

Migrating Staff and Student email to the cloud

JCU's Experience

Introduction

James Cook University has recently completed its Email and Calendar project which centered on migrating staff and student email and calendar functionality from an on-premise email system to the Microsoft Cloud solutions, Live@Edu and BPOS.

Background



- Why did we do this ?
 - Old system nearing end-of-life
 - Suffering performance issues
 - Storage capacity shortcomings
 - Calendaring functionality not meeting user expectations
 - Mail Archiving for legislative requirements
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Background



- Why a hosted mail solution?
 - Price
 - Capacity
 - Resourcing
 - Email for life
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Background



- Why Microsoft?
- Best business fit
 - Integration with many existing desktop and business applications
- Interesting and compelling futures (Office 365, Lync, Sharepoint etc)

Timeline overview



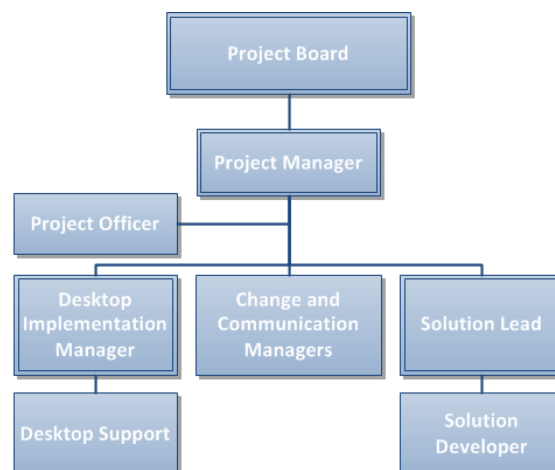
Apr 2010	Jun 2010	Planning
Jul 2010	Aug 2010	Design of Staff Email System
Aug 2010	Sep 2010	Build and Test of Staff Email System
13 Sep 2010	28 Sep 2010	Pilot Rollout to IT&R staff
29 Sep 2010	15 Oct 2010	Pilot Rollout to SoB staff
18 Oct 2010	3 Dec 2010	Rollout to rest of academic units
6 Dec 2010	17 Dec 2010	Rollout to rest of non-academic units
Dec 2010	Jan 2011	Rollout of students to Live@edu
Jan 2011	Mirapoint license expires	

How many people does it take...



- 1 Project manager
- 1 Dedicated Project officer
- 7 Dedicated Desktop Support (split over the two campuses)
- 2 Change managers
- 2 Solution developers (and a **LOT** of overtime)

Project Resources



Project Resources



- Implementation partner selected from a number of partners recommended by Microsoft.
 - Initially helpful – Discussing migration strategies
 - Project management moved in-house
 - Quickly surpassed in terms of technical capability and overall usefulness
 - Moved to a “time and materials” engagement

Opportunity



- Differentiate legitimate/official JCU communications from student email.
- BPOS domain @jcu.edu.au
 - for staff & official business
- Live@EDU domain @my.jcu.edu.au
 - for student, alumni & staff personal
- “Value add” to the Universities marketing strategies by providing a true email for life service.

Opportunity



- Perform a “staged migration” to the new service for staff and to roll out a unified corporate mail/calendaring solution for staff within the MOE.
- Different strategies for student and staff migrations to fit within the teaching year.

Challenges



- Complication of Identity and Resource management – a push into role based identity management and a shift in provisioning platform (we have to do what with Windows!?!)

Challenges



- Tight timeframes during a very sensitive time of year requiring a controlled approach to migration
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Challenges



- Migrating users to the Microsoft supported email clients and selling the benefits of the new system.
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Process Issues



- Scheduling staff groupings for migrating
- Migrating groups of staff in a timely fashion
- Ongoing Maintenance of staff accounts
- Migrating all non-staff before start of semester and license expiration

Scheduling migrations



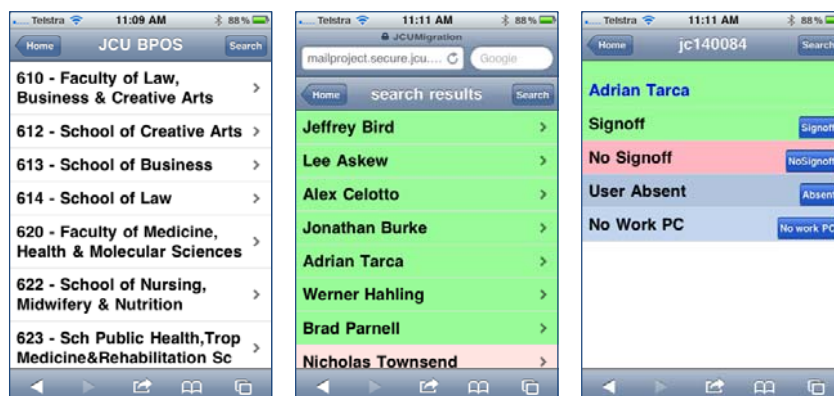
- Problems:
 - Large groups of users with large volumes of email
 - Need to migrate logical groups of users together so as to not interrupt business functions or cause coexistence problems with calendaring
 - Reasonable group sizes for Desktop team to tidy up any client issues

Scheduling migrations



- Solution: Develop a schedule control application
 - Display schedule to end users
 - Assemble candidates for migration
 - Capture user acceptance and Signoff
 - Capture live statistics of the desktop implementation (iPhone web interface)

Scheduling migrations



Meeting the schedule



- Staff Migration Problem:
 - How to make sure all mailboxes are migrated inside the schedule?
 - How to make the best use of available server resources and how to make more resources available quickly?
- Microsoft's BPOS transporter tools = CSV Import ...

Meeting the schedule



- Staff Migration Problem:
 - CSV Import = Fixed lists
 - Harder to add resources during the process – stop all and redistribute
 - One migration host may finish it's list quicker than others then sits idle while there is still work to do.

Meeting the schedule



- Staff Migration Solution:
 - Write a queuing system!
 - Fill the queue in order of mailbox size: biggest mailboxes first
 - Serviced by N migrators (VM's)
 - Grab the next job off the list.
 - Big batch? Add more migrators.

Ongoing Maintenance



- Staff Maintenance Problem:
 - Account sync is fine, but:
 - MS BPOS Sync tools
 - Don't Synchronise passwords
 - Don't Automatically "license" the mailboxes
 - Out of band password and account management.

Ongoing Maintenance



- Out of band password and account management.
 - Using powershell...
- Cross platform integration ?

Ongoing Maintenance



- Staff Maintenance Solution
 - A message bus!
 - Programmatic wrapper around powershell scripts, written in c# + spring framework
 - Listens to a message queue, and runs the appropriate command
- It works! But was a lot of effort – Live@EDU is so much easier. Roll on Office365

Student Migrations



- Big-bang approach
- Problem: Migrating all non-staff accounts (~24000) to Live@EDU before the start of semester (and before the Mirapoint licenses expired)

Student Migrations



- Microsofts Live@EDU Migration tools are different to the BPOS tools
 - Pull instead of push
 - Again CSV based – same fixed list problem
 - Bigger problem was they could only run 10 concurrent connections

Student Migrations



- Solution: Live@EDU Migration middleware
 - Provide higher parallelism for Live @EDU migrations
 - 120 concurrent connections using our tools
 - Incrementally synchronized until go-live date.

Results



- 5780 “staff” accounts migrated over the project period with 1790 people serviced by the desktop support team.
- Final sync of ~24000 non-staff took less than 24 hours

Success factors



- Vice Chancellor's support
 - Centralized IT management
 - Mandated Clients and MOE
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Success factors



- Innovative use of technology to achieve tight migration timeframes
 - Centralized, defined control application
 - Targeted communication
 - Published rollout plan
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Success factors



- Desktop team built from one member from each faculty/division, providing a “local expert” helping the end users feel comfortable.
- Accelerated rollout – Only pain in the short term during the co-existence phase.

...and the bad bits



- Timelines left no opportunity for rigorous PM or development. - Just enough, just in time.
- A lot of apathy from the end users (particularly in academic areas)
- Majority of users still don't use calendaring
- Information sessions were poorly attended and targeted communication at times ignored.

Lessons Learned



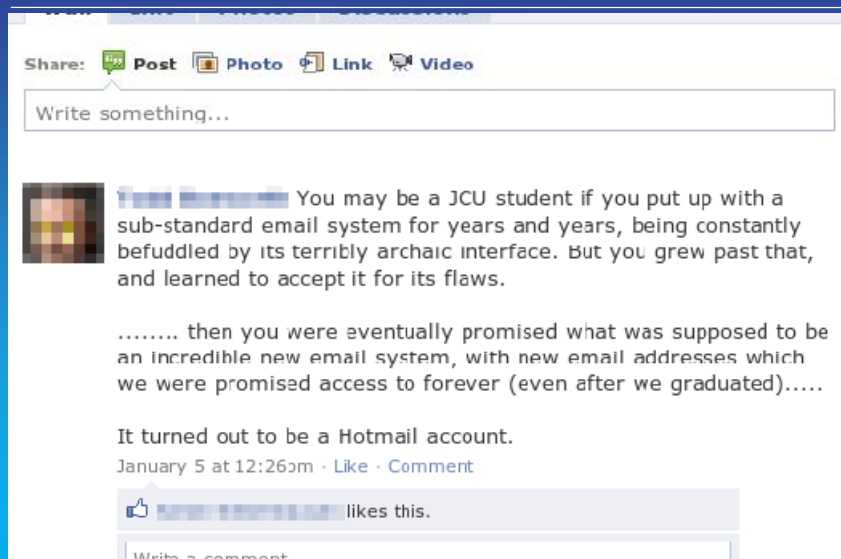
- Adequate pre-planning is essential
 - Effective change management required more time than we had available
 - Project procedures were not adequately communicated and hence not adequately followed
 - Some user requirements were not met
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Lessons Learned



- Staff acceptance rates were about 60/40 overall
 - Better in some areas than others
 - Needed better communication/change management/user engagement
 - Student User acceptance surveys had a low response rate: For students only ~450 out of ~18000.
 - Only the unhappy ones respond, provide incentives/prizes etc...
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But, If you really want Feedback...



Questions?

