



MTCONNECT

RECERTIFICATION
LEARNING OBJECTIVES



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TOPICS	
1.0	Transformative Technology in Manufacturing
1.1	Define advanced analytics
1.2	Define digital manufacturing, digital thread, and monitoring
1.3.	Describe the MTConnect standards in manufacturing
1.4	Understand the common language for device communication
2.0	An Overview of MTConnect
2.1	Define the MTConnect standard
2.2	Understand the difference between the MTConnect standard and other communication standards
2.3	Explain the benefits derived from deploying software solutions that use MTConnect
3.0	A Free and Open Standard
3.1	Understand why the MTConnect standard is ideal for manufacturing
3.2	Understand that the standard is a series of documents organized into parts
3.3	Describe the common language used on the shop floor
3.4	Explain the benefits derived from MTConnect
4.0	MTConnect Architecture
4.1	Understand the MTConnect standard and how it addresses problems associated with data management in manufacturing operations
4.2	Explain the difference between unstructured data and structured data
4.3	Understand the different documents that describe each part of the MTConnect standard
5.0	MTConnect's Document Organization
5.1	Describe the MTConnect standard

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TOPICS	
5.2	Understand the MTConnect agent functionality
5.3	Explain the five parts of the document that make up the standard
6.0	The MTConnect Agent
6.1	Describe how the information from the shop floor is gathered, managed, and presented for consumption by client software applications
6.2	Understand the three major sections of an agent and the functionality that an agent must provide for each section
7.0	A Deeper Look at the MTConnect Agent
7.1	Describe the major functions provided by an agent
7.2	Understand equipment metadata and streaming data
7.3	Understand the three types of information provided by streaming data
8.0	Data Management and Messaging Patterns
8.1	Understand the different types of data handled by the data management function
8.2	Describe the interaction between an agent and a client software application
9.0	Request/Response Messaging Communications
9.1	Explore the exchange of information between a client and an agent
10.0	Information Collection
10.1	Understand the data streaming process
10.2	Understand what a heartbeat parameter is and how it can be used to troubleshoot connection issues
10.3	Describe the expected behavior and functionality of an MTConnect agent