

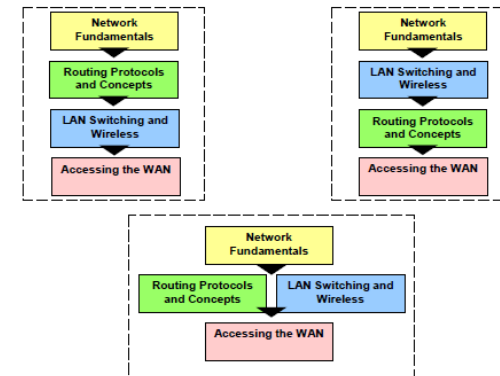
# Remote Network Connectivity Requirements

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# What we have done this far

- Courses 1-4
- CCNA
- CCNA Security – SSH, RSA etc.
- CCNP
  - – Building Scalable Internetworks
  - - Building Multilayer Switched Networks

Figure 1. CCNA Exploration Course Delivery Options



CCNA

Skills and Competencies
1. Implement, monitor, and maintain routing and switching services in an enterprise campus network.
2. Plan, configure, and verify the implementation of complex enterprise LAN and WAN routing solutions
3. Implement IPv6, EIGRP, BGP, and OSPF in an enterprise network.
4. Configure secure routing solutions to support branch offices and mobile workers.
5. Implement the secure integration of VLANs, WLANs, voice, and video into campus networks.
6. Plan, configure, and verify the implementation of complex enterprise switching solutions.
7. Plan and execute regular network maintenance to monitor and maintain complex enterprise routed and switched IP networks.
8. Perform network troubleshooting using technology-based processes and best practices, based on systematic and industry recognized approaches

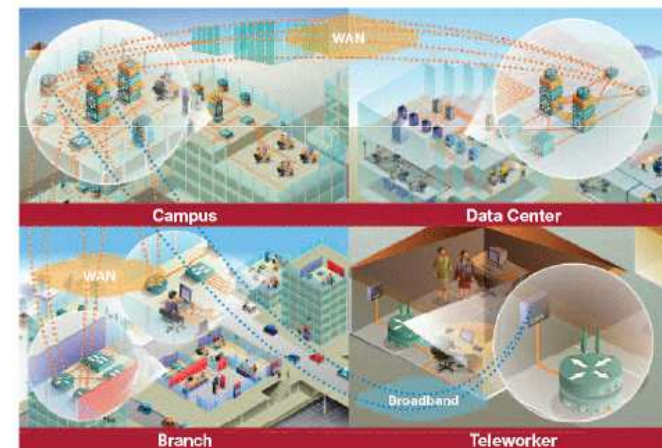
The New CCNP (v. 6)

## Remote Network Requirements

- **The central site must:**
  - Provide secure and reliable access to resources for remote users.
  - Accommodate many types of WAN connections from remote locations.
- **Remote sites:**
  - Branch office** — A remote location that accommodates employees who have a reason to be located away from the central site. A branch office is also called a remote site or remote office.
  - SOHO site** — A small office with one to several employees or the home office of a telecommuter.
  - Mobile workers sites** — Remote locations for mobile users who tend to access the company network using an asynchronous dialup connection or access the corporate intranet using broadband Internet service.

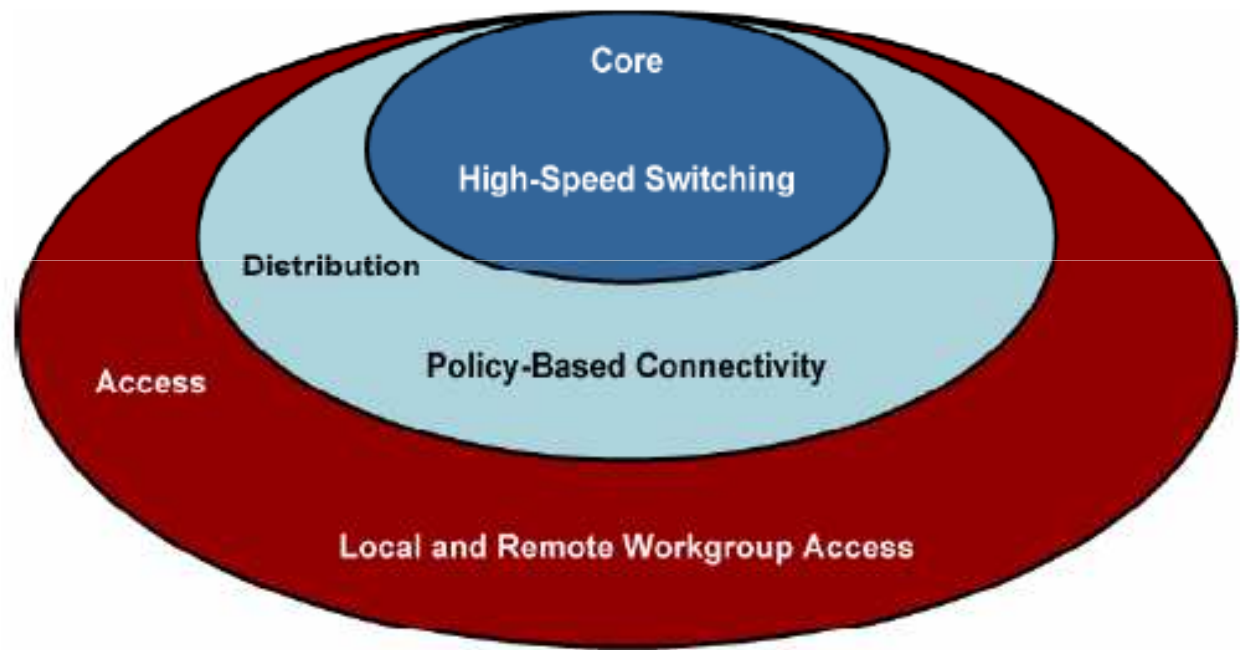
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## Elements of Cisco Enterprise Architecture



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## Traditional Three-layer Hierarchical Model

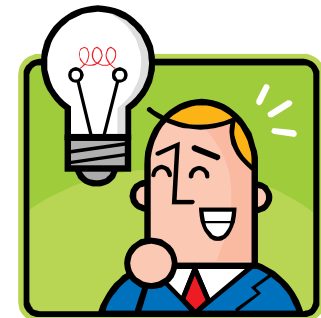


# Objectives

- Setting up WAN connections for remote networks using different solutions.
  - Multiple access options
  - Cost
  - Access Control
  - Secure Connectivity
  - Authentication
  - Redundancy
  - Infrastructure availability

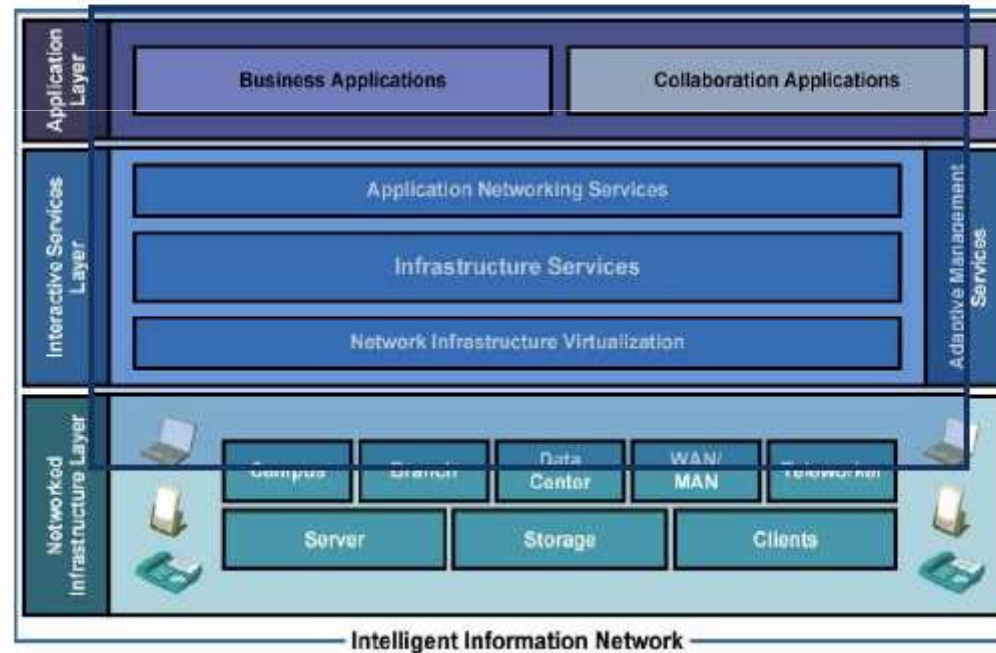
# Intelligent Information Network

- Intelligent Information Network (IIN) integrates networked resources and information assets.
- Three phases in building an IIN are:
  - Integrated transport
    - –Voice, Video and Data can travel and share the same “roads” of the network.
  - Integrated services
    - –Webservices, FTP-services etc. share the same resources. Ex. All servers share all tasks.
  - Integrated applications
    - –Applications that are “Network Aware”. Ex. A antivirusprogram detects a virus and communicates with the switch to shut down a port. – Please shut me down.

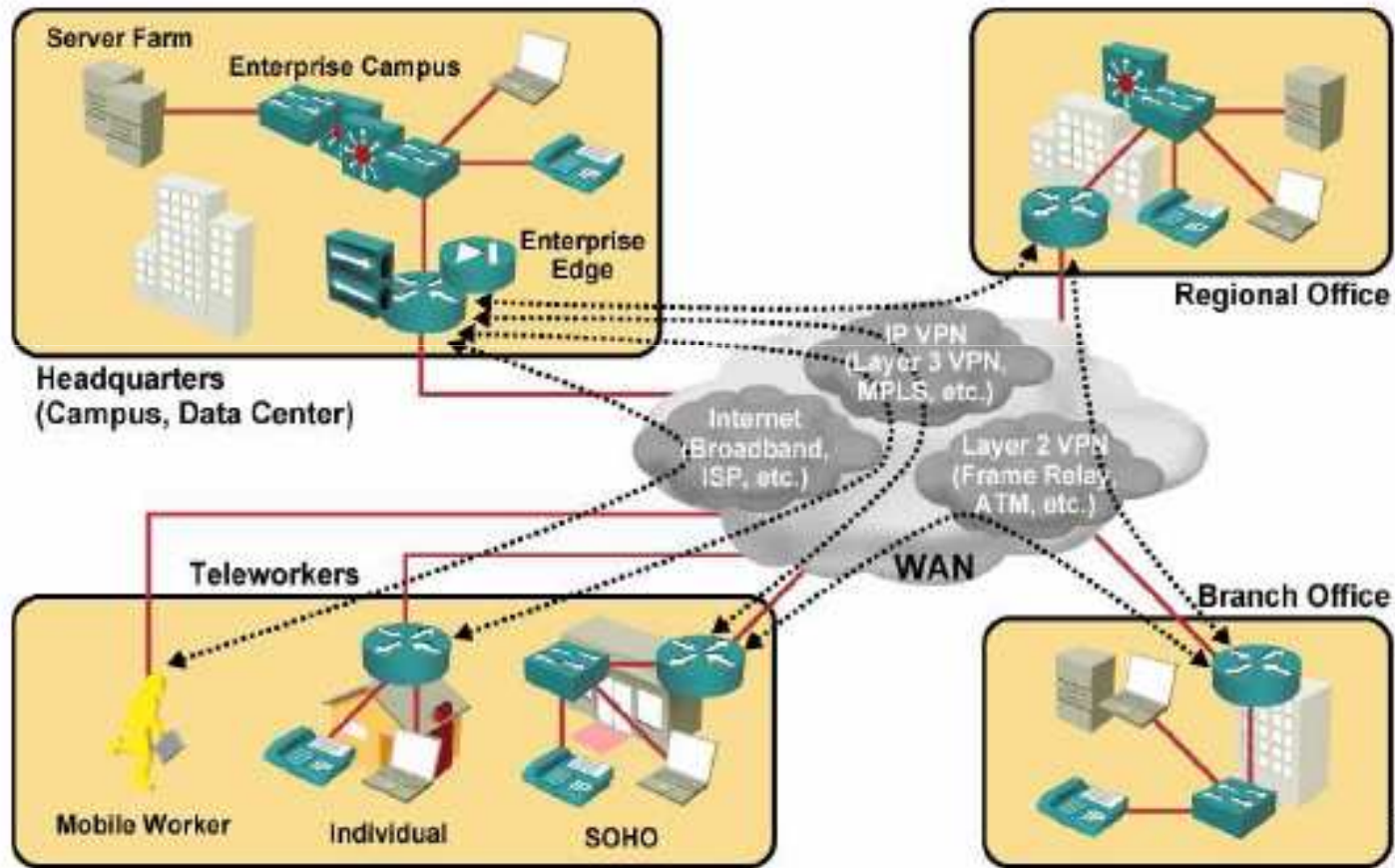


# The Service Oriented Network Architecture

## Cisco SONA Layers



# Cisco Enterprise Architecture Remote Connection Options





## Example: Integrated Services for Secure Remote Access

