



Arrow ECS Finland Oy - Education Services

TRAINING OFFERING

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Developing iRules for BIG-IP v16.1

CODE:	LENGTH:	PRICE:
F5N_BIG-IRULE-CFG	24 Hours (3 days)	€2,995.00

Description

This course provides networking professionals a functional understanding of iRules development. The course builds on the foundation of the *Administering BIG-IP* or *Configuring LTM* course, demonstrating how to logically plan and write iRules to help monitor and manage common tasks involved with processing traffic on the BIG-IP system. Extensive course labs consist of writing, applying and evaluating the effect of iRules on local traffic. This hands-on course includes lectures, labs, and discussions.

Objectives

- Describe the role of iRules in customizing application delivery on a BIG-IP system
- Describe best practices for using iRules
- Define event context, and differentiate between client-side and server-side contexts, request and response contexts, and local and remote contexts
- Trigger an iRule for both client-side and server-side request and response events
- Assign multiple iRules to a virtual server and control the order in which duplicate events trigger
- Describe and use a testing methodology for iRule development and troubleshooting
- Use local variables, static variables, lists, arrays, the session table, and data groups to store information needed for iRule execution
- Write iRules that are optimized for runtime and administrative efficiency
- Use control structures to conditionally branch or loop within an iRule
- Log from an iRule using Linux syslog-ng or TMOS high-speed logging (HSL)
- Incorporate coding best practices during iRule development
- Use analyzer tools to capture and view traffic flow on both client-side and server-side contexts
- Collect and use timing statistics to measure iRule runtime efficiency
- Write iRules to help mitigate and defend from some common HTTP attacks
- Differentiate between decimal, octal, hexadecimal, floating-point, and exponential notation
- Parse and manipulate strings using Tcl commands and iRule functions
- Write iRules to access and manipulate HTTP header information
- Write iRules to collect customized statistics
- Implement universal persistence via an iRule
- Modify payload content using an iRule with a stream profile

Audience

This course is intended for system administrators, network administrators and application developers responsible for the customization of traffic flow through a BIG-IP system.

Prerequisites

Students must complete one of the following F5 prerequisites before attending this course:

[Administering BIG-IP](#) instructor-led course [Configuring BIG-IP LTM](#) instructor-led course [F5 Certified BIG-IP Administrator](#)

The following free web-based training courses, although optional, will be very helpful for any student with limited BIG-IP administration and configuration experience. These courses are available at [F5 University](#):

[Getting Started with BIG-IP](#) web-based training [Getting Started with BIG-IP Local Traffic Manager \(LTM\)](#) web-based training

Programme

Chapter 1: Setting Up the BIG-IP System Introducing the BIG-IP System Initially Setting Up the BIG-IP System

Archiving the BIG-IP System Configuration Leveraging F5 Support Resources and Tools **Chapter 2: Getting Started with iRules**
Customizing Application Delivery with iRules Triggering an iRule Leveraging the DevCentral Ecosystem
Creating and Deploying iRules **Chapter 3: Exploring iRule Elements** Introducing iRule Constructs
Understanding iRule Events and Event Context Working with iRule Commands
Logging from an iRule Using SYSLOG-NG (LOG Command) Working with User-Defined Variables
Working with Operators and Data Types Working with Conditional Control Structures (IF and SWITCH)
Incorporating Best Practices in iRules **Chapter 4: Developing and Troubleshooting iRules**
Mastering Whitespace and Special Symbols Grouping Strings Developing and Troubleshooting Tips
Using Fiddler to Test and Troubleshoot iRules **Chapter 5: Optimizing iRule Execution** Understanding the Need for Efficiency
Measure iRule Runtime Efficiency Using Timing Statistics Modularizing iRules for Administrative Efficiency
Using Procedures to Modularize Code Optimizing Logging Using High-Speed Logging Commands in an iRule
Implementing Other Efficiencies Using Looping Control Structures (WHILE, FOR, FOREACH Commands)
Chapter 6: Securing Web Applications with iRules Integrating iRules into Web Application Defense
Mitigating HTTP Version Attacks Mitigating Path Traversal Attacks
Using iRules to Defend Against Cross-Site Request Forgery (CSRF) Mitigating HTTP Method Vulnerabilities
Securing HTTP Cookies with iRules Adding HTTP Security Headers Removing Undesirable HTTP Headers
Chapter 7: Working with Numbers and Strings Understanding Number Forms and Notation
Working with Strings (STRING and SCAN Commands)
Combining Strings (Adjacent Variables, CONCAT and APPEND Commands)
Using iRule String Parsing Functions (FINDSTR, GETFIELD, and SUBSTR Commands)
Chapter 8: Processing the HTTP Payload Reviewing HTTP Headers and Commands
Accessing and Manipulating HTTP Headers (HTTP::header Commands)
Other HTTP commands (HTTP::host, HTTP::status, HTTP::is_keepalive, HTTP::method, HTTP::version, HTTP::redirect,
HTTP::respond, HTTP::uri)
Parsing the HTTP URI (URI::path, URI::basename, URI::query) Parsing Cookies with HTTP::cookie
Selectively Compressing HTTP Data (COMPRESS Command) **Chapter 9: Working with iFiles and Data Groups**
Working with iFiles Introducing Data Groups Working with Old Format Data Groups (MATCHCLASS, FINDCLASS)
Working with New Format Data Groups (CLASS MATCH, CLASS SEARCH)
Chapter 10: Using iRules with Universal Persistence, Stream, and Statistics Profiles
Implementing Universal Persistence (PERSIST UIE Command) Working with the Stream Profile (STREAM Command)
Collecting Statistics Using a Statistics Profile (STATS Command) Collecting Statistics Using iStats (ISTATS Command)
Chapter 11: Incorporating Advanced Variables Reviewing the Local Variable Namespace
Working with Arrays (ARRAY Command) Using Static and Global Variables Using the Session Table (TABLE Command)
Processing Session Table Subtables Counting “Things” Using the Session Table

Session Dates

Aikataulutamme kiinnostuksen mukaan. [Ota yhteyttä](#)

Additional Information

This training is also available as onsite training. Please contact us to find out more.