Boehringer Ingelheim – Company Introduction

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AVAYA
INTELLIGENT COMMUNICATIONS

Boehringer Ingelheim

- Family-owned global company
- Founded 1885 in Ingelheim, Germany
- Focus on Human Pharmaceuticals and Animal Health
- Corporation: 41,300 employees
- Operating with 138 affiliated companies in 47 countries
- Net sales U.S. 17 billion dollars in 2008
- Products marketed in some 152 countries

* For U.S. use only

Telephony Landscape

- Avaya IP PBX at CM 5.x
- MM 3.1 in a multiple physical S3500 server architecture
  - Two discrete MM systems
    - One dedicated for corporate subscribers
    - One dedicated for field sales force subscribers (no phone sets)
- MM Integration to PBX is E1 QSIG for a total of 144 ports for each MM system (max allowed)

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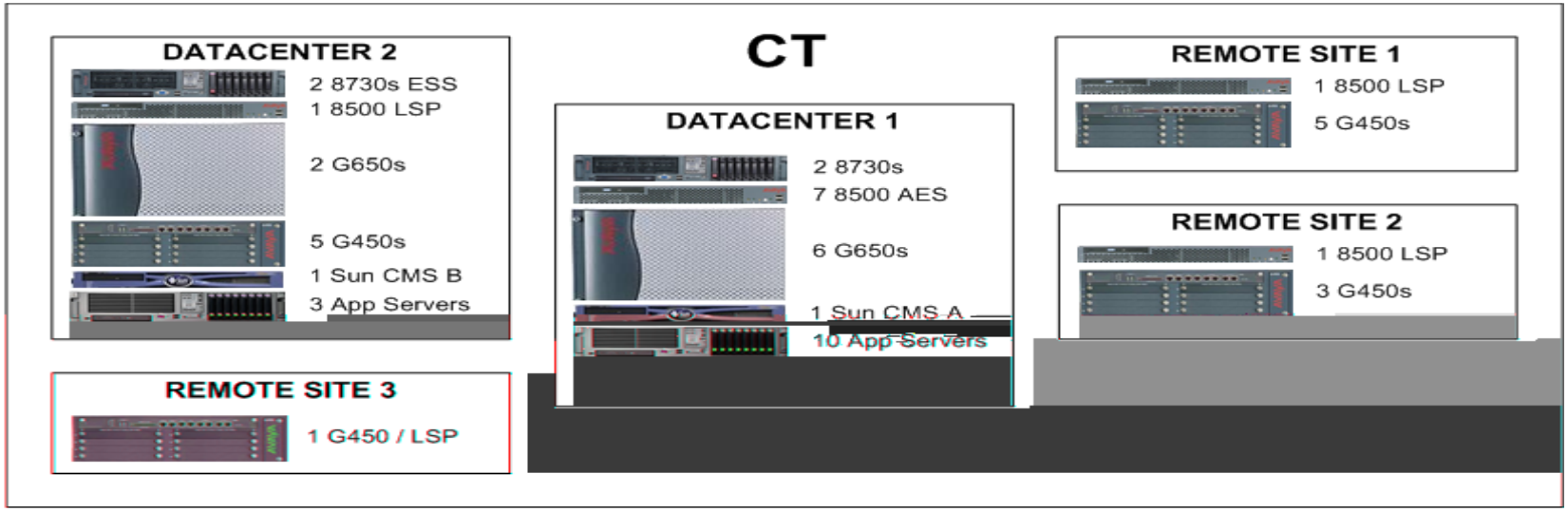
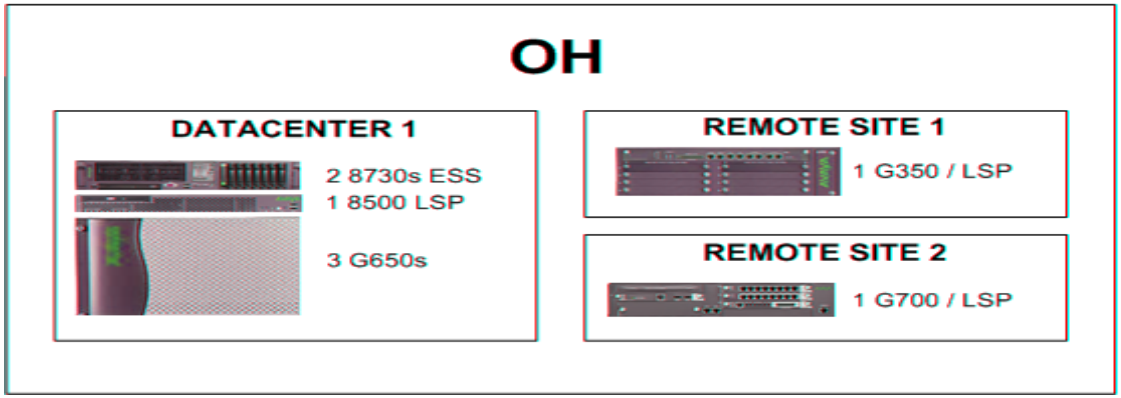
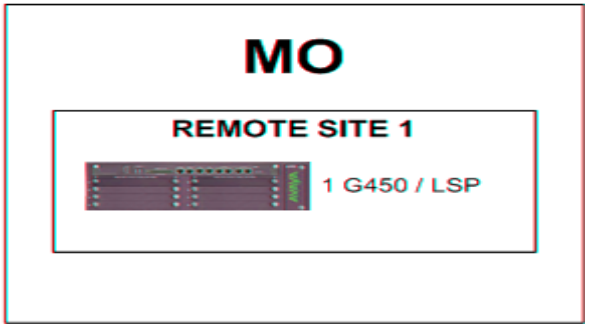
Avaya IP PBX Architecture

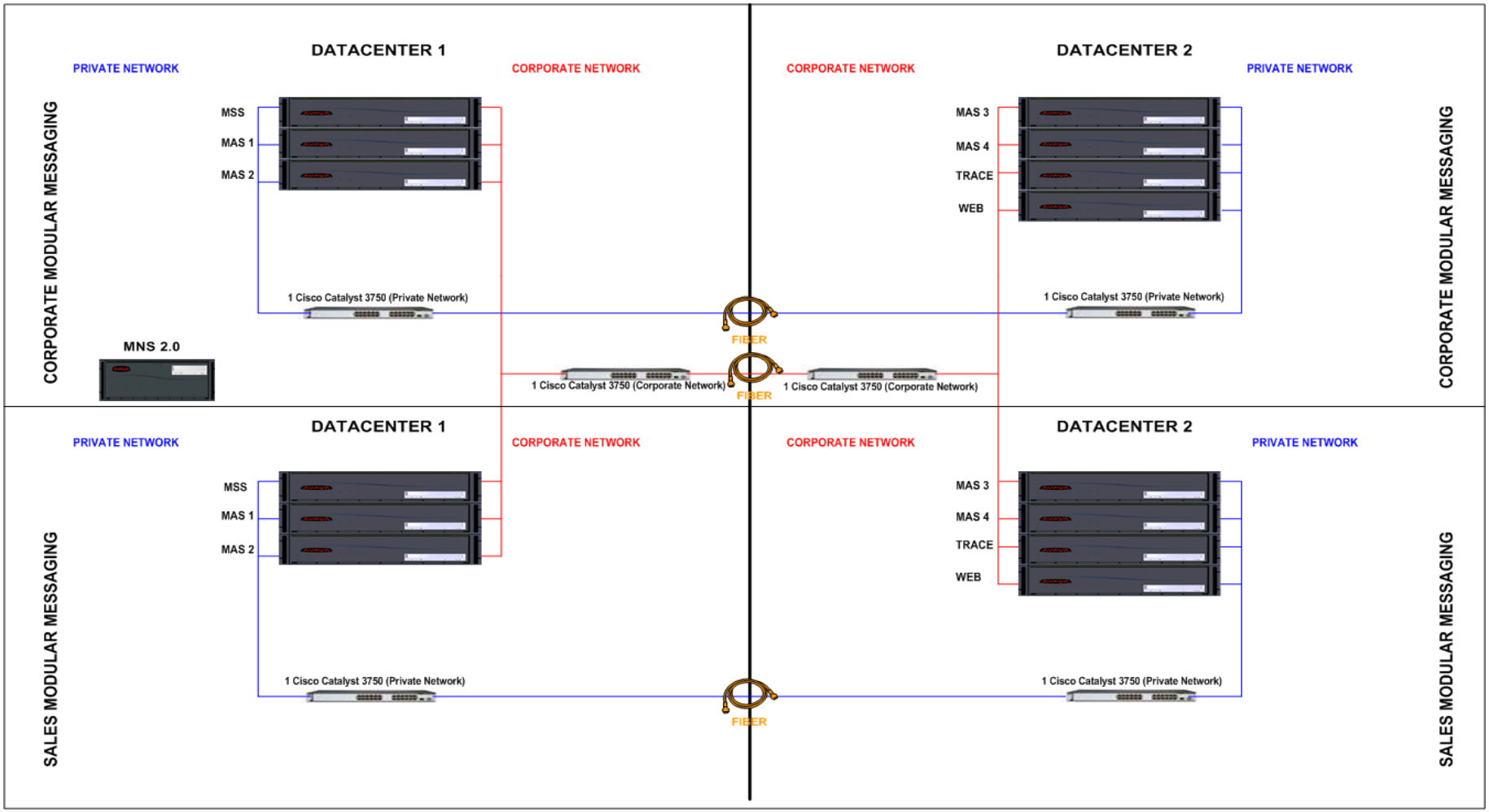






Boehringer Ingelheim – Telephony Landscape

MM 3.1 Architecture



The Challenge…

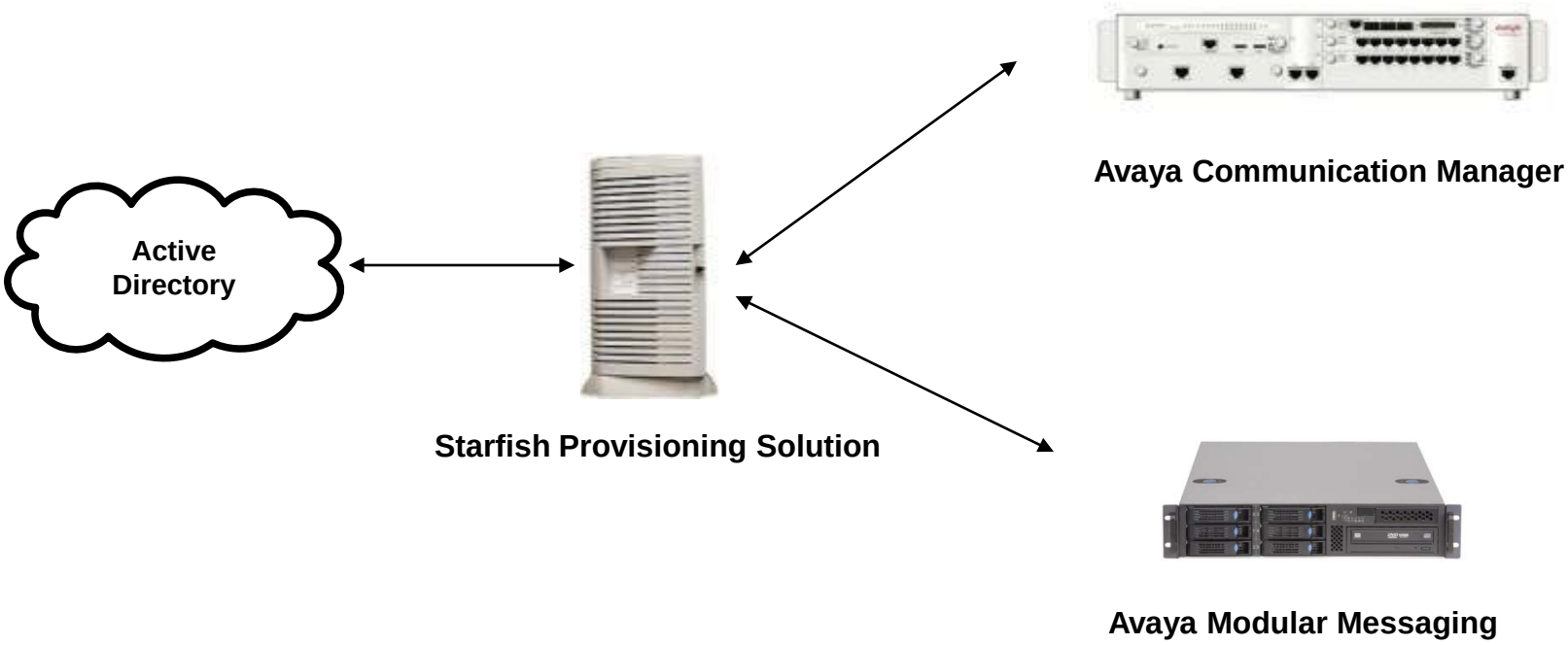
- Manual Move Add and Change transactions of phones and voice mailboxes are time consuming and error prone
- Discrepancies between data in the Enterprise Active Directory and the telecommunication system
- Manual de-provisioning often leaves telecom resources active after employees are no longer with the organization

Solution: Drive auto-provisioning through active directory

- Active Directory is monitored by the provisioning service which triggers appropriate transactions on CM and MM whenever an AD user is added modified or deleted

- The provisioning service keeps data in sync between Active Directory, CM and MM

Auto Provisioning Driven by Active Directory



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Use Cases: The provisioning service reacts to AD events

- Add Active Directory User
  - Create a station
  - Populate station settings (set type, location data) with values taken from AD
  - Populate cost center and user ID in station record to associate the station with the AD user
  - Create an MM mailbox
  - Populate mailbox settings (name, COS, default password)
  - Populate cost center and user ID in subscriber record to associate mailbox with AD User

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- Modify Active Directory User
  - If user name was modified
    - Update station display name
    - Update voice mailbox name fields
  - For all other relevant attributes (like cost center) update corresponding attributes in the station and voice mailbox
- Delete Active Directory User
  - Locate corresponding station
  - Locate other users associated with the station. If this is the only user, remove station
  - Re-number the mailbox using a pre-determine range
  - Change password and community ID to pre-determined values

Benefit to the Business

- Labor – significant workload reduction for our Account Management staff (45% - 75%)
- Speed – cycle time reduction from new request receipt to client resource delivery (25% - 45%)
- Accuracy – eliminates PBX, Voice Mail and AD database discrepancies

The Challenge…

- BI's field sales force reps make extensive use of voicemail distribution lists
  - Primary method of communication within the field
  - MM mailbox is field rep's entire telephony environment
- There are hundreds of distribution lists which may contain thousands of members
- Manually maintaining those lists is not practical
- Voicemail and email distribution lists need to be in sync

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Business Relevance…

- Lists heavily used for primary communication between sales management and field sales reps
- Reps are remote and required to check voicemail and email multiple times a day
- Lists extremely dynamic - membership based on rep assignment and geographic location
- Sales force can modify their hierarchy twice a year – we must modify list structure as a result
- Process highly visible and must be accurate – perfect candidate for intelligent automation

Process Prior to Intelligent Automation

- Over 400 MNS 2.0 EDLs ranging from a handful of MM subscribers to several thousand
  - List membership extremely dynamic – members moving in and out frequently
  - Actual lists fully restructured twice a year with possible “one off” changes throughout the year
  - Voice admins need to perform all of these changes manually
- Lists must be tightly permissioned manually
- Too many individual subscribers in each MNS EDL could cause an infrequent, yet possible, delivery failure

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Solution: Automate management of distribution lists by synchronizing to the sales force database

- Implement a process that nightly refreshes the membership in voicemail distribution lists based on queries made to the sales force database
- Create lists as ELAs so that local MSS expands the message to subscribers instead of MNS, reducing risk
- Nest MM ELAs in MNS EDLs to maintain transparency to users – no change in list ID numbering scheme
- Mirror ELAs as AD distribution groups
- The same process manages the members in the email

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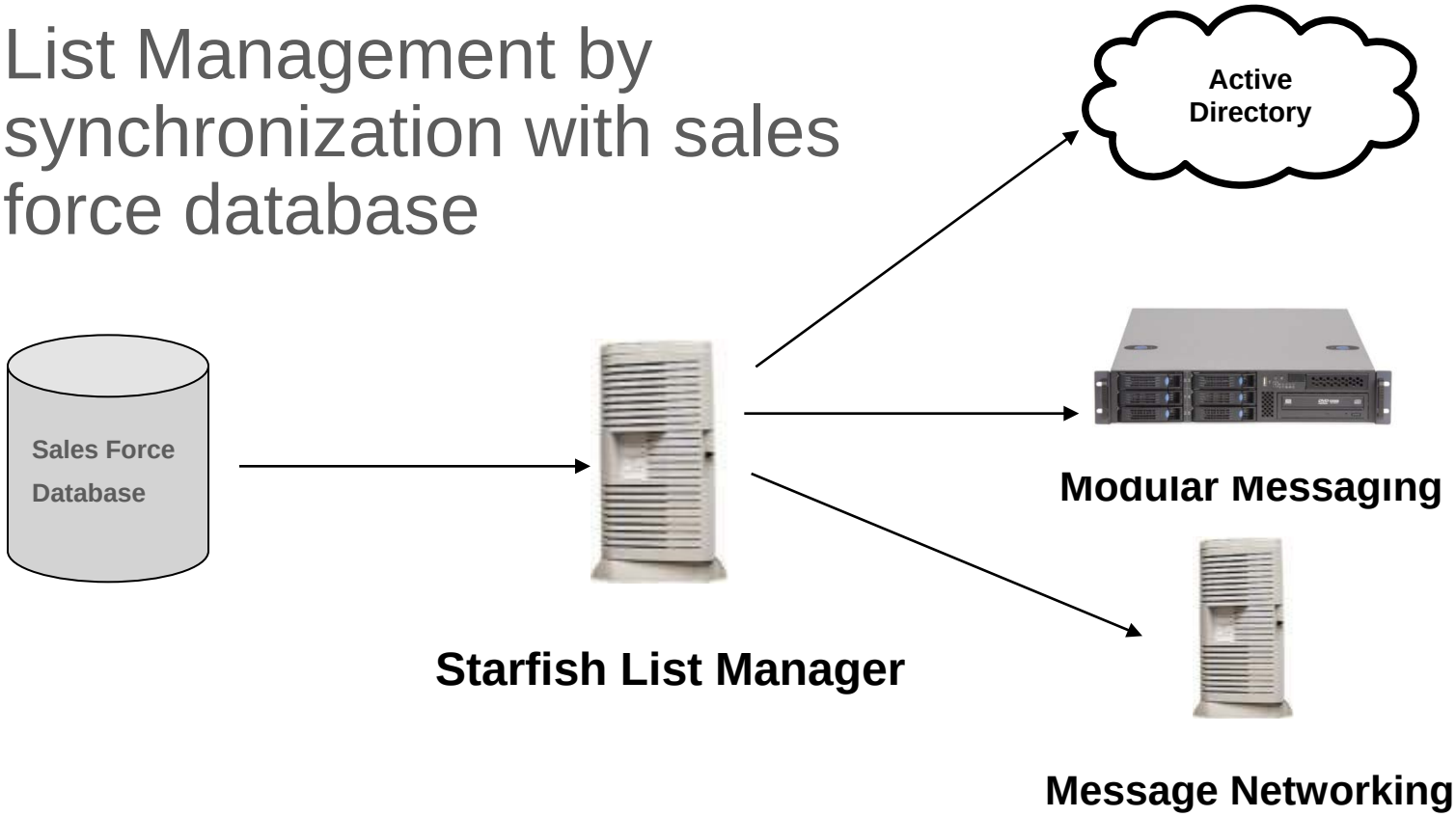
List Management by synchronization with sales force database



Script Process Description…

- Starfish List Manager application runs daily at 3:00 AM synchronizing Avaya Modular Messaging and AD with a sales reporting database functioning as an authoritative data store using employee ID as unique attribute
- Process initiated by a scheduled task on a dedicated application server using a specific voice AD service account for authentication
- Complete synchronization takes about one hour on average
- The two components that make up the sync process are DBsync.exe and ADsync.exe
  - **DBsync** reads data from sales reporting DB and then creates, modifies, and deletes MM subscribers. DBsync also modifies membership in Modular Messaging ELA distribution lists.
  - **ADsync** then synchronizes Modular Messaging ELA membership to AD distribution group membership using Microsoft ADAM (Active Directory Application Mode).
- Full transaction logging performed
- Employee ID and associated voice mailbox number are written to table in sales DB for consumption into sales organization management systems

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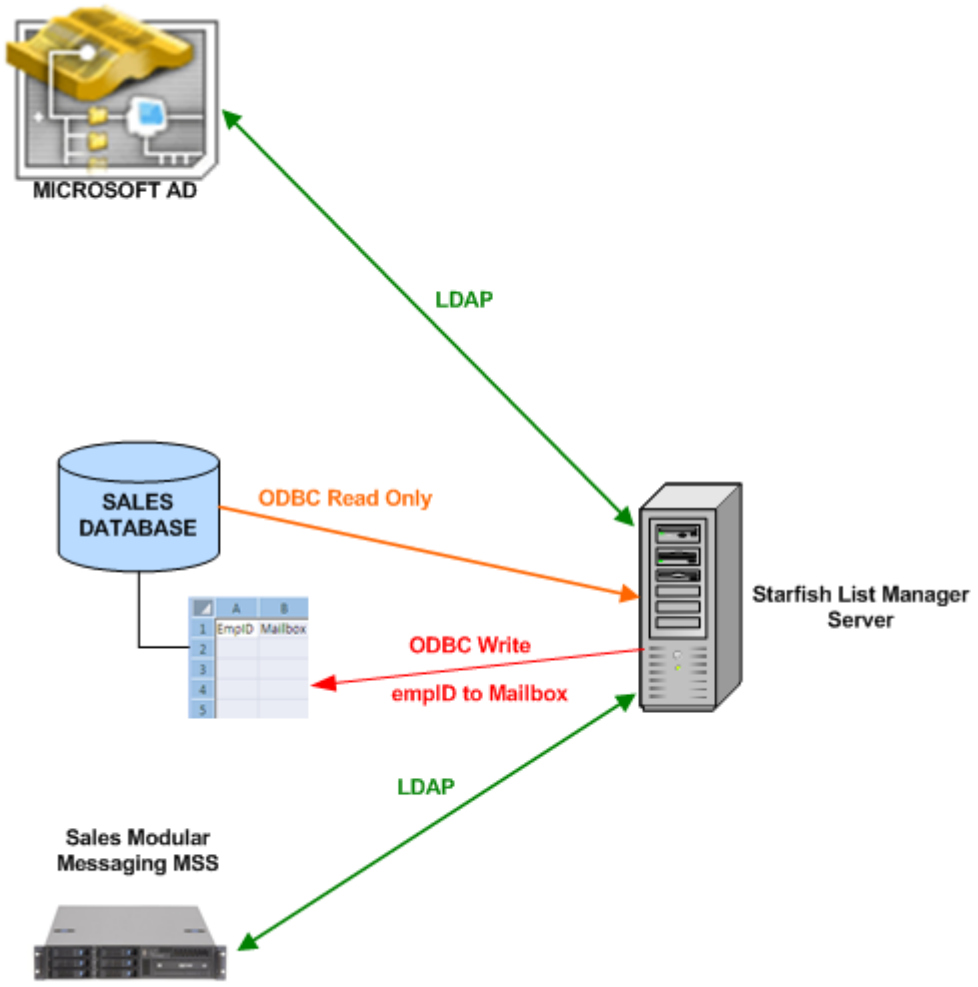
STARFISH LIST MANAGER TOPOLOGY AT BI



Benefit to the Business…

- Reduce complexity of manual processes freeing up resources to focus on other activities
- Automate MAC activity by consuming changes daily from an authoritative DB, greatly reducing cycle time
- Significant reduction in human error
- Voicemail DL landscape now compliant with Avaya best practices
- Introduction of single instance storage into the voicemail environment by leveraging MSS ELAs
- Mirror voicemail DL hierarchy in AD to produce a consistent and managed set of email distribution lists