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WebSphere® MQ File Transfer Edition V7.0

Technical Overview



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Unit objectives

After you complete this unit, you should have an understanding of WebSphere MQ File Transfer Edition

- The key features of the product
- The key components used to make it work
- A description of the key components used in a simple topology





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WebSphere MQ File Transfer Edition V7.0

Features



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- Delivers a reliable managed file transfer solution for moving files between IT systems
 - ▶ Regardless of file size
 - ▶ Without the need for programming
- WebSphere MQ messaging is used as the reliable transport mechanism
 - ▶ Files are split up into messages and sent across the MQ network

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- Support for binary and text transfers
 - ▶ Text files are automatically converted between the code pages and the end of line conventions for the source and destination systems.
- File data can be secured using Secure Socket Layer (SSL) based connections



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■ Conditional Transfers

- ▶ At a certain date and time (scheduling)
- ▶ Given certain file system environment events (triggering)
 - for example the existence of a file within the file system
 - Or when a file reaches a certain size
- ▶ Both Scheduling and Triggering are provided in the GUI or Command line interface



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- Graphical tools integrated with WebSphere MQ Explorer
 - ▶ Enables file transfer initiation between WebSphere MQ File Transfer agents
 - ▶ Provides a log of file movements with information that can be used for audit purposes
- Command line interface
 - ▶ Provided to enable administration of WebSphere MQ File Transfer Edition agents and definition of transfer requests



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- Files are split into MQ non-persistent messages
 - ▶ (Minimal impact on MQ logs)
 - ▶ Internal protocol handles non-delivery of messages
- Rate of transfer is paced
 - ▶ Prevents a source agent outperforming a destination agent
 - ▶ Avoids flooding MQ network with file data
- Files transferred reliably
 - ▶ Checkpoint restart feature provides for toleration of network outages
 - ▶ When a network outage is resolved file transfer requests are restarted from the last checkpoint avoiding the need to send the whole file again



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■ Customization points

- ▶ User exit routines are provided at source and end points to allow customization of file transfer behavior
- ▶ User exit routines have the power to
 - Change which files are transferred
 - Change the order in which files are transferred
 - Cancel a transfer.





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Key Components – how does it work ?



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WebSphere MQ File Transfer Edition V7.0 *agents*

- Files are sent between WebSphere MQ File Transfer Edition agents
- Requires a connection to a queue manager
 - ▶ Bindings mode or client mode
 - ▶ *(note the MQ client is not required on machines without MQ)*
- Runs locally to the files being transferred as a long running Java process



WebSphere MQ File Transfer Edition V7.0 Tools

- Command Line tools

- ▶ For operations (for example transferring a file)
- ▶ Administration (for example starting an agent)

- GUI

- ▶ eclipse based plug-in to MQ Explorer
- ▶ Used for operations only (for example transferring files, browsing transfer log history)



queue manager definitions required

- queue manager definitions used by WebSphere MQ File Transfer Edition
 - ▶ **Coordination** queue manager
 - ▶ **Command** queue manager
 - ▶ **Agent** queue manager

- *Note: The WebSphere MQ File Transfer Edition installation process assumes that the above queue managers are already defined and are accessible*

The coordination queue manager

- Collects information about
 - ▶ progress of active transfers (active transfer log)
 - ▶ Auditable history of past transfers
- Holds information about agents defined in the WebSphere MQ File Transfer Edition network
- Has a SYSTEM.FTE queue and topic defined to it as part of the configuration used internally by the product
- Must be at MQ V7
- All agents in the network must have access to this queue manager in order to publish transfer log processing messages
- No WebSphere MQ File Transfer Edition code runs on this queue manager

The *command* queue manager

- Used to get commands into the WebSphere MQ File Transfer Edition network
- Can be at MQ V7 or MQ V6
- Can have multiple *Command* queue managers defined for multiple command injection points
- No WebSphere MQ File Transfer Edition code runs on this queue manager
- (can be the same queue manager as the Coordination queue manager or different)

The *agent* queue manager

- The queue manager to which an Agent in the WebSphere MQ File Transfer Edition network is attached
- Used by an agent to send/ receive files across MQ
- Can be at MQ V7 or MQ V6
- Can have multiple agents attached to it
- Has internal SYSTEM.FTE queue definitions defined to it as part of the agent setup and configuration
- Requires capacity planning dependent on load



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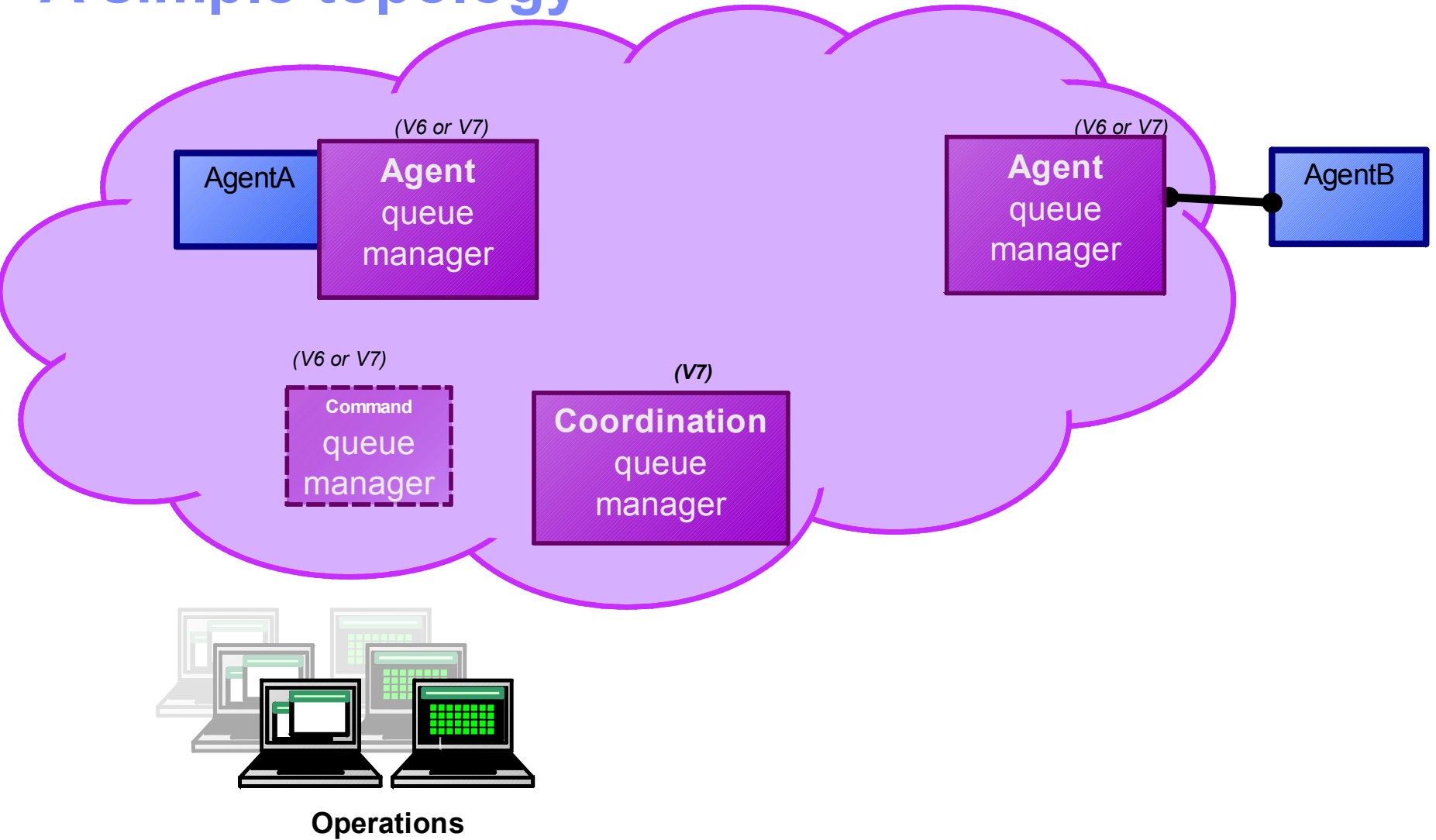
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A simple topology

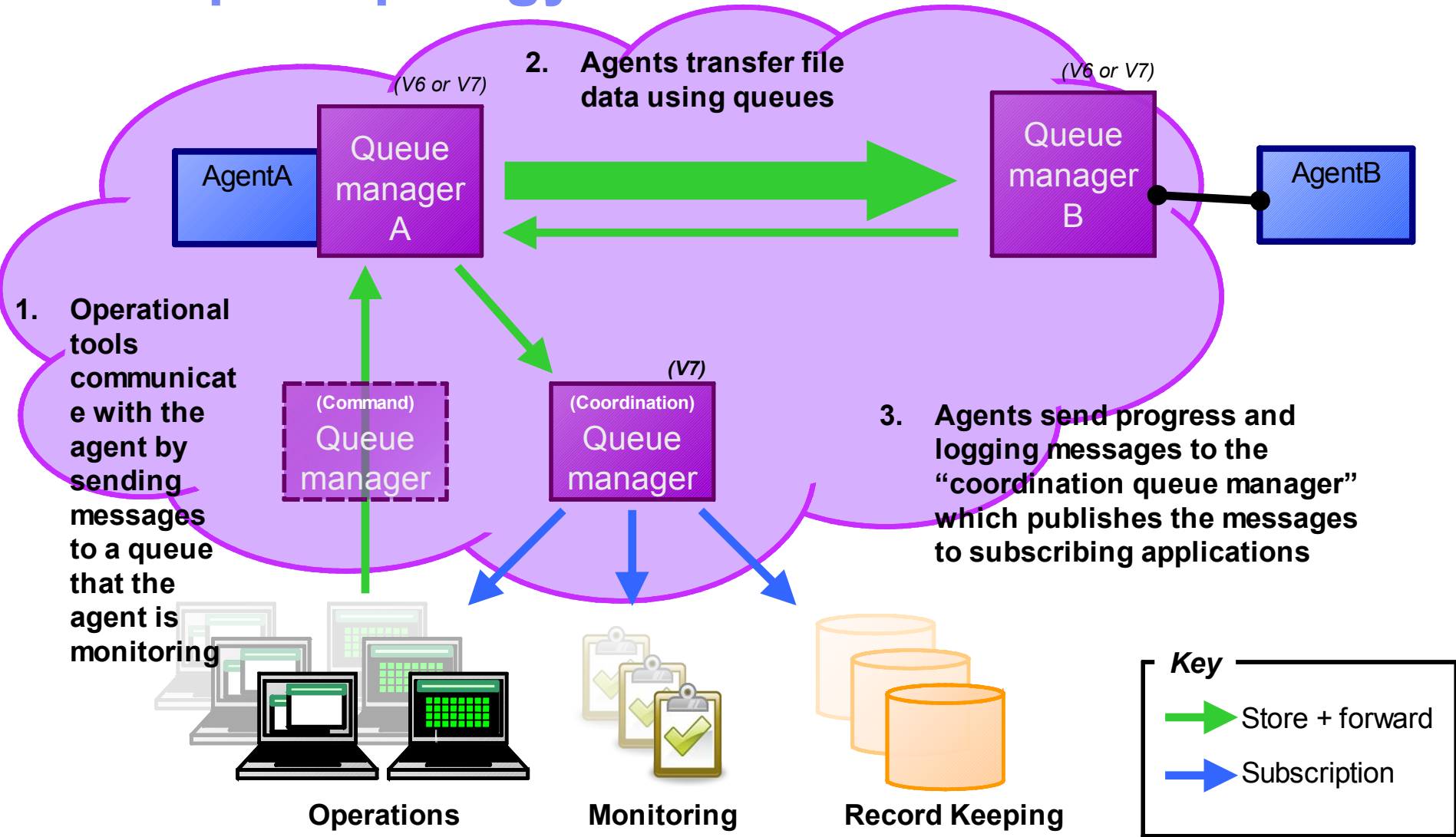


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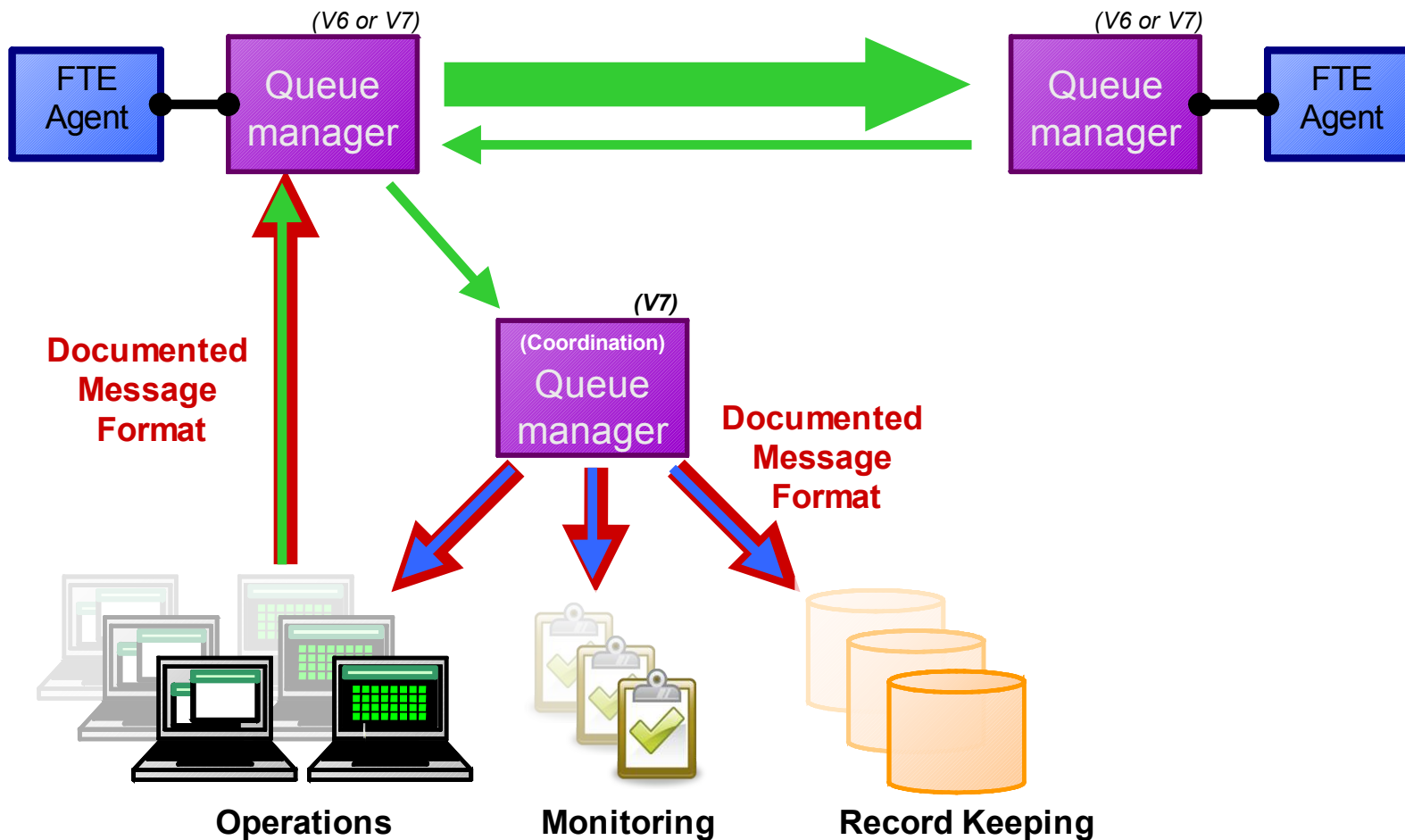
A simple topology



A simple topology



Published interfaces



Unit summary

Now that you have completed this unit, you should understand:

- The key features of the product
- The components used to make it work
- A description of the key components used in a simple topology
- For more information refer to <http://ibm.com/webspheremq/filetransfer>