal' error which stated that it contained text which was "invalid for this item type".
CM7-23134	Administration Console - Scheduler: Copying Chromeleon 6 Sequences into Chromeleon 7 using a Scheduler task would fail for any Sequences with verified Chromeleon 6 Electronic Signatures.
CM7-23163	A2D: When using a USB3 port in Windows 8 to download firmware to the A2D V4, an "Invalid Configuration Descriptor" error occurred.
CM7-23180	Reporting - Instrument Method Overview Table: In a report template for a sequence using multiple instrument methods, the Instrument Method Overview Table reports information for only the first injection when used on any report sheet except the first sheet.
CM7-23199	Reporting: When opening a Report Template from the Associated Items list in the console, the user would not receive prompt feedback that the item was opening.
CM7-23225	Console - Import/Export: Attempting to export to .cmbx a Sequence containing subfolders, would result in Chromeleon reporting an 'unexpected error' if any of the subfolders had access restriction defined.
CM7-23263	TSQ 8000: When a Thermo Scientific TSQ 8000 is acquiring data, a sequence would stall indefinitely between injections in some situations.
CM7-23300	Console - Import/Export: When exporting a Sequence containing subfolders to .cmbx, if any of the subfolders had access restriction defined, it was possible, under certain circumstances, for users without the required 'Send to File' privilege to export restricted subfolders.
CM7-23361	Integrion: Closing the column compartment and/or detector doors just before starting or during a running sequence would cause the approved consumables to go into an unapproved state if one of those consumables is dropped from the scan (e.g., if tag is misaligned). This would abort said sequence.
CM7-23380	EG-5000: In very rare cases, a pump leak or pressure over limit error would not turn off the EGC.
CM7-4134	Studio - Peak Properties Pane: The Undo / Redo did not work when making changes to the component table using the peak properties pane.
CM7-6390	ePanels - UltiMate DGP-3600(RS, SD): When using an UltiMate DGP-3600(RS, SD) shared between two instruments, the ePanels would show only the left pump on both instruments, in addition to some $1 symbols.

ID	Description
CM7-8121	Data Vault Manager: When creating or mounting a multi-user data vault via the respective wizards the password of the user used for authentication was shown as plain text in the Connection string edit box. The password is now obfuscated and not visible unless the password is edited directly into the connection string.

6 Backward/Forward Compatibility Issues

6.1 Thermo Scientific Vanquish Charged Aerosol Detector [CM6-23499]

Any Instrument Methods created for the Vanquish Charged Aerosol detector with Chromeleon 7.2 SR2 MUa and earlier may need to be updated due to changes in the driver introduced in Chromeleon 7.2 SR2 MUb.

6.2 Thermo Scientific Vanquish Autosampler [CM6-23405]

Any Instrument Methods created for the Vanquish Autosampler containing the WashSpeed property will need to be updated. The WashSpeed value needs to be divided by 0.06 in order for the Instrument Method to work correctly.

6.3 Thermo Scientific TriPlus RSH

The updated driver for this instrument is incompatible with firmware older than version 2.2.

Note: It is necessary that the firmware is updated to the latest version in order to benefit from any future driver enhancements.

6.4 Thermo Scientific TriPlus 300 HS [CM6-22430]

The updated driver for this instrument is incompatible with firmware older than 2001.9.0.

Note: It is necessary that the firmware is updated to the latest version in order to benefit from any future driver enhancements.

6.5 Thermo Scientific TriPlus LS-100

The updated driver for this instrument, included in this Service Release, is incompatible with firmware older than version 2.2.

Note: It is necessary that the firmware be updated to the latest version in order to control the instrument with this software release.

6.6 Thermo Scientific TSQ Quantiva

The driver version 1.1 QF1 for this instrument, included in this Service Release, may not be compatible with existing TSQ Quantiva mass spectrometers running driver version 1.0 without a hardware update. Please contact your local MS service engineer before attempting to upgrade the unit.

Note: New TSQ Quantiva modules from the factory are not affected by this issue.

6.7 Thermo Scientific TSQ Quantiva and Endura

The driver version 1.1 SP1 for these instruments may not be compatible with existing TSQ Quantiva and Endura mass spectrometers running driver version 1.0 without a hardware update. Please contact your local MS field service engineer before attempting to upgrade the unit.

Note: New TSQ Quantiva and Endura modules from the factory are not affected by this issue.

6.8 TSQ Quantiva and Endura Instrument Method [CM7-18759]

Instrument methods created with older versions of the TSQ Quantiva and Endura instrument method editor cannot be opened with newer versions of the method editor. If a large number of instrument methods have already been created for regular use, upgrade of the TSQ Quantiva and Endura driver is not recommended. Contact your local Thermo Fisher Scientific representative for additional details.

6.9 Signed Sequences [CM7-16374]

Sequences that have been signed within Chromeleon 7.2 SR1 will fail verification after copying within later versions of Chromeleon 7.2 CDS.

7 Appendix

This chapter contains general Information about Service Releases, Release Notes, Online Help, and Contributed Content.

7.1 Release Notes

The Release Notes list the new features and improvements of the current release. Included in these Release Notes are all of the functionality and bug fixes from Chromeleon 7.2 SR4 MUa and Chromeleon 7.2 SR4 MUb. For details about Chromeleon 7.2 SR4 and other previous releases, refer to the relevant release notes which can be found on the Chromeleon 7.2 SR5 DVD.

7.2 Online Help

In general, new features, updates and drivers that are introduced with this release are described in an updated Online Help that is distributed with the release.

7.3 Contributed Content

The Chromeleon 7 disk contains a folder titled Contributed Content. This folder contains:

- Demonstration Material
- Localized Documents
- Localized ePanels
- Localized Report Templates
- eWorkflow Templates
- User Management Example
- Charlie Mouse Pointer

Note: The files in the Contributed Content folder have not been tested and validated according to Thermo Fisher Scientific Software Development Cycle guidelines modeled after ISO 9001:2008 standards. Thermo Fisher Scientific assumes no responsibility for any errors that may appear in the content provided in the Contributed Content folder.

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