



Milestone Certified Integration Technician (MCIT) Assessment

STUDY GUIDE

Milestone Learning & Performance

Version 2.11

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Overview

A Milestone Certified Integration Technician (MCIT) should have the ability to install and configure moderately complex XProtect Advanced VMS installations with a camera count of approximately 100-500 cameras, a single Management Server, and features like a Milestone Interconnect connection to a remote site.

For Milestone to attest that you have this knowledge and these skills, we created an assessment that may touch on any of the tasks listed in the table on the next page.

Before you take the MCIT assessment, ensure that you have the knowledge and skills to perform the tasks and steps listed in this document by consulting the resources that follow the table.

You will be allowed to access any of these resources during the test. However, you have only two hours to complete the test and you must already be very familiar with the *entire* list of content here for you to be successful.

Resources for preparing for the MCIT

Use the resources below to assist you in developing the skills and knowledge necessary to complete the tasks listed in the previous section. The resources below are offered in different languages, though some documents are limited to English at this time.

Manuals and Guides

- [XProtect VMS Products – Getting Started with XProtect VMS](#)
- [XProtect VMS Products - Administrator manual](#)
- [XProtect Smart Client - User Manual](#)
- [XProtect Smart Client - Search and export video evidence quick guide](#)
- [XProtect VMS Certificates Guide](#)

White Papers

- [System Architecture Guide for IT Professionals](#)
- [Milestone Interconnect](#)

Guides

Milestone Deployment Assistant

The Deployment Assistant will help you organize a deployment and manage the risk and complexity of installing an IP video surveillance system. It is **strongly recommended** to have it installed before beginning the certification.

<https://learn.milestonesys.com/tools/deployment-assistant/>

eLearning

You can access Milestone eLearning courses by following the link below and logging into the Partner Learning Portal:

<https://www.milestonesys.com/solutions/services/learning-and-performance/>

Milestone Web Resources

Milestone Customer Dashboard Presentation

<https://content.milestonesys.com/?mediaId=6789BDA7-9208-497E-AF35C98423895850>

Milestone Interconnect Compatibility

<https://www.milestonesys.com/solutions/hardware-and-add-ons/milestone-addons/interconnect/milestone-interconnect-compatibility/>

Other Web Resources

Microsoft Virtual Academy - Networking Fundamentals

<https://docs.microsoft.com/en-us/learn/modules/network-fundamentals/>

Microsoft Virtual Academy - Windows Server Administration Fundamentals

<https://docs.microsoft.com/en-us/learn/certifications/mta-windows-server-administration-fundamentals/>

ASIS

<https://www.asisonline.org>

Tasks within the scope of the MCIT assessment

The list of tasks below outlines the current scope of the MCIT assessment. Milestone Certified Integration Technicians should be able to demonstrate their knowledge of the skills required to accomplish any of these tasks.

1. Configure a network to support a XProtect Advanced design by doing the following tasks:

- A. Confirm passwords and settings on existing network and server equipment
- B. Check switches
- C. Determine IP Address Ranges
- D. Configure the Network
- E. Test the Network
- F. Check Network Time Protocol (NTP) Server
- G. Check Access to Microsoft Active Directory
- H. Verify Microsoft SQL server access and permissions
- I. Verify access to remote XProtect VMS systems that will be interconnected

2. Configure cameras and other IP hardware devices by doing the following tasks:

- A. Set a static IP address or configure DHCP and hostname
- B. Set administrator account credentials
- C. Verify firmware version with Milestone Supported Devices list
- D. Configure hardware devices HTTPS certificates
- E. Mount cameras and other IP hardware devices
- F. Configure additional storage devices
- G. Install Milestone Screen Recorder

3. Configure Windows servers by doing the following tasks:

- A. Obtain or create server communication encryption certificates
- B. Install operating system environment
- C. Set and verify network settings
- D. Check server access
- E. Add and verify user accounts and passwords
- F. Enable remote management, such as Windows Remote Desktop
- G. Check Server time
- H. Install all important Windows Updates
- I. Check additional server software and settings
- J. Add anti-virus scan exceptions
- K. Enable SNMP traps

4. Configure storage by doing the following tasks:
 - A. Prepare storage system
 - B. Verify access to remote storage

5. Install XProtect Management Server by doing the following tasks:
 - A. Prepare for installation
 - B. Import certificates on the management server
 - C. Run the Management Server installer
 - D. Select service user account
 - E. Specify server encryption
 - F. Verify the server is running

6. Install XProtect Mobile Server by doing the following tasks:
 - A. Prepare for installation
 - B. Import certificates on mobile servers
 - C. Download and run the XProtect Mobile server software from the Management Server
 - D. Specify mobile server encryption
 - E. Specify URL and credentials to connect to the Management Server
 - F. Verify the Mobile Server is running

7. Install XProtect Recording Server by doing the following tasks:
 - A. Prepare for installation
 - B. Import certificates on recording servers
 - C. Download and run the XProtect Recording Server installer from the Management Server
 - D. Specify recording server encryption
 - E. Verify the server is running
 - F. Install a different device pack
 - G. Add anti-virus scan exceptions

8. Install XProtect Failover Recording Servers by doing the following tasks:
 - A. Prepare for installation
 - B. Import certificates on failover recording servers
 - C. Download and run the XProtect Recording Server installer from the Management Server
 - D. Specify recording server encryption
 - E. Verify the server is running
 - F. Install a different device pack
 - G. Add anti-virus scan exceptions

9. Install XProtect Management Clients by doing the following tasks:

- A. Prepare for installation
- B. Import certificates on Management Client workstations
- C. Download and run the Management Client software from the Management Server

10. Configure global settings and behaviors by doing the following tasks:

- A. Log in with the Management Client
- B. Basic authentication
- C. Configure Management Client behavior
- D. Configure Recording Server timeout settings
- E. Configure Log Server settings
- F. Configure email notification settings
- G. Verify bookmark default behavior
- H. Create Evidence Lock profiles
- I. Add Audio Messages
- J. Configure Customer Dashboard connectivity
- K. Configure alarm and event settings
- L. Generic Event settings

11. Verify license and site information by doing the following tasks:

- A. Review license information
- B. Activate license
- C. Enter and verify the site information

12. Configure Recording Servers and Failover Recording Servers by doing the following tasks:

- A. Define failover servers
- B. Review and update recording server information
- C. Configure Recording Server storage settings
- D. Configure archiving
- E. Assign Failover Servers to Recording Servers
- F. Enable certificates

13. Add hardware devices by doing the following tasks:

- A. Add and name hardware devices
- B. Disable all unused encoder video channels

14. Name and group devices:

- A. Name hardware devices
- B. Name cameras
- C. Name microphones and speakers
- D. name inputs and outputs
- E. Name metadata channels
- F. Disable unused devices
- G. Create additional camera, microphone, speaker, input, output, and metadata device groups
- H. Add devices to the relevant groups

15. Configure cameras:

- A. Review and update device information
- B. Configure general camera settings
- C. Configure video streams
- D. Configure streams
- E. Configure recording
- F. Configure 360° lens settings
- G. Configure privacy masking
- H. Configure camera events
- J. Configure PTZ presets
- K. Configure PTZ patrolling

16. Configure Metadata:

- A. Verify metadata settings
- B. Verify and adjust metadata recording settings

17. Configure microphones and speakers:

- A. Verify microphone settings
- B. Verify and adjust microphone recording settings
- C. Select microphone recording storage
- D. Configure microphone events
- E. Verify speaker settings
- F. Verify and adjust speaker recording settings
- G. Select speaker recording storage

18. Configure inputs and outputs:

- A. Verify input settings
- B. Configure input events
- C. Verify output settings
- D. Test inputs and outputs

19. Configure client settings:

- A. Create custom view groups
- B. Configure Smart Client Profiles
- C. Configure Matrix recipient details
- D. Configure Smart Walls
- E. Configure Metadata use

20. Configure software events:

- A. Create User-defined Events
- B. Configure Generic Events

21. Create time and notification profiles:

- A. Define single and recurring Time Profiles
- B. Define Day length time profiles
- C. Create notification profiles

22. Create rules:

- A. Verify default rules
- B. Create video and audio feed start and recording rules
- C. Create other installation-specific rules
- D. Create system administrator email notification rules
- E. Validate all rules

23. Configure users and security:

- A. Verify Windows users and groups
- B. Create Basic users
- C. Create Roles
- D. Assign client behavior and time profiles
- E. Configure client permissions and login authorization requirements
- F. Assign users and groups to each role
- G. Define overall security settings for each role
- H. Define detail security settings for each role
- I. Verify effective roles

24. Define alarms:

- A. Add and remove alarm sounds
- B. Configure alarm data settings
- C. Define alarm definitions

25. System performance and alerting:

- A. Verify system performance via System Monitor
- B. Verify connectivity to Customer Dashboard
- C. Verify SNMP trap connectivity
- D. Check log files

26. Configure Mobile servers:

- A. Install XProtect Mobile server (if not done previously)
- B. Configure general settings
- C. Configure connectivity settings
- D. Configure performance settings
- E. Configure investigation settings
- F. Configure Video Push
- G. Configure Push Notifications

27. Configure Milestone Interconnect:

- A. Add Interconnected systems
- B. Select Interconnected cameras
- C. Verify feed start and recording rules for Interconnected cameras
- D. Verify user permissions to Interconnected cameras

28. Activate license:

- A. Activate license
- B. Enable automatic license activation
- B. Verify license information

29. Configure the Smart Client:

- A. Check workstation hardware, software, and settings
- B. Import certificates on Smart Client workstations
- C. Download and run Smart Client installer from the Management Server
- D. Create views for each group
- E. Verify hardware decoding / performance
- F. Create maps and Smart Map
- G. Verify user logins and permissions
- H. Verify audio permissions
- I. Verify Smart Wall permissions
- J. Configure Smart Client Options

30. Configure Web Client:

- A. Create browser shortcuts
- B. Verify user logins

31. Configure Mobile Client:

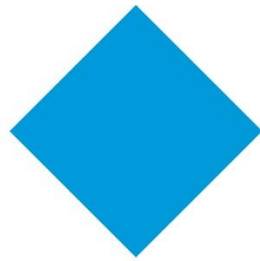
- A. Install app from relevant online marketplace
- B. Verify user logins
- C. Test Video Push
- D. Verify Push Notifications

32. Hand off to customer

- A. Perform a walk test for all cameras with motion detection
- B. Create a configuration report
- C. Make a configuration backup
- D. Perform a Final Acceptance Test
- E. Perform customer operator and staff training
- F. Confirm statement of Work fulfilment

33. Additional XProtect VMS Service, upgrade, and expansion proficiencies

- A. Replace a hardware device
- B. Move a hardware device to another Recording Server
- C. Save and load a system configuration
- D. Configure the Download Manager
- E. Upgrade the system
- F. Explain and manage key system behaviors
- G. Perform SQL server maintenance and performance optimization
- H. Perform critical server maintenance
- I. Manage profitability and customer expectations



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