The Road to IP Telephony

- **Identify operational changes**—Revisit operational policies to ensure a smooth migration and keep the new system clean. New support models, attention to operational security issues, handling of modem lines, and restrictions on migrating unused lines are considerations of the new converged voice and data network.

- **The good, the bad, and the ugly**—List the top ten things that will improve as a result of the new IP Telephony network and the top ten things that could go wrong without proper planning.

Chapter 4, “Implementation,” addresses implementation topics such as network management, power backup, monitoring and troubleshooting, serviceability, and the importance of a backup support plan.

### Appendix 3-A: Planning Workshop Template

The Planning Workshop is intended to help articulate the customer requirements and expectations for the solution. It also allows you to clarify the existing network. You schedule the Planning Workshop after all the site surveys have been returned and analyzed. You can use all information that you obtain during the Planning Workshop in the planning deliverable and ultimately in the design phase.

The sections that follow provide checklists that outline the topics and issues that you must discuss during the Planning Workshop. As the facilitator of the workshop, it is your responsibility to drive the conversation to these topics and ensure that they are documented correctly. This appendix is also available at [http://www.ciscopress.com/1587200880](http://www.ciscopress.com/1587200880).

### Executive Requirements and Expectations

**Intent:** To allow the executive sponsor to articulate the company’s goals and vision for the next 3 to 5 years. Also allows the executive to define requirements for the new solution.

- Overview of company vision—Proposed goals and growth of the company
- 3- to 5-year plan—3- to 5-year plan for both the voice and data networks
- Solution expectations—Executive expectations and requirements for the completed solution, including features and functionality
- Project expectations—Executive expectations and requirements surrounding the project (such as timetables, site priority, and success criteria)
Technical Requirements and Expectations

Intent: To discuss and document the current and future requirements for the network.

- General solution expectations
  - What does the client ultimately need the network to accomplish to best serve his users? (Actual applications will be discussed later.)
  - Why is a new system required?
  - What is missing from the old system (features, scalability, integration, and so on)?

- Deployment and timing expectations
  - What expectations does the client have for the deployment of the solution?
  - What timeline does the client have for the deployment of the solution?
  - Should particular sites/departments/users be given priority for deployment?

- Network availability/redundancy requirements
  - What is the required up-time for the network?
  - Redundancy versus cost discussion—How much redundancy is required?

- Network management requirements
  - Does the client want to upgrade/integrate a network management system?
  - If so, what are the expectations for the management system (monitoring requirements, scalability, alarms)?
The Road to IP Telephony

- Security requirements
  - What requirements does the client have for security?
  - What requirements does the client have for virus protection?

Existing Network Review

Intent: This discussion topic assumes that you have completed, documented, and reviewed all the site surveys. After you are familiar with the environment, the time you spend on the Existing Network Review section allows you, as the partner, to confirm site survey data and assumptions with the customer. It also allows you to probe deeper into configurations and ask specific voice and data questions to the appropriate personnel.

- LAN network topology
  - Naming convention.
  - Server location and purpose.
  - DNS (domain, parent, child).
  - Domains and trust relationships.
  - Client configuration—Is there a standard client image for the operating system and mail client (Windows 2000/Outlook 2000, Windows NT 4.0/Outlook 98, and so on)? If not, is the client moving to a standard? What is the timeline?

- IP addressing scheme

- WAN network topology
  - WAN circuits (network analysis)
  - PVCs
  - Mesh networks
  - Protocols, policies, and quality of service (QoS)

- Legacy Telephony infrastructure (trunking, signaling, and analog)
  - PBX or KSU vendor and model (from site survey)
Chapter 3: The Migration Strategy

- Quantity and locations of PBX/key service unit (KSU) systems (from site survey)
- Release of software running on PBX or KSU (from site survey)
- Quantity and location of PBXs with which IP Telephony might interface (from site survey)
- Hardware models and revisions of installed cards (from site survey)
- Number of existing digital connections for each PBX/KSU (from site survey)
- Number and capacity of ISDN trunks connected to each PBX (from site survey)
- Number of existing analog connections for each PBX or KSU and three expected to remain following deployment
- Toll by pass applications

- Legacy dial plan/DID configurations
  - Will the organization use existing or distributed dial plans among multiple sites?
  - Are there number ranges to be reserved for PBXs? If so, what are they?
  - Are there number ranges to be reserved for analog phones? If so, what are they?
The Road to IP Telephony

- Redundant or backup paths (transparent to the user)
- Emergency dialing call patterns
- Automatic call distribution
- Call blocking where individual groups or numbers have limited offnet access
- Legacy voice mail
  - Voice mail system models and vendor (from site survey)
  - Quantity and locations of voice mail systems (from site survey)
  - Hardware model and revision cards of voice mail systems (from site survey)
  - Software features currently deployed with voice mail system
  - Does the voice mail system have a Station Message Desk Interface (SMDI)?
  - Does the voice mail system support AMIS?
  - How is the voice mail system connected to the PBX?
  - Is the message waiting indicator integrated into the voice mail solution?

- Legacy Exchange environment (where applicable)
  - Version of Exchange (from site survey)
Chapter 3: The Migration Strategy

- Upgrade plans for Exchange?
- Is LDAP enabled in Exchange?
- Do all users currently have Exchange accounts?

- Virus protection

Applications and Features

Intent: Discuss the current applications and features and define which applications and features are required for the proposed solution.

- Existing phone applications—Which applications are they currently using with their existing solution (per site if necessary)?
  - Automatic call distributors (ACDs)—Please define all ACDs in terms of the number of users
  - Contact center applications
  - Interactive voice responses (IVRs)
  - Auto attendant
  - Music on hold
  - Call accounting
  - Time of day routing
  - Voice mail/unified messaging
  - Fax software
  - Conferencing
  - Call transfer
  - Call hold
  - Call park
  - Calling line identity
  - Calling party name
New solution applications—Discuss which applications the new solution must have to be successful:

- ACDs
- Contact center applications—IP Contact Center (IPCC)/International Code Designators (ICDs)
- Integration with existing IVRs
- IP interactive voice responses (IPIVRs)
- SoftPhones
- Auto attendant
- Personal assistant
- Call accounting
- Time of day routing
- E911
- Call setup
- Conferencing
- Call transfer
- Call hold
- Call park
- Calling line identity
- Calling party name

Voice mail/unified messaging—Discuss voice mail/unified messaging requirements for new solution.

- Text to speech—Real Speak/TT3300
- Fax integration

Collaboration

- What are the current voice collaboration devices and uses (such as voice bridges and third-party conferencing)?

- Any there applications for voice collaboration devices that users frequently use (such as e-learning, Placeware, and NetMeeting)?
Chapter 3: The Migration Strategy

- Are future requirements for voice collaboration devices in the proposed solution? Is a voice bridge in the client’s 3- to 5-year plan? If so, discuss call flow and sizing network correctly.

- What are the current video collaboration devices and uses (such as Vtel, PictureTel, and webcams)?

- Which applications does the client currently utilize for video collaboration devices?

- What are the future requirements for video collaboration devices in the proposed solution? Is video in the client’s 3- to 5-year plan? If so, discuss sizing network correctly.

- Existing data applications—Discuss the following applications, and clearly understand and document where the application is used, how often, by whom, and what the estimated bandwidth utilization is.
  - CRM
  - Client server databases
  - Imaging software
  - User transactions
  - XML applications
  - E-mail server transaction
  - Directory/Lightweight Directory Access Protocol (LDAP) transactions
  - Unified messaging transaction
  - Toll bypass application

- Proposed data applications—Discuss the client’s 3- to 5-year plan for applications.
  - CRM
  - Client server databases
  - Imaging software
  - User transactions
  - XML applications
Planning and Strategy
Intent: Understand the client’s requirements for the future of the network and the deployment of the new solutions.

- Company growth estimates
  - Number of users

- Number of sites—Where are the sites located?

- PBX migration/integration
  - Will PBX be displaced right away, or will the solution coexist with the legacy PBX?

  - When will the PBX be displaced? Will the users be migrated on a schedule, or will some users stay on the legacy environment?

- Country-specific considerations (any regulations)

- Client’s change management process—Clearly understand the client’s change management process.

  - What is the process for reviewing a change management request?

  - How are change management requests submitted?

  - What is the average turnaround time for approval?
Support

Intent: Clearly understand and articulate the client’s current support strategy and the support requirements for the new IP Telephony solution.

- Existing data and voice support services
  - Is the voice network supported by a third party, and if so, who? If the voice network is supported internally, which resources support it?

- Is the data network supported by a third party, and if so, who? If the data network is supported internally, which resources support it?

- Day 2 support expectations for the IP Telephony solution—Is the new solution going to be supported by a third party or internally?

- Internal support training program
  - What are the client’s training expectations from you, the partner?

  - Is there a budget to train the administrators for supporting this environment?
The Road to IP Telephony

- End user training requirements
  - What are the client’s expectations for training the end users?

- How has training been done in the past?

Appendix 3-B: Sample Users Conversion Notice

This appendix provides an example of a communication that was sent out to users about the impending cutover to their new IP phone. Use this sample to create your own communication message. You can also find this appendix at http://www.ciscopress.com/1587200880.

To: All Building Employees

From: Cisco IT AVVID Tiger Team

Our plan is to convert all users on the San Jose campus to the Cisco IP Phone. Your location is scheduled for conversion on Saturday ______________. Exceptions to this include all call center agents and lobby receptionists who are part of the contact center operators group. There are three areas of sensitivity for us: modems, boss admin support, and Oryx System users.