

Application delivery fundamentals

A 3 day **Hands on** training course



Description

A concise hands on course covering section 1 of the F5 networks AD fundamentals exam. The course focuses on the technology and not any one manufacturers product. This will enable delegates to work with devices from any manufacturer. Practical hands on with Cisco and Microsoft systems follow the major sessions to reinforce the theory.



Key outcomes

By the end of the course delegates will be able to:

- ✓ Explain, compare and contrast the OSI layers.
- ✓ Explain protocols and technologies specific to the data link.
- ✓ Explain protocols and apply technologies specific to the network layer.
- ✓ Explain the features & functionality of the protocols and technologies specific to the Transport layer.
- ✓ Explain the features & functionality of the protocols and technologies specific to the Application layer.



Training approach

This structured course uses Instructor Led Training to provide the best possible learning experience. Small class sizes ensure students benefit from our engaging and interactive style of teaching with delegates encouraged to ask questions throughout the course. Quizzes follow each major section allowing checking of learning. Hands on sessions are used throughout to allow delegates to consolidate their new skills.



Details

Who will benefit?

Anyone taking the F5 networks AD fundamentals exam. Technical staff working in Application delivery.

Prerequisites

None

Duration: 3 days

Customer rating: New course

Generic training



Generic training compliments product specific courses covering the complete picture of all relevant devices including the protocols "on the wire".

"Friendly environment with expert teaching that teaches the why before the how."
G.C. Fasthosts

Small class sizes



We limit our maximum class size to 8 delegates; often we have less than this. This ensures optimal interactivity between delegates and instructor.

"Excellent course. The small class size was a great benefit..."
M.B. IBM

Hands On training



The majority of our courses use hands on sessions to reinforce the theory.

"Not many courses have practice added to it. Normally just the theoretical stuff is covered."
J.W. Vodafone

Our courseware



We write our own courses; courseware does not just consist of slides and our slides are diagrams not bullet point text.

"Comprehensive materials that made the course easy to follow and will be used as a reference point."
V.B. Rockwell Collins

Customise your course



Please contact us if you would like a course to be customised to meet your specific requirements. Have the course your way.

"I was very impressed by the combination of practical and theory. Very informative. Friendly approachable environment, lots of hands on."
S.R. Qinetiq

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Course content

What is TCP/IP?

Protocols, services. The Internet, RFCs, The OSI 7 layer model. Layer 1 cables.

Ping and addressing

Host configuration of IP addresses, subnet masks, default gateways, ipconfig, ping. Hands on: Configuring TCP/IP, ping.

Ethernet and the data link layer

802.3, evolution, choosing cables, topologies, CSMA/CD, hubs, NICs, MAC addresses. Hands on: Analysing MAC addresses.

IP and Ethernet

Relationship. Hands on: ARP.

What is a switch?

Switches connect multiple devices, switches versus hubs, simultaneous conversations, switches work at layer 2, the forwarding database, how the forwarding database is built, broadcast and collision domains. Hands on: Difference between hubs and switches.

Link aggregation

Loops, broadcast storms, STP, Architectures, modes, link aggregation, load sharing, resilience. Hands on: fail over times.

VLANs

Virtual versus physical LANs, Why have VLANs? Broadcast domains. Hands on: VLANs effect on traffic.

IP

IP datagram format, ICMP datagram format. Hands on: Analysing IP and ICMP packets.

IP addressing

Format of addresses, registering, dotted decimal notation, choosing addresses, DHCP. Hands on: impact of addressing errors.

Routing

What is a router? Reason for routing, network addressing, default gateways, how routing works, routing and addresses, routing tables, traceroute. Hands on: Using a routed network.

Routing protocols

IGPs, EGPs, RIP & OSPF. Hands on: Configuring routers for RIP and OSPF.

Subnetting

When to subnet, subnet masks, working with subnetting, CIDR notation. Hands on: Changing the routed network to use subnetting.

The transport layer

UDP, Ports, TCP, acknowledgements, sliding windows. Hands on: Analysing packets.

Applications

Clients, servers, web, Email SMTP, resource sharing, IM, VoIP, Video over IP, terminal emulation, FTP. Hands on: FTP, SIP.

Web pages

URLs, DNS, names to IP addresses. HTTP, versions and status codes. Keepalives, cookies. Hands on: Analysing HTTP headers.

