Advanced VoIP Technologies for Design and Support

Duración: 2 Días      Código del Curso: 0368C

Temario:

This course is designed for experienced design and support specialists with solid knowledge and field experience in voice, data, and Voice over IP (VoIP) technologies. These specialists require the specific knowledge and skills to design and support complex VoIP solutions in Wide Area Network (WAN) and Local Area Network (LAN) environments.

Dirigido a:

Participants require a solid knowledge of Nortel VoIP products and a minimum of 6-12 months field experience supporting voice, data, and VoIP technologies.

Objetivos:

- Analyze voice packetization parameters that you can modify to meet customer voice quality objectives.
- Determine optimal VoIP traffic flow recommendations and QoS requirements.
- Identify the existence of data network issues known to be problematic for VoIP infrastructure.
- Compare and contrast the advantages and disadvantages associated with the various WAN topologies, such as Frame Relay, Asynchronous Transfer Mode (ATM), leased lines, and Digital Subscriber Line (DSL) commonly available fore the transport of the VoIP traffic.
- Determine appropriate power needs for VoIP devices, application servers, and LAN infrastructure.
- Identify common fragmentation issues known to be problematic for VoIP traffic in LAN and WAN environments.
- Discriminate the various methods, such as Differentiated Services (DiffServ), available for implementing QoS of VoIP traffic in a WAN environment to achieve the best voice quality.
- Assess customer routers to identify performance/traffic handling capabilities and network implementations known to be problematic for VoIP traffic.
- Analyze customer data protocols and application requirements to identify which traffic (data, voice, and VoIP) is to be given priority.
- Analyze a customer Frame Relay environment to identify if circuit speed mismatches exist in the VoIP speech path to determine whether traffic shaping or fragmentation is needed.
- Given customer Network Address Translation (NAT) and firewall implementations, recommend methods for addressing traversal issues known to be problematic for H.323 traffic.
- Develop customer recommendations for VoIP traffic implemented within Virtual Private Network (VPN) tunnels based upon acceptable overhead and latency for sample design scenarios.
- Explain the issues and challenges of providing regulatory emergency services in a VoIP environment to meet customer/regulatory emergency services requirements.
- Communicate about standards and protocols for converged networks, such a H.323 and Session Initiation Protocol (SIP).
- Define peer networking.
- Identify techniques to interwork systems, including gatekeeper and zone configuration.
- Identify common H.323 interoperability issues known to be problematic for VoIP traffic.
- Describe the recommended flow to complete a professional VoIP network assessment.
- Describe how to use network assessment tools and outputs of customer network environments to assess the network’s readiness for VoIP.
- Given the results of a network assessment, recommend configuration changes or upgrades necessary to address bandwidth and appropriate handling of converged traffic.

Prerequisitos:

- NCSE - Communication Server 1000 Rls. 5.0 Installation &
Troubleshooting (Available August 2007)

IMPORTANT
This course is designed to help participants prepare for the Nortel Certification Exam (920-804). It does not provide hands-on training on how to install and configure Nortel VoIP products.

Included in this course is a single attempt at either a Segment or Full Length certification exam (as applicable).

This exam will will be Proctored under Prometric conditions and will be run in the classroom, or as appropriate facility on the same site as your Training Course.
The exam is an integral part of the course and will be the last event on the final day of the course.

Contenido:
- Parameters that impact IP Telephony Traffic
  - Bandwidth
- Using the Nortel VoIP Bandwidth Demand Calculator
- Traffic Flow Recommendations
- Wide Area Network Traffic Convergence Issues
- Security in the VoIP Environment
- Emergency Services in the VoIP Environment
- Technology Standards and Protocols for Converged networks
- Network
- Assessment Guidelines

Más información:
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