

Mirth Connect Fundamentals Certification Training

SYLLABUS

Mirth Connect Training (Days 1-3)

1. Course Introduction
 - a. Introductions
 - b. Course Overview
 - c. Course Materials
 - d. Agenda
2. Introduction to Mirth Connect
 - a. The History of Mirth Connect
 - b. What is Mirth Connect?
 - i. Sample Use Cases
3. Document Standards Review & Questions
4. Getting Started with Mirth Connect
 - a. Installation
 - i. Installation Options
 - ii. Upgrading Mirth Connect
 - b. Starting the Mirth Connect Server
 - i. Mirth Connect Server Manager
 - ii. Windows Service
 - iii. Executable
 - iv. LAB: Stop/Start Mirth Connect Server
 - c. Starting the Mirth Connect Administrator
 - i. Methods for Starting the Administrator
 - ii. LAB: Start the Mirth Connect Administrator
 - iii. Mirth Connect Administrator Overview
5. Mirth Connect Fundamentals
 - a. Channels
 - i. Connectors
 - ii. Channel Properties
 - iii. Message Storage
 - iv. Channel Tags
 - v. Deploying Channels
 - vi. Starting/Stopping Channels
 - vii. LAB: Creating and Deploying a Channel
 - b. Viewing Message Data
 - i. Message Statistics
 - ii. Viewing and Filtering Messages
 - iii. Reprocessing Messages
 - c. Web Dashboard
 - d. Message Processing Flow
 - i. Processing Flow
 - ii. Message Transformation
 - iii. Message States
 - e. Data Types and Properties
6. Filters & Transformers
 - a. Filters
 - i. Types of Filter Rules
 - ii. Rule Builder
 - iii. Inbound Message Template
 - iv. LAB: Create a Filter Using Rule Builder
 - b. Transformers
 - i. Types of Transformer Steps
 - ii. Mapper Transformers
 - iii. Message Builder Transformers
 - iv. Outbound Message Template
 - v. LAB: Create Transformers Using Mapper and Message Builder Steps
 - c. Custom Metadata
7. Connectors
 - a. Source Connectors
 - i. Source Settings
 - ii. Source Queues
 - b. Destination Connectors
 - i. Destination Queues
 - c. File Connectors
 - i. File Methods
 - ii. Connector Settings
 - iii. LAB: Create a Channel with File Connectors
 - d. TCP Connectors
 - i. Connector Settings
 - ii. MLLP Transmission Mode
 - iii. Basic TCP Transmission Mode
 - iv. LAB: Receive, Send Message Using TCP Connectors in MLLP Transmission Mode
 - e. Database Connectors
 - i. Connector Settings
 - ii. Updating Processed Data
 - iii. LAB: Create a Channel with a Database Reader
 - iv. LAB: Create a Channel with a Database Writer
 - v. Installing Database Drivers
 - f. Document Writer Connector
 - i. Connector Settings
 - ii. Document as attachment

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iii. LAB: Generate a PDF Document Using Document Writer	iv. Demo: Creating a Preprocessor Script to Remove Illegal Characters from Message
g. SMTP (Email) Connector	v. Postprocessor Scripts
i. Connector Settings	10. Responses
ii. Demo: Sending an Email with PDF Attachment	a. Response Validation
h. DICOM Connectors	b. Auto-Generated ACKs
i. Overview	c. Custom Responses
8. Channel Configuration	i. Response Map Variables
a. Configuration Map	ii. Postprocessor Responses
i. Creating Configuration Map Variables	iii. Generating a Custom ACK
ii. Importing/Exporting Configuration	iv. Demo: Create a Custom ACK Response
iii. LAB: Create and Use Configuration Map Variables	d. Response Transformers
b. Mapper Variable Summary	11. Internal Routing
c. Destination Chaining	a. Channel Connectors
9. Using JavaScript with Mirth Connect	b. The VMRouter Java Object
a. JavaScript Review	c. LAB: Use Internal Routing
b. JavaScript & E4X in Mirth Connect	12. Batch Processing
i. Accessing Message Data with E4X	a. Batch Processing Options
ii. Adding Segments	b. Demo: Processing a CSV Batch File
iii. Copying Segments between Messages	13. Mirth Connect Operations
iv. Deleting Segments	a. Logs and Logging
v. Repeating Segments	b. Settings
vi. Message Variables	c. Alerts
vii. Regular Expressions	i. Configuring Alerts
c. JavaScript Filters	ii. Demo: Create, Trigger an Alert
i. LAB: Create Channel with Filtering on a Repeating Segment	d. Events
d. JavaScript Transformers	e. User Management
i. Accessing Mapper Variables	f. Extensions
ii. LAB: Create Channel with JavaScript Transformers that Iterate over Repeating Segments, Delete a Segment, Create a New Segment	i. Available Enterprise Extensions
e. Mirth Connect User API Overview	ii. Demo: Install a New Extension
f. Global and Channel Scripts	g. Import/Export
i. Deploy Scripts	i. Overview
A. Translation Tables	ii. Exporting Message Data
B. Demo: Using a Global Deploy Script to Load a Translation Table	h. Server Configuration Backup
ii. Undeploy Scripts	i. LAB: Create Server Configuration Backup
iii. Preprocessor Scripts	i. Data Pruner
	j. Mirth Connect Architecture
	i. Under the Hood
	ii. Mirth Connect Database
	A. Configuring a New Database for Mirth Connect
	B. LAB: Configure Mirth Connect to Use PostgreSQL Database

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- k. Command Line Interface (CLI)
 - i. LAB: Launch CLI, Walkthrough Commands, List/Start/Stop Channels
 - ii. Using Automated Scripts
 - iii. Demo: Running the CLI in Script Mode
- 14. Mirth Connect Training Wrap-Up
 - a. Open Questions & Answers

Certification (Day 4)

- 1. Certification Overview/Agenda/Review
- 2. Multiple Choice Exam
- 3. Practical (Hands-On) Exam