

Merge DICOM Toolkit™

5.20.0

Release Notes

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Symbols Glossary:

Symbol	Title
	Manufacturer
	Consult Instructions for Use

The full symbols glossary can be viewed at

<https://merative.com/content/dam/merative/enterprise-imaging/merge-healthcare-symbols-glossary.pdf>

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Part	Date	Revision	Description
COM-6077	February 2025	1.0	Updated bi-annually

The latest version of this document can be found at <https://merge.my.site.com/mergecommunity>.

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Chapter 1. About the Application

The Merge DICOM Toolkit provides a powerful and simplified interface to DICOM. It allows you to focus on the important details of your application and the immediate needs of your end users, rather than the complex details of the DICOM standard.

WARNING: If using the log feature to log information to a file, Personal Health Information (PHI) may be exposed. Client application and system should be aware of this risk and take necessary procedures to prevent and identify unauthorized use or access to PHI.

This release includes the following toolkits:

Merge DICOM Toolkits	Target Development Environment
Merge DICOM Toolkit – C/C++ Toolkit V5.20.0	32-Bit Windows – Visual C++
	64-Bit Windows – Visual C++
	64-Bit Windows (New Edition) – VS 2019
	32-Bit Windows – Borland
	32-Bit – Linux on Intel x86
	64-Bit – Linux on Intel x86_64
	64-Bit – Linux on Intel x86_64 (New Edition) – GCC 9.4.0
	64-Bit – Linux on ARMv8
	32-Bit – Solaris 10 on Intel x86 – GCC Compiler
	64-Bit – Solaris 10 on Intel x86_64 – GCC Compiler
	32-Bit – Solaris 8 Sparc – Sun Compiler
	32-Bit – Solaris 8 Sparc – GCC Compiler
	32-Bit – MAC OS on Intel and Power PC
	64-Bit – MAC OS on Intel
	64-Bit – macOS on Intel and M1 (New Edition)
	32-Bit Android on Armv7
	64-Bit Android on Armv8
	64-Bit iOS
Merge DICOM Toolkit – .NET Framework 2.0/C# Toolkit V5.20.0	32-Bit Windows
	64-Bit Windows
Merge DICOM Toolkit – .NET Framework 4.5/C# Toolkit V5.20.0	64-Bit Windows

Merge DICOM Toolkits	Target Development Environment
Merge DICOM Toolkit – .NET Framework 4.8/C# Toolkit V5.20.0	64–Bit Windows
Merge DICOM Toolkit – .NET Core/C# Toolkit V5.20.0	64–Bit Windows
	64–Bit Linux
Merge DICOM Toolkit – .NET 6/C# Toolkit V5.20.0	64–Bit Windows
	64–Bit Linux
Merge DICOM Toolkit – .NET 8/C# Toolkit V5.20.0	64–Bit Windows
	64–Bit Linux
Merge DICOM Toolkit – Java Toolkit V5.20.0	Windows, Solaris, Linux, Android, Mac OS X
Merge DICOM Toolkit – Python Toolkit V5.20.0	64–Bit Windows
	64–Bit Linux

This release includes the following:

- [CHAPTER 2. ENHANCEMENTS ON PAGE 6](#)
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Chapter 2. Enhancements

NOTE: Supplements and change proposals apply to all toolkits.

This release adds support for the following DICOM supplements.

Supplement	Title
239	Waveform Annotation SR

This release also contains updates to the DICOM standard. It addresses the following correction proposals (CP):

CP#	Title
1636	Examples of Specific Character Set in Worklist
2305	Clarify Matching of Key Attributes with a VR of IS or DS
2306	Fix inconsistencies regarding "Status"-related terms
2307	Rationalize and extend codes and strings for filter material
2308	Clarify Creator Digital Signature Profile
2311	Make Camellia support optional
2312	Address late-breaking change to BCP-195
2314	Clarify units of Vector Grid Data
2316	Include reference to DICOM Conformance Statement (DCS) into Annex N PS3.2
2320	Communication that data is synthetic
2324	Add information about Vertex Distance to refraction correction parameters
2325	Correct DICOMDIR sample in table A.1-1
2328	Deidentification of Patient ID in Patient Group Macro
2330	Add Spatial Information to Secondary Capture IOD
2331	Clarify Segment scan order for TILED_FULL
2334	Add [18F]DCFPyL (Piflufolastat) PSMA PET radiopharmaceutical This CP applies to Merge DICOM Java Toolkit.
2335	Clinical Trial Identifiers need Issuers and may be multiple
2344	Update RT Patient Setup Module
2345	Add Requirement for Selected Frames in Sparse MF Module
2348	Replace the terms Operations Statement and Notifications Statement
2352	Clarify floating point Not a Number values

CP#	Title
2354	Clarify lack of version of Character Sets including GB18030
2356	Add Ethnic Group Code Sequence
2357	Clarify that in SR, the Referenced Instance Sequence content shall not overlap with the Current Requested Procedure or Pertinent Other Evidence, Predecessor or Identical Documents Sequences
2358	Update DICOM to reflect changes in IHTSDO SNOMED CT-DICOM Subset for JUL 2023 INT Release
2359	Add representative and boundary point concepts
2362	Clarify the content of Extended Offset Table present in Concatenation
2363	Add missing fields to Context Group definition This CP applies to Merge DICOM Java Toolkit.
2365	Clarify use of Command Elements and Error Comment
2366	Remove rendered bulk from conformance statement
2371	Remove precision on ObservationDateTime for Procedure Log
2372	Update Gantry Angle description in RT IMAGE to allow for an Imaging beam angle
2374	Improve RT equipment mapping for imaging
2376	Add Table Top Calibration UID to Table Top positions
2378	Add RT Treatment Technique Code to Beam Sequence

In addition to updating the toolkit to reflect changes to the DICOM standard, this release also contains the following enhancements:

NOTE: Issue numbers can be used to request additional information from your account representative.

Issue	Description
COM-5654	Allow to process and transfer DICOM data with the size exceeding 4GB. This enhancement applies to Merge DICOM C/C++ New Edition Toolkits: <ul style="list-style-type: none"> 64-Bit Windows (New Edition) - VS 2019 64-Bit - Linux on Intel x86_64 (New Edition) - GCC 9.4.0
COM-5917	Add the support of .NET 8 Framework. This enhancement applies to Merge DICOM .NET 8/C# Toolkit.
COM-6173	Add the support of Python 3.13 This enhancement applies to Merge DICOM Python Toolkit

Chapter 3. Fixed Issues

The following table lists the issue that has been fixed in this release.

NOTE: Issue numbers can be used to request additional information from your account representative.

Issue	Description
COM-6074	Fixed the validation of Snout, Ion Control Point and Ion Beam Data Items to prevent false validation errors. This update applies to all Merge DICOM Toolkits.
COM-6075	Added missing JPIP HTJ2K Referenced and JPIP HTJ2K Referenced Deflate Transfer Syntaxes introduced in DICOM Supplement 235. This update applies to all Merge DICOM Toolkits.
COM-6086	Fixed the configuration allowing to process and accept Private Create Code attributes containing invalid characters. This update applies to all Merge DICOM .NET Toolkits..
COM-6171	Fixed the processing of DICOM attributes of TM and DT Value Representation to allow the Second component to have a value of 60 for a leap second. This update applies to all Merge DICOM Toolkits.
COM-6172	Fixed the configuration allowing to reject DICOM association with non-DICOM PDU Protocol version. This update applies to all Merge DICOM Toolkits.

Chapter 4. Known Issues

The following table lists the issue that have been identified, but not fixed, in this release.

NOTE: Issue numbers can be used to request additional information from your account representative.

Issue	Description
COM-6195	The string values of Items and Services structures are not accessible from Merge DICOM Toolkit dynamic library. This issue applies to Merge DICOM C/C++ Toolkit 64-Bit Windows (New Edition) - VS 2019