

Merge DICOM Toolkit™

5.19.0

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-5909	June 2024	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 V5.19.0	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 V5.19.0	32-Bit Windows
	64-Bit Windows
Merge DICOM Toolkit – .NET Framework 4.5/C# Toolkit V5.19.0	64-Bit Windows

Merge DICOM Toolkits	Target Development Environment
Merge DICOM Toolkit – .NET Framework 4.8/C# Toolkit V5.19.0	64–Bit Windows
Merge DICOM Toolkit – .NET Core/C# Toolkit V5.19.0	64–Bit Windows
	64–Bit Linux
Merge DICOM Toolkit – .NET 6/C# Toolkit V5.19.0	64–Bit Windows
	64–Bit Linux
Merge DICOM Toolkit – Java Toolkit V5.19.0	Windows, Solaris, Linux, Android, Mac OS X
Merge DICOM Toolkit – Python Toolkit V5.19.0	64–Bit Windows
	64–Bit Linux

This release includes the following:

- [CHAPTER 2. ENHANCEMENTS ON PAGE 6](#)
- [CHAPTER 3. FIXED ISSUES ON PAGE 8](#)
- [CHAPTER 4. KNOWN ISSUES ON PAGE 9](#)

Chapter 2. Enhancements

NOTE: Supplements and change proposals apply to all toolkits.

This release adds support for the following DICOM supplements.

Supplement	Title
226	Confocal Microscopy Image
234	DICOMweb Storage Commitment This enhancement update applies to Merge DICOM .NET, Java and Python Toolkits.
235	HTJ2K Transfer Syntax

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

CP#	Title
2040	Fix DICOMweb Media Types and add bulkdata and pixeldata sub-resources. This enhancement update applies to Merge DICOM .NET and Java Toolkits.
2204	Restore multipart bulkdata and clarify range requests. This enhancement update applies to Merge DICOM .NET and Java Toolkits.
2267	Correct inconsistencies in Mammography Image Type tables.
2268	Update Quantitative Diagnostic Imaging Procedure codes.
2269	Clarify matching multiple values.
2270	Support of Repository Query in DICOMWeb. This enhancement applies to Merge DICOM .NET, Java and Python Toolkits.
2280	Relax requirement to provide default Transfer Syntax if uncompressed encapsulated Transfer Syntax image is too large.
2281	Remove references to retired IODs and other retired concepts.
2282	Add Note on handling C-FIND-CANCEL request in Query/Retrieve Service Class.
2283	Clarify use of Concept Name Code Sequence in Encapsulated Documents.
2284	Remove remaining references to retired Curves and suffix retired sections.
2285	Harmonize description of Directory Records and clarify their applicability.
2286	Post-Coordinated Echo Property Code Fix.
2287	Update mammography dose reference point code meaning.
2288	Table timing description for Enhanced RDSR.
2290	PositionMeasuringDeviceUsed Enumeration.

CP#	Title
2293	Resolve Duplicate names for TIDs and a CID.
2296	Extend RT Structure Set Definitions.
2297	Strengthen Dose Semantics of Dose References.
2298	Synchronize 1st Generation BLD definitions.
2299	Beam Hold Transition Trigger Source.
2300	Extend 1st Gen to 2nd Gen Tolerance Value Mapping.
2301	Clarify applicability of RLE and JPEG 2000 Transfer Syntax to single bit images such as binary segmentations.
2302	Clarify absence of padding between frames applies to single BitsStored multi-frame images encoded in Native format.
2303	Clarify Frame Pixel Data Retrieve Response for single BitsStored multi-frame images encoded in Native format.
2304	Use the Group Number term correctly.
2309	Add channel obstruction to Treatment Termination reasons.
2310	Wording improvement for C.8.8.5.4 and use of Study in RTSS references.

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-4854	Add support in DICOM Web services for the bulkdata and pixeldata media types. This update applies to Merge DICOM .NET and Java Toolkits.
COM-5929	Support DICOM encoded Unicode strings up to 2GB in size. This update applies to Merge DICOM C/C++ Toolkit.
COM-5920	Add support for BulkdataURI in JSON to Message and XML to Message conversions in Python Toolkit. This update 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-5901	Fix the order of 'vr' and 'Value' attributes in DICOM JSON conversion. This update applies to Merge DICOM C/C++ Toolkit.

Chapter 4. Known Issues

At the time of this publication, there are no known issues.