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## Data Center Network Infrastructure -1

**Duration: 5 Days**    **Course Code: DCNI-1**

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### Overview:

This course is primarily focused on the Cisco Catalyst 6500 and Catalyst 4900 series of switches, there is some content around Cisco's blade switch technology but this is not the main focus of this course. The Catalyst 6500 Switch modules are incorporated but this is largely restricted to the FWSM and NAM. This is predominantly an implementation course, however delegates will still gain an understanding of how data centers have evolved and what the latest trends are within this technology area, enabling them to correctly position Cisco platforms for the access, aggregation and core layers of the data center. The overall goal of this course is to enable customers to build scalable, reliable, and intelligent Data Center networks using Cisco Catalyst 6500 and Catalyst 4900 switches.

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### Target Audience:

This course is designed for Network Field Engineers who are already capable of implementing and optimizing basic Layer 2 and Layer 3 services using Cisco IOS and the Cisco Catalyst switching platform, but who require more in-depth training on the Catalyst 6500 and 4900 switches.

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### Objectives:

- To fully understand and be able to deploy the Cisco Data Center solution, incorporating the Cisco Catalyst 6500 and 4900 Series Switches, as well as the options available in the Cisco Blade Switch family.
  - To identify and implement traffic flows, including FWSM routed and transparent modes, supervisor-based packet acceleration, and FWSM-PISA integration.
  - To have an understanding of NAM hardware, and be able to implement initial configuration, and use Cisco NAM to monitor network traffic.
  - To be able to describe and deploy high-availability features in the data center.
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### Prerequisites:

**Attendees should have the following skills:**

- CCNP or CCIE R&S or CCIE Service Provider

### Testing and Certification

**Recommended as preparation for exam:**

- 642-973 - DCNIS-1  
This exam is required for the Cisco CQS for Data Center Infrastructure Support, and is one of six courses and exams that make up the Advanced Data Center Networking Infrastructure Partner Accreditation.
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### Follow-on-Courses:

**The following courses are recommended for further study:**

- DCNI-2 - Data Center Network Infrastructure - Part 2
  - DCNID - Data Center Network Infrastructure Design
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## Content:

### **Module 1: Implementing the Cisco Catalyst 6500 Series, Cisco Catalyst 4900 Series, and Blade Switches**

- Describing Data Center Architecture for Cisco Catalyst 6500 and 4900 Series Switches
- Describing and Positioning the Cisco Catalyst 6500 and 4900 Series Switches
- Describing the Cisco Catalyst 6500 Series Switch Supervisors
- Describing the Cisco Catalyst 6500 Series Switch Module and Power Supply Options
- Implementing VSS 1440
- Upgrading Cisco IOS Software Using Software Modularity
- Implementing NetFlow
- Implementing QoS
- Implementing EEM
- Utilizing Automated Diagnostics
- Implementing SPAN, RSPAN, and ERSPAN
- Describing the Cisco Blade Switch Family

### **Module 2: Implementing FWSM for a Data Center Network Infrastructure**

- Implementing Traffic Flows
- Implementing Management Access
- Implementing Routing
- Implementing Failover
- Implementing Deep Packet Inspection

### **Module 3: Implementing Network Analysis with Cisco NAM**

- Introducing Cisco NAM
- Implementing Initial Configuration
- NAM Maintenance
- Implementing High-Availability Data Center Features
- Implementing Stateful Switchover
- Implementing Nonstop Forwarding

#### **Labs**

- Lab 1-1: Deploying and Examining the VSS 1440 Operation
- Lab 1-2: Deploying and Examining IOS software Modularity
- Lab 1-3: Deploying QoS
- Lab 1-4: Deploying and Examining EEM
- Lab 1-5: Deploying Automated Diagnostics
- Lab 1-6: Deploying SPAN
- Lab 2-1: Deploying the FWSM in Transparent Mode
- Lab 2-2: Deploying Multiple Contexts on FWSM
- Lab 2-3: Deploying the FWSM in Routing Mode
- Lab 2-4: Deploying the FWSM Failover
- Lab 3-1: Deploying the Initial Cisco NAM Configuration
- Lab 3-2: Deploying Collection Mechanisms
- Lab 4-1: Deploying High Availability on Cisco Catalyst 6500 Series Switch

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## Additional Information:

This course supercedes **DCIFE** and **CAT6KS**.

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## Further Information:

For More information, or to book your course, please call us on 353-1-814 8200

[info@globalknowledge.ie](mailto:info@globalknowledge.ie)

[www.globalknowledge.ie](http://www.globalknowledge.ie)

Global Knowledge, 3rd Floor Jervis House, Millennium Walkway, Dublin 1