



Advanced Services

Knowledge Sharing Session

CUCM Upgrade / UCS Migration

Case Study # 1



Agenda

- Pre-upgrade Environment
- AS UC Upgrade and UCS Migration Services Summary
- Drivers for Migration
- Project Overview
- Business Requirements
- Project Phases Breakdown
- Important Considerations
- Lessons Learned

Current UC Environment

- 11 Organizations / 30+ Sites
- Each Organization has its own UC cluster and Unity VM
- Each org serves 1-5 sites
- MCS Servers
- 2 UCCX Clusters
- Each org uses Unity 5.x / 7.x
- 3 Organizations using its own CER
- Each org has Cisco 3900 Series Gateways
- Approx. 7K phones total (All Clusters)
- Unified Meeting Place
- Forced Authorization Codes
- Unicast MOH
- 3rd Party applications:
 - IPCelerate / IPSSession / IPStudio
 - Xmedius Fax
 - OCS

UC Upgrade and UCS Migration Services Summary

- Build all UC applications(CUCM, Unity Connection, UCCX, CER) to most stable / desired release
- AD Integration with CUCM
- Site Migration of Endpoints and Gateways
- Site Migration of Unity to Unity Connection
- Site Migration of ERLs / ELINs for CER and switchport discovery
- On-site and Remote Services

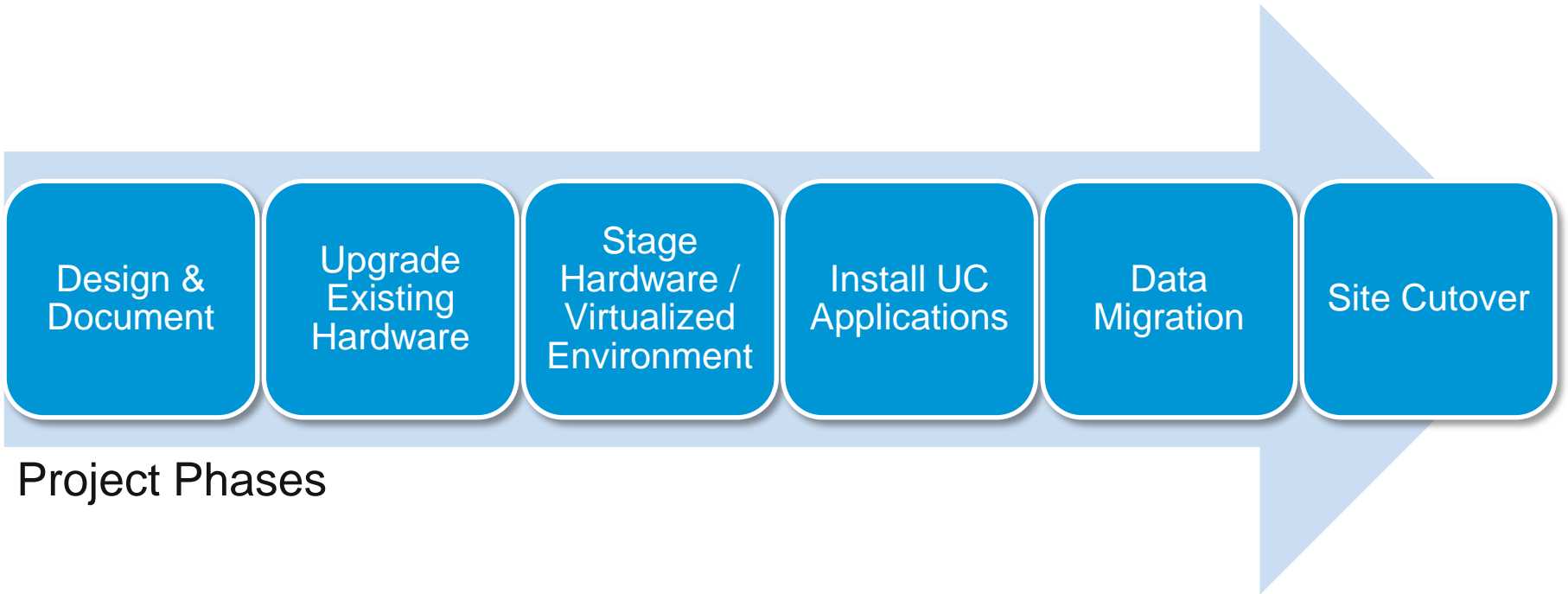
Drivers for a Centralized CUCM

- Consolidate UC infrastructure
- Hardware Refresh
- Virtualized Environment
- Ease of management

❖ Cost Savings:

- Power
- Datacenter
- Licensing

Project Overview



Project Phases - Breakdown

Project Phases	Tasks
Project Kick-off	<ul style="list-style-type: none">▪ Introduction of teams▪ Project Overview▪ Communication Plan▪ Discuss Migration Approach
Phase 1 Design & Document	<ul style="list-style-type: none">▪ Review Detailed UC / Network Diagrams▪ Identify Phone Models and firmware version▪ Identify Gateway Models and IOS version▪ Identify 3rd party Applications▪ B-series / SAN - UC IOPS requirements▪ Identify Server Sizing / OVA template▪ Determine IP Addresses for CIMC and ESXi per HOST▪ Create HLD, LLD, Test Plans

Project Phases - Breakdown

Project Phases	Tasks
Phase 2 Upgrade Existing Hardware	<ul style="list-style-type: none">▪ Upgrade Phone Loads▪ Upgrade Gateways
Phase 3 Staging	<ul style="list-style-type: none">▪ Rack & Stack UCS Servers▪ Network Connectivity for B-Series servers▪ Create LUNs▪ Procure Media for CUCM, CUC, CER, UCCX▪ Upload Media to Datastore▪ Export Data (CUCM, Unity/COBRAS)▪ Production Change Freeze▪ Back Up all Production UC components▪ Install ESXi on all Hosts▪ Configure CIMC, ESXi, RAID, Virtual Switch▪ Upload License for ESXi▪ Prep ESXi / Disable LRO▪ Load OVA Template

Project Phases - Breakdown

Project Phases	Tasks
Phase 4 Install UC Applications	<ul style="list-style-type: none">▪ Install CUCM Servers on UCS▪ Install CER 8.6 Servers on UCS▪ Install UCCX Server on UCS▪ Install CUC Servers UCS▪ Install All Licenses
Phase 5 Data Migration	<ul style="list-style-type: none">▪ Export Devices from Production CUCM▪ Import Devices on to new CUCM▪ Run DBWalker on Production Unity▪ Run COBRAS Export on Unity▪ Run COBRAS Import on Unity Connection

Project Phases - Breakdown

Project Phases	Tasks
Phase 6 Cutover	<ul style="list-style-type: none">▪ Determine Change Window▪ Notify End Users▪ Change DHCP Scope with new CUCM TFTP Servers▪ Reboot devices on production CUCM▪ Ensure registration of devices on new CUCM▪ Test Features / Functionality▪ Cutover 3rd Party Apps▪ Test 3rd Party Integrations▪ UCCX Site: Upgrade CAD Agents and Supervisor
Support	<ul style="list-style-type: none">▪ Day 1 Support (Onsite and Remote)

New System Requirements

Gather requirements for the new centralized system to ensure the proper versions and/or licenses is used.

- Convert 5 -> 7 Digit Dial Plan
- TEHO / Toll Bypass
- E911 for all migrated sites
- SRST
- QOS
- Multicast MoH
- CUC Exchange Integration (Single Inbox)
- CUCM and Unity Connection AD Integration
- Locations Based CAC
- Call Park / Call Pickup
- FAC Codes

Determine OVA Templates

OVA Templates are determined will carve out the following specs for each VM.

- Communications Manager:
6x CUCM- 10,000; 2x160 GB HD; 6 GB RAM; 4 vCPU
- Cisco Emergency Responder:
2x CER- 20,000; 1x80 GB HD; 2.25 GB RAM; 1 vCPU
- Cisco Unity Connection
4x CUC- 10,000; 2x146 GB HD; 6 GB RAM; 4 vCPU+1vCPU (ESXi)
- Unified Contact Center Express
4x UCCX- 400; 2x146 GB HD; 8 GB RAM; 4 vCPU

Note: Size your VMs appropriately. Consider oversubscription, failover and well as hardware resources (CPU / Memory / Storage)

“Do I have enough resources available?!?”

Lessons Learned

CUCM Migration Challenges

- Issue:
 - VG224 / VG248 Migration Challenges. CUCM BAT tool is not capable of migrating endpoints for VG2XX. It will migrate the device configuration, thus all endpoints need to be created manually. This can be extremely time consuming depending on how many VG2XX devices are to be migrated.

- Solution:
 - GAT Tool

Unity to CUC Migration Challenges

- Issue:
 - Dial-Plan change from 5 to 7 digit.
 - Subscriber Alias is changing from existing username to employee ID
- Solution:
 - Use Dataviewer to modify the Alias and Extension in the COBRAS .MDB file.

Available on <http://CiscoUnityTools.com>

UCCX

- Issue:
 - Voice CSQ Summary not displaying any data
- Solution:
 - Restart Cisco Desktop Enterprise Service

The screenshot shows the Cisco Supervisor Desktop interface. The 'Skill Groups' pane on the left shows a tree structure with 'Contact Service Queues' expanded to 'Voice', which includes 'CSQ-Pets-Hotel-Sk' and 'CSQ-Salon-Sk'. The 'Real Time Displays' pane shows the 'Voice CSQ - Detail' table with the following data:

Agent Name	Current State	Skill Group	Contact Service Queue	State Duration	Reason Code
Britney Dale	Talking	2	CSQ-Pets-Hotel-Skills	00:01:24	0
Jennifer Glesge	Talking	2	CSQ-Pets-Hotel-Skills	00:03:59	0
Felice Norris	Not Ready			00:01:33	32760 (Logon)
Tianna Armstrong	Talking	2	CSQ-Pets-Hotel-Skills	00:01:39	0
David Gilmore	Not Ready			00:52:32	32760 (Logon)
Ronald Schultz	Talking	2	CSQ-Pets-Hotel-Skills	00:02:27	0
John Grizzard	Talking	2	CSQ-Pets-Hotel-Skills	00:01:01	0
Chelsea Sunderland	Ready			00:10:35	0
Portia Antrim	Ready			00:01:13	0
Cynjoia Satchel	Not Ready			00:01:12	0
Damon Schultz	Not Ready			00:02:33	32760 (Logon)

Below the table is the 'Voice CSQ - Summary' section, which is currently empty.

Thank you.

