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Class Code: IPV6FD  
Number of Days: 5  
Format: Instructor-Led

## IPv6 Fundamentals, Design & Deployment (IPV6FD) Version 2.0

**Course Description:** IP6FD v2.0 is a five-day course that provides baseline through advanced technical information and training on the next-generation Internet protocol, IPv6. The goal of this course is to prepare the student for transitioning to IPv6 based networks. IP6FD encompasses design considerations, security considerations, configuration principles, configuring IOS devices for IPv6 and IPv6 transition mechanisms. Throughout the course students will be presented justification for the principles, concepts and practices contained in each lesson. This course will help network engineers understand, configure, and support Cisco devices running IOS software and covers the IPv6 routing protocols such as RIPng, OSPF, BGP, EIGRP, and IS-IS; IPv6 transition mechanisms including tunnels, ISATAP, NAT-PT, and 6to4; and other features. The design and deployment components present in depth coverage of IPv6 design and deployment for DNS, DHCP, integrating IPv6 in an IPv4 network, Multicast, and much more.

**Target Audience:** This course is intended for networking professionals who are considering or making the migration from IPv4 to IPv6. The goal is to gain the skills needed to understand and explain the operation of IPv6, implement IPv6 services and applications including DNS and DHCPv6 and identify IPv6 security threats and design practices.

**Prerequisites:** Students with knowledge equivalent to the CCNP certification. Good knowledge of IP routing is required.

- CCNP - requires exams 642-825 (ISCW), 642-845 (ONT), 42-901 (BCSI), 642-812 (BCMSN) or exam 642-892 (Composite of BSCI and BCMSN).

**Delivery Method:** Instructor led, group-paced, classroom-delivery learning model with structured hands-on activities.

### Course Objectives

- Recite the factors that drove the creation of a new IP structure and its possible usages.
- Fundamentally explain the operation of IPv6.
- Demonstrate theoretical and practical knowledge of IPv6 advanced concepts and uses respectively.
- Identify all the updates to IPv4 routing protocols needed to support IPv6 topologies.
- Implement IPv6 services and applications.
- Evaluate a given scenario and desired outcome and identify the best transition mechanism for the situation.
- Identify and illustrate IPv6 security threats and design practices respectively.
- Describe the differences between Mobile IPv4 and Mobile IPv6.
- Discuss several IPv6 deployment concerns.

## Course Outline

- Introduction to IPv6.
- Technology and features of Cisco security appliances.
- IPv6 Operation.
- Advanced IPv6 Topics.
- Describing IPv6-Enabled Routing Protocols.
- Using Ipv6 Services.
- IPv6 Transition Mechanisms.
- Discussing Security Issues in IPv6.
- Mobile IP Model.
- Deploying IPv6.

Contact us for more information at 1-866-88-CTREC – Fax (713) 622-1915 - [ctrew@ctrechilton.com](mailto:ctrew@ctrechilton.com) or [www.CTRECHilton.com](http://www.CTRECHilton.com)

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