

Deployment of Exchange 2010 mail platform

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- Mail service in numbers:
 - ~18 000 mailboxes
 - ~ 18 000 mailing lists (e-groups)
 - ~ 3 000 electronic faxes received/send each month
 - ~ 200 000 messages send each day to Internet
 - ~ 80 000 legitimate messages received each day from Internet
- Current systems
 - Microsoft Exchange 2003 – 95% of mailboxes
 - Microsoft Exchange 2010 – 5% of mailboxes + client access and edge servers

Renew mailbox hosting infrastructure

- Exchange 2003 towards end of life
- Hardware refresh

Modernize webmail

- Instant search, instant messages, cross-platform support (AJAX), Internet Calendar Sharing...

Adapt to ever-growing mail usage

- Provide bigger mailboxes
- Server-side mail archiving



- Storage space for mailbox databases
 - JBOD – storing databases and logs on the same disk without RAID
- Deployment of high availability environment
 - Mailbox databases in 2 data centers
- Protection against logical database corruption
 - Backup made by Tivoli instead of lagged databases
- Roles deployment
 - Edge servers – mail gateways
 - Facing internet
 - Facing intranet
 - Hub transport + Client Access servers
 - Mailbox servers

New OWA webmail

Instant search, full features for all browsers/platforms, autoreply settings etc.

Messages grouped by discussions

Helpdesk improvements: Exchange Control Panel

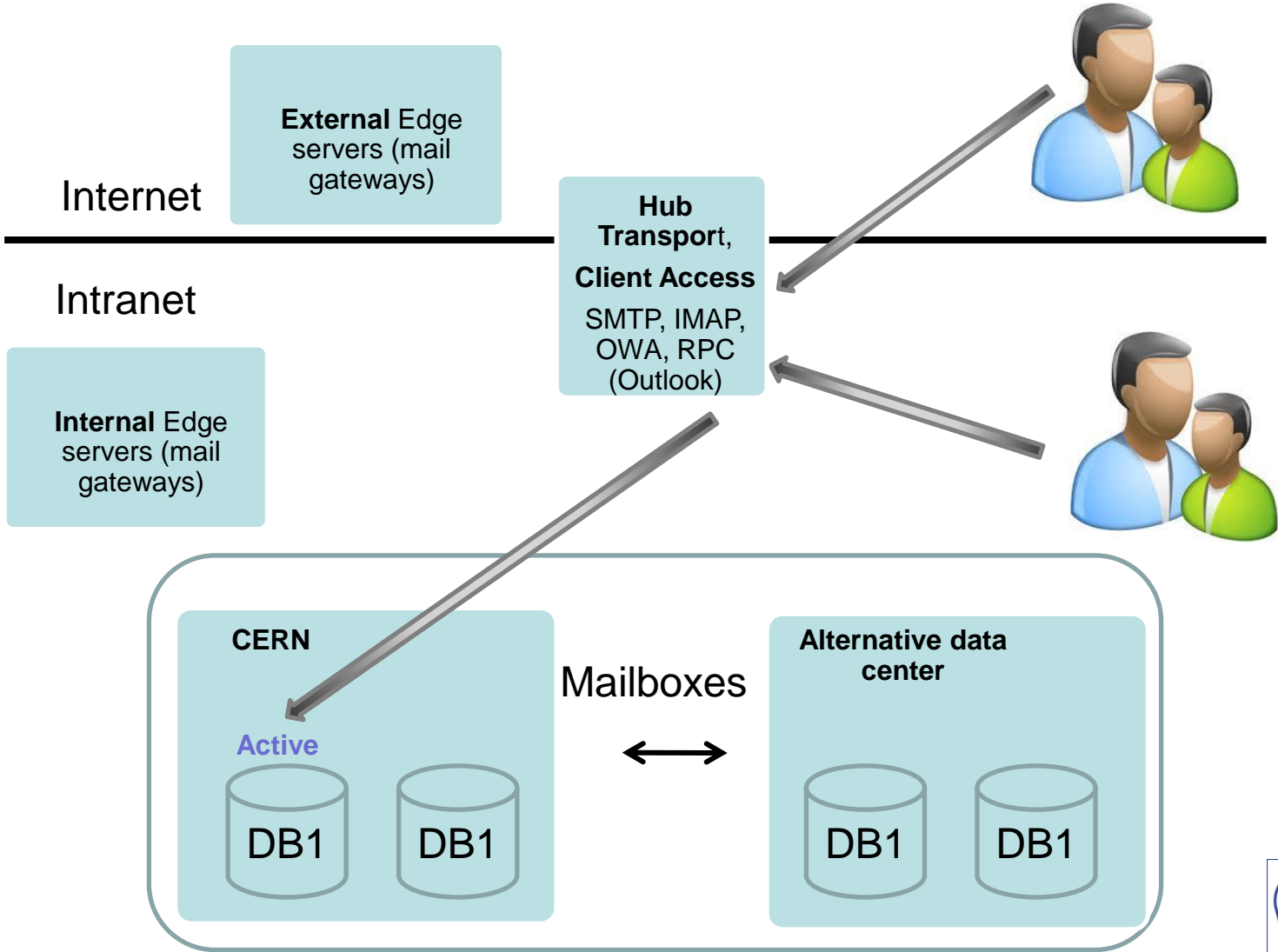
Restoring deleted items from all folders

Smartphone wipe if lost/stolen



The screenshot displays the Outlook Web App interface. On the left is a navigation pane with folders like 'Inbox (57)', 'Drafts [10]', 'Sent Items', 'Deleted Items (679)', 'CERN Security (6833)', 'Conversation History', 'Deleted Messages', 'Junk E-mail', 'mail', 'Notes', 'RSS Feeds', 'saved-messages', 'Sent', 'Sent Messages', 'sent-mail', 'Temp', 'test 1 (Recovered)', 'Trash', 'Usunięte elementy', and 'Wiadomości-śmieci'. The main area shows a list of emails under 'Last Week' and 'Two Weeks Ago'. The selected email is from Pawel Grzywaczewski to Joao Carlos Oliveira, titled 'Squash next Tuesday @ 13h15'. The right pane shows the email content: 'Hi, I will be on holidays from 23.10 - 8.11. I can play in the morning (around 9am) or in the evening 7pm. I can check mails on Saturday and on Sunday morning. Cheers, Pawel'. Below it is a reply from Joao Carlos Oliveira to Pawel Grzywaczewski, dated 15 October 2010 11:29, with the text: 'You replied on 15/10/2010 13:28. How long are you going to be in holidays? It's complicated for me to play during the weekend. But maybe Sunday afternoon. Do you read you email at home? I can send you an email sunday morning to confirm if I can or not. Cheers'. The bottom of the interface shows a preview of the next email: 'Pawel Grzywaczewski Hi Joao, Sorry, I won't ... Thu 14/10'.

- Data Availability Group (DAG)
- Storage deployed on JBOD disks
 - 4 copies of each database dispatched in 2 data centers
- Redundant infrastructure – alternative data center 15 km away from CERN
- In total we have 60 databases in 4 DAG
- Infrastructure improvements
 - No service interruption for maintenance
 - Validated with simulated network failure



**October 2008 –
deployment of first
Exchange 2007
front end servers**

**April 2010 –
deployment of mail
gateways (Exchange
2010 Edge servers)**

- New anti spam/virus system: Microsoft ForeFront Protection 2010 for Exchange servers
- Number of messages in SPAM folder reduced

**June 2009 –
Exchange 2007
pilot**

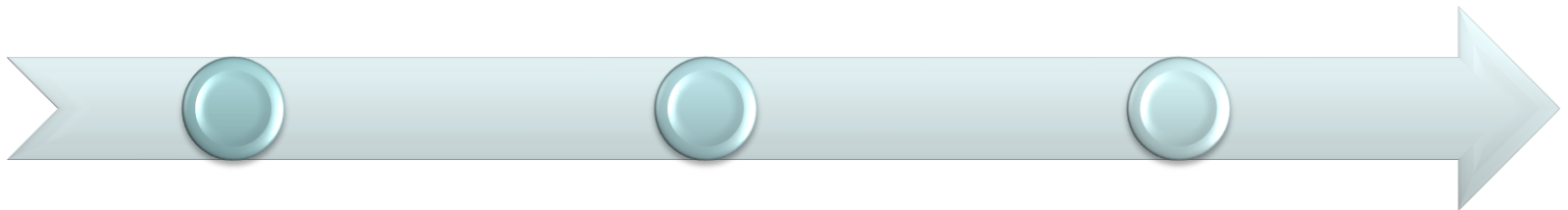
- Problems with digitally signed messages in Pine (1 500 users)
- IT departement migrated but no mass migration

April 2010: deployment of Exchange 2010 Client Access servers

- Preparation for Exchange 2010 mailbox migration
- WebDAV not supported in Ex2k10
- ~300 Mac users moved to Exchange 2007 pilot to use Entourage/Snow Leopard Exchange mode

October 2010: Exchange 2010 pilot

- Pine issues with digitally signed messages resolved
- IT department and all users hosted on Exchange 2007 were migrated to Exchange 2010

**September 2010: Deployment of internal tools for Exchange 2010**

- Used by helpdesk and end users to perform different tasks (mailbox forwards, quota, mailbox permissions etc.)

- In general feedback is positive
- A few issues reported
- Alpine and Thunderbird IMAP clients can't display some messages or attachments
 - Incorrect message size returned by a server
 - Workaround: configure a server to calculate exact size of a message
 - We are waiting for a fix
 - Missing quotes for 7BIT phrase returned by a server
 - Microsoft fixed it and we are testing it

- Mac.Mail – “From” is not displayed for messages sent by a user
 - Expected to be fixed in a new version of Mac.Mail
- Some issues on not supported IMAP clients at CERN (Mutt, Evolution)
 - Fixed by updating to a newer version of a mail client
- Outlook 2003 – it happens rarely that “message deletion” generates a warning in Outlook
 - Workaround: update to Outlook 2007
- Issue with IMAP threads
 - Symptoms: if there is more then 1036 threads on IMAP server then server can't serve new requests
 - Workaround: script to monitor number of threads and restart IMAP protocol
 - Waiting for a fix

- Migrate all users during the next months
- New users get Exchange 2010 mailbox (end of November)
- More quota
 - 2GB default, 10GB optional
- Archive mailbox



- Overall positive experience and positive feedback about the product
- Exchange 2010 provides new features which are valuable from maintenance and end user point of view
- Microsoft has to improve IMAP implementation
 - It required some effort to deal with bugs
- Before deploying Exchange 2010 it's worth to understand requirements and adapt it to needs

OIS

Thank you!

