Stage: Acceptance

User Acceptance Test (UAT) Plan

Exchange Provisioner Upgrade

Memory usage
2nd Mar
@14:44 - 249,100k
@14:49 - 289,080k
@15:28 - 550,484k
@15:36 - 613,648k
@15:47 - 614,380k
3rd Mar
@09:58 - 509,152k

COMMUNICATION

COM008

Document Version: 1.5.0

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Contents

1 Exchange Provisioner

1.1 Contributors

Please provide details of all contributors to this document.

Role	Unit	Name
Business Analyst (Owner)	IS Applications	Alex Carter
Project Manager		
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Applications Management Analyst	IS Applications	Adam Wheavil
Technical Architect		
Business Area Manager		
IDM Service Manager	IS Applications	Chris McKay
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1.2 Version Control

Please document all changes made to this document since initial distribution.

Date	Version	Author	Section	Amendment
07/02/14	1.0	AC	All	First draft
12/02/14	1.1	RN	2.3, 2.4, 3.1, 3.2, A	Clarified how test cases are to be run (i.e. visitor accounts will actually be generated). Added note about testing memory usage. Added SQL script for changing service a notification is attached to in IDM
13/02/14	1.2	RN	2.4, A	Added specifics of shutting down previous IDM provisioner before creating changes to be moved across Simplified SQL for moving changes, by providing service IDs, now these are defined. Added SQL for identifying changes for the Exchange provisioning service
19/02/14	1.3	APW	All	Added detail to UAT plan, and included failure cases.
04/03/14	1.3.1	RN	2, 3, A	Minor tweaks to wording

				Raised current issue of uncertainty of server names for UAT
04/03/14	1.4.0	APW	All	Incorporated changes suggested by Service Mgmt (SS & AC).
25/03/14	1.5.0	APW	All	Changes made in preparation for phase 2 of UAT

2 User Acceptance Test

2.1 Definition

The purpose of User Acceptance Testing (UAT) is to ensure that the solution performs at an acceptable level. Testing may also identify problems relating to the usability of the solution. UAT is the final step before rolling out the solution to the end users and is typically carried out by end users in an environment that closely models the real world. UAT gives the project sponsor and end users confidence that the solution being delivered meets their requirements.

This document outlines the plan for user acceptance testing of the project deliverables. This document is a high level guide. Detailed test scripts/cases have been developed and will be used to record the results of user testing. This document will be used to record the project sponsor and end user sign off of the UAT.

2.2 Roles and Responsibilities

Role	Responsibilities	Name
Project Manager	• Communication with the Business Assurance Coordinator to agree format and scope of UAT • Ensure acceptance criteria are agreed prior to commencing UAT	
Business Analyst	• Assist Business Assurance Coordinator with the creation of a detailed test plan • Review scripts/cases and scenarios for accuracy, completeness and sequencing. • Confirm test data is correct.	
Technical Architect	• Validation of UAT environment	
Business Assurance Coordinator	• Ensure that a detailed test scripts/cases, scenarios and instructions are available for test users prior to the start of testing • Ensure that issues identified during UAT are logged in the Test Log • Ensure testing takes place within agreed timeframes	
Testers	• Execute test scripts/cases • Document test results	Adam Wheavil

2.3 Test Requirements

- Testing will take place using the live environment as there is no suitable test environment.
- Test scripts will be prepared prior to the start of UAT.
- Test participants will conduct the tests and document results.
- Issues will be recorded in the Test Log and tracked by the Business Assurance Coordinator.
- A simple mechanism for diverting notifications from the existing Exchange provisioner queue to the test provisioner queue will be required (see script in Appendix A:).

2.4 Test Process

- The scope of this testing is from notification in the IDM notification queue to suitable action in the Exchange/Office 365 environment.
- Suitable notifications will be identified or created in the existing Exchange Service notification queue and diverted to the new provisioner. Existing notifications are to be used except where indicated below, as changes will be written into the live environment, and using actual notifications reduces scope for unexpected consequences.
- The existing Exchange provisioning service will be stopped while changes are being loaded from IDM, in order to avoid any risk of conflicts. As such, the process will be:
    1. Stop existing Exchange provisioning service
    2. Take action to create new change notifications in LIVE IDM
    3. Switch service code on change notifications
    4. Start existing Exchange provisioning service
- For reference, the AD provisioning service runs every hour, at 20 minutes past the hour. Therefore, any account created in IDM will not have its AD provisioning process started until then.
- Also for reference, any change which is marked for retry will not be retried automatically until a configured minimum interval has elapsed. This interval is specified in the "Configuration" database table.
- For the test cases of creating new visitor accounts, this will be done by manually creating new visitor accounts via the IDM UI. The resulting changes will then be redirected from the existing provisioner, to the new one.
- For test cases of suspending visitor accounts, this will also be done by raising new changes through the normal process, and redirected as previously.
- The output of the processing of these notifications will be monitored and any fixes required for live accounts applied via an expedited version of the usual support processes.

2.5 Test Participants

Testing participants include representative from all areas involved in the solution. Testers and their specific areas of focus are identified in the table below:

Name	Area Represented	Area of Testing Focus
Alex Carter	Service Management	Oversight
Stephen Smith	Office 365 Service	Exchange account results

Chris McKay	IDM Service	Oversight
Adam Wheavil	Applications Management IDM Service	IDM Notification Queue Oversight
John McFarlane	Technology Management	Oversight
Ross Nicoll	Development Services	Oversight/assistance

2.6 Test Schedule

All upgraded functionality and test data will be migrated to the test environment prior to the start of user acceptance testing.

Activity	Responsibility	Target Date	Date Completed
Confirm testers for UAT	Business Assurance Coordinator		
Confirm test scenarios, test data and scripts/cases	Business Assurance Coordinator Business Analysts		
Ensure UAT environment is configured for testing	Business Assurance Coordinator Business Analysts Technical Architect		
Oversee testing by UAT participants	Business Assurance Coordinator		

2.7 Assumptions

- The UAT environment will be available and fully configured ahead of the UAT.
- The business team has reviewed and accepted functionality identified in the Business Requirements Document (BRD) and System Design Document (SDS).
- Code walkthroughs/reviews have been completed by the Development Team and signed off as part of the Peer Project Build Review (PPBR)
- Integration testing, including where relevant load and performance testing, has been completed and signed off as part of the Peer Project Integration Review.
- Testers will test the functionality documented in the approved BRD (taking into account any changes in business requirement subsequently agreed by the Project Team)
- Resources identified in this plan are available to conduct the UAT and address issues as they are raised by the test team.
- The assumption is that updating the service_id field in the table idm_notifications_queue will be all that is required by UAT testers to divert notifications from the live queue to the test queue.
- The UAT environment will not issue emails to normal addresses, but will instead send to a specified UAT mail address.

The Project Manager must notify the Project Sponsor if any of these assumptions are not correct before commencing the UAT.

3 Acceptance Test Log

3.1 Functional Testing

Requirements Coverage:	See section 3.2 or the green comments in the Expected Results column…

ID	Tasks	Tests	Expected Results	Pass /Fail
Day before UAT				
Memory usage record: 08/04/2014: @12:00 35,856k @13:47 164,696k @15:28 791,312k @15:50 845,316 k @16:11 1,158,178k @17:00 1,485,416k 09/04 @08:52 1,763,392k @12:06 1,792,844k @14:36 2,074,736k @16:28 2,630,752k @16:41 3,111,020k @17:19 3,443,672k X PC Restarted for patching			Standby memory: 09/04/2014 @16:52 1,711 MB @17:19 1,419 MB	

Phase 3 Testing

1.1 IDM	Create four test visitor accounts, and assign them all the Active Directory service.	All accounts must have a surname of "MailTestOne", an end date of three months in the future, and the following details set for each account (all other details can be random): 1 &1a- First name: "Staff-Exch" Org Unit: "Applications Production Management – D716" Visit Type: "VisitorStaff" 2 & 2a- First name: "Staff-Stfm" Org Unit: "Operational Services - D671" Visit Type: "VisitorStaff" 3- First name: "VisitorStudent-Exch" Org Unit: "Applications Production Management – D716" Visit Type: "VisitorStudent" 4- First name: "VisitorStudent-Stfm" Org Unit: "Operational Services - D671" Visit Type: "VisitorStudent" Visit Type: "VisitorStaff"	Four test visitor accounts successfully created in IDM. Record their uuns & account passwords: (see red comments): • Staff-Exch -uun: v1smailt [1] [v1smail3 EHTQ4tvS] chB4tzNV • Staff-Stfm -uun: v1smail2 [2] [v1smail4 xt8jbxrG] PXz4FWcR • VisitorStudent-Exch [OK] -uun: v1vmailt [3] aukFF2us • VisitorStudent-Stfm [OK] -uun: v1vmail2 [4] Ey9PNztz *----------* • VisitorStaff-Exch [v1vmail6 PyD=BeHb] -uun: v1vmail3 [1a] GqQT7hGy • VisitorStaff-Stfm [v1vmail5 R8BHxrNR] [2b] -uun: v1vmail4 [2a] vHPN6fXp Note: Accounts [1a] and [2a] were added for the 2nd phase of UAT, which means outgoing XML will have to be modified for [1] and [2] to make these VisitorStaff appear as permanent Staff users. *----------*

✓ ✓ 08/04/14

1.2 IDM	Create two functional accounts, assigned to default services (which includes Active Directory)	Both accounts must have a surname of "MailTestOne", an end date of three months in the future, and the following details set for each account (all other details can be random): 1- First name: "Functional-Exch" Org Unit: "Applications Production Management – D716" Preferred UUN: o365exch 2- First name: "Functional-Stfm" Org Unit: "Operational Services - D671" Visit Type: "VisitorStudent" Preferred UUN: o365stfm Assign this account to the Staffmail service.	Two test functional accounts successfully created in IDM. Record their uuns: • Functional-Exch -uun: ph2exch [5] hAc+wBHv [ph2exch2 c5CasNuS] • Functional-Stfm -uun: ph2stfm [6] br6Jvusb [ph2stfm2 [6a] QxAb+Gqh]	✓✓
1.3 ExchP	Start the new provisioner service to pick up and process notifications sent to service-id '506'	Examine the logs and memory usage on an hourly basis to determine that the service is still running, and no changes are processed by the provisioner.	New provisioner service started and running on new server, and no changes have been made to O365. Leave the new service running overnight.	✓ Skipped for Phase 2 testing. ✓
First day of UAT				2nd-April-2014
2.1 ExchP	Check that the new provisioner service is still running, and review the event logs.	Ensure that the logs do not contain errors, and the service has continued to run smoothly overnight.	Provisioner has been running for a long period of time without interruption. High level design requirement – monitor memory usage	✓ Skipped (Phase 2) ✓

2.2 IDM ExchP	Wait for student updates to arrive in IDM from EUCLID, and then identify new STUUG and STUPGT students. Immediately change the service-id of their downstream notifications from '136' to '000'. Make the change for four students.	Ensure that the '136' notifications were not picked up by the existing Exchange Provisioner. Make sure that at least two STUPGT students are selected – one from an org-unit that uses Stfmail by default, and one that uses Exchange by default.	Four taught students have been set to be provisioned by the new Exchange Provisioner. • STUUG: -uun: s1437861 [7] [s1372203] • STUUG: -uun: s1465456 [8] [s1434005] • STUPGT: -uun: s1444172 [9] [s0807042] • STUPGT: -uun: s1403017 [10] [s1401373]	10:04
2.3 ExchP	Either pause the existing live provisioner, or monitor the logs to determine that it will not pick up new Exchange service notifications from IDM for at least the next hour.	Wait until a suitable time to proceed with the remaining steps…	It is safe to proceed with testing of the new provisioner for at least the next hour.	10:05 08/04 11:50
2.4 O365	Ensure that each account created the day before [1-6] exists in both local and remote Active Directory.	Use the "get-user" command locally, and ensure that the uun appears in Exchange Admin Online.	The accounts created yesterday exist in both local and remote AD.	10:29 11:56

2.5 IDM ExchP	For each account created the day before [1 – 6], one by one, assign the Exchange service and immediately change the service-id from '136' to '506'. Provisioning order: 1 13:44 1a 10:38 – Do not exist on O365. Mailbox not created. (just 'Remote User Mailbox') 2 13:50 – 2a 10:43 – Custom Attribute set correctly. But no contact object set for STF & VSTF. X 3 13:55 – Correct Err; however error message not emailed. X ✓ JIRA008-115 4 14:05 – Correct Err, however error message not emailed. X 5 14:45 [2 Staff-Stfm] vlsmail4 & vlsmail5 took 67 mins 6 14:51 – Custom Attribute set correctly. But no contact object set. X 7 14:57 8 15:22 – SMS alias not immediately set. Was set after a few more mins. ✓ 9 15:28 10 15:34	Ensure that the '136' notifications were not picked up by the existing Exchange Provisioner. ↳ It just took time to propagate ✓ Check that each account has been created correctly, before progressing onto the next one.	All Exchange accounts should be created very quickly, as the uuns already existed in local and remote AD. In all cases - Recipient Type: "Remote User mailbox" * Check that Admin permission added for each account Expected outcome for each account: • Office 365 Faculty licenced account – [1], [3], [5] • Office 365 Faculty licenced account with mail forwarding to StaffMail, and delete policy (OCSExpiryPolicy) applied – [2], [4], [6] "Calendar User" retention policy not applied to Staffmail accounts Ensure that the correct account type has been created in each case, and setup correctly. JIRA COM008-116	X
2.6 ExchP	If the existing live provisioner was paused during step 2.3, then resume processing.	Confirm that the existing live provisioner continues to provision accounts for on-site Exchange.	Existing live Exchange provisioning continues.	✓
2.7 ExchP	Examine Exchange provisioner logs, to ensure that they are as expected.	There is no delay experienced in the setup of the accounts. They are created within 10 minutes of the service-id being changed to '506'. * Staffmail accounts took 67 minutes	Exchange provisioner logs correspond to actions, and there are no retries, or errors recorded. Account creation is not delayed.	✓
2.8 O365	Check that the SMTP email addresses are correct on each account, and send an internal email to every account [1-6].	An email from the tester to each account is sufficient.	No bounce back messages were received.	— Service Mgmt.

2.9 O365	Verify that all SMTP email addresses [1-6] are recognised externally.	http://verify-email.org/ is a useful site for this step.	All email addresses are externally recognised. I – M30, M31, M38	— SMGMT
2.10 O365	Send an email from an external email service to every account [1-6].	An email from the tester to each account is sufficient.	No bounce back messages were received.	—
2.11 O365	Log into each account [1-6] to check that user login works, and to ensure that both test emails were received.	While logged into each account, reply with a short message to both test emails.	Every account is operational, and receipt of both internal and external emails confirmed.	—
2.12 O365	Check the email replies that were received from the test accounts and ensure that the 'from' address and 'first-name' and 'surnames' are correct.		All test accounts send valid emails back to senders.	—
2.13 O365	Check each account in the Global Address List (GAL) and make sure that contact objects do not appear.	There is only one correct entry in the GAL for each account.	Every account [1-6] has correct GAL entries.	—
2.14 O365	Check that 'Custom Attribute1' has been set correctly for accounts [1-6].		'Custom Attribute 1' is set correctly for every account: • 'O365STAFF' - [1], [3], [5] • 'O365STAFFMAIL' - [2], [4], [6]	✓ Correct when provisioned, but subsequently changed.
2.15 IDM	For accounts [1 & 2] change the email address in IDM to be a non-valid email address: ("email..email@example.com" & ".email@example.com") Manipulate the source of the notification to be 'EDDIR' and for service-id '506'.	Ensure that if IDM accepts invalid email addresses, that they will not be used by the Exchange provisioner.	The Exchange provisioner ignores the invalid email addresses, does nothing with the updates and logs sensible error messages. Incorrect error message is logged.	JIRA-117 ✗ JIRA-118.

2.16 IDM	For accounts [1 & 2], change their email addresses to "com008-o365-test.exchange@ed.ac.uk" & "com008-o365-test.staffmail@ed.ac.uk" respectively. Manipulate the source of the notification to be 'EDDIR' and for service-id '506'.	The Exchange provisioner should instruct O365 to update the default SMTP address.	The new SMTP email address has been updated in O365. U – M33 (data) Reprovisions do not set new SMTP email addresses as primary. JIRA-119 Same applies to EDDIR updates.	X
2.17 IDM	For accounts [1 & 2], change their email addresses to "com008-o365-test.exchange@gmail.com" & "com008-o365-test.staffmail@hotmail.com" respectively. Manipulate the source of the notification to be 'EDDIR' and for service-id '506'.	The Exchange provisioner will not apply the new SMTP address.	The Exchange provisioner ignores the disallowed email addresses, does nothing with the updates and logs sensible error messages. ↑See above JIRA-119.	X
2.18 IDM ExchP	For each student account identified earlier today [7 – 10], all at once, change the service-id from '000' to '506'.	Check that each account is created correctly, view logs to ensure they can be easily followed, and it is expected that there will be some retries.	All Exchange accounts should be created over the next few hours. In all cases - Recipient Type: "Mail User" Expected outcome for every account: • Office 365 Student licenced account – [7-10] Ensure that the correct account type has been created in each case, and setup correctly.	✓
2.19 O365	Check that 'Custom Attribute1' has been set correctly for accounts [7-10].		'Custom Attribute 1' is set correctly for every account: All are set to 'O365'.	✓

2.20 O365	Check that the SMTP email addresses are correct on each account [7-10].Verify that all SMTP email addresses are recognised externally.	http://verify-email.org/ is a useful site for this step.	All email addresses are externally recognised.	✓
2.21 O365	Set mail forwards for three accounts [1, 3 & 5]. Set to an external address, an internal @ed address and a @staffmail address. [1] 'v1vmail6' → wheavil@hotmail.com	Use the Exhange Admin online to apply the email forwards.	Three mail forwards are active in O365.	✓
2.22 IDM Suspension process run for... 'ph2exch2', 'ph2stfm2', 'v1vmail5' & 'v1vmail6'	Suspend accounts [1-6] [2a] 'v1vmail5' → adam.wheavil@ed.ac.uk [5] 'ph2exch2' → v1vmail5@staffmail.ed.ac.uk		Mail forward to non-staffmail accounts removed. Removed for: 'v1vmail6', 'v1vmail5' & 'ph2exch2' Mail forwarding to Staffmail remains. Remains for: 'v1vmail5' U – M32	✓
2.23 IDM	Unsuspend accounts [1-6]		Any previous mail forwards are not reinstated.	✓
2.24 O365	Set Out of Office messages for three accounts [1, 3 & 5]. 'v1vmail6' → wheavil@hotmail.com 'v1vmail5' & 'ph2exch2' Set mail forward for account [1] to an external address.	Use the Exhange Admin online to set the out of office messages.	Three out of office messages are active in O365, and one external mail forward.	✓
2.25 IDM Suspended: 'ph2exch2', 'ph2stfm2', 'v1vmail5' & 'v1vmail6'	Suspend accounts [1-6]		Mail forward to non-Staffmail account removed. Disabled, not removed, which is ok. All three out of office messages are disabled (message may not be stored).	✓
2.26 IDM Active: 'v1vmail6' & 'v1vmail5'. Returning & then Active: 'ph2exch2' & 'ph2stfm2'.	Unsuspend accounts [1-6]		Any previous mail forwards, or out of office settings are not reinstated.	✓

2.27 IDM	Identify at least five recent Update notifications in IDM (with non EDDIR/Ageing source) for current O365 users, and immediately change the service-id from '136' to '506'.	Ensure that the '136' notifications were not picked up by the existing Exchange Provisioner.	Update notifications were identified for the following uuns: 1. S1229136. STUDENT ✓ 2. mlaw1. STAFF ✓ 3. s1374053. STUDENT ✓ 4. S9243072. STUDENT ✓ 5. v1lcatte. VISITOR ✓ 6. v1hdunca. IDM ✓ Set Forwarding Suspension process was run. OK. 7. S0902874. UCAS APPLICANT ✓ 8. S1466945. STUDENT ✓	✓
2.28 ExchP	Examine Exchange provisioner logs, to ensure that they are as expected.	There is no delay experienced in processing the Update notifications.	Exchange provisioner logs correspond to actions, and there are no retries, or errors recorded. The Exchange Provisioner took no action for all Update notifications - they were ignored. Apart from IDM Update → Suspension of a student account which is OK. U/D M33 (affil), M35	✓
2.29 IDM	Identify at least twenty recent notifications of source 'IDM Aging' in IDM. Does not exist ∴ test 10, not 20. - 5 of each status code - ~~'E'~~, 'U' & 'D'. - At least 5 at the Suspension expiry stage. Do not select any at the Expiry stage for STUUG or STUPGT! – See 2.29 2.32 Immediately change the service-id from '136' to '000'.	Ensure that the '136' notifications were not picked up by the existing Exchange Provisioner.	IDM Aging notifications were identified for the following uuns: 1. aranchov U/E. 11. ~~_____~~. 2. ejamies2 U/S. 12. ~~_____~~. 3. paranth U/S. 13. ~~_____~~. 4. S9243072 U/R. 14. ~~_____~~. 5. mreimer U/E. 15. ~~_____~~. 6. ochopeli U/S. 16. ~~_____~~. 7. dweir D/. 17. ~~_____~~. 8. mmcinty2 D. 18. ~~_____~~. 9. ddalgott D. 19. ~~_____~~. 10. icrozier D. 20. ~~_____~~.	✓

Migration Progress: Update 10-Apr-14. → 22½ thousand migrated. → 6 thousand to go. → End of April.

2.30 IDM	Select the first IDM Aging notification identified in 2.26, and change the service-id from '000' to '506'.	Check that no action is taken, view logs to ensure they can be easily followed, and it is expected that there will be no retries.	The Exchange provisioner ignored the change, however ensure the event is logged. * The event is not explicitly logged as nothing was done. However can see that it was processed which is good enough. D – M37, U/D M34, M33, M35	✓
2.31 IDM	For the remaining 19 notifications change the service-id from '000' to '506'.	~~Check that each account is created, correctly~~, view logs to ensure they can be easily followed, and there should be no retries, or errors.	The Exchange Provisioner ignored all changes, and logged every event.	✓
2.32 ExchP	Stop the new Exchange Provisioner, and set email routing for Expiry emails to divert to tester's (or UAT) account. ~~Modify the email that is sent to display the intended target for each message.~~ Not possible.		The new Exchange Provisioner stopped cleanly. Exchange Provisioner has been modified to ensure that expiry emails will not be delivered to actual students.	✓
2.33 ExchP	Start the new provisioner service to pick up and process notifications sent to service-id '506'	Examine the logs to determine that the service is running, and no changes are processed by the provisioner.	New provisioner service started and running on new server, and no changes have been made to O365.	✓
2.34 IDM	Identify at least ten recent IDM Aging notifications in IDM at the Expiring stage. ~~Every affiliation type (e.g. STUUG, STF...)~~ must be represented at least once. I will test just STUUG & STUPGT due to unavailability of test cases. Immediately change the service-id from '136' to '506'.	Ensure that the '136' notifications were not picked up by the existing Exchange Provisioner. STUUG = s1269930 STUUG = s1349051 ← on demand aging. STUPGT = s1064250	Expiry notifications were identified for the following uuns: Selecting already disconnected mailboxes for testing: 1. ~~s1213237~~ 6. s1268843 → Poby State – Not in Federated AD. STUUG → 2. s1213112 7. s1063839 3. s0950559 8. s0093600 4. s1054420 9. _____ 5. s1270168 10. _____	✗ Failed to fail after 5 attempts!
2.35 ExchP	Examine Exchange provisioner logs, to ensure that they are as expected.	There is no delay experienced in processing the Expiry notifications. * There are no log entries when emails are sent. This is adequate.	Exchange provisioner logs correspond to actions, and there are no retries, or errors recorded. The Exchange Provisioner only issued an expiry email to taught students (STUUG & STUPGT). U – M36 Expiry emails received for s1269930, s1349051 & s1064250.	✓

2.36 IDM	Identify at least ~~five~~ recent Update notifications in IDM of source 'STAFF'. Only 1 available. 'stamwol' Immediately change the service-id from '136' to '506'.	Ensure that the '136' notifications were not picked up by the existing Exchange Provisioner.	Expiry notifications were identified for the following uuns: 1. stamwol 2. 3. 4. 5. Inadequate test data available. One should be sufficient. ✓
2.37 ExchP	Examine Exchange provisioner logs, to ensure that they are as expected.	There is no delay experienced in processing the Expiry notifications.	Exchange provisioner logs correspond to actions, and there are no retries, or errors recorded. The Exchange Provisioner took no action for all Update notifications - they were ignored. No expiry emails received. ✓
2.38 IDM	Reprovision [Insert and Update] each of the accounts [1-6]. Immediately change the service-ids from '136' to '506'.	Ensure that the '136' notifications were not picked up by the existing Exchange Provisioner. *Only Insert Reprovisions will restart Change queue in Exchange Provisioner.	Exchange provisioner logs correspond to actions, and there are no retries, or errors recorded. The Exchange Provisioner made no changes for all reprovisions. ✓ I/U
2.39 IDM	Reprovision [Insert and Update] each of the accounts [7-10]. Immediately change the service-ids from '136' to '506'.	Ensure that the '136' notifications were not picked up by the existing Exchange Provisioner.	Exchange provisioner logs correspond to actions, and there are no retries, or errors recorded. The Exchange Provisioner made no changes for all reprovisions. ✓

2.42 O365	In Office 365, break the mail setup for accounts[1-6] in various different ways: ✓1- Change/remove 'Custom Attribute 1' v1vmail5✓ '0365STAFFMAIL' -> '0365STAFF' ✓2- Remove licensing v1vmail6 Hard to test. ✓3- Change/remove routing ph2exch2 Not recat. → 4- Do not hide contact object from GAL v1vmail5✓ ontact object ot re-added. → 5- Remove contact object ph2stfm2✓ ✓6- Remove mailbox, leave contact object v1vmail5✓ ✓7- Change/remove SMTP email ph2exch2✓ 8- Change/remove contact object forwarding 9- Remove 'OCSExpiryPolicy' from contact	All the rest went straight to ChangeSucceeded.	All accounts [1-6] mail setups have been intentionally broken. Reprovising results: v1vmail6 removed ✓ → Retry: ✓ Succes. Only failures: If contact object hidden, does not re-apply it. ✓ Contact object not recreated, which is probably okay.
2.43 IDM	Reprovision [Insert] each of the accounts [1-6]. Immediately change the service-ids from '136' to '506'.	Ensure that the '136' notifications were not picked up by the existing Exchange Provisioner.	Exchange provisioner logs correspond to actions, and there are no retries, or errors recorded. The Exchange Provisioner corrected all corrupted email setups. ✓
2.44 IDM O365	Send a notification of source 'Alumni' for one of the test accounts.		Ensure that the Exchange Provisioner takes no action for the alumni notification. ✓ Could not test. No data.

2.45 IDM	Complete steps 1.1 – 1.2 again [Day Before UAT], but this time ensure the surname is "MailTest**Two**", and assign accounts to Active Directory and Exchange (and Staffmail) at the same time. This time there is no need to complete the test for [1a] and [2a] (which were added to step 1.1 for phase 2 of UAT), and [11] & [12] can be setup as VisitorStaff. Immediately change the service-ids from '136' to '506'.	Ensure that the '136' notifications were not picked up by the existing Exchange Provisioner. Check that each account is created correctly, view logs to ensure they can be easily followed, and it is expected that there will be retries.	• Staff-Exch -uun: v 1smail5 [11] • Staff-Stfm -uun: v 1smail6 [12] • ~~VisitorStudent-Exch~~ ~~-uun: v_____ [13]~~ • ~~VisitorStudent-Stfm~~ ~~-uun: v_____ [14]~~ Not required, as will not be provisioned. • Functional-Exch -uun: ph3exch [15] • Functional-Stfm -uun: ph3stfm [16] All Exchange accounts should be created over the next few hours, as the uuns had to be setup in local and remote AD. Continue with the next steps as we want to create as much havoc as possible while the Exchange Provisioner is trying to set these accounts up.	✓

2.46 O365	Restart the server		Server was restarted, and the new Exchange Provisioner started automatically upon startup, and there was no serious loss of data. The logs remain sensible.	✓
2.47 IDM	Reprovision accounts [11-16]	Even though the mail accounts haven't yet been fully setup for all of these accounts, reprovisioning will help add to the general confusion.	Ensure that the Exchange Provisioner.	✓
2.48 O365	Make the provisioning database unavailable for a few minutes, and then allow access again.		New Exchange Provisioner recovers from temporary loss of access to database.	✓
2.49 O365	Break the connection between the Exchange Provisioner and Microsoft's server, and allow access again 15 minutes later	* Changed the name of the Powershell script as a substitute for this step.	New Exchange Provisioner recovers from temporary loss of communication with Microsoft.	✓
2.50 O365	Change the web service URL on the Provisioner side for a few minutes, until communication with IDM is broken. Restore access shortly afterwards.		New Exchange Provisioner recovers from temporary loss of access to IDM web service.	✓

2.51 O365	Continue to monitor the progress of mailbox creation for accounts [11-16].	In all cases - Recipient Type: "Remote User mailbox" Expected outcome for each account: • Office 365 Faculty licenced account – [1], [3], [5] • Office 365 Faculty licenced account with mail forwarding to StaffMail, and delete policy (OCSExpiryPolicy) applied – [2], [4], [6] Ensure that the correct account type has been created in each case, and setup correctly. No errors occurred, and all accounts were successfully created, perhaps after a few retries. Record the number of retries experienced by each account: 11. No more than 5 retries in 12. each case. 13. _____. 14. _____. 15. _____. 16. _____.

2.52 O365	Use the email lookup tool for accounts [1-10] http://www.ed.ac.uk/schools-departments/information-services/computing/comms-and-collab/email/email-staff-pgr Record what is returned for each account and ensure that it is correct.		The email lookup tool is correctly reporting "Office 365 for Students" or "Office 365 for Staff": O365 or Staffmail were returned. All cases correct. 1. _____. 6. _____. 2. _____. 7. _____. 3. _____. 8. _____. 4. _____. 9. _____. 5. _____. 10. _____.	✓
2.53 IDM	Pick any two of the accounts [1-6] and reconcile the accounts in IDM.	v1vmail5 --> v1vmail6	The Exchange Provisioner does not break the email service for the uun that is being kept.	✓
2.54 O365 IDM	For all visitor accounts created as part of this testing, remove their presence in the GAL and set their end dates in IDM to be today, so that they are eventually removed.		The test visitor accounts are no longer visible to users in the GAL, and will be deleted from the live system in due course.	✓
One week after UAT				
3.1 ExchP	Check that the new provisioner service is still running, and review the logs.	Ensure that the logs do not contain errors, and the service has continued to run smoothly over the past week.	Provisioner has been running for a prolonged period of time without interruption. High level design requirement – monitor memory usage	Completed this previously ✓ as now on phase 3 of UAT.

3.2 Requirements Coverage

The following table links the project delivery requirements to the UAT test plan above:

Task	Requirement	Step ID
Create account Set default SMTP address	I – M30, M31, M38	2.9
Suspend mail forward for identity suspension	U – M32	2.22

Only suspend forward if to non-staffmail account. Disable any Out of Office messages that are set (data may not be stored)		
Set SMTP email alias	U – M33 (data)	2.16
Ignore	U/D M33 (affil), M35	2.27
If STUUG, STUPGT and status E, then issue expiry email.	U – M36	2.32
Ignore	U/D M34	2.27
Ignore, but hook for action may be needed.	D – M37	2.27
Reprovision	I/U	2.9
Reprovision	U	2.9
Monitor memory usage	Non-functional	2.1, 3.1

4 Acceptance Test Results

4.1 Open Issues

4.2 *Any issues identified during UAT must be added to JIRA. It may be agreed that UAT can be signed off while some issues remain open. Please insert a copy of any open issues from JIRA, together with details of why these issues remain open at the sign off of the Acceptance Stage.*

4.3 Document Sign Off

Project Manager	*Name*	*Date Signed Off*
Business Analyst	*Name*	*Date Signed Off*
Business Assurance Coordinator	*Name*	*Date Signed Off*

Appendix A: SQL Script

The following script will move a change notification between services in IDM. This should be run as the "idmengine" user on IDMLIVE.WORLD, replacing "<new service key>" with the key for the test service, and "<change ID>" with the ID of the change to be moved:

```
UPDATE IDM_NOTIFICATION_QUEUE
      SET SERVICE_ID='506'
      WHERE CHANGE_ID='<change ID>'
            AND SERVICE_ID='136';
```

Where an intermediary service ID of '000' is to be used, the following two statements can be used instead:

```
UPDATE IDM_NOTIFICATION_QUEUE
      SET SERVICE_ID='000'
      WHERE CHANGE_ID='<change ID>'
            AND SERVICE_ID='136';

UPDATE IDM_NOTIFICATION_QUEUE
      SET SERVICE_ID='506'
      WHERE SERVICE_ID='000';
```

The following script can be used to identify changes for the existing IDM service, in order that their change IDs can be passed into the SQL above. The status code condition limits the returned notifications to new (unprocessed) notifications:

```
SELECT * FROM IDM_NOTIFICATION_QUEUE
      WHERE SERVICE_ID='136'
            AND STATUS_CODE='N';
```

Code comments