From: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>
To: ██████████NAWVR/AGFA@AGFA
Cc: ██████|██████AMPCY/AGFA@AGFA, ██████████agfa.onmicrosoft.com" <██████████agfa.onmicrosoft.com>, ████
██████████AGFA, "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, "Duggan, Mark (Health)" <Mark.Duggan@act.gov.au>,
"Barrett, Scott (Health)" <Scott.Barrett@act.gov.au>
Date: 20/03/2018 11:32
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi ██████
This looks to me like a bit of option 1 and option 2.
I would like to understand the criteria behind auto purge.
1. Is it first in first out?

If migrated RIS data can remain we would prefer this bridged approach.

Please proceed with the configuration of extra disk to TEST from the unused env.

Kind Regards,

Dev

— —

Dev Arsavilli | Project Manager
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2-6 Bowes Street, Phillip ACT | GPO Box 825, Canberra ACT 2601 | act.gov.au

From: ██████ ████ [mailto ██████████████]
Sent: Monday, 19 March 2018 5:19 PM
██ ████████████████████████████
██ ████████ ██████████████ ████████████████████████████
██████████████████ Griffiths, Jessica (Health) <Jessica.Griffiths@act.gov.au>; Duggan, Mark (Health)
<Mark.Duggan@act.gov.au>; Barrett, Scott (Health) <Scott.Barrett@act.gov.au>
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

'i Dev,

Just to confirm our discussion just now.

You are OK for Agfa to proceed now with Option 2 as Follows.

a) Agfa will reassign 1TB of Cache from "Test" (not currently in use) to the "Dev" environment. (Now designated as the TEST environment).

b) Agfa will configure the auto purging of images from Dev cache only. The RIS Data will remain.

I will try to find our if any particular rules can be applied and if the purging can be scheduled.

Kind Regards,

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Click on link to read important disclaimer: http://www.agfahealthcare.com/maildisclaimer

From: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>
To: ▮▮▮▮▮▮ agfa.onmicrosoft.com
Cc: ▮▮▮▮▮▮ NAWVR/AGFA@AGFA, ▮▮▮ ▮▮▮ AMPCY/AGFA@AGFA, ▮▮▮▮▮▮ AWWQG/AGFA@AGFA, "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, "Barrett, Scott (Health)" <Scott.Barrett@act.gov.au>, "Duggan, Mark (Health)" <Mark.Duggan@act.gov.au>
Date: 16/03/2018 01:25
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi ▮▮▮▮

Thank you for taking time to review this issue and responding in detail.

My summary:
It is a very simple and general expectation of ACT Health that we have a TEST environment that is fit for purpose.
Here we have a TEST environment that is not fit for testing within the scope.

I do not agree with the reasoning that this approach was not made clear:
I have reviewed this with the Project Team and asked them to look in to all initial discussions.
From the available minutes etc, this testing approach was being discussed in September/October 2017.
Agfa team were part of these discussions.
Please see attached; one of the items mentioned in this minute talks about subset of data migration testing being sufficient for ACT Health. It also mentions that as big as 10% of DB will be provided to Agfa for migration at one instance.
Q1. Why was this issue not identified/thought/raised earlier?
Q2. Why have we discovered this in the middle of testing after the fact that the disk was full?
It seems like the environment was not actively monitored. Are there any monitoring measures in place currently? If we are not monitoring disk space are we monitoring other issues?

Nowhere in the BRS have we mentioned that we will accept Agfa's global best practice.
Please see below:

S16	Compliance	Comply with the standards for hardware and software listed in the ACT reference manual.	
S17	Compliance	Comply with the ACT Health change management process.	
S12	Architecture	Complies with the ACT Government ICT Data Centre requirements.	

Agree that this approach of 20% of migration was not documented in the BRS as we normally consider 100% data migration in TEST as a standard. Imagine scoping of TEST environments for just 1.5% of data migration.
If this is the best practice I am really concerned.

I see the requirement in BRS mentioning Data Migration.

| CC12 | Installation | Data migration from the existing RIS-PACS to the new RIS-PACS should be included in the solution offered. | |

Q3. Was Agfa unware of the size of the database to be migrated from existing RIS-PACS to the new RIS-PACS?
I agree that there is no mention of environments in this requirement,
Q4. Does that mean data migration happens directly in Production environment?
Q5. Why was only production environment scoped for data migration when our environment description mentions TEST as well?

CC1	Environment	The system will operate in the environments: • Dev • Test • Pre Prod / Training; and • Prod	•

This clearly explains that we test any changes before migrate to Production.

It is a standard practice if there is a data migration involved, the storage space in TEST and PROD be configured at similar capacity. In some instances we configure non-replicated storage in test for testing purposes but with matching disk capacity.

PR2	Storage	Provide enough short term storage to house a minimum of 3 years data.	Current date minus 3 years plus capacity to store pre-fetched historical (archived) images.

Q6. How did Agfa see similar requirements for PROD env only?

Q7. Was 'testing' for data migration not scoped at all?

'e are really concerned that testing of data migration was not considered.

This should have been checked as part of milestone 1 completion.

I am also concerned that there is a reference to SoW and a Pre-Prod testing approach. Currently I am not able to view the SoW but would like to read it myself. If this statement is correct, then we have agreed on a poor quality criteria.

Coming to the options proposed:

Option 1: not suitable

a. This option proposes different approach for TEST and PROD and this is not considerable

b. This option may delete images before completion of testing

Option 3: not suitable

a. Testing in Pre-PROD is simply not acceptable and doesn't comply with ACT Change Management Processes

b. We need migrated data in TEST for System and Integration (SIT) Testing and BI (reporting) testing.

c. This will make SIT and BI testing invalid in TEST

Option 2: not suitable fully, but we can accept this approach temporally to continue with data migration cycle 3 and 4 but for cycle 5 would require more than 2TB.

` This approach requires clean-up of the data for each cycle to run.

⌐. Our preferred approach for this option would be to keep migrated RIS data in place with each cycle and just remove images to create space for next cycle.

b. I believe this is not possible

c. However, to continue with data migration testing this approach can be used. I have confirmation from the Testing Team this will not cause any issues for their testing plan

2. This approach will not ensure that we have sufficient RIS data for BI testing in TEST

Q8. Why we were not proposed an option to use the Production disk temporarily in the similar manner to Option 2 (Option 2 proposed porting of 1TB from a different environment)

a. This will be our most preferred approach to resolve this issue.

b. This will ensure sufficient temp storage for testing in TEST

PR3	Storage	The storage solution is scalable and upgradeable.	

c. This will give good approximate times for PRE-PROD data migration

d. This approach will help us do bigger chunks of data migration as planned before.

e. If production uses replicated storage – using a small portion of the replicated storage is an advantage

f. As we are not using the PROD environment, temporary usage of the disc adds value

g. Q8. Is there a significant reason preventing Agfa do not want to take this approach

h. The project team would like to discuss further at any time.

Kind Regards,

Dev

— —
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From: ▓▓▓▓ ▓▓▓▓ [mailto ▓▓▓▓▓▓▓▓▓▓▓▓▓▓
Sent: Wednesday, 14 March 2018 7:40 PM
To: Duggan, Mark (Health) <Mark.Duggan@act.gov.au>
Cc: Arsavilli, Dev <Dev.Arsavilli@act.gov.au>; ▓▓▓ ▓▓ <▓▓▓▓▓▓▓▓▓▓▓ ▓▓ ▓ <▓▓▓▓▓▓▓▓▓▓ ▓▓▓▓▓▓▓ <▓▓▓▓▓▓▓▓▓ ▓▓▓▓

Subject: TEST environment- Options to move forward.

Hi Mark

I have reviewed the issue, notes in email trail below, and both ▓▓▓ have gone through the relevant project and commercial documentation.

I am not able to find any reference to the requirement to provision a TEST environment suitable to specifically support the migration testing strategy and approach that is currently being undertaken by ACT Health. In addition, I am not able to locate where there may be stated *any* requirements or direction articulated to Agfa in advance so as one would reasonable expect us to assess and provision an environment that supports this particular testing approach.

In the course of my internal discussions with the AGFA teams last night and this morning, it would appear we certainly have not been previously exposed to migration testing in this context and which required us to provision an environment to meet your particular needs. By no means is it a reflection of the testing quality and efficacy being undertaken, but it certainly would be viewed as atypical from our perspective. As such, it was never planned for or considered. Our EI TEST environment, as ▓▓▓ has articulate below, has been provisioned in line with our global best practice. Our design specifications of course are to support testing of our applications, and were never intended for supporting this type of migration testing. Although we inadvertently seemed to have gone down this path a ways with you in good faith.

So going forward, we can propose three options for consideration:

1. As ▓▓▓ email from 09 March, we can turn on automatic purging of the data within the TEST storage cache. I understand this may have some impact on the testing approach and ▓▓▓ can work through this with Dev and the migration teams.
2. We believe we can relatively easily assign 1TB of cache from one of the other environments temporarily. Although this will immediately allow you to progress the testing of DICOM throughput which has recently been stopped, I don't believe 2TB will be near sufficient to achieve the 20% of migrated data being sent to TEST. Essentially this too will fill up eventually.
3. ACT Health to change the testing approach to one which involves migrated data being testing in Pre-PROD. I know Dev has expressed some concerns about this approach (and we would be happy to discuss with him further what risks he sees here). I believe this was an approach that was perhaps suggested in the SoW documents in any case, but understand if that changes to approach may be valid through the course of any project.

Once you have reviewed these options, please let us know how you may wish to proceed. Of course if you need an out of session meeting to discuss, we can organise.

Kind Regards,

▓▓▓▓▓▓▓▓▓▓ ▓ ▓▓▓▓▓▓

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Heland, Rebecca (Health)

From:	▌▌▌▌ < ▌▌▌▌▌▌▌▌ >
Sent:	Wednesday, 28 March 2018 1:20 PM
To:	▌▌▌▌ (Health)
Cc:	Arsavilli, Dev; Barrett, Scott (Health)
Subject:	Re: FW: Load on PACS servers [SEC=UNCLASSIFIED]

Hi ▌▌

▌▌ and I have a call with ▌▌ tonight, I will ask for the details of the migrations when everything is complete. I'll also ask for the migration to be paused but I think it should be completed by then based on current progress.

The 2nd Batch started just before 17:00 yesterday so I expect that was the peak that was observed then. It was running 5 threads.

Kind Regards,

▌▌▌▌ | ▌▌▌▌▌▌

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From: ▌▌▌▌ (Health)" < ▌▌▌▌▌▌ >
To: ▌▌▌▌/NAWVR/AGFA@AGFA
Cc: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>, "Barrett, Scott (Health)" <Scott.Barrett@act.gov.au>
Date: 28/03/2018 12:08
Subject: FW: Load on PACS servers [SEC=UNCLASSIFIED]

▌▌▌▌

For information. Can you try and get details on when each migration batch finished/started? I'm wondering if the load spike was all 5 threads asking for an image at exactly the same time when ▌▌ started batch 2.

Also, please note the maintenance on PACS servers tomorrow morning. Assuming the migration is still running at that stage, can you organise to have it paused/restarted?

Thanks
▌▌

▌▌▌▌ | IDIS Delivery Manager - UCPH Digital Solutions Program
Phone: 02 6174 8768 |Mobile: ▌▌▌▌ | Email: ▌▌▌▌
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From: Barrett, Scott (Health)
Sent: Wednesday, 28 March 2018 11:55 AM
To: Arsavilli, Dev <Dev.Arsavilli@act.gov.au>; ▌▌▌▌ ▌▌▌▌ (Health)
< ▌▌▌▌ act.gov.au>

Cc: Alam, Azwer (Health) <Azwer.Alam@act.gov.au>
Subject: RE: Load on PACS servers [SEC=UNCLASSIFIED]

Hi Guys,

Just some more feedback on the data migration.

We noticed that the system load went up to about 8 yesterday evening at about 5pm. Was there anything unusual happening at that time that we should be aware of? No complaints were received but I'd still like us to try and not creep too much above 6 if possible.

Also, we are due to carry out our routine PACS maintenance at 5am tomorrow which will involve powering down the servers and restarting them. This will obviously disrupt the migration and I wanted to raise it so you both the project and Agfa are aware that there will be a dropout at this time.

Thanks

Scott

Scott Barrett | Manager
Direct Phone: 02 6174 8039 | Direct Email: scott.barrett@act.gov.au
Diagnostic Imaging Systems | Diagnostic & Medication Systems Hub | Phone: 02 6174 8750 | Email: DSD.DIS@act.gov.au
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Level 10, Building 1, Canberra Hospital, Garran ACT | GPO Box 825, Canberra City ACT 2601 | act.gov.au

From: Arsavilli, Dev
Sent: Monday, 26 March 2018 11:15 AM
To: Barrett, Scott (Health) <Scott.Barrett@act.gov.au>; ▓▓▓▓ ▓▓ (Health) <▓▓▓▓▓▓▓▓▓▓▓▓ ▓▓▓▓▓▓▓ (Health) <▓▓▓▓▓▓▓▓▓ act.gov.au>
Subject: RE: Load on PACS servers [SEC=UNCLASSIFIED]

Thank you Scott for the update.

Kind Regards,

Dev

– –

Dev Arsavilli | Project Manager
Phone: 02 6174 8729 | Mobile ▓▓▓▓▓▓▓ | Email: Dev.Arsavilli@act.gov.au
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From: Barrett, Scott (Health)
Sent: Monday, 26 March 2018 11:01 AM
To: ▓▓▓▓ ▓▓ (Health) <▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓ ▓▓▓▓ (Health) <▓▓▓▓▓▓▓▓ act.gov.au>
Cc: Arsavilli, Dev <Dev.Arsavilli@act.gov.au>
Subject: FW: Load on PACS servers [SEC=UNCLASSIFIED]

Hi Guys,

FYI

Thanks

Scott

Scott Barrett | Manager
Direct Phone: 02 6174 8039 | Direct Email: scott.barrett@act.gov.au
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From: Alam, Azwer (Health)
Sent: Monday, 26 March 2018 10:57 AM
To: Barrett, Scott (Health) <Scott.Barrett@act.gov.au>
Subject: Load on PACS servers [SEC=UNCLASSIFIED]

Hi Scott,

The load on PACS servers at the moment is double of that we usually see. However, servers can manage really well on this load.

Numbers beyound 6 will slow down PACS. Please note the high memory usage, but there is buffering.

In short, PACS is manageing the work load well at the moment.

Will keep an eye.

```
top - 10:50:32 up 25 days,  4:34,  8 users,  load average: 4.86, 4.18, 4.49
Tasks: 424 total,   2 running, 422 sleeping,   0 stopped,   0 zombie
Cpu(s): 10.7%us,  3.1%sy,  0.0%ni, 79.7%id,  5.9%wa,  0.0%hi,  0.6%si,  0.0%st
Mem:   129161M total,  128585M used,   576M free,   3623M buffers
Swap:    8196M total,    194M used,   8002M free,  82229M cached

  PID USER      PR  NI  VIRT  RES  SHR S %CPU %MEM    TIME+  COMMAND
19080 sdm       20   0 10.1g 2.2g 7748 S  252  1.7  4836:34 /usr/java/default/bin/j
18536 sdm       20   0 7325m 3.6g 6660 S   35  2.9  1882:16 /usr/java/default/bin/j
19687 sdm       20   0 2073m 697m 6420 S    4  0.5 338:10.94 /usr/java/default/bin/j
43259 root      20   0    0    0    0 S    3  0.0  8:58.95 [kjournald]
43129 root      20   0    0    0    0 S    2  0.0  9:27.95 [kjournald]
43134 root      20   0    0    0    0 S    2  0.0  8:42.10 [kjournald]
18722 root      14  -6    0    0    0 S    1  0.0  6:59.02 [vxiod]
 1719 root      20   0    0    0    0 R    1  0.0  7:29.67 [kworker/20:2]
 7159 root      20   0    0    0   -0 S    1  0.0  7:40.17 [kworker/6:0]
14482 root      20   0    0    0    0 S    1  0.0 28:32.01 [kworker/19:0]
34657 root      20   0 88304  872  780 S    1  0.0 319:01.46 /usr/sbin/ocmanager/elx
43272 root      20   0    0    0    0 S    1  0.0 17:53.84 [kworker/13:0]
55269 root      20   0    0    0    0 S    1  0.0  2:42.43 [kworker/7:2]
  _62 root      20   0    0    0    0 S    1  0.0  9:10.35 [kworker/14:0]
   66 root      20   0    0    0    0 S    1  0.0  6:18.55 [kworker/15:0]
   78 root      20   0    0    0    0 S    1  0.0 30:07.10 [kworker/18:0]
   90 root      20   0    0    0    0 S    1  0.0  5:09.42 [kworker/21:0]
  911 root      20   0 9176 1412  812 R    1  0.0  0:00.16 top -c
 2548 sdm       20   0 54864 3072 2312 S    1  0.0  0:00.02 /usr/bin/ssh -x -oForwa
 2562 sdm       20   0 54864 3072 2312 S    1  0.0  0:00.02 /usr/bin/ssh -x -oForwa
14483 root      20   0    0    0    0 S    1  0.0 26:10.24 [kworker/18:2]
15319 root      20   0    0    0    0 S    1  0.0  0:47.97 [kworker/0:0]
18718 root      14  -6    0    0    0 S    1  0.0  8:41.72 [vxiod]
```

Azwer Alam | System Support Officer
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----

immediately. You should not copy or use it for any purpose, nor disclose its contents to any other person.

Heland, Rebecca (Health)

From:	Barrett, Scott (Health)
Sent:	Wednesday, 28 March 2018 11:55 AM
To:	Arsavilli, Dev; ▓▓▓ ▓ (Health); ▓▓▓ ▓ (Health)
Cc:	Alam, Azwer (Health)
Subject:	RE: Load on PACS servers [SEC=UNCLASSIFIED]

Hi Guys,

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We noticed that the system load went up to about 8 yesterday evening at about 5pm. Was there anything unusual happening at that time that we should be aware of? No complaints were received but I'd still like us to try and not creep too much above 6 if possible.

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Scott Barrett | Manager
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From: Arsavilli, Dev
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Subject: RE: Load on PACS servers [SEC=UNCLASSIFIED]

Thank you Scott for the update.

Kind Regards,

Dev

--

Dev Arsavilli | Project Manager
Phone: 02 6174 8729 | Mobile ▓▓▓ | Email: Dev.Arsavilli@act.gov.au
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2-6 Bowes Street, Phillip ACT | GPO Box 825, Canberra ACT 2601 | act.gov.au

From: Barrett, Scott (Health)
Sent: Monday, 26 March 2018 11:01 AM
To: ▓▓▓ (Health) <▓▓▓▓▓▓ ▓▓ (Health) ▓▓▓▓
Cc: Arsavilli, Dev <Dev.Arsavilli@act.gov.au>
Subject: FW: Load on PACS servers [SEC=UNCLASSIFIED]

Hi Guys,

FYI

Thanks

Scott

Scott Barrett | Manager
Direct Phone: 02 6174 8039 | Direct Email: scott.barrett@act.gov.au
Diagnostic Imaging Systems | Diagnostic & Medication Systems Hub | Phone: 02 6174 8750 | Email: DSD.DIS@act.gov.au
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Cpu(s): 10.7%us,  3.1%sy,  0.0%ni, 79.7%id,  5.9%wa,  0.0%hi,  0.6%si,  0.0%st
Mem:   129161M total,  128585M used,    576M free,    3623M buffers
Swap:    8196M total,    194M used,   8002M free,   82229M cached

  PID USER      PR  NI  VIRT  RES  SHR S %CPU %MEM    TIME+ COMMAND
19080 sdm       20   0 10.1g 2.2g 7748 S  252  1.7 4836:34 /usr/java/default/bin/j
18536 sdm       20   0 7325m 3.6g 6660 S   35  2.9 1882:16 /usr/java/default/bin/j
19687 sdm       20   0 2073m 697m 6420 S    4  0.5 338:10.94 /usr/java/default/bin/j
43259 root      20   0    0    0    0 S    3  0.0 8:58.95 [kjournald]
43129 root      20   0    0    0    0 S    2  0.0 9:27.95 [kjournald]
43134 root      20   0    0    0    0 S    2  0.0 8:42.10 [kjournald]
18722 root      14  -6    0    0    0 S    1  0.0 6:59.02 [vxiod]
 1719 root      20   0    0    0    0 R    1  0.0 7:29.67 [kworker/20:2]
 7159 root      20   0    0    0    0 S    1  0.0 7:40.17 [kworker/6:0]
14482 root      20   0    0    0    0 S    1  0.0 28:32.01 [kworker/19:0]
34657 root      20   0 88304  872  780 S    1  0.0 319:01.46 /usr/sbin/ocmanager/elx
43272 root      20   0    0    0    0 S    1  0.0 17:53.84 [kworker/13:0]
55269 root      20   0    0    0    0 S    1  0.0 2:42.43 [kworker/7:2]
   62 root      20   0    0    0    0 S    1  0.0 9:10.35 [kworker/14:0]
   66 root      20   0    0    0    0 S    1  0.0 6:18.55 [kworker/15:0]
   78 root      20   0    0    0    0 S    1  0.0 30:07.10 [kworker/18:0]
   90 root      20   0    0    0    0 S    1  0.0 5:09.42 [kworker/21:0]
  911 root      20   0 9176 1412  812 R    1  0.0 0:00.16 top -c
 2548 sdm       20   0 54864 3072 2312 S    1  0.0 0:00.02 /usr/bin/ssh -x -oForwa
 2562 sdm       20   0 54864 3072 2312 S    1  0.0 0:00.02 /usr/bin/ssh -x -oForwa
14483 root      20   0    0    0    0 S    1  0.0 26:10.24 [kworker/18:2]
15319 root      20   0    0    0    0 S    1  0.0 0:47.97 [kworker/0:0]
18718 root      14  -6    0    0    0 S    1  0.0 8:41.72 [vxiod]
```

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Heland, Rebecca (Health)

From:	Barrett, Scott (Health)
Sent:	Wednesday, 28 March 2018 11:37 AM
To:	▓▓▓▓▓ ▓ (Health)
Subject:	RE: Load on PACS servers [SEC=UNCLASSIFIED]

Hi ▓▓

Are you asking how orders placed and how many reports (in total) we have in the RIS going back to go live?

I don't believe that we have something like that easily have to hand but I will ask the team. Wouldn't this be something that either ▓▓▓▓ or Siemens can provide?

Thanks

Scott

Scott Barrett | Manager
Direct Phone: 02 6174 8039 | Direct Email: scott.barrett@act.gov.au
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From: ▓▓▓▓▓ ▓ (Health)
Sent: Wednesday, 28 March 2018 9:38 AM
To: Barrett, Scott (Health) <Scott.Barrett@act.gov.au>
Subject: RE: Load on PACS servers [SEC=UNCLASSIFIED]

Scott,

Is your team able to give us figures on the number of orders and reports currently in the RIS? (just orders would probably do if necessary – we would be close enough if we estimated there was a report for every order). We have a performance figure now on how fast they are being migrated so knowing the totals will help us estimate Production RIS migration time.

Ta

▓▓▓▓

▓▓▓▓▓▓ | **IDIS Delivery Manager - UCPH Digital Solutions Program**
Phone: 02 6174 8768 | Mobile: ▓▓▓▓▓▓ | Email: ▓▓▓▓▓▓▓▓
Future Capability & Governance | Digital Solutions Division | Health Directorate | ACT Government
Level 10, Building 1, TCH, Garran ACT | PO Box 11, Woden ACT 2606 | www.act.gov.au

From: Barrett, Scott (Health)
Sent: Monday, 26 March 2018 11:01 AM
To: ▓▓▓▓ ▓ (Health) <▓▓▓▓▓▓▓▓▓ ▓▓▓ ▓▓▓ (Health) <▓▓▓▓▓▓▓▓ act.gov.au>
Cc: Arsavilli, Dev <Dev.Arsavilli@act.gov.au>
Subject: FW: Load on PACS servers [SEC=UNCLASSIFIED]

Hi Guys,

FYI

Thanks

Scott

Scott Barrett | Manager
Direct Phone: 02 6174 8039 | Direct Email: scott.barrett@act.gov.au
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From: Alam, Azwer (Health)
Sent: Monday, 26 March 2018 10:57 AM
To: Barrett, Scott (Health) <Scott.Barrett@act.gov.au>
Subject: Load on PACS servers [SEC=UNCLASSIFIED]

Hi Scott,

The load on PACS servers at the moment is double of that we usually see. However, servers can manage really well on this load.

Numbers beyound 6 will slow down PACS. Please note the high memory usage, but there is buffering.

In short, PACS is manageing the work load well at the moment.

Will keep an eye.

```
top - 10:50:32 up 25 days,  4:34,  8 users,  load average: 4.86, 4.18, 4.49
Tasks: 424 total,   2 running, 422 sleeping,   0 stopped,   0 zombie
Cpu(s): 10.7%us,  3.1%sy,  0.0%ni, 79.7%id,  5.9%wa,  0.0%hi,  0.6%si,  0.0%st
Mem:   129161M total,  128585M used,    576M free,    3623M buffers
Swap:    8196M total,    194M used,   8002M free,   82229M cached

  PID USER      PR  NI  VIRT  RES  SHR S  %CPU %MEM    TIME+  COMMAND
19080 sdm       20   0 10.1g 2.2g 7748 S   252  1.7  4836:34 /usr/java/default/bin/j
18536 sdm       20   0 7325m 3.6g 6660 S    35  2.9  1882:16 /usr/java/default/bin/j
19687 sdm       20   0 2073m 697m 6420 S     4  0.5 338:10.94 /usr/java/default/bin/j
43259 root      20   0    0    0    0 S     3  0.0  8:58.95 [kjournald]
43129 root      20   0    0    0    0 S     2  0.0  9:27.95 [kjournald]
43134 root      20   0    0    0    0 S     2  0.0  8:42.10 [kjournald]
18722 root      14  -6    0    0    0 S     1  0.0  6:59.02 [vxiod]
 1719 root      20   0    0    0    0 R     1  0.0  7:29.67 [kworker/20:2]
 7159 root      20   0    0    0    0 S     1  0.0  7:40.17 [kworker/6:0]
14482 root      20   0    0    0    0 S     1  0.0 28:32.01 [kworker/19:0]
34657 root      20   0 88304  872  780 S     1  0.0 319:01.46 /usr/sbin/ocmanager/elx
43272 root      20   0    0    0    0 S     1  0.0 17:53.84 [kworker/13:0]
55269 root      20   0    0    0    0 S     1  0.0  2:42.43 [kworker/7:2]
   62 root      20   0    0    0    0 S     1  0.0  9:10.35 [kworker/14:0]
   66 root      20   0    0    0    0 S     1  0.0  6:18.55 [kworker/15:0]
   78 root      20   0    0    0    0 S     1  0.0 30:07.10 [kworker/18:0]
   90 root      20   0    0    0    0 S     1  0.0  5:09.42 [kworker/21:0]
  911 root      20   0 9176 1412  812 R     1  0.0  0:00.16 top -c
 2548 sdm       20   0 54864 3072 2312 S     1  0.0  0:00.02 /usr/bin/ssh -x -oForwa
 2562 sdm       20   0 54864 3072 2312 S     1  0.0  0:00.02 /usr/bin/ssh -x -oForwa
14483 root      20   0    0    0    0 S     1  0.0 26:10.24 [kworker/18:2]
15319 root      20   0    0    0    0 S     1  0.0  0:47.97 [kworker/0:0]
18718 root      14  -6    0    0    0 S     1  0.0  8:41.72 [vxiod]
```

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Level 10, Building 1, Canberra Hospital, Garran ACT | GPO Box 825, Canberra City ACT 2601 | act.gov.au

Heland, Rebecca (Health)

From:	██████ ██████ (Health)
Sent:	Wednesday, 28 March 2018 9:42 AM
To:	██████ ███ ██████
Subject:	Migration Status report for Test Cycle 1 [SEC=UNCLASSIFIED]
Attachments:	[AUS - ACT] DICOM Migration Status.xlsx

I have attached the migration status report from ████ this was for Cycle 1, with 1 thread during the peak and 2 during the off peak hours.

Regards,

████

████ ██████ | IDIS Data Migration Analyst - UCPH Digital Solutions Program
Mobile : ██████████ Email: ██████████act.gov.au

Heland, Rebecca (Health)

From:	████ ████ <████████████
Sent:	Monday, 26 March 2018 6:54 PM
To:	████ ████
Cc:	Arsavilli, Dev; Griffiths, Jessica (Health); ██████ ████ (Health); ██████ ████ (Health); ██ ████ ██ ██████ ███████████████████ ████████████████ Crossley, Nick; ████ █████
Subject:	[AUS - ACT] TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi ████

I just had a look at the running migration, this is the status:

- The migration of studies that don't need an update to the DICOM header is at 75% and is expected to run for another 20 hours to complete at the current rate.
- All migrated studies seem to validate successfully.
- We also still have +/- 2000 studies that need a DICOM header update and from previous tests we know that these studies are large (more MB per study to move).

So we will not be finished before the extra threads kick in.

Kind Regards,

████ ████ | ████████
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Click on link to read important disclaimer: http://www.agfahealthcare.com/maildisclaimer

From: ████████ /NAWVR/AGFA
To: ████ ████ AXKQB/AGFA@AGFA
Cc: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>@AGFASMTP, "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, ████ ████ (Health)" <████████████████████████ ████████████████████████ "Crossley, Nick" <Nick.Crossley@act.gov.au>
Date: 26/03/2018 08:29
Subject: Re: [AUS - ACT] TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi ████

So far migration has been going well.

At 17:00 (after 7 hrs) migration was at approx 60% and process 630k images.

It is likely this will finish before 22:00 when the additional threads would be used but if you can give us a report anyway when finished it would be appreciated.

Kind Regards,

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From: ████████ NAWVR/AGFA
To: ████████ AXKQB/AGFA@AGFA
Cc: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>@AGFASMTP, "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, ████████ (Health)"
████████████████ "Crossley, Nick" <Nick.Crossley@act.gov.au>
Date: 23/03/2018 19:52
Subject: Re: [AUS - ACT] TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi ████

Thanks for confirming just now the HL7 migration was successful.

Please schedule the DICOM migration to commence **Monday 10:00** (our time) according to the following criteria...

- The peak and off-peak times remain the same as for the previous cycles,
- Threads to run during the peak hours – 5
- Threads to run during the off-peak hours – 10

*Peak hours - 5:00 am to 10:00pm
Off peak hours - 10:00pm to 5:00am

We will monitor the initial DICOM performance with the PACS Admin team Monday to ensure no impact to the Siemens production system.

Kind Regards,

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---

From: ████████ AXKQB/AGFA
To: ████████ NAWVR/AGFA@AGFA
Cc: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>@AGFASMTP, "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, ████████ (Health)"
████████████████
Date: 22/03/2018 21:19
Subject: [AUS - ACT] TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi All,

I can confirm that the HL7 migration of the 'Cycle 3' test extracts has now been completed towards EI.

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For the DICOM part of the migration, I'll wait for a signal that the validation was completed.

Performance is better then before, we are now using a multi threaded approach in a new version of the migration tools (2 services per Core Server). If the production EI has multiple CS servers, the performance should still be better then what is mentioned below.

- ORM => +/- 350ms per message
- ORU => +/- 250ms per message

Kind Regards,

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From: ████████/NAWVR/AGFA
To: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>@AGFASMTP
Cc: "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, ████████ (Health)" <████████████████████████ (Health)"
<██
Date: 21/03/2018 19:52
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi Dev,

Just confirming, ██ has reassigned the available cache from "Test" to "Dev" and turned on the purging.

On this afternoon's migration call we can confirm the time and date for the 3rd test migration. As per ████████ advice the next test migration will have ....

- The peak and off-peak times remain the same as for the previous cycles,
- Threads to run during the peak hours – 5
- Threads to run during the off-peak hours – 10

*Peak hours - 5:00 am to 10:00pm
Off peak hours - 10:00pm to 5:00am

Kind Regards,

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3

From: ████████/NAWVR/AGFA
To: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>@AGFASMTP
████████████████████████ "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, "Duggan, Mark (Health)" <Mark.Duggan@act.gov.au>,
"Barrett, Scott (Health)" <Scott.Barrett@act.gov.au>, ████████ (Health)" ████████████████ ████████ (Health)"
<████████████
Date: 20/03/2018 13:08
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi Dev,

Thanks for the confirmation.

I tried to find out overnight the details of the algorithm used. From the feedback so far it appears to be based on a FIFO but this is an algorithm designed for the incoming cache cleanup so a number of factors are used.

btw - I checked with ████ and he has confirmed the testing team have completed their testing on the first 2 cycles.

Kind Regards,

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From: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>
To: ████████/NAWVR/AGFA@AGFA
Cc: ████████AMPCY/AGFA@AGFA, "████████agfa.onmicrosoft.com" <████████agfa.onmicrosoft.com>, ████████
AWWQG/AGFA@AGFA, "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, "Duggan, Mark (Health)" <Mark.Duggan@act.gov.au>,
"Barrett, Scott (Health)" <Scott.Barrett@act.gov.au>
Date: 20/03/2018 11:32
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi ████,
This looks to me like a bit of option 1 and option 2.
I would like to understand the criteria behind auto purge.
1. Is it first in first out?

If migrated RIS data can remain we would prefer this bridged approach.

Please proceed with the configuration of extra disk to TEST from the unused env.

Kind Regards,

Dev

--

Dev Arsavilli | Project Manager
Phone: 02 6174 8729 | Mobile ████████ | Email: Dev.Arsavilli@act.gov.au
Future Capability and Governance Branch | Digital Solutions Division | Health Directorate | ACT Government
2-6 Bowes Street, Phillip ACT | GPO Box 825, Canberra ACT 2601 | act.gov.au

From: ████████ [mailto████████

Sent: Monday, 19 March 2018 5:19 PM
To: Arsavilli, Dev <Dev.Arsavilli@act.gov.au>
Cc: ████ ████ <█████████████████████████████████agfa.onmicrosoft.com; ████████
<████████████████████ Griffiths, Jessica (Health) <Jessica.Griffiths@act.gov.au>; Duggan, Mark (Health)
<Mark.Duggan@act.gov.au>; Barrett, Scott (Health) <Scott.Barrett@act.gov.au>
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi Dev,

Just to confirm our discussion just now.

You are OK for Agfa to proceed now with Option 2 as Follows.

a) Agfa will reassign 1TB of Cache from "Test" (not currently in use) to the "Dev" environment. (Now designated as the TEST environment).

b) Agfa will configure the auto purging of images from Dev cache only. The RIS Data will remain.

I will try to find our if any particular rules can be applied and if the purging can be scheduled.

Kind Regards,

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From: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>
To: ████████████agfa.onmicrosoft.com
Cc: ██████████NAWVR/AGFA@AGFA, ████████AMPCY/AGFA@AGFA, ██████████AWWQG/AGFA@AGFA, "Griffiths, Jessica (Health)"
<Jessica.Griffiths@act.gov.au>, "Barrett, Scott (Health)" <Scott.Barrett@act.gov.au>, "Duggan, Mark (Health)" <Mark.Duggan@act.gov.au>
Date: 16/03/2018 01:25
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi ████████

Thank you for taking time to review this issue and responding in detail.

My summary:
It is a very simple and general expectation of ACT Health that we have a TEST environment that is fit for purpose.
Here we have a TEST environment that is not fit for testing within the scope.

I do not agree with the reasoning that this approach was not made clear:
I have reviewed this with the Project Team and asked them to look in to all initial discussions.
From the available minutes etc, this testing approach was being discussed in September/October 2017.
Agfa team were part of these discussions.
Please see attached; one of the items mentioned in this minute talks about subset of data migration testing being sufficient for ACT Health. It also mentions that as big as 10% of DB will be provided to Agfa for migration at one instance.
Q1. Why was this issue not identified/thought/raised earlier?
Q2. Why have we discovered this in the middle of testing after the fact that the disk was full?
It seems like the environment was not actively monitored. Are there any monitoring measures in place currently? If we are not monitoring disk space are we monitoring other issues?

Nowhere in the BRS have we mentioned that we will accept Agfa's global best practice.
Please see below:

S16	Compliance	Comply with the standards for hardware and software listed in the ACT reference manual.	
S17	Compliance	Comply with the ACT Health change management process.	
S12	Architecture	Complies with the ACT Government ICT Data Centre requirements.	

Agree that this approach of 20% of migration was not documented in the BRS as we normally consider 100% data migration in TEST as a standard. Imagine scoping of TEST environments for just 1.5% of data migration.
If this is the best practice I am really concerned.

I see the requirement in BRS mentioning Data Migration.

CC12	Installation	Data migration from the existing RIS-PACS to the new RIS-PACS should be included in the solution offered.	

Q3. Was Agfa unaware of the size of the database to be migrated from existing RIS-PACS to the new RIS-PACS?
I agree that there is no mention of environments in this requirement,
Q4. Does that mean data migration happens directly in Production environment?
Q5. Why was only production environment scoped for data migration when our environment description mentions TEST as well?

CC1	Environment	The system will operate in the environments: • Dev • Test • Pre Prod / Training; and • Prod	•

This clearly explains that we test any changes before migrate to Production.
It is a standard practice if there is a data migration involved, the storage space in TEST and PROD be configured at similar capacity. In some instances we configure non-replicated storage in test for testing purposes but with matching disk capacity.

PR2	Storage	Provide enough short term storage to house a minimum of 3 years data.	Current date minus 3 years plus capacity to store pre-fetched historical (archived) images.

Q6. How did Agfa see similar requirements for PROD env only?

Q7. Was 'testing' for data migration not scoped at all?
We are really concerned that testing of data migration was not considered.
This should have been checked as part of milestone 1 completion.
I am also concerned that there is a reference to SoW and a Pre-Prod testing approach. Currently I am not able to view the SoW but would like to read it myself. If this statement is correct, then we have agreed on a poor quality criteria.

Coming to the options proposed:
Option 1: not suitable
a. This option proposes different approach for TEST and PROD and this is not considerable
b. This option may delete images before completion of testing

6

Option 3: not suitable
a. Testing in Pre-PROD is simply not acceptable and doesn't comply with ACT Change Management Processes
b. We need migrated data in TEST for System and Integration (SIT) Testing and BI (reporting) testing.
c. This will make SIT and BI testing invalid in TEST

Option 2: not suitable fully, but we can accept this approach temporally to continue with data migration cycle 3 and 4 but for cycle 5 would require more than 2TB.
1. This approach requires clean-up of the data for each cycle to run.
a. Our preferred approach for this option would be to keep migrated RIS data in place with each cycle and just remove images to create space for next cycle.
b. I believe this is not possible
c. However, to continue with data migration testing this approach can be used. I have confirmation from the Testing Team this will not cause any issues for their testing plan
2. This approach will not ensure that we have sufficient RIS data for BI testing in TEST

Q8. Why we were not proposed an option to use the Production disk temporarily in the similar manner to Option 2 (Option 2 proposed porting of 1TB from a different environment)
a. This will be our most preferred approach to resolve this issue.
b. This will ensure sufficient temp storage for testing in TEST

R3	Storage	The storage solution is scalable and upgradeable.	

c. This will give good approximate times for PRE-PROD data migration
d. This approach will help us do bigger chunks of data migration as planned before.
e. If production uses replicated storage – using a small portion of the replicated storage is an advantage
f. As we are not using the PROD environment, temporary usage of the disc adds value
g. Q8. Is there a significant reason preventing Agfa do not want to take this approach
h. The project team would like to discuss further at any time.

Kind Regards,

Dev

‒ ‒

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ture Capability and Governance Branch | Digital Solutions Division | Health Directorate | ACT Government
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From: ▮▮▮▮ [mailto ▮▮▮▮]
Sent: Wednesday, 14 March 2018 7:40 PM
To: Duggan, Mark (Health) <Mark.Duggan@act.gov.au>
Cc: Arsavilli, Dev <Dev.Arsavilli@act.gov.au>; ▮▮▮▮ <▮▮▮▮> ▮▮▮▮ <▮▮▮▮>
▮▮▮▮ <▮▮▮▮>
Subject: TEST environment- Options to move forward.

Hi Mark

I have reviewed the issue, notes in email trail below, and both ▮▮▮▮ have gone through the relevant project and commercial documentation.

I am not able to find any reference to the requirement to provision a TEST environment suitable to specifically support the migration testing strategy and approach that is currently being undertaken by ACT Health. In addition, I am not able to locate where there may be stated *any* requirements or direction articulated to Agfa in advance so as one would reasonable expect us to assess and provision an environment that supports this particular testing approach.

In the course of my internal discussions with the AGFA teams last night and this morning, it would appear we certainly have not been previously exposed to migration testing in this context and which required us to provision an environment to meet your

particular needs. By no means is it a reflection of the testing quality and efficacy being undertaken, but it certainly would be viewed as atypical from our perspective. As such, it was never planned for or considered. Our EI TEST environment, as ████ has articulate below, has been provisioned in line with our global best practice. Our design specifications of course are to support testing of our applications, and were never intended for supporting this type of migration testing. Although we inadvertently seemed to have gone down this path a ways with you in good faith.

So going forward, we can propose three options for consideration:

1. As ████ email from 09 March, we can turn on automatic purging of the data within the TEST storage cache. I understand this may have some impact on the testing approach and ████ can work through this with Dev and the migration teams.
2. We believe we can relatively easily assign 1TB of cache from one of the other environments temporarily. Although this will immediately allow you to progress the testing of DICOM throughput which has recently been stopped, I don't believe 2TB will be near sufficient to achieve the 20% of migrated data being sent to TEST. Essentially this too will fill up eventually.
3. ACT Health to change the testing approach to one which involves migrated data being testing in Pre-PROD. I know Dev has expressed some concerns about this approach (and we would be happy to discuss with him further what risks he sees here). I believe this was an approach that was perhaps suggested in the SoW documents in any case, but understand if that changes to approach may be valid through the course of any project.

Once you have reviewed these options, please let us know how you may wish to proceed. Of course if you need an out of session meeting to discuss, we can organise.

Kind Regards,

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--[attachment "ACT Health Project - Migrations (as PDF).pdf" deleted by ████ ████ NAWVR/AGFA]

8

Heland, Rebecca (Health)

From:	Barrett, Scott (Health)
Sent:	Monday, 26 March 2018 11:01 AM
To:	▇▇▇ ▇ (Health); ▇▇▇ ▇▇ (Health)
Cc:	Arsavilli, Dev
Subject:	FW: Load on PACS servers [SEC=UNCLASSIFIED]

Hi Guys,

FYI

Thanks

Scott

Scott Barrett | Manager
Direct Phone: 02 6174 8039 | Direct Email: scott.barrett@act.gov.au
Diagnostic Imaging Systems | Diagnostic & Medication Systems Hub | Phone: 02 6174 8750 | Email: DSD.DIS@act.gov.au
Technology Operations Branch | Digital Solutions Division | Health Directorate | ACT Government
Level 10, Building 1, Canberra Hospital, Garran ACT | GPO Box 825, Canberra City ACT 2601 | act.gov.au

From: Alam, Azwer (Health)
Sent: Monday, 26 March 2018 10:57 AM
To: Barrett, Scott (Health) <Scott.Barrett@act.gov.au>
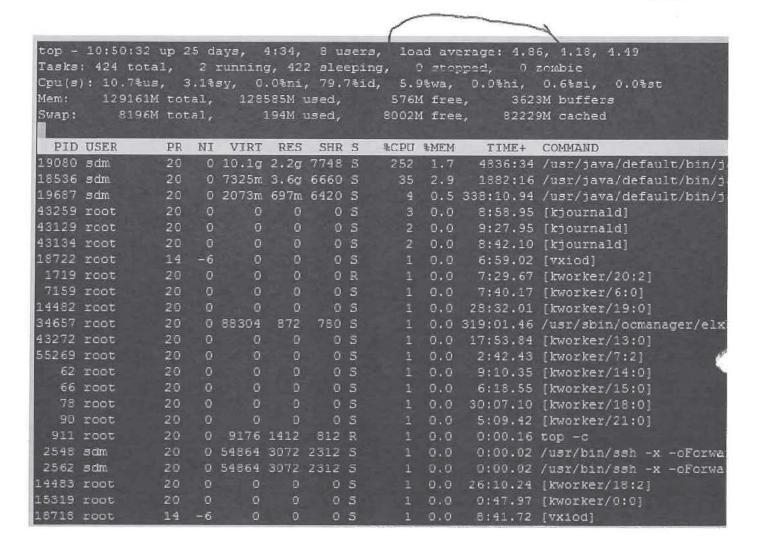**Subject:** Load on PACS servers [SEC=UNCLASSIFIED]

Hi Scott,

The load on PACS servers at the moment is double of that we usually see. However, servers can manage really well on this load.

Numbers beyound 6 will slow down PACS. Please note the high memory usage, but there is buffering.

In short, PACS is manageing the work load well at the moment.

Will keep an eye.

```
top - 10:50:32 up 25 days,  4:34,  8 users,  load average: 4.86, 4.18, 4.49
Tasks: 424 total,   2 running, 422 sleeping,   0 stopped,   0 zombie
Cpu(s): 10.7%us,  3.1%sy,  0.0%ni, 79.7%id,  5.9%wa,  0.0%hi,  0.6%si,  0.0%st
Mem:    129161M total,   128585M used,    576M free,    3623M buffers
Swap:     8196M total,     194M used,   8002M free,   82229M cached

  PID USER      PR  NI  VIRT  RES  SHR S  %CPU %MEM    TIME+  COMMAND
19080 sdm       20   0 10.1g 2.2g 7748 S   252  1.7  4836:34 /usr/java/default/bin/j
18536 sdm       20   0 7325m 3.6g 6660 S    35  2.9  1882:16 /usr/java/default/bin/j
19687 sdm       20   0 2073m 697m 6420 S     4  0.5 338:10.94 /usr/java/default/bin/j
43259 root      20   0     0    0    0 S     3  0.0   8:58.95 [kjournald]
43129 root      20   0     0    0    0 S     2  0.0   9:27.95 [kjournald]
43134 root      20   0     0    0    0 S     2  0.0   8:42.10 [kjournald]
18722 root      14  -6     0    0    0 S     1  0.0   6:59.02 [vxiod]
 1719 root      20   0     0    0    0 R     1  0.0   7:29.67 [kworker/20:2]
 7159 root      20   0     0    0    0 S     1  0.0   7:40.17 [kworker/6:0]
14482 root      20   0     0    0    0 S     1  0.0  28:32.01 [kworker/19:0]
34657 root      20   0 88304  872  780 S     1  0.0 319:01.46 /usr/sbin/ocmanager/elx
43272 root      20   0     0    0    0 S     1  0.0  17:53.84 [kworker/13:0]
55269 root      20   0     0    0    0 S     1  0.0   2:42.43 [kworker/7:2]
   62 root      20   0     0    0    0 S     1  0.0   9:10.35 [kworker/14:0]
   66 root      20   0     0    0    0 S     1  0.0   6:18.55 [kworker/15:0]
   78 root      20   0     0    0    0 S     1  0.0  30:07.10 [kworker/18:0]
   90 root      20   0     0    0    0 S     1  0.0   5:09.42 [kworker/21:0]
  911 root      20   0  9176 1412  812 R     1  0.0   0:00.16 top -c
 2548 sdm       20   0 54864 3072 2312 S     1  0.0   0:00.02 /usr/bin/ssh -x -oForwa
 2562 sdm       20   0 54864 3072 2312 S     1  0.0   0:00.02 /usr/bin/ssh -x -oForwa
14483 root      20   0     0    0    0 S     1  0.0  26:10.24 [kworker/18:2]
15319 root      20   0     0    0    0 S     1  0.0   0:47.97 [kworker/0:0]
16718 root      14  -6     0    0    0 S     1  0.0   8:41.72 [vxiod]
```

Azwer Alam | System Support Officer
Direct Phone: 02 62444932 | Direct Email: azwer.alam@act.gov.au
Diagnostic Imaging Systems | Diagnostic & Medication Systems Hub | Phone: 02 6174 8750 | Email: DSD.DIS@act.gov.au
Technology Operations Branch | Digital Solutions Division | Health Directorate | ACT Government
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Heland, Rebecca (Health)

From:	██████ <████████████
Sent:	Saturday, 24 March 2018 1:40 PM
To:	████████ (Health); Crossley, Nick; ███████████ (Health); Arsavilli, Dev; Griffiths, Jessica (Health); ████████████████████████
Cc:	████████████████████████
Subject:	ACT Health Project - Migration Meeting 22/03/2018
Attachments:	ACT Health Project - Migration M (as PDF).pdf

Kind Regards,

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Click on link to read important disclaimer: http://www.agfahealthcare.com/maildisclaimer

Heland, Rebecca (Health)

From:	██████ <█████████████>
Sent:	Saturday, 24 March 2018 1:39 PM
To:	████████ (Health); Crossley, Nick; ████████████ (Health); Arsavilli, Dev; Griffiths, Jessica (Health); ████████████████████████
Cc:	████████████████████████████████
Subject:	ACT Health Project - Migration Meeting 08/03/2018
Attachments:	ACT Health Project - Migration M (as PDF).pdf; DM Schedule Draft 1.xlsx; Testing approach V1.docx

Kind Regards,

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Heland, Rebecca (Health)

From:	███ ████ <████████████
Sent:	Friday, 23 March 2018 8:12 PM
To:	████ ███
Cc:	Arsavilli, Dev; Griffiths, Jessica (Health); ████████ (Health); ████████ (Health); ████████ ████████████████████ ████████ Crossley, Nick; ████ ████
Subject:	[AUS - ACT] TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi All,

The DICOM extracts have now been imported and validated.
The DICOM migration is scheduled to start at the schedule mentioned below on Monday 10:00 (your local time).

Kind Regards,

███████████ ██████████
.

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http://blog.agfahealthcare.com

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IBAN Customer Account BE20375104592856 | ING Belgium NV, B-1000 Brussels
Click on link to read important disclaimer: http://www.agfahealthcare.com/maildisclaimer

---

From: ██████ /NAWVR/AGFA
To: ██████ AXKQB/AGFA@AGFA
Cc: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>@AGFASMTP, "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, ████████
██
"Crossley, Nick" <Nick.Crossley@act.gov.au>
Date: 23/03/2018 09:52
Subject: Re: [AUS - ACT] TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi ████

Thanks for confirming just now the HL7 migration was successful.

Please schedule the DICOM migration to commence **Monday 10:00** (our time) according to the following criteria...

- The peak and off-peak times remain the same as for the previous cycles,
- Threads to run during the peak hours – 5
- Threads to run during the off-peak hours – 10

*Peak hours - 5:00 am to 10:00pm
Off peak hours - 10:00pm to 5:00am

We will monitor the initial DICOM performance with the PACS Admin team Monday to ensure no impact to the Siemens production system.

Kind Regards,

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1

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From: ███ █████ AXKQB/AGFA
To: ████ █████ NAWVR/AGFA@AGFA
Cc: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>@AGFASMTP, "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, █████ █████
██
Date: 22/03/2018 21:19
Subject: [AUS - ACT] TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi All,

I can confirm that the HL7 migration of the 'Cycle 3' test extracts has now been completed towards EI.
For the DICOM part of the migration, I'll wait for a signal that the validation was completed.

Performance is better then before, we are now using a multi threaded approach in a new version
of the migration tools (2 services per Core Server). If the production EI has multiple CS servers, the
performance should still be better then what is mentioned below.

- ORM => +/- 350ms per message
- ORU => +/- 250ms per message

Kind Regards,

████ █████ | █████████
█████████ █
T █████████

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IBAN Customer Account BE20375104592856 | ING Belgium NV, B-1000 Brussels
Click on link to read important disclaimer: http://www.agfahealthcare.com/maildisclaimer

From: ███ █████ NAWVR/AGFA
To: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>@AGFASMTP
Cc: "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, █████████
██
Date: 21/03/2018 19:52
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi Dev,

Just confirming, ██ has reassigned the available cache from "Test" to "Dev" and turned on the purging.

On this afternoon's migration call we can confirm the time and date for the 3rd test migration. As per ████████ advice
the next test migration will have ....

2

- The peak and off-peak times remain the same as for the previous cycles,
- Threads to run during the peak hours – 5
- Threads to run during the off-peak hours – 10

*Peak hours - 5:00 am to 10:00pm
Off peak hours - 10:00pm to 5:00am

Kind Regards,

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From: ████████/NAWVR/AGFA
To: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>@AGFASMTP
Cc: ████████/AMPCY/AGFA@AGFA, ████████████agfa.onmicrosoft.com" <████████████agfa.onmicrosoft.com>, ████
████████/AWWQG/AGFA@AGFA, "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, "Duggan, Mark (Health)" <Mark.Duggan@act.gov.au>,
"Barrett, Scott (Health)" <Scott.Barrett@act.gov.au>, ████████ (Health)" <████████████████ ████████ (Health)"
████████act.gov.au>@AGFASMTP
Date: 20/03/2018 13:08
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi Dev,

Thanks for the confirmation.

I tried to find out overnight the details of the algorithm used. From the feedback so far it appears to be based on a FIFO but this is an algorithm designed for the incoming cache cleanup so a number of factors are used.

btw - I checked with ████ and he has confirmed the testing team have completed their testing on the first 2 cycles.

Kind Regards,

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From: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>
To: ████████NAWVR/AGFA@AGFA
Cc: ████████/AMPCY/AGFA@AGFA, ████████████agfa.onmicrosoft.com" <████████████agfa.onmicrosoft.com>, ████
████████/AWWQG/AGFA@AGFA, "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, "Duggan, Mark (Health)" <Mark.Duggan@act.gov.au>,
"Barrett, Scott (Health)" <Scott.Barrett@act.gov.au>
Date: 20/03/2018 11:32
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi ███

This looks to me like a bit of option 1 and option 2.

I would like to understand the criteria behind auto purge.

1. Is it first in first out?

If migrated RIS data can remain we would prefer this bridged approach.

Please proceed with the configuration of extra disk to TEST from the unused env.

Kind Regards,

Dev

—

Dev Arsavilli | Project Manager
Phone: 02 6174 8729 | Mobile ███ | Email: Dev.Arsavilli@act.gov.au
Future Capability and Governance Branch | Digital Solutions Division | Health Directorate | ACT Government
2-6 Bowes Street, Phillip ACT | GPO Box 825, Canberra ACT 2601 | act.gov.au

From: ███ [mailto ███]
Sent: Monday, 19 March 2018 5:19 PM
To: Arsavilli, Dev <Dev.Arsavilli@act.gov.au>
Cc: ███ < ███ agfa.onmicrosoft.com; ███
< ███ Griffiths, Jessica (Health) <Jessica.Griffiths@act.gov.au>; Duggan, Mark (Health)
<Mark.Duggan@act.gov.au>; Barrett, Scott (Health) <Scott.Barrett@act.gov.au>
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi Dev,

Just to confirm our discussion just now.

You are OK for Agfa to proceed now with Option 2 as Follows.

a) Agfa will reassign 1TB of Cache from "Test" (not currently in use) to the "Dev" environment. (Now designated as the TEST environment).

b) Agfa will configure the auto purging of images from Dev cache only. The RIS Data will remain.

I will try to find our if any particular rules can be applied and if the purging can be scheduled.

Kind Regards,

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From: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>
To: ███ agfa.onmicrosoft.com
Cc: ███ NAWVR/AGFA@AGFA, ███ AMPCY/AGFA@AGFA, ███ AWWQG/AGFA@AGFA, "Griffiths, Jessica (Health)"
<Jessica.Griffiths@act.gov.au>, "Barrett, Scott (Health)" <Scott.Barrett@act.gov.au>, "Duggan, Mark (Health)" <Mark.Duggan@act.gov.au>
Date: 16/03/2018 01:25
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi ▉▉▉▉

Thank you for taking time to review this issue and responding in detail.

My summary:
It is a very simple and general expectation of ACT Health that we have a TEST environment that is fit for purpose.
Here we have a TEST environment that is not fit for testing within the scope.

I do not agree with the reasoning that this approach was not made clear:
I have reviewed this with the Project Team and asked them to look in to all initial discussions.
From the available minutes etc, this testing approach was being discussed in September/October 2017.
Agfa team were part of these discussions.
Please see attached; one of the items mentioned in this minute talks about subset of data migration testing being sufficient for ACT Health. It also mentions that as big as 10% of DB will be provided to Agfa for migration at one instance.
Q1. Why was this issue not identified/thought/raised earlier?
Q2. Why have we discovered this in the middle of testing after the fact that the disk was full?
It seems like the environment was not actively monitored. Are there any monitoring measures in place currently? If we are not monitoring disk space are we monitoring other issues?

Nowhere in the BRS have we mentioned that we will accept Agfa's global best practice.
Please see below:

S16	Compliance	Comply with the standards for hardware and software listed in the ACT reference manual.	
S17	Compliance	Comply with the ACT Health change management process.	
S12	Architecture	Complies with the ACT Government ICT Data Centre requirements.	

Agree that this approach of 20% of migration was not documented in the BRS as we normally consider 100% data migration in TEST as a standard. Imagine scoping of TEST environments for just 1.5% of data migration.
If this is the best practice I am really concerned.

I see the requirement in BRS mentioning Data Migration.

| CC12 | Installation | Data migration from the existing RIS-PACS to the new RIS-PACS should be included in the solution offered. | |

Q3. Was Agfa unware of the size of the database to be migrated from existing RIS-PACS to the new RIS-PACS?
I agree that there is no mention of environments in this requirement,
Q4. Does that mean data migration happens directly in Production environment?
Q5. Why was only production environment scoped for data migration when our environment description mentions TEST as well?

| CC1 | Environment | The system will operate in the environments:
• Dev
• Test
• Pre Prod / Training; and

    • Prod | • |

This clearly explains that we test any changes before migrate to Production.

It is a standard practice if there is a data migration involved, the storage space in TEST and PROD be configured at similar capacity. In some instances we configure non-replicated storage in test for testing purposes but with matching disk capacity.

PR2	Storage	Provide enough short term storage to house a minimum of 3 years data.	Current date minus 3 years plus capacity to store pre-fetched historical (archived) images.

Q6. How did Agfa see similar requirements for PROD env only?

Q7. Was 'testing' for data migration not scoped at all?

We are really concerned that testing of data migration was not considered.

This should have been checked as part of milestone 1 completion.

I am also concerned that there is a reference to SoW and a Pre-Prod testing approach. Currently I am not able to view the SoW but would like to read it myself. If this statement is correct, then we have agreed on a poor quality criteria.

Coming to the options proposed:

Option 1: not suitable

a. This option proposes different approach for TEST and PROD and this is not considerable

b. This option may delete images before completion of testing

Option 3: not suitable

a. Testing in Pre-PROD is simply not acceptable and doesn't comply with ACT Change Management Processes

b. We need migrated data in TEST for System and Integration (SIT) Testing and BI (reporting) testing.

c. This will make SIT and BI testing invalid in TEST

Option 2: not suitable fully, but we can accept this approach temporally to continue with data migration cycle 3 and 4 but for cycle 5 would require more than 2TB.

1. This approach requires clean-up of the data for each cycle to run.

a. Our preferred approach for this option would be to keep migrated RIS data in place with each cycle and just remove images to create space for next cycle.

b. I believe this is not possible

c. However, to continue with data migration testing this approach can be used. I have confirmation from the Testing Team this will not cause any issues for their testing plan

2. This approach will not ensure that we have sufficient RIS data for BI testing in TEST

Q8. Why we were not proposed an option to use the Production disk temporarily in the similar manner to Option 2 (Option 2 proposed porting of 1TB from a different environment)

a. This will be our most preferred approach to resolve this issue.

b. This will ensure sufficient temp storage for testing in TEST

PR3	Storage	The storage solution is scalable and upgradeable.	

c. This will give good approximate times for PRE-PROD data migration

d. This approach will help us do bigger chunks of data migration as planned before.

e. If production uses replicated storage – using a small portion of the replicated storage is an advantage

f. As we are not using the PROD environment, temporary usage of the disc adds value

g. Q8. Is there a significant reason preventing Agfa do not want to take this approach

h. The project team would like to discuss further at any time.

Kind Regards,

Dev

--

Dev Arsavilli | Project Manager

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Future Capability and Governance Branch | Digital Solutions Division | Health Directorate | ACT Government
2-6 Bowes Street, Phillip ACT | GPO Box 825, Canberra ACT 2601 | act.gov.au

From: [redacted] [mailto [redacted]
Sent: Wednesday, 14 March 2018 7:40 PM
To: Duggan, Mark (Health) <Mark.Duggan@act.gov.au>
Cc: Arsavilli, Dev <Dev.Arsavilli@act.gov.au>; [redacted] < [redacted] ; [redacted] < [redacted]
[redacted] < [redacted]
Subject: TEST environment- Options to move forward.

Hi Mark

I have reviewed the issue, notes in email trail below, and both [redacted] have gone through the relevant project and commercial documentation.

I am not able to find any reference to the requirement to provision a TEST environment suitable to specifically support the migration testing strategy and approach that is currently being undertaken by ACT Health. In addition, I am not able to locate where there may be stated *any* requirements or direction articulated to Agfa in advance so as one would reasonable expect us to assess and provision an environment that supports this particular testing approach.

In the course of my internal discussions with the AGFA teams last night and this morning, it would appear we certainly have not een previously exposed to migration testing in this context and which required us to provision an environment to meet your particular needs. By no means is it a reflection of the testing quality and efficacy being undertaken, but it certainly would be viewed as atypical from our perspective. As such, it was never planned for or considered. Our EI TEST environment, as [redacted] has articulate below, has been provisioned in line with our global best practice. Our design specifications of course are to support testing of our applications, and were never intended for supporting this type of migration testing. Although we inadvertently seemed to have gone down this path a ways with you in good faith.

So going forward, we can propose three options for consideration:

1. As [redacted] email from 09 March, we can turn on automatic purging of the data within the TEST storage cache. I understand this may have some impact on the testing approach and [redacted] can work through this with Dev and the migration teams.
2. We believe we can relatively easily assign 1TB of cache from one of the other environments temporarily. Although this will immediately allow you to progress the testing of DICOM throughput which has recently been stopped, I don't believe 2TB will be near sufficient to achieve the 20% of migrated data being sent to TEST. Essentially this too will fill up eventually.
3. ACT Health to change the testing approach to one which involves migrated data being testing in Pre-PROD. I know Dev has expressed some concerns about this approach (and we would be happy to discuss with him further what risks he sees here). I believe this was an approach that was perhaps suggested in the SoW documents in any case, but understand if that changes to approach may be valid through the course of any project.

nce you have reviewed these options, please let us know how you may wish to proceed. Of course if you need an out of session meeting to discuss, we can organise.

Kind Regards,

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--[attachment "ACT Health Project - Migrations (as PDF).pdf" deleted by [redacted] NAWVR/AGFA]

Heland, Rebecca (Health)

From:	███████ <███████████
Sent:	Thursday, 22 March 2018 10:16 PM
To:	████ ████
Cc:	Arsavilli, Dev; Griffiths, Jessica (Health); ██████ ████ (Health); ████████ ████████ (Health); ██ ████ ███ ████████ ████████████████████ ████████ ████████
Subject:	Re: [AUS - ACT] TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi ████

There are 3 x CS Servers in production.

Kind Regards,

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From: ███ █████AXKQB/AGFA
To: ███ █████NAWVR/AGFA@AGFA
Cc: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>@AGFASMTP, "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, ████████ ███ ██ ████████████
Date: 22/03/2018 21:19
Subject: [AUS - ACT] TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi All,

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For the DICOM part of the migration, I'll wait for a signal that the validation was completed.

Performance is better then before, we are now using a multi threaded approach in a new version of the migration tools (2 services per Core Server). If the production EI has multiple CS servers, the performance should still be better then what is mentioned below.

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Cc: "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, ██
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<████████ act.gov.au>@AGFASMTP
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Phone: 02 6174 8729 | Mobile ████████ | Email: Dev.Arsavilli@act.gov.au
Future Capability and Governance Branch | Digital Solutions Division | Health Directorate | ACT Government
2-6 Bowes Street, Phillip ACT | GPO Box 825, Canberra ACT 2601 | act.gov.au

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Thank you for taking time to review this issue and responding in detail.

My summary:
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Here we have a TEST environment that is not fit for testing within the scope.

I do not agree with the reasoning that this approach was not made clear:
I have reviewed this with the Project Team and asked them to look in to all initial discussions.
From the available minutes etc, this testing approach was being discussed in September/October 2017.
Agfa team were part of these discussions.
Please see attached; one of the items mentioned in this minute talks about subset of data migration testing being sufficient for ACT Health. It also mentions that as big as 10% of DB will be provided to Agfa for migration at one instance.
Q1. Why was this issue not identified/thought/raised earlier?
Q2. Why have we discovered this in the middle of testing after the fact that the disk was full?
It seems like the environment was not actively monitored. Are there any monitoring measures in place currently? If we are not monitoring disk space are we monitoring other issues?

Nowhere in the BRS have we mentioned that we will accept Agfa's global best practice.
Please see below:

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Agree that this approach of 20% of migration was not documented in the BRS as we normally consider 100% data migration in TEST as a standard. Imagine scoping of TEST environments for just 1.5% of data migration.
If this is the best practice I am really concerned.

I see the requirement in BRS mentioning Data Migration.

CC12	Installation	Data migration from the existing RIS-PACS to the new RIS-PACS should be included in the solution offered.	

Q3. Was Agfa unware of the size of the database to be migrated from existing RIS-PACS to the new RIS-PACS?
I agree that there is no mention of environments in this requirement,
Q4. Does that mean data migration happens directly in Production environment?
Q5. Why was only production environment scoped for data migration when our environment description mentions TEST as well?

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This clearly explains that we test any changes before migrate to Production.
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Q6. How did Agfa see similar requirements for PROD env only?

Q7. Was 'testing' for data migration not scoped at all?
We are really concerned that testing of data migration was not considered.
This should have been checked as part of milestone 1 completion.
I am also concerned that there is a reference to SoW and a Pre-Prod testing approach. Currently I am not able to view the SoW but would like to read it myself. If this statement is correct, then we have agreed on a poor quality criteria.

Coming to the options proposed:
Option 1: not suitable
a. This option proposes different approach for TEST and PROD and this is not considerable
b. This option may delete images before completion of testing

Option 3: not suitable
a. Testing in Pre-PROD is simply not acceptable and doesn't comply with ACT Change Management Processes
b. We need migrated data in TEST for System and Integration (SIT) Testing and BI (reporting) testing.
c. This will make SIT and BI testing invalid in TEST

Option 2: not suitable fully, but we can accept this approach temporally to continue with data migration cycle 3 and 4 but for cycle 5 would require more than 2TB.
1. This approach requires clean-up of the data for each cycle to run.
a. Our preferred approach for this option would be to keep migrated RIS data in place with each cycle and just remove images to create space for next cycle.
b. I believe this is not possible
c. However, to continue with data migration testing this approach can be used. I have confirmation from the Testing Team this will not cause any issues for their testing plan
2. This approach will not ensure that we have sufficient RIS data for BI testing in TEST

Q8. Why we were not proposed an option to use the Production disk temporarily in the similar manner to Option 2 (Option 2 proposed porting of 1TB from a different environment)

a. This will be our most preferred approach to resolve this issue.
b. This will ensure sufficient temp storage for testing in TEST

PR3	Storage	The storage solution is scalable and upgradeable.	

c. This will give good approximate times for PRE-PROD data migration
d. This approach will help us do bigger chunks of data migration as planned before.
e. If production uses replicated storage – using a small portion of the replicated storage is an advantage
f. As we are not using the PROD environment, temporary usage of the disc adds value
g. **Q8. Is there a significant reason preventing Agfa do not want to take this approach**
h. The project team would like to discuss further at any time.

Kind Regards,

Dev

--

Dev Arsavilli | Project Manager
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From: ▮▮▮▮ ▮▮▮▮ [mailto▮▮▮▮▮▮▮▮▮▮▮▮▮
Sent: Wednesday, 14 March 2018 7:40 PM
To: Duggan, Mark (Health) <Mark.Duggan@act.gov.au>
Cc: Arsavilli, Dev <Dev.Arsavilli@act.gov.au>; ▮▮▮ ▮▮ <▮▮▮▮▮▮▮▮▮ ▮▮▮ <▮▮▮▮▮▮▮▮▮▮
▮▮▮▮▮▮ <▮▮▮▮▮▮▮▮▮▮

Subject: TEST environment- Options to move forward.

Hi Mark

I have reviewed the issue, notes in email trail below, and both ▮▮▮ have gone through the relevant project and commercial documentation.

I am not able to find any reference to the requirement to provision a TEST environment suitable to specifically support the migration testing strategy and approach that is currently being undertaken by ACT Health. In addition, I am not able to locate where there may be stated *any* requirements or direction articulated to Agfa in advance so as one would reasonable expect us to assess and provision an environment that supports this particular testing approach.

In the course of my internal discussions with the AGFA teams last night and this morning, it would appear we certainly have not been previously exposed to migration testing in this context and which required us to provision an environment to meet your particular needs. By no means is it a reflection of the testing quality and efficacy being undertaken, but it certainly would be viewed as atypical from our perspective. As such, it was never planned for or considered. Our EI TEST environment, as ▮▮▮ has articulate below, has been provisioned in line with our global best practice. Our design specifications of course are to support testing of our applications, and were never intended for supporting this type of migration testing. Although we inadvertently seemed to have gone down this path a ways with you in good faith.

So going forward, we can propose three options for consideration:

1. As ▮▮▮ email from 09 March, we can turn on automatic purging of the data within the TEST storage cache. I understand this may have some impact on the testing approach and ▮▮▮ can work through this with Dev and the migration teams.
2. We believe we can relatively easily assign 1TB of cache from one of the other environments temporarily. Although this will immediately allow you to progress the testing of DICOM throughput which has recently been stopped, I don't believe 2TB will be near sufficient to achieve the 20% of migrated data being sent to TEST. Essentially this too will fill up eventually.
3. ACT Health to change the testing approach to one which involves migrated data being testing in Pre-PROD. I know Dev has expressed some concerns about this approach (and we would be happy to discuss with him further what risks he sees here). I believe this was an approach that was perhaps suggested in the SoW documents in any case, but understand if that changes to approach may be valid through the course of any project.

Once you have reviewed these options, please let us know how you may wish to proceed. Of course if you need an out of session meeting to discuss, we can organise.

Kind Regards,

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---[attachment "ACT Health Project - Migrations (as PDF).pdf" deleted by ████ ████ NAWVR/AGFA]

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2. This approach will not ensure that we have sufficient RIS data for BI testing in TEST

Q8. Why we were not proposed an option to use the Production disk temporarily in the similar manner to Option 2 (Option 2 proposed porting of 1TB from a different environment)
a. This will be our most preferred approach to resolve this issue.
b. This will ensure sufficient temp storage for testing in TEST

PR3	Storage	The storage solution is scalable and upgradeable.	

This will give good approximate times for PRE-PROD data migration
d. This approach will help us do bigger chunks of data migration as planned before.
e. If production uses replicated storage – using a small portion of the replicated storage is an advantage
f. As we are not using the PROD environment, temporary usage of the disc adds value
g. Q8. Is there a significant reason preventing Agfa do not want to take this approach
h. The project team would like to discuss further at any time.

Kind Regards,

Dev

--
Dev Arsavilli | Project Manager
Phone: 02 6174 8729 | Mobile [redacted] | Email: Dev.Arsavilli@act.gov.au
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2-6 Bowes Street, Phillip ACT | GPO Box 825, Canberra ACT 2601 | act.gov.au

From: [redacted] [mailto:[redacted]
Sent: Wednesday, 14 March 2018 7:40 PM
To: Duggan, Mark (Health) <Mark.Duggan@act.gov.au>
Cc: Arsavilli, Dev <Dev.Arsavilli@act.gov.au>; [redacted] < [redacted] > [redacted] < [redacted] >
[redacted] < [redacted] >

Subject: TEST environment- Options to move forward.

Hi Mark

I have reviewed the issue, notes in email trail below, and both ███ have gone through the relevant project and commercial documentation.

I am not able to find any reference to the requirement to provision a TEST environment suitable to specifically support the migration testing strategy and approach that is currently being undertaken by ACT Health. In addition, I am not able to locate where there may be stated *any* requirements or direction articulated to Agfa in advance so as one would reasonable expect us to assess and provision an environment that supports this particular testing approach.

In the course of my internal discussions with the AGFA teams last night and this morning, it would appear we certainly have not been previously exposed to migration testing in this context and which required us to provision an environment to meet your particular needs. By no means is it a reflection of the testing quality and efficacy being undertaken, but it certainly would be viewed as atypical from our perspective. As such, it was never planned for or considered. Our EI TEST environment, as ███ has articulate below, has been provisioned in line with our global best practice. Our design specifications of course are to support testing of our applications, and were never intended for supporting this type of migration testing. Although we inadvertently seemed to have gone down this path a ways with you in good faith.
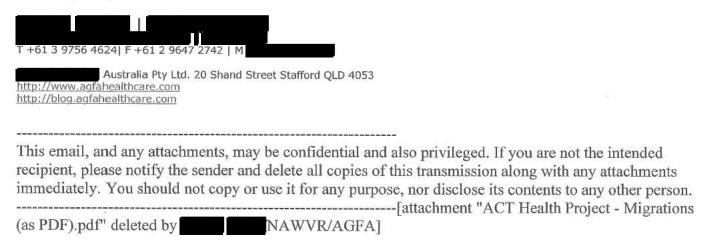
So going forward, we can propose three options for consideration:

1. As ███ email from 09 March, we can turn on automatic purging of the data within the TEST storage cache. I understand this may have some impact on the testing approach and ███ can work through this with Dev and the migration teams.
2. We believe we can relatively easily assign 1TB of cache from one of the other environments temporarily. Although this will immediately allow you to progress the testing of DICOM throughput which has recently been stopped, I don't believe 2TB will be near sufficient to achieve the 20% of migrated data being sent to TEST. Essentially this too will fill up eventually.
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Once you have reviewed these options, please let us know how you may wish to proceed. Of course if you need an out of session meeting to discuss, we can organise.

Kind Regards,

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Heland, Rebecca (Health)

From:	███████ <███████████
Sent:	Thursday, 22 March 2018 6:05 AM
To:	Arsavilli, Dev
Cc:	Griffiths, Jessica (Health); ███████ (Health); ███████ (Health); █ ███████ ███ ████████ ████████████████████████ ███████ ███ ████
Subject:	RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi Dev,

Just confirming, Lou has reassigned the available cache from "Test" to "Dev" and turned on the purging.

On this afternoon's migration call we can confirm the time and date for the 3rd test migration. As per ███████ advice the next test migration will have ....

- The peak and off-peak times remain the same as for the previous cycles,
- Threads to run during the peak hours – 5
- Threads to run during the off-peak hours – 10

*Peak hours - 5:00 am to 10:00pm
Off peak hours - 10:00pm to 5:00am

Kind Regards,

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From: ███████NAWVR/AGFA
To: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>@AGFASMTP
Cc: ███████AMPCY/AGFA@AGFA, "███████agfa.onmicrosoft.com" <███████agfa.onmicrosoft.com>, ████
████AWWQG/AGFA@AGFA, "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, "Duggan, Mark (Health)" <Mark.Duggan@act.gov.au>,
"Barrett, Scott (Health)" <Scott.Barrett@act.gov.au>, ███████ (Health)" ███████████████, ███████ (Health)"
<███████act.gov.au>@AGFASMTP
Date: 20/03/2018 13:08
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi Dev,

Thanks for the confirmation.

I tried to find out overnight the details of the algorithm used. From the feedback so far it appears to be based on a FIFO but this is an algorithm designed for the incoming cache cleanup so a number of factors are used.

btw - I checked with ████ and he has confirmed the testing team have completed their testing on the first 2 cycles.

Kind Regards,

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From: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>
To: ████████ /NAWVR/AGFA@AGFA
Cc: ████████ /AMPCY/AGFA, "████████ agfa.onmicrosoft.com" <████████ agfa.onmicrosoft.com>, ████
████████████, "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, "Duggan, Mark (Health)" <Mark.Duggan@act.gov.au>,
"Barrett, Scott (Health)" <Scott.Barrett@act.gov.au>
Date: 20/03/2018 11:32
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi ████

This looks to me like a bit of option 1 and option 2.
I would like to understand the criteria behind auto purge.
1. Is it first in first out?

If migrated RIS data can remain we would prefer this bridged approach.

Please proceed with the configuration of extra disk to TEST from the unused env.

Kind Regards,

Dev

--
Dev Arsavilli | Project Manager
Phone: 02 6174 8729 | Mobile ████████ | Email: Dev.Arsavilli@act.gov.au
Future Capability and Governance Branch | Digital Solutions Division | Health Directorate | ACT Government
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From: ████████ [mailto ████████████]
Sent: Monday, 19 March 2018 5:19 PM
To: Arsavilli, Dev <Dev.Arsavilli@act.gov.au>
Cc: ████████ <████████████ agfa.onmicrosoft.com; ████████
<████████████ Griffiths, Jessica (Health) <Jessica.Griffiths@act.gov.au>; Duggan, Mark (Health)
<Mark.Duggan@act.gov.au>; Barrett, Scott (Health) <Scott.Barrett@act.gov.au>
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

Hi Dev,

Just to confirm our discussion just now.

You are OK for Agfa to proceed now with Option 2 as Follows.

a) Agfa will reassign 1TB of Cache from "Test" (not currently in use) to the "Dev" environment. (Now designated as the TEST environment).

b) Agfa will configure the auto purging of images from Dev cache only. The RIS Data will remain.

I will try to find our if any particular rules can be applied and if the purging can be scheduled.

Kind Regards,

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From: "Arsavilli, Dev" <Dev.Arsavilli@act.gov.au>
To: ███████████ agfa.onmicrosoft.com
Cc: ███████ NAWVR/AGFA@AGFA, ███████ AMPCY/AGFA@AGFA, ███████ AWWQG/AGFA@AGFA, "Griffiths, Jessica (Health)" <Jessica.Griffiths@act.gov.au>, "Barrett, Scott (Health)" <Scott.Barrett@act.gov.au>, "Duggan, Mark (Health)" <Mark.Duggan@act.gov.au>
Date: 16/03/2018 01:25
Subject: RE: TEST environment- Options to move forward. [SEC=UNCLASSIFIED]

'|j ████

Thank you for taking time to review this issue and responding in detail.

My summary:
It is a very simple and general expectation of ACT Health that we have a TEST environment that is fit for purpose.
Here we have a TEST environment that is not fit for testing within the scope.

I do not agree with the reasoning that this approach was not made clear:
I have reviewed this with the Project Team and asked them to look in to all initial discussions.
From the available minutes etc, this testing approach was being discussed in September/October 2017.
Agfa team were part of these discussions.
Please see attached; one of the items mentioned in this minute talks about subset of data migration testing being sufficient for ACT Health. It also mentions that as big as 10% of DB will be provided to Agfa for migration at one instance.
Q1. Why was this issue not identified/thought/raised earlier?
Q2. Why have we discovered this in the middle of testing after the fact that the disk was full?
It seems like the environment was not actively monitored. Are there any monitoring measures in place currently? If we are not monitoring disk space are we monitoring other issues?

Nowhere in the BRS have we mentioned that we will accept Agfa's global best practice.
Please see below:

S16	Compliance	Comply with the standards for hardware and software listed in the ACT reference manual.	
S17	Compliance	Comply with the ACT Health change management process.	
S12	Architecture	Complies with the ACT Government ICT Data Centre requirements.	

Agree that this approach of 20% of migration was not documented in the BRS as we normally consider 100% data migration in TEST as a standard. Imagine scoping of TEST environments for just 1.5% of data migration.
If this is the best practice I am really concerned.

I see the requirement in BRS mentioning Data Migration.

| CC12 | Installation | Data migration from the existing RIS-PACS to the new RIS-PACS should be included in the solution offered. | |

Q3. Was Agfa unaware of the size of the database to be migrated from existing RIS-PACS to the new RIS-PACS?
I agree that there is no mention of environments in this requirement,
Q4. Does that mean data migration happens directly in Production environment?
Q5. Why was only production environment scoped for data migration when our environment description mentions TEST as well?

CC1	Environment	The system will operate in the environments: • Dev • Test • Pre Prod / Training; and • Prod	•

This clearly explains that we test any changes before migrate to Production.
It is a standard practice if there is a data migration involved, the storage space in TEST and PROD be configured at similar capacity. In some instances we configure non-replicated storage in test for testing purposes but with matching disk capacity.

PR2	Storage	Provide enough short term storage to house a minimum of 3 years data.	Current date minus 3 years plus capacity to store pre-fetched historical (archived) images.

Q6. How did Agfa see similar requirements for PROD env only?

Q7. Was 'testing' for data migration not scoped at all?
We are really concerned that testing of data migration was not considered.
This should have been checked as part of milestone 1 completion.
I am also concerned that there is a reference to SoW and a Pre-Prod testing approach. Currently I am not able to view the SoW but would like to read it myself. If this statement is correct, then we have agreed on a poor quality criteria.

Coming to the options proposed:
Option 1: not suitable
a. This option proposes different approach for TEST and PROD and this is not considerable
b. This option may delete images before completion of testing

Option 3: not suitable
a. Testing in Pre-PROD is simply not acceptable and doesn't comply with ACT Change Management Processes
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4

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Sent: Wednesday, 14 March 2018 7:40 PM
To: Duggan, Mark (Health) <Mark.Duggan@act.gov.au>
Cc: Arsavilli, Dev <Dev.Arsavilli@act.gov.au>; ████ ███ <██████████████████ ██ ███ < ████████████
████████ < ███████████████

Subject: TEST environment- Options to move forward.

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--[attachment "ACT Health Project - Migrations (as PDF).pdf" deleted by ████████ NAWVR/AGFA]