



**SAPPHIRE**

## **Unified Access Gateway (UAG) Training Course Syllabus**

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**Reference #:**

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# Sapphire Course Syllabus

## *Implementing Forefront Unified Access Gateway 2010*

**Number of Days:** 3

**Format:** Instructor-led

**Certification Exams:** None

**This course syllabus should be used to determine whether the course is appropriate for the students, based on their current skills and technical training needs.**

**Course content, prices, and availability are subject to change without notice.**

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The three-day instructor-led course presented by Sapphire prepares you to design and deploy remote access solutions using Microsoft® Forefront™ Unified Access Gateway 2010 (UAG). Forefront UAG provides organizations with unparalleled flexibility in providing access to network resources (such as Web sites and internal applications) with granular access control, custom content protection, and endpoint validation. Forefront UAG also integrates with DirectAccess, a new Windows® 7 technology that provides seamless remote access to all corporate resources without connecting to a virtual private network. This course is intended for architects, consultants, network administrators, and technical sales professionals who are responsible for selling, designing, and deploying edge access solutions for enterprises. The course is split into 11 modules however it can be tailored to your requirements and current UAG deployment. For example modules 7, 8 and 9 are not required if DirectAccess technology has not been enabled.

### **Audience**

This course is intended for IT security and infrastructure specialists who have experience with Windows networking and authentication protocols. Experience with the IPv6 protocol is desirable but not required.

### **At Course Completion**

After completing this course, students will be able to:

- Install and configure Forefront UAG as a standalone server or an array member.
- Publish Microsoft® Exchange Server, Microsoft® Office SharePoint® Server, and Remote Desktop Gateway applications to external users.
- Configure Forefront UAG to authenticate and authorize users, and enforce security policies on clients.
- Use Forefront UAG as a gateway for DirectAccess clients.
- Understand the design and deployment considerations when building an enterprise access solution using Forefront UAG.

### **Prerequisites**

Before attending this course, students must have:

- Solid understanding of Windows® networking. Experience with IPv6 is desirable but not required.
- Working knowledge of Active Directory®, LDAP, and RADIUS authentication.
- Basic understanding of Microsoft® Exchange Server 2007 and Microsoft® Office SharePoint® Server 2007.

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## Module 1: Forefront UAG Overview

This module provides an overview of the features and capabilities of Forefront UAG, and the role it plays in enabling usage scenarios that are part of the Microsoft Business Ready Security strategy.

Time	Lessons
60 minutes	<ul style="list-style-type: none"> <li>▪ Microsoft® Business Ready Security Strategy (BRS)</li> <li>▪ Forefront Unified Access Gateway Architecture</li> <li>▪ Licensing and Availability</li> </ul>

After completing this module, students will be able to:

- Understand how Forefront UAG fits into the Microsoft Business Ready Security strategy solutions.
- Describe the Forefront UAG solution and internal architectures.
- Provide customers with licensing options for Forefront UAG.

## Module 2: Forefront Unified Access Gateway Setup and Upgrade

This module covers the setup and configuration tasks for Forefront UAG, and describes how to migrate from Microsoft® Intelligent Application Gateway 2007 (IAG) to Forefront UAG.

Time	Lessons
60 minutes	<ul style="list-style-type: none"> <li>▪ Installing Forefront UAG</li> <li>▪ Initial Configuration</li> </ul>
Time	Lab 1: Install Forefront Unified Access Gateway 2010
60 minutes	<ul style="list-style-type: none"> <li>▪ Install Forefront UAG 2010</li> <li>▪ Configure the initial settings using the Getting Started Wizard</li> </ul>

After completing this module, students will be able to:

- Describe the Forefront UAG setup process.
- Explain how customers can migrate from IAG to Forefront UAG.

## Module 3: Forefront UAG Portal

In this module, you'll understand the concept of a trunk in Forefront UAG, and how the product uses trunks to enable remote users to connect to internal applications. You'll see the role of the Forefront UAG portals as front end interfaces for these users, and how Forefront UAG can be customized during deployments.

Time	Lessons
60 minutes	<ul style="list-style-type: none"> <li>▪ Trunks and Portals</li> <li>▪ Portal Customization</li> <li>▪ Client Detection</li> </ul>
Time	Lab 2: Create and Configure a Portal Trunk
45 minutes	<ul style="list-style-type: none"> <li>▪ Create a HTTPS trunk in Forefront UAG</li> <li>▪ Configure an Active Directory authentication repository</li> </ul>

After completing this module, students will be able to:

- Understand how Forefront UAG uses trunks and portals to provide access to internal resources.
- Explain how to customize the Forefront UAG portal look and feel.
- Describe how Forefront UAG detects the remote endpoint capabilities and how to customize this process.

## Module 4: Publishing Web Applications

In this module, you will learn how to configure Forefront UAG to enable remote endpoints to have access to internal Web applications. You will see how to enable access to Microsoft Exchange and Microsoft SharePoint, and how to deploy federation using Active Directory Federation Services (AD FS).

Time	Lessons
120 minutes	<ul style="list-style-type: none"> <li>▪ Web Publishing Overview</li> <li>▪ Publishing Microsoft Exchange</li> <li>▪ Publishing Microsoft SharePoint</li> <li>▪ Deploying Federation with AD FS</li> </ul>
Time	Lab 3: Publishing Exchange Applications
60 minutes	<ul style="list-style-type: none"> <li>▪ Configure Outlook Web Access (OWA) publishing using the OWA look and feel</li> <li>▪ Configure OWA publishing inside the Forefront UAG portal</li> <li>▪ Publish Outlook Anywhere and Exchange Autodiscover</li> </ul>

After completing this module, students will be able to:

- Publish Web applications to the Internet using Forefront UAG trunks.
- Enable remote client access to Microsoft Exchange and Microsoft SharePoint services.
- Configure Forefront UAG to use federation for portal and application access.

## Module 5: Remote Desktop Gateway Publishing

In this module, you will see how Forefront Unified Access Gateway (UAG) allows you to provide access to published RemoteApps and Remote Desktops by integrating a Remote Desktop Gateway (RD Gateway) to provide an application-level gateway for Remote Desktop Services (RDS) and applications.

Time	Lessons
60 minutes	<ul style="list-style-type: none"> <li>▪ Remote Desktop Publishing Overview</li> <li>▪ Deploying RD Gateway Publishing</li> </ul>
Time	Lab 4: Publishing Remote Desktop Services
45 minutes	<ul style="list-style-type: none"> <li>▪ Publish RemoteApp applications using the Forefront UAG portal</li> <li>▪ Publish a predefined Remote Desktop</li> </ul>

After completing this module, students will be able to:

- Explain the benefits of using the Remote Desktop Gateway (RD Gateway) publishing feature.
- Describe how Forefront UAG integrates with RD Gateway.
- Explain how to configure Forefront UAG to publish RemoteApps, predefined Remote Desktops, and user-defined Remote Desktops.

## Module 6: Remote Network Access

This module explains how you can configure remote access to the corporate network using the legacy Network Connector application or the Secure Sockets Tunneling Protocol (SSTP).

Time	Lessons
60 minutes	<ul style="list-style-type: none"> <li>▪ Remote Network Access Overview</li> <li>▪ UAG/SSTP Integration Architecture</li> <li>▪ Configuring Remote Network Access</li> </ul>
Time	Lab 5: Remote Network Access using SSTP
30 minutes	<ul style="list-style-type: none"> <li>▪ Configure remote network access using SSTP</li> <li>▪ Publish remote network access in the Forefront UAG portal</li> </ul>

After completing this module, students will be able to:

- Explain the different technologies used by Forefront UAG to enable remote access to the corporate network.
- Describe how Forefront UAG integrates with Forefront TMG and Windows to provide SSTP VPN access to Windows 7 clients.
- Configure Forefront UAG to provide remote network access using SSTP and the Network Connector.

## Module 7: IPv6 and IPv6 Transition Technologies

This module provides an overview of the IPv6 protocol used by Forefront UAG DirectAccess, and the technologies associated with transitioning from IPv4 to IPv6 networking.

Time	Lessons
60 minutes	<ul style="list-style-type: none"> <li>▪ IPv6 Overview</li> <li>▪ IPv6 Transition Technologies</li> </ul>
Time	Lab 6: IPv6 and ISATAP
45 minutes	<ul style="list-style-type: none"> <li>▪ Use IPv6 link-local addresses for local network connectivity</li> <li>▪ Deploy an ISATAP router in an intranet</li> </ul>

After completing this module, students will be able to:

- Understand the limitations of the IPv4 protocol, and the benefits provided by IPv6.
- Describe the addressing, routing, and name resolution characteristics of the IPv6 protocol.
- Explain how ISATAP, 6to4, Teredo, and NAT64/DNS64 can be used to enable IPv6 connectivity over IPv4 networks.

## Module 8: DirectAccess

This module gives an overview of DirectAccess, a technology enabled by Forefront UAG that provides seamless network access to Windows 7 clients.

Time	Lessons
120 minutes	<ul style="list-style-type: none"> <li>▪ DirectAccess Overview</li> <li>▪ DirectAccess Solution Components</li> <li>▪ Planning a DirectAccess Deployment</li> <li>▪ Deploying DirectAccess Using Forefront UAG</li> </ul>
Time	Lab 7: Deploying DirectAccess
60 minutes	<ul style="list-style-type: none"> <li>▪ Prepare the infrastructure requirements for DirectAccess</li> <li>▪ Configure DirectAccess using Forefront UAG</li> </ul>

After completing this module, students will be able to:

- Understand the benefits provided by DirectAccess to users and IT organizations.
- Describe the DirectAccess architecture and its components.
- Understand the requirements and design decisions involved in a DirectAccess solution using Forefront UAG.
- Configure DirectAccess using Forefront UAG.

## Module 9: Endpoint Security Policies and NAP Integration

This module presents an overview of the policy evaluation and enforcement technologies for the Forefront UAG endpoints.

Time	Lessons
60 minutes	<ul style="list-style-type: none"> <li>▪ Endpoint Policies</li> <li>▪ Network Access Protection Integration</li> </ul>
Time	Lab 8: Endpoint Policies and Network Access Protection
75 minutes	<ul style="list-style-type: none"> <li>▪ Use the Endpoint Policies with a Forefront UAG portal application</li> <li>▪ Configure Network Access Protection (NAP) with Forefront UAG DirectAccess</li> </ul>

After completing this module, students will be able to:

- Explain how Forefront UAG can enforce endpoint policies.
- Configure Forefront UAG to use NAP for policy validation.

## Module 10: Array Management

This module explores how Forefront UAG uses arrays to scale out to large deployments—improving the scalability and availability of the solution while reducing management overhead.

Time	Lessons
60 minutes	<ul style="list-style-type: none"> <li>▪ Forefront UAG Array Management Overview</li> <li>▪ Deploying and Operating Forefront UAG Arrays</li> <li>▪ Network Load Balancing Integration</li> </ul>
Time	Lab 9: Configuring Forefront UAG Arrays
75 minutes	<ul style="list-style-type: none"> <li>▪ Install an additional Forefront UAG server</li> <li>▪ Configure a Forefront UAG array and perform post-array configuration tasks</li> </ul>

After completing this module, students will be able to:

- Explain the benefits provided by using Forefront UAG arrays.
- Describe the array management architecture, and the tasks involved in creating and managing an array.
- Explain how the Network Load Balancing feature of Windows Server® is integrated into Forefront UAG.

## Module 11: Enterprise Deployment and Troubleshooting

This module covers the considerations involved in designing, deploying, and troubleshooting an enterprise access solution based on Forefront UAG.

Time	Lessons
120 minutes	<ul style="list-style-type: none"> <li>▪ Deploying Forefront UAG in Enterprise Environments</li> <li>▪ Supporting and Troubleshooting Forefront UAG</li> </ul>

After completing this module, students will be able to:

- Describe the process of designing and deploying Forefront UAG in an enterprise environment.
- Describe the tools and best practices for troubleshooting issues with Forefront UAG.