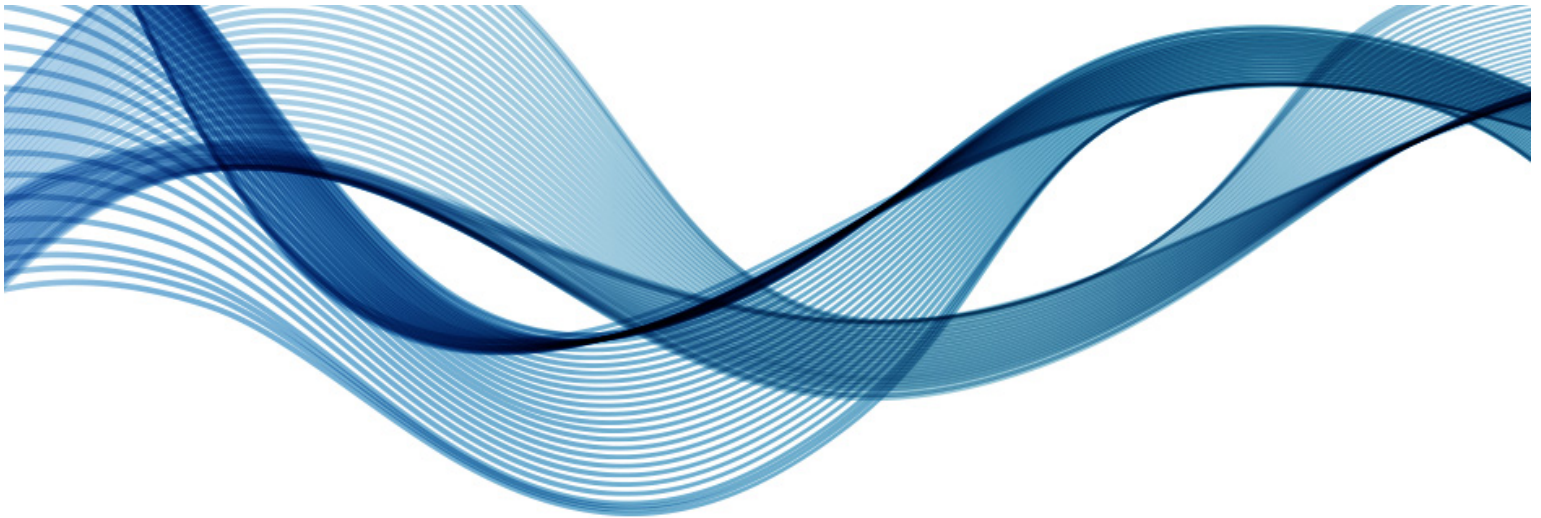




Study Guide:

Milestone Certified Integration Technician (MCIT) Assessment



Milestone Learning & Performance

Version 1.02



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Overview

A Milestone Certified Integration Technician (MCIT) should have 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.

In order 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 only have two hours to complete the test and you must already be very familiar with the *entire* list of content here for you to be to be successful.

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 an XProtect Advanced design by doing the following tasks:
 - A. Check switches, verify bandwidth and PoE capabilities and budgets
 - B. Obtain and verify IP address ranges
 - C. Determine whether the cameras receive IP addresses from DHCP.
 - D. Check DNS, if DHCP is used
 - E. Check RTP, time server
 - F. Check passwords and other settings on routers, firewalls, access points
 - G. Check Internet access if required
 - H. Check access for Active Directory and ensure that groups are defined
 - I. Verify Microsoft SQL server access and permissions
 - J. Verify Smart Client access to remote systems if Interconnect is used

2. Configure cameras and other IP devices by doing the following tasks:
 - A. Set the IP address or Host Name if DHCP is used
 - B. Set Admin password for devices and verify with Milestone Supported Devices list
 - C. Verify firmware version with Milestone Supported Devices list and update if needed
 - D. Hang cameras:
 - Set Field of View
 - Set Focus
 - Connect I/O
 - E. Configure Edge Storage settings
 - F. Configure onboard events and analytics
 - G. Install Milestone Screen recorder

3. Configure a Windows server to support a given XProtect Corporate design by doing the following tasks:
 - A. Install Windows and verify version against Milestone product specifications
 - Set and verify host name
 - B. Set and verify network settings
 - IP addresses and network masks
 - Default Gateway
 - DNS server settings
 - C. Verify Internet access if required for design
 - D. Check and update for appropriate Windows service packs
 - E. Check .Net version and update if needed
 - F. Check the Windows Installer version and update if needed
 - G. Check DirectX version and update if needed
 - H. Add and verify User accounts and passwords
 - I. Enable remote management, including Remote Desktop if needed

- J. Add anti-virus scan exceptions
 - K. Check and adjust time if needed:
 - Time and time zone
 - RTP server settings
 - L. Verify and implement VM environment
 - M. Enable SNMP traps and management server
 - N. Verify that the hostname lookup works between servers
 - O. Manually edit hosts files as necessary
4. Configure storage to support a given XProtect Corporate design by doing the following tasks:
- A. Enable/verify RAID if not set up with JBOD
 - B. Verify NAS access, including IP, user accounts, create/edit/delete file capability
 - C. Format to 64K block size
5. Prepare for a Milestone software installation by doing the following tasks:
- A. Download server software
 - B. Download the latest from web device Pack if necessary
 - C. Obtain license file
6. Install Milestone Management server by doing the following tasks:
- A. Install Management server
 - Choose between default or custom
 - B. Verify service user accounts if using NAS storage
 - C. Verify that the systray icon status is green
 - D. Install Event Server on intended server if not installed on management server
 - E. Install Service Channel on intended server if not installed on management server
 - F. Create MyMilestone account and register software
7. Install Milestone Mobile server by doing the following tasks:
- A. Install Mobile Server and specify admin user account for access to management server
 - B. Verify that it is running by the green icon status in the Windows System Tray
8. Install Milestone Recording server(s) and Failover Recording server(s) by doing the following tasks:
- A. Download software from management server download page and install under default, unless changing service user account to access NAS storage or installing as failover server
 - Specify server access details
 - B. Verify that it is running by the question mark icon status in the Windows System Tray
 - C. Install device pack if a newer is available
 - D. Add anti-virus scan exceptions, if not done under Server
9. Download and install the Management Client by doing the following tasks:
- A. Download software from management server download page
 - B. Install Mobile Server plugin

10. Configure Milestone server by doing the following tasks:

- A. Configure application behavior and general settings
 - Configure General Settings
 - Server logs retention time and detail settings
 - Configure Mail server settings
 - Configure AVI generation if using AVI attachments to email notifications
 - Configure default Bookmark behavior
 - Configure Evidence Lock profiles
 - Configure Generic Event settings
- B. Activate licenses
 - Review license information
- C. Authorize recording servers
- D. Define failover servers
- E. Configure recording server
 - Configure basic storage settings
 - Configure archiving if external storage or grooming is used

11. Add and name devices and functions and create device groups by doing the following tasks:

- A. Add and name the following devices:
 - Supported cameras
 - ONVIF cameras
 - I/O devices
 - Audio-only devices
 - DirectShow devices
 - Screen Recorders
- B. Disable unused functions
- C. Create additional camera, microphone, speaker, input and output device groups

12. Configure devices by doing the following tasks:

- A. Name devices
- B. Disable non-used functions
- C. Name cameras
- D. Name Microphones
- E. Name Speakers
- F. Name inputs
- G. Name outputs

13. Configure Cameras by doing the following tasks:

- A. Configure camera settings and define video streams
 - Compression, brightness, contrast, etc
 - Resolution
 - Codec
 - Rotation
 - Keyframes
 - Streaming modes
 - Target constant and variable bitrates, set priority and limits
 - Disable date/time stamp and other overlays

- B. Streams
- C. Recording
- D. 360 lenses
- E. Camera events
- F. Privacy Masking
- G. Motion Detection
- H. PTZ presets
- I. PTZ patrol

14. Configure speakers and microphones by doing the following tasks:

- A. Settings
- B. Recording
- C. Audio events

15. Configure inputs and outputs by doing the following tasks:

- A. Settings
- B. Input events
- C. Test outputs

16. Configure client settings by doing the following tasks:

- A. View Groups
- B. Smart Client Profiles
- C. Management Client Profiles
- D. Matrix recipients
- E. Smart Wall
 - Create Smart Wall
 - Add monitors
 - Define monitor characteristics
 - Create Smart Wall presets
 - Specify Smart Wall monitor layout
 - Define Smart Wall monitor preset layouts
- F. Define events
 - Generic Events
 - User-defined events

17. Define time and notification profiles by doing the following tasks:

- A. Time profiles
- B. Day Length time profiles
- C. Notification profiles

18. Create rules by doing the following tasks:

- A. General rules
- B. Administrator notification rules

19. Configure security by doing the following tasks:

- A. Add Basic users

- B. Create Roles
 - Assign profile
 - Management Client profile
 - Smart Client profile
 - Default time profile
 - Evidence Lock profile
 - Smart Client login within time profile
 - Login authorization requirement for dual or four-eye authentication
- C. Assign users and user groups to role
- D. Define overall security settings for role
- E. Define detail security settings for role
 - Device access settings
 - PTZ access and priority
 - Speech (speaker) access and priority
- F. Verify effective roles via the Tools menu

20. Define alarms by doing the following tasks:

- A. Alarm data settings
- B. Sound settings
- C. Alarm definitions

21. System performance and alerting by doing the following tasks:

- A. Verify system performance via System Monitor
- B. Verify SNMP trap connectivity
- C. Check log files:
 - Audit Log
 - Rule Log
 - Event Log

22. Configure Mobile server by doing the following tasks:

- A. Add Mobile Server
- B. Set access credentials
- C. Export settings
- D. Enable smart Connect and/or update firewall/router as necessary
- E. Add Video Push

23. Configure an Interconnect system by doing the following tasks:

- A. Add Interconnected system
- B. Select Interconnected cameras

24. Activate Licenses by doing the following tasks:

- A. Online or offline activation
- B. Verify information on license overview page

25. XProtect Server Service/upgrade/expansion by doing the following tasks:

- A. Move camera
- B. Change storage
- C. Save/load system configuration
- D. Download Manager:
 - Install Server Side installers
 - Verify/change settings
- E. Daylight Saving
- F. SQL tools and maintenance:
 - Backup
 - Shrink transaction log
- G. Replacing (failed) mgmt server,
- H. Replacing (failed) recording server,
- I. Importance of SOW
- J. Importance of FAT

26. Configure the Smart Client by doing the following tasks:

- A. Install Smart Clients via the server download page
- B. Verify access to slave servers
- C. Create views
- D. Create maps
- E. Verify hardware decoding/performance
- F. Verify user logins
 - Verify permissions
 - Tab access/block (live, playback, Alarms, Sequence Explorer, Setup)
 - Manage views access/block
 - Menus and functions access/block
 - Export permissions
 - Camera access
 - PTZ control and priority
 - Trigger events
 - Manage alarms
- G. Configure joystick and keyboard shortcuts [Smart Client Options]
- H. Configure camera performance settings [Properties menu]
- I. Verify access to Interconnected cameras
- J. Verify access to Smart Wall
 - Verify Smart Wall presets
- K. Check audio communication
- L. Manage alarms
- M. Consider Smart Client time zone settings [options menu]

27. Configure the Web Client by doing the following tasks:

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

28. Configure a Mobile client by doing the following tasks:

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

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.

Manuals and Guides

You can find the following resources at Milestonesys.com > Support > Manuals and guides:

- XProtect Advanced VMS - Administrator Getting Started Guide
- XProtect Corporate Administrator's Manual
- XProtect Smart Client - User Manual
- Milestone Mobile Server Manual
- XProtect Smart Client Hardware acceleration guide

Quick Guides

You can find the following resources at Milestonesys.com > Support > Quick Guides:

- XProtect 2016 License Activation Guide
- XProtect Software Registration Guide
- XProtect Smart Client - How to search and export
- XProtect Software Registration Guide
- How to upgrade your XProtect VMS product

White Papers

You can find the following resources at Milestonesys.com > Support > White Papers:

- XProtect Advanced System Architecture Guide for IT Professionals
- White paper - Milestone Interconnect

eLearning

You can find Milestone eLearning resources at the following location:

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

eLearning resources that directly support the MCIT include:

- Milestone Foundations
 - not released yet, a temporarily available, older version can be found here:
https://www.youtube.com/watch?v=zO2gy6hRuT4&index=1&list=PLk8b_NN1xAqhqd7vTVhgENga3hckLGpnS
- Getting Started with XProtect Smart Client
- The following XProtect 2016 modules:
 - XProtect 2016 Smart Connect
 - XProtect 2016 Smart Wall
 - XProtect 2016 System Monitor
 - XProtect 2016 Enhanced PTZ
 - XProtect 2016 Push Notifications
 - XProtect 2016 Move Hardware
 - XProtect 2016 Smart Connect

- Using the Customer Dashboard

The *Getting Started with XProtect Professional* course does not directly support the XProtect Advanced VMS products. However, the concepts presented in modules of the *Using the Getting Started Wizards* section may be useful:

- Automatically Add Devices
- Manually Add Devices
- Configure Storage and Archiving
- Adjust Motion Detection
- Add and Manage Users

Milestone Web Resources

<https://www.milestonesys.com/support/product-system-requirements/xprotect-corporate-2016/>

https://www.milestonesys.com/files/Customer%20Dashboard/Current/Presentations/Milestone_Customer_Dashboard_Presentation.zip

<https://www.milestonesys.com/our-products/milestone-interconnect/milestone-interconnect-compatibility/>

<https://www.milestonesys.com/support/product-system-requirements/>

Other Web Resources

Microsoft Virtual Academy - Networking Fundamentals

<https://mva.microsoft.com/en-US/training-courses/networking-fundamentals-8249>

Microsoft Virtual Academy - Windows Server Administration Fundamentals

<https://mva.microsoft.com/en-us/training-courses/windows-server-administration-fundamentals-8477>

ASIS

<https://www.asisonline.org>



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