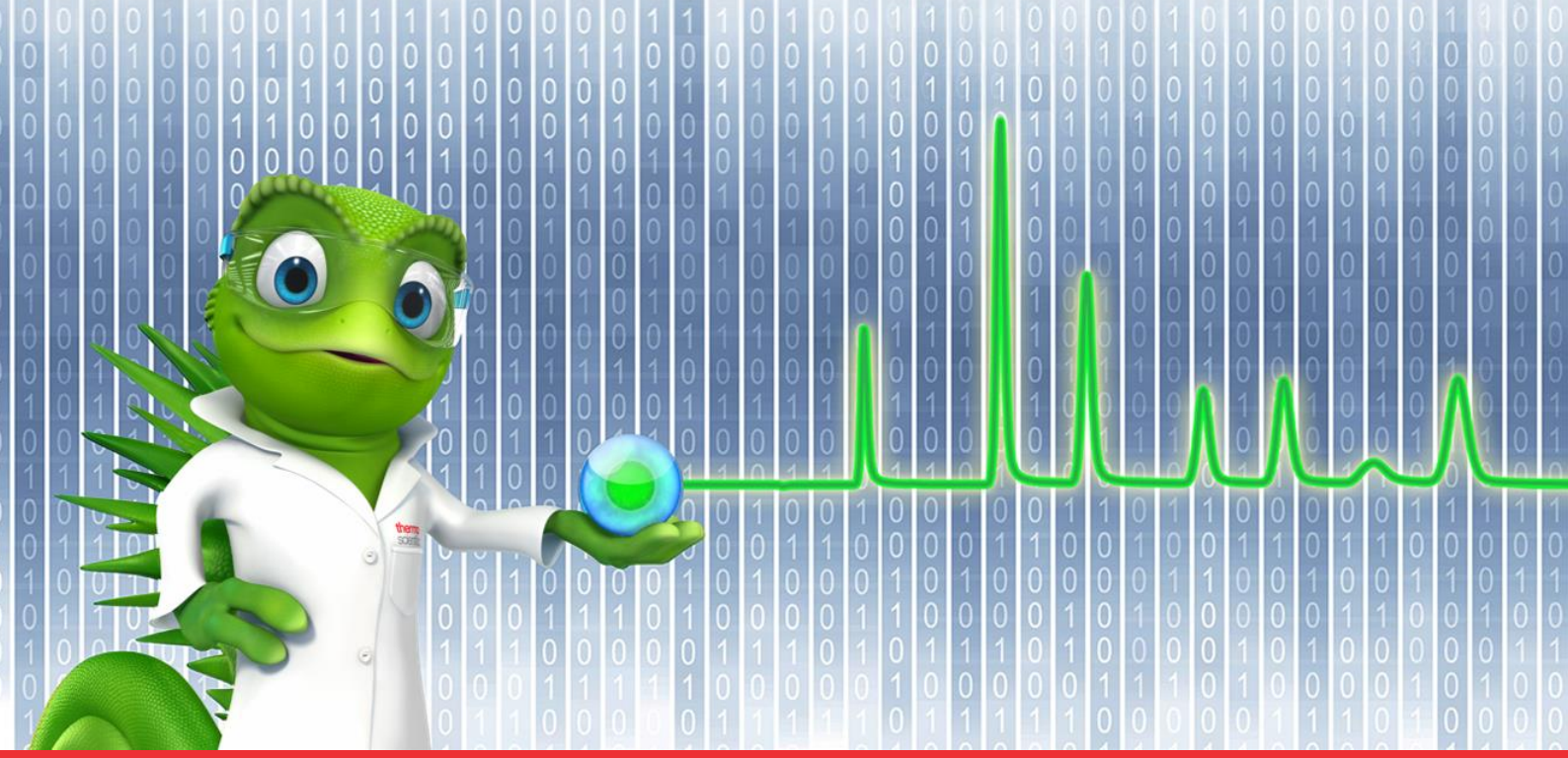

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Supported Operating Systems Version 2

Chromeleon 7
Chromatography Data System

Software Version 7.2.10 MUa • November 2020

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Revision	Date	Comment
1	Aug 2020	Initial Product Release (Chromeleon 7.2 MUa)
2	Nov 2020	Updated the Database section to include support for Oracle 19c. Added Microsoft Server 2019. Updated Virtualization and Cloud sections. Updated the Windows 10 End of Service section.

Note: Changes made since the previous version of this document are highlighted in yellow.

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1 Introduction

This document lists the operating systems supported for use with Chromeleon 7.2.10 MUa and the role within Chromeleon for which each operating system can be used.

2 Support Details

2.1 General

2.1.1 Operating System Support

Chromeleon 7.2.10 MUa is a maintenance release providing “Extended Support” for Chromeleon 7.2.10. This extended support provides resolution to defects introduced into Chromeleon 7.2.10 but also introduces a small number of new features requested by customers who are not yet in a position to move to Chromeleon 7.3.

In general Extended Support releases (ES) are supported on the version(s) of Windows Desktop, Windows Server, and Citrix which were available at the time of the release of Chromeleon 7.2.10, but also adds support for some newer operating systems when required by customers using this channel.

2.1.2 Database Support

In general releases on the Extended Support channel are supported for use with the versions of Microsoft SQL and Oracle databases which were available at the time of the release of Chromeleon 7.2.10. Support for newer database platforms may be introduced if requested by customers using this channel or if this becomes necessary due to OEM de-support.

2.1.3 Operating System and Database Releases after Chromeleon Release

After a Chromeleon Extended Support release, we continue to monitor new Windows (including Windows KBs) and Database releases. If new versions of Windows, SQL or Oracle are released between Chromeleon Extended Support Maintenance Releases, then we will normally aim to test Chromeleon compatibility with those versions as part of the testing of the subsequent maintenance release on the extended support channel.

2.2 Supported Operating Systems per Role

The following table lists, for each role in Chromeleon, the operating systems supported.

For Enterprise Chromeleon systems, any supported Client operating system(s) can be used in combination with any supported Server operating system(s).

Role	Supported Operating Systems	
Standalone Workstation	Microsoft Windows 10 Pro and Enterprise (64-bit)[5] Microsoft Windows 8.1 Professional (64-bit)	
Remote Client / Data Processing Client	Microsoft Windows 10 Pro and Enterprise (64-bit)[5] Microsoft Windows 8.1 Professional (64-bit)	
Thin Client	Microsoft Windows Server 2019 with Terminal Services activated [1] Microsoft Windows Server 2016 with Terminal Services activated [1] Microsoft Windows Server 2016 with Terminal Services activated running Citrix XenApp Server 7.15 [1] Microsoft Windows Server 2012 R2 (64-bit) with Terminal Services activated [1] Microsoft Windows Server 2012 R2 (64-bit) with Terminal Services activated running Citrix XenApp Server 7.6 [1] Microsoft Windows Server 2012 (64-bit) with Terminal Services activated [1] Microsoft Windows Server 2012 (64-bit) with Terminal Services activated running Citrix XenApp Server 6.5 [1]	
IPC / Enterprise Workstation	Microsoft Windows 10 Pro and Enterprise (64-bit) [5] Microsoft Windows 8.1 Professional (64-bit)	
247 Instrument Controller	Microsoft Windows 10 LTSC 1809 firmware version TDS5.50 (TDS5) [5] Microsoft Windows Embedded Standard 7 firmware version 5.33a (TDS5) [8]	
Chromeleon Domain Controller	Microsoft Windows Server 2019 [1] Microsoft Windows Server 2016 [1] Microsoft Windows Server 2012 R2 (64-bit) [1]	
Data Vault Server (Master or Slave)	Microsoft Windows Server 2019 [1] Microsoft Windows Server 2016 [1] Microsoft Windows Server 2012 R2 (64-bit) [1]	
Database Server[2]	Oracle 12c (R1) Oracle 18c[6] Oracle 19c[6]	Microsoft SQL Server 2014 SP3 Microsoft SQL Server 2016 Microsoft SQL Server 2017
Local database	Oracle not supported for local data vault	Microsoft SQL Server 2014 Express SP3
Raw Data Server	Microsoft Windows Server 2019 [1] Microsoft Windows Server 2016 [1]	

	Microsoft Windows Server 2012 R2 (64-bit) [1]
.Net Framework	Microsoft .NET Framework 3.5 SP1 Microsoft .NET Framework 4.6.2
Virtualisation	Virtualisation is supported for the following roles [3]: • Chromeleon Domain Controller • Chromeleon Data Vault Server (load-balanced) • Database Server (Oracle and SQL) • Chromeleon Raw Data Server • Thin Client • Remote Client / Data Processing Client
Cloud deployment	Cloud deployment is supported for the the following roles [9]: • Chromeleon Domain Controller • Chromeleon Data Vault Server (load-balanced) • Database Server (Oracle and SQL) • Chromeleon Raw Data Server • Thin Client • Remote Client / Data Processing Client

Notes:

[1] Windows Server 2019, 2016 and 2012 are supported on both the Standard and Datacenter editions.

[2] If the database is installed on the same machine as the Chromeleon Domain Controller or the Chromeleon Data Vault Server (neither of these configurations is recommended as they cause a potential single-point-of-failure in the Chromeleon system), the database version must be compatible with the Server operating system. Refer to the documentation for your chosen database for more information

[3] Chromeleon has been tested by Thermo Fisher Scientific on a range of virtualisation hypervisors. Our findings are that, provided the hypervisor is capable of hosting a virtual machine running one of the Windows versions listed in the table above, it is capable of being used in a Chromeleon system in any of the roles listed in the Virtualisation section of the table above. Virtualization is not supported for Workstation or IPC roles as a physical connection to an instrument is required and reliable 'virtualised' instrument connection mechanisms are not fully compatible with real-time operations and usage of multiple communication ports.

[4] With Chromeleon 7, you can only create standard data vaults locally on the hard drive of the PC that runs Chromeleon 7. Standard data vaults are shared in a Chromeleon domain, but the connectivity, performance, and capacity are limited by the SQL Server version

[5] See section 2.2 for further information regarding Windows 10 support

[6] Installation of the Oracle 18c and 19c clients require special instructions. These can be found in the document #460 of the Chromeleon Enterprise documents

[7] Since January 2020, Microsoft no longer provides mainstream support for Windows 7. If you want to continue using Windows 7 with Chromeleon, you will need to purchase Extended Support for Windows 7 from Microsoft. The support statements for Windows 7 in this document are only valid if you have Extended Support for Windows 7.

[8] From October 2020, Microsoft will no longer provide mainstream support for Windows Embedded Standard 7. If you want to continue using WES7 firmware with your Thermo Scientific 247 Instrument Controller, you will need to purchase Extended Support for WES7.

[9] Chromeleon has been tested by Thermo Fisher Scientific on Amazon Web Services (AWS) Elastic Cloud Compute (EC2) instances of Windows 2016 Server. Any other cloud platform which supports the creation of a

Windows Server VM running one of the Windows versions listed in the table above is supported for use in a Chromeleon system in any of the roles listed in the Cloud deployment section above. Cloud deployment is not supported for Workstation or IPC roles as a physical connection to an instrument is required and reliable 'virtualised' instrument control connection mechanisms are not fully compatible with real-time operations and usage of multiple connection ports.

2.3 Windows 10 Service Periods

With the release of Windows 10, Microsoft's support model was changed. This has an impact on the way Thermo Fisher Scientific is able to support Chromeleon on Windows 10.

Windows 10 Feature Updates are now released twice a year and each feature release is supported by Microsoft for approximately 30 months.

At the time of release of Chromeleon 7.2.10, the versions of Windows 10 which are under support by Microsoft and are therefore supported for Chromeleon 7.2.10 are displayed in the table below:

Windows 10 Version	End of service for Professional edition	End of service for Enterprise edition	End of service for Long-term Servicing Channel edition
Version 1703	Windows 10 Pro Version 1703 is no longer supported	Windows 10 Enterprise 1703 is no longer supported	n/a
Version 1709	Windows 10 Pro Version 1709 is no longer supported	Windows 10 Enterprise 1709 is no longer supported	n/a
Version 1803	Windows 10 Pro Version 1803 is no longer supported	Nov 2020	n/a
Version 1809	Windows 10 Pro Version 1809 is no longer supported	May 2021	Aug 2028[1]
Version 1903	Dec 2020	Dec 2021	n/a
Version 1909	May 2021	May 2022	n/a
Version 2004	Dec 2021	Dec 2022	n/a

Notes:

[1] LTSC editions of Windows 10 are released less often than other editions, but are supported for a longer period.

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