



Enterprise Computing Solutions - Education Services

## TRAINING OFFERING

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# Developing iRules For BIG-IP v16.1

| CODE:     | LENGTH:           | PRICE:      |
|-----------|-------------------|-------------|
| F5N_IRDEV | 24 Hours (3 days) | kr27,500.00 |

## Description

This course provides networking professionals a functional understanding of iRules development. The course builds on the foundation of the Administering BIG-IP v12 course, demonstrating how to logically plan and write iRules to help monitor and manage common tasks involved with processing traffic on the BIG-IP. Course Labs consist of writing, applying and evaluating the effect of iRules on LTM traffic. This hands-on course includes lectures, labs, and discussions.

## Objectives

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 ToolsChapter 2: Getting Started with iRules  
• Customizing Application Delivery with iRules• Triggering an iRule• Leveraging the DevCentral Ecosystem  
• Using the F5 iRule Editor• Assigning and Testing iRulesChapter 3: Exploring iRule Elements• Introducing iRule Constructs  
• Understanding iRule Events and Event Context• Working with iRule Commands  
• Logging from an iRule Using SYSLOG-NG Working with User-Defined Variables• Working with Operators and Data Types  
• Working with Conditional Control Structures• Incorporating Best Practices in iRules  
Chapter 4: Developing and Troubleshooting iRules• Mastering Whitespace and Special Symbols  
• Developing and Troubleshooting Tips• Tracing iRule Execution and Profiling Performance  
• Using Fiddler to Test and Troubleshoot iRulesChapter 5: Optimizing iRule Execution• Understanding the Need for Efficiency  
• Profiling iRule Performance with the Rule Profiler• 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  
Chapter 6: Securing Web Applications with iRules• Integrating iRules into Web Application Defense  
• Mitigating HTTP Version Attacks• Mitigating Path Traversal Attacks  
• Using iRules to Defends 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  
• Combining Strings• Using iRule String Parsing FunctionsChapter 8: Processing the HTTP Payload  
• Reviewing HTTP Headers and Commands• Accessing and Manipulating HTTP Headers• Parsing the HTTP URI  
• Selectively Compressing HTTP DataChapter 9: Working with iFiles and Data Groups• Working with iFiles  
• Introducing Data Groups• Working with Old Format Data Groups• Working with New Format Data Groups  
Chapter 10: Using iRules with Universal Persistence, Stream, and Statistics Profiles• Implementing Universal Persistence  
• Working with the Stream Profile• Collecting Statistics Using a Statistics Profile• Collecting Statistics Using iStats  
Chapter 11: Incorporating Advanced Variables• Reviewing the Local Variable Namespace• Working with Arrays  
• Using Static and Global Variables• Using the Session Table

## 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 courses, although optional, will be very helpful for any student with limited BIG-IP administration and configuration experience:

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

The following general network technology knowledge and experience are recommended before attending any F5 Global Training Services instructor-led course:

- OSI model encapsulation
- Routing and switching
- Ethernet and ARP
- TCP/IP concepts
- IP addressing and subnetting
- NAT and private IP addressing
- Default gateway
- Network firewalls
- LAN vs. WAN

The following **course-specific** knowledge and experience is suggested before attending this course:

- HTTP protocol
- Any programming language

## Programme

- Setting up the BIG-IP system
- Getting started with iRules
- Using the iRules Editor
- Leveraging DevCentral resources for iRule development
- Exploring iRule elements, including events, functions, commands, variables, and operators
- Using control structures for conditional branching and looping
- Mastering whitespace, grouping, and special symbols
- Tracing iRule execution and profiling performance using the Rule Profiler
- Measuring iRule efficiency using timing statistics
- Logging from an iRule using syslog-ng and high-speed logging (HSL)
- Optimizing iRules execution, including implementing efficiency best practices
- Modularizing iRules for administrative efficiency, including using procedures
- Securing web applications with iRules, including preventing common HTTP attacks, securing HTTP headers and cookies, and implementing HTTP strict transport security (HSTS)
- Working with strings, including using Tcl parsing commands and iRules parsing functions
- Accessing and manipulating HTTP traffic, including applying selective HTTP compression
- Working with iFiles and data groups
- Using iRules with universal persistence and stream profiles
- Gathering statistics using STATS and ISTATS
- Incorporating advanced variables, including arrays, static variables, and the session table

## Session Dates

På begäran, [kontakta oss](#)

## Ytterligare information

[Denna utbildning finns också som utbildning på plats. Kontakta oss för mer information.](#)