Cisco Unity Connection (CUC) 8.x

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May 2011

Agenda

- **Software Releases**
- **Enhancements to Unity Connection 8.x**
- **Upgrade Paths**
- **Key Takeaways**

Q&A Policy

- **Please hold questions until the end of the presentation**

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CUC 8.x
SOFTWARE RELEASE STATUS

Release Status for CUC 8.x

- **CUCM/CUC share installation media**

  - **DVD/CD Media**

  - **ISO**

- **Release schedule falls in line with CUCM 8.x**

  - **Latest is 8.5(1)SU1 – Feb 2011**

  - **UC 8.6 Beta Trial in progress**

CUC 8.x

NEW FEATURES / ENHANCEMENTS

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Increased Capacity/Scalability

- **Highlight of 8.0 release**

- **250 ports per server**
  - **Often misunderstood – need to highlight design considerations**

- **20,000 users per server/cluster**

- **Digital networking for up to 100,000 users across up to 20 servers/clusters with cross-server features**

Port Capacity and HA Clustering

- **Port capacity "numbers" are often misunderstood when deploying HA clusters**

- **250 ports/server x 2 servers (HA) = 500 ports!**

  - Mathematically, yes. However, consider the design.

- **CUC HA = Active/Active Failover**

  - 100% redundancy between servers

  - Normal operations – 1 server (Subscriber) should handle majority of call processing duties

  - 1 server = 250 ports

- **Publisher should handle client and administration traffic**

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Port Capacity and HA Clustering

- **So, does this mean only one server can take calls?**

  – **No, it's OK for the Publisher to handle additional calls (250+) during high-call volume periods**

  – **But, if you consistently need more ports than one server can handle then increased call blocking will occur in a failure event**

    - **i.e., less than 100% redundancy**

- **CNC Recommendation**

  – **Plan for (or close to) an effective port capacity of 250 ports**

Port Capacity and HA Clustering

- **Is this documented somewhere?**
  - Yes, but "selective reading" can lead to misunderstanding
    - Ex: "When configured as a Connection cluster…system can support double the number of VM ports"
    - Ex: "…each server in the Connection cluster must have enough VM ports to handle all calls for the Connection cluster"
    - Ex: "…we recommend that most call traffic be directed to the subscriber server"

Virtualization

- **Introduced in 8.0**
  - **Supported with UC on UCS**
  - **Mixed install support for clustering**
    - **1 physical server / 1 virtual server**
      - **Match VM specifications for CPU, memory, and disk space to physical server**

- **Clustering (2 VM's)**
  - **Prefer HW redundancy**

- **8.5 brings new overlay and HW support**
  - **UCS B200 M2 and C200/210 M2**

Single Inbox

- **Single Inbox = Unified Messaging (UM)**
  - **Introduced in 8.5(1)**
    - **Upon launch, support for Exchange 2010 only**
    - **8.5(1)SU1 released in February**
      - **Added support for Exchange 2003 and 2007**

- **What does this mean for Cisco Unity?**
  - **Maintenance mode only**
    - **Don't expect feature/version development beyond Unity 8.0**

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Single Inbox

- **Why would Cisco introduce UM for CUC?**
  - Unity can be difficult manage and maintain
    - Typical causes include…
      - Poor planning
      - Misunderstanding/lack of expertise
        » Schema extensions, permissions, operation
      - Lack of cohesion between voice and infrastructure teams
  - Emergence of Microsoft UM
    - Less cooperation, more competition

Single Inbox

- **Why would Cisco introduce UM for CUC?**
  - **Changes to MAPI affect Unity's integration capabilities**
    - **Unity's interaction with Exchange is based on MAPI**
  - **Move to appliance-based server model**
    - **Stability**
    - **TCO**
  - **Legal concerns**
    - **With Unity, messages are always stored in Exchange**
    - **Voicemail is inherently email**

Single Inbox

- **How is Unity UM different from CUC UM?**
  - **Single Store vs. Dual Store Architecture**
  - **CUC UM is based on Dual Message Store Synchronization**
    - **Goodbye, MAPI. Hello, Web API's.**
      - **CUC leverages web services (WebDAV/EWS) to synchronize with Exchange**
    - **Reduces dependencies on AD and Exchange**
      - **No schema extensions, minimal permissions**
        - » **1 to 3 permissions required for CUC service account (s) depending on Exchange version**

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Single Inbox

- **How is Unity UM different from CUC UM?**
  - **Single Store vs. Dual Store Architecture**
    - **Reduces dependences on AD and Exchange**
      - **CUC will not stop functioning if a GC is unavailable**
      - **CUC does not require co-location with Exchange servers for synchronization**
      - **Clients have access to VM even if Exchange is down**
        - » **CUC does not depend on Exchange for delivery/ receipt/storage of voicemails**

Single Inbox

- **How is Unity UM different from CUC UM?**
  - **Flexibility**
    - **Synchronize with multiple versions of Exchange simultaneously**
    - **Provide VM-only, Integrated Messaging (IMAP), or UM on a per-user basis**
      - **Jane wants VM, John wants UM…no problem.**
      - **AD accounts/Exchange mailboxes are not required for CUC VM-only users**
  - **Synchronization vs. Integration**
    - **Voice messages are always stored on CUC and then synchronized with Exchange mailboxes**

Single Inbox

- **Requirements and Support Details**
  - **Exchange**
    - **All editions**
      - **Standard, Enterprise, etc.**
    - **2010 – Update Rollup 3 or later, SP1**
    - **2007 – SP2**
    - **2003 – SP2**
  - **Exchange clusters are supported**
  - **Exchange can use any SAN configuration supported by Microsoft**

Single Inbox

- **Requirements and Support Details**
  - Support multiple forest Exchange integration
    - Requires at least 1 CUC UM service per forest (up to 20 per server/cluster)
  - AD and Exchange can be virtualized
    - If supported by Microsoft, it's OK
  - Single Inbox must be assigned within an applicable Class of Service for Single Inbox users
  - Single Inbox users must use an email client configured to access their Exchange mailbox
    - For full functionality, use Outlook with ViewMail for Outlook

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Single Inbox

- **Feature Details**
  - **Users must be enabled for Single Inbox**
  - **Voice messages (including messages sent via ViewMail for Outlook) are first stored in CUC and then replicated to the user's Exchange mailbox**
    - **i.e., Synchronization**
  - **Status changes are replicated (bi-directional) between CUC and Exchange**
  - **ViewMail for Outlook is a key component**
    - **Users can send new voice messages and reply to/forward voice messages and they are synchronized with CUC**
    - **Listen to secure messages**
      - **Forwarding of private messages is restricted**

Single Inbox

- **Feature Details**
  - **ViewMail for Outlook is a key component**
    - **Without ViewMail or when another client is used…**
      - **Messages are treated like emails with .wav attachments**
      - **Replies/forwards are treated like email**
        - » **Message is routed via Exchange, not CUC**
          - » **Messages are never sent to CUC**
      - **Cannot listen to Secure Messages**
        - » **Secure Messages NEVER leave CUC**
      - **Users may be able to forward private messages**

Single Inbox

- **Feature Details**
  - **Outlook folder synchronization**
    - **CUC Inbox is synchronized with a set of Outlook folders**
      - **Subfolders under Outlook Inbox**
      - **Subfolders under Outlook Deleted Items**
        - » **Deleted Items appear in CUC Deleted Items**
      - **Outlook Junk Mail**
    - **User moves voice messages (not secure) into other folders in Outlook not under the Inbox…**
      - **Messages moved to CUC Deleted Items**

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Single Inbox

- **Feature Details**
  - **Outlook folder synchronization**
    - **Users moves voice messages back to Outlook Inbox or a synchronized folder…**
      - **If still in CUC Deleted Items, synchronized to CUC Inbox**
      - **If not in CUC Deleted Items, can be played in Outlook but is not resynchronized**
    - **Delete a message in CUC**
      - **Message sent to CUC Deleted Items and syncs with Outlook Deleted Items**
    - **Delete a message from CUC Deleted Items (manually or via message aging rules)**
      - **Messages deleted from Outlook Deleted Items**

Single Inbox

- **Feature Details**

  - **Outlook folder synchronization**

    - **CUC messages that are not synced**

      - **Sent, Draft, Future delivery, Broadcast, Unaccepted dispatch**

  - **Secure Messages**

    - **Secure messages only reside on CUC, only a decoy is replicated to Exchange**

      - **When playing a message via ViewMail, it is securely streamed from CUC without being stored in Exchange or local to PC**

Single Inbox

- **Preparation Tasks/Considerations**
  - **Licensing**
    - **Upgrade**
      - **Pre 8.0 → Obtain upgrade license**
      - **8.0 to 8.5 → No upgrade license**
    - **Single Inbox Feature**
      - **Considered the same as IMAP**
  - **LDAP synchronization considerations**
    - **CUCM Mail ID → Corporate Email ID in CUC**
    - **Ultimately, CUC needs to know user's corporate email address for UM**

Single Inbox

- **Preparation Tasks/Considerations**
  - Should CUC communicate with a specific Exchange server or search for and communicate with different Exchange servers, as needed?
    - Ability to communicate with Exchange servers can be affected by decision (based on version of Exchange)
    - May affect the number of UM services CUC requires to access all of the mailboxes in the Exchange organization
  - Type of authentication used between CUC and Exchange
  - UM service account(s)
    - Created in AD and granted minimal permissions
  - Exchange Considerations
    - 2003 – Enable WebDAV
    - 2010 – Remove EWS limits for UM service account(s)

Single Inbox

- **Preparation Tasks/Considerations**
  - **Create UM services in CUC**
    - **You may have multiple based on configuration and features enabled for users**
  - **Load certificates on CUC**
  - **Enable feature in CoS and assign to applicable users**
  - **Allow ViewMail users to send new messages or reply to/forward messages**
    - **Add SMTP proxy addresses to Subscribers**
  - **Create UM accounts**
    - **Used to tie Subscribers to UM services in CUC**
    - **Not automatically provisioned**
    - **A user may have more than 1 UM account**

Message Aging and Expiration

- **Message Aging Alerts**

    – Customizable alerts can be sent to users before message aging rule enforcement

        - Users have time to take action, if required

        - Customize delays between the alert and messaging aging rule enforcement

- **Message Recording Expiration**

    – Ensures messages stored on CUC cannot be listened to after a specified expiration date (even if forwarded)

    – System-wide, advanced configuration option

    – Specify the number of days until expiration based on message body creation time

Secure Delete

- **Messages are "shredded" after deletion**

- **System-wide, advanced configuration option**

- **Iteration of 1-10 passes**

    - **3 is standard for "general" use**

- **Uses standard Linux tool**

    - **GNU core utility – Shred Tool**

    - **Bits that make up a message are overwritten with random data bits**

    - **Clean Deleted Messages task**

        - **Ex: Shred every 30 minutes**

Application and DB Logging

- **Audit logging is centralized and enabled by default**

  - Collected, viewed, and deleted within RTMT

- **Can now leverage audit logging reports for configuration changes**

  - Ex: Login/logout of CU Administration

  - Ex: Configuration changes

  - Ex: BAT creates/deletes

Client Enhancements

- ## ViewMail for Outlook

  - 8.5(4) latest as of April 2011

  - Replaces old form-based client

  - Use for Single Inbox or IMAP

  - Provides Single Inbox with most robust feature set

  - VMO has its own set of application requirements

- ## Web Inbox

  - Web 2.0 Inbox replaces Unity Inbox

  - HTML5 and REST-based API's

  - Can be deployed as a widget or gadget

CUC 8.x

UPGRADE PATH(S)

Upgrade Path(s) to CUC 8.5

- ## As previously mentioned, CUCM/CUC share installation media

  - ### Shared application components

    - #### Business Edition

- ## Upgrade path falls in line with CUCM 8.x

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KEY TAKEAWAYS

Key Takeaways

- ## Virtualization

  - **Key addition for UC 8.x**

- ## Unity Connection is premier voice messaging platform for Cisco

  - **UM is no longer a rumor**

  - **Dual store architecture has some serious advantages**

  - **If you're considering Cisco for messaging, you should be looking at CUC**

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