

CNS-318-1I: Citrix NetScaler Advanced Topics – Secure Web Applications



Overview

Designed for students with previous NetScaler experience, this course is best suited for individuals who will be deploying and/or managing Citrix NetScaler Application Firewall (AppFirewall) in Citrix NetScaler environments.

Learn the skills required to deploy and manage AppFirewall including types of web attacks, protections and signatures, the adaptive learning engine, AppFirewall policies and profiles, troubleshooting, and additional pertinent NetScaler security features. At the end of the course, students will be able to configure NetScaler environments to address application services security requirements with AppFirewall.

Recommended pre-requisite courses:

- [CNS-102 NetScaler Overview](#)
AND
- [CNS-220 Citrix NetScaler Essentials and Traffic Management](#)
OR
- [CNS-222 Citrix NetScaler Essentials and Unified Gateway](#)

Key Skills

Upon successful completion of this course, students will be able to:

- Identify common web attacks and vulnerabilities
- Write PERL compatible regular expressions
- Understand how to utilize the adaptive learning engine
- Configure AppFirewall to protect web applications
- Utilize NetScaler Secure Insight to Monitor, Manage and report on Application Services security
- Troubleshoot AppFirewall

Audience

Students interested in learning the skills required to deploy and manage Citrix NetScaler Application Firewall. Specifically:

- Administrators
- Implementers / Engineers
- Architects

Instructional Method



This course is offered in instructor-led training (ILT)/virtual instructor-led training (vILT) formats with application of concepts through hands-on exercises in a live lab environment.

Course Length

3 days

Course Materials

As part of this course, students will receive the following materials:

- Access to a lab environment for the duration of the course
- Lab exercise guide
- Access to final course deliverables once the course is available in general availability including copies of all official materials presented by the instructor with additional notes and references as well as videos with experts throughout Citrix around course topics and lab exercises.

Preparatory Recommendations

Citrix recommends students prepare for this course by taking the following courses:

- [CNS-102 NetScaler Overview](#)
AND
- [CNS-220 Citrix NetScaler Essentials and Traffic Management](#)
OR
- [CNS-222 Citrix NetScaler Essentials and Unified Gateway](#)

Citrix also recommends an understanding of the following concepts and technologies:

- The functionalities and capabilities of Citrix NetScaler
- Basic NetScaler network architecture
- Obtaining, installing, and managing NetScaler licenses
- Use of NetScaler traffic management features
- Basic Networking
- Windows and Linux Server administration
- Web Services
- SSL encryption and certificates
- Common web services attacks and use of 3rd party tools

Certification Preparation

There are no associated exams/certifications currently available. Click [here](#) to learn more about Citrix Certifications.

Topic Outline

Application Firewall Overview

- AppFirewall solution Security Model (include signature)

- Overview of types of attacks
- PCIDSS
- Adaptive Learning Engine
- Packet Processing and Inspection
- Log Files – view violations

Policies and Profiles

- Profiles
- Policies
- Engine Settings

Regular Expressions

- Forms of Regular Expressions
- Using Regular Expressions
- Metacharacters and Literal Characters
- Escapes
- Quantifiers
- Back Referencing
- Lookaheads
- Regular Expression Scope

Attacks and Protections

- Data Flow with AppFirewall
- Security Checks
- AppFirewall Actions
- Adaptive Learning
- Signatures
- Code Quality (HTML Comment Striping)
- Buffer Overflow
- SQL injection
- Cross-Site Scripting
- Cookie Tampering
- Cookie Protection
- Parameter Tampering
- Server Misconfiguration
- Form Protections
- Identity Theft - CC – Safe Object
- URL Protections – Start URL and Deny URL
- CSRF

Application Firewall Troubleshooting and Monitoring

- Security Insight

- HTTP Callout
- Rate-Limit
- AppQOE
- IP Reputation