

NBSS integration with PACS

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Objective of this session

- Increase awareness of the work being undertaken by CFH and the LSP's regarding the storage of breast screening images

Background

- The vast majority of modalities used within English breast screening units are analogue.
- The NBSS application is used by all of the 83 breast screening units – local databases.
- 127 hospital trusts across England have implemented PACS as delivered by the LSPs under the national PACS Programme.
- All remaining hospital trusts have implemented independently-procured PACS

LSP-supplied PACS/RIS



Connecting for Health

LSP: CSCA

PACS: GE

RIS: HSS SHA domain

LSP: FJA

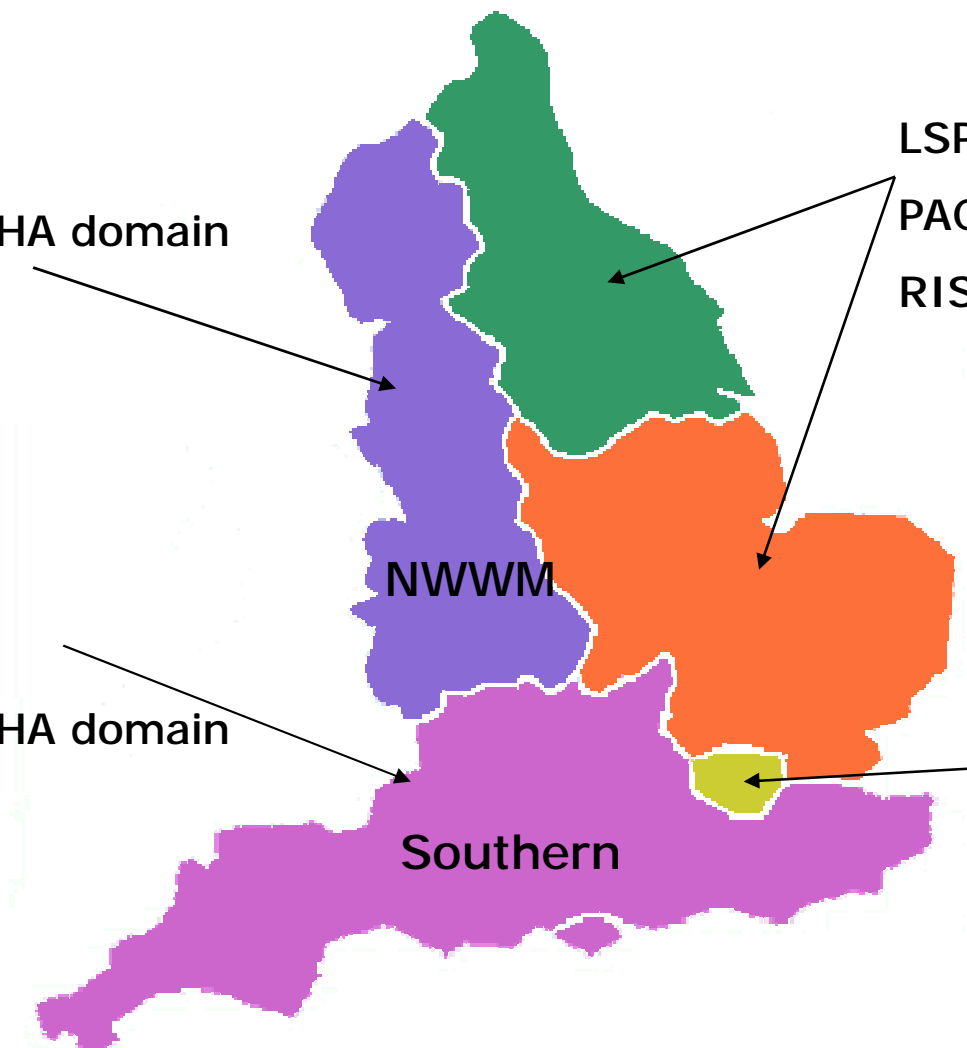
PACS: GE

RIS: HSS SHA domain

LSP: Accenture

PACS: Agfa

RIS: HSS? (stand alone)



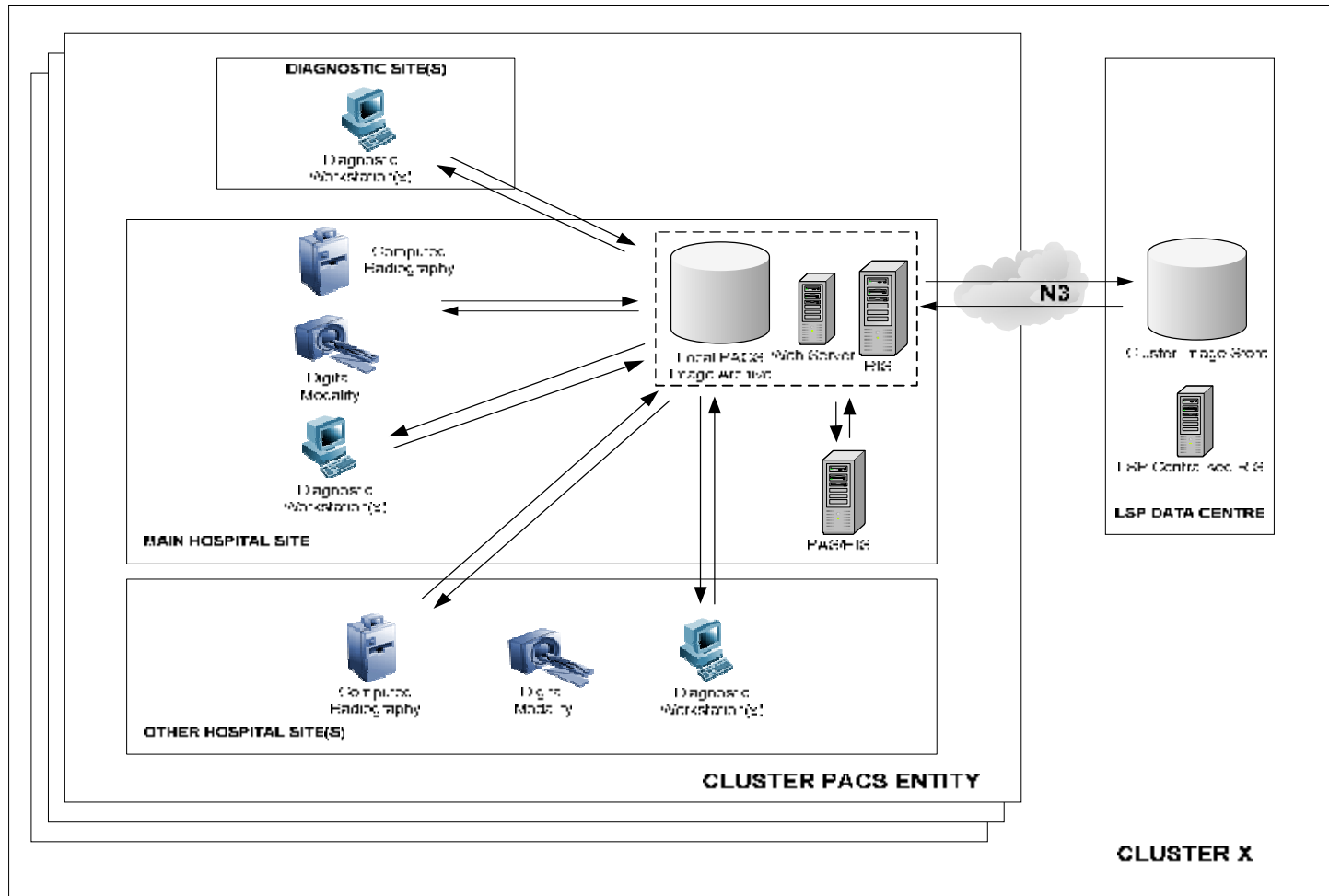
LSP: CCA

PACS: Sectra

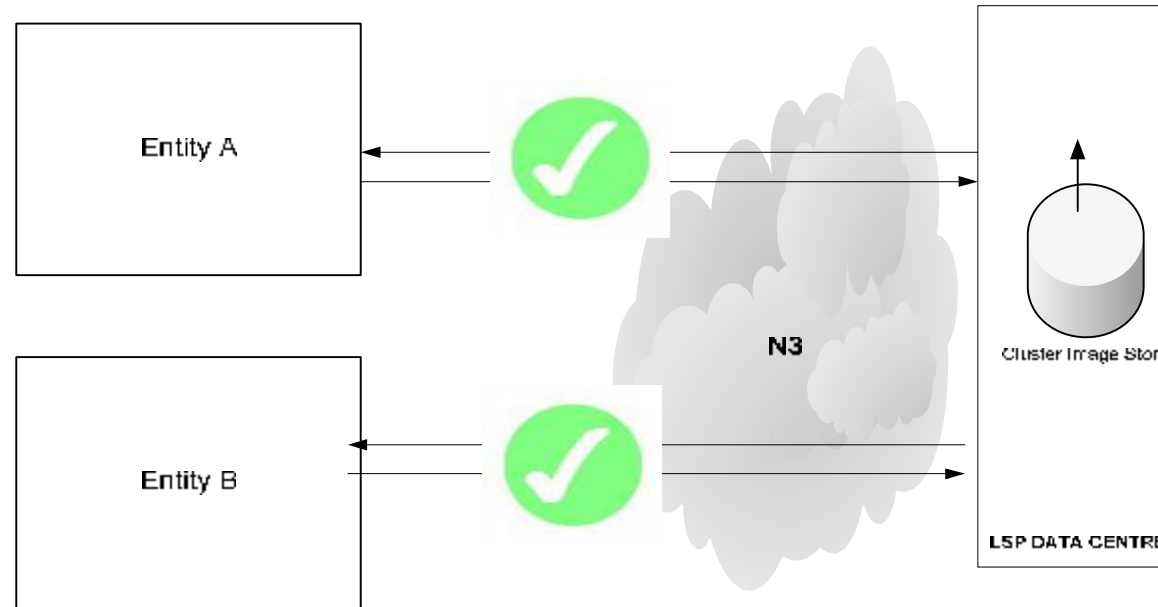
RIS: Cerner
or Isoft



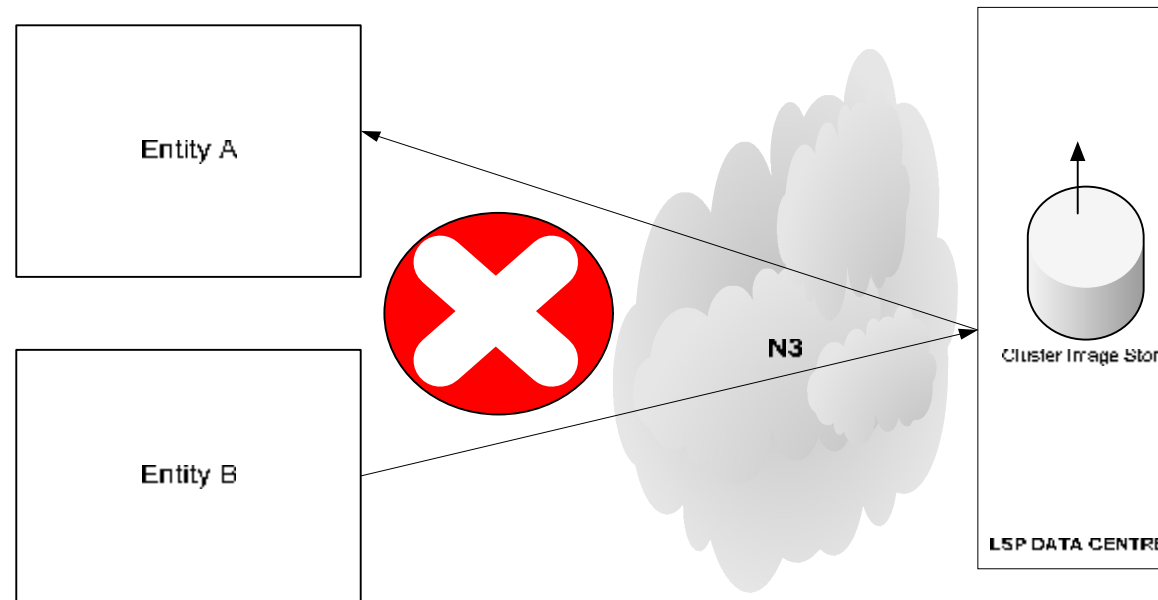
LSP PACS Overview



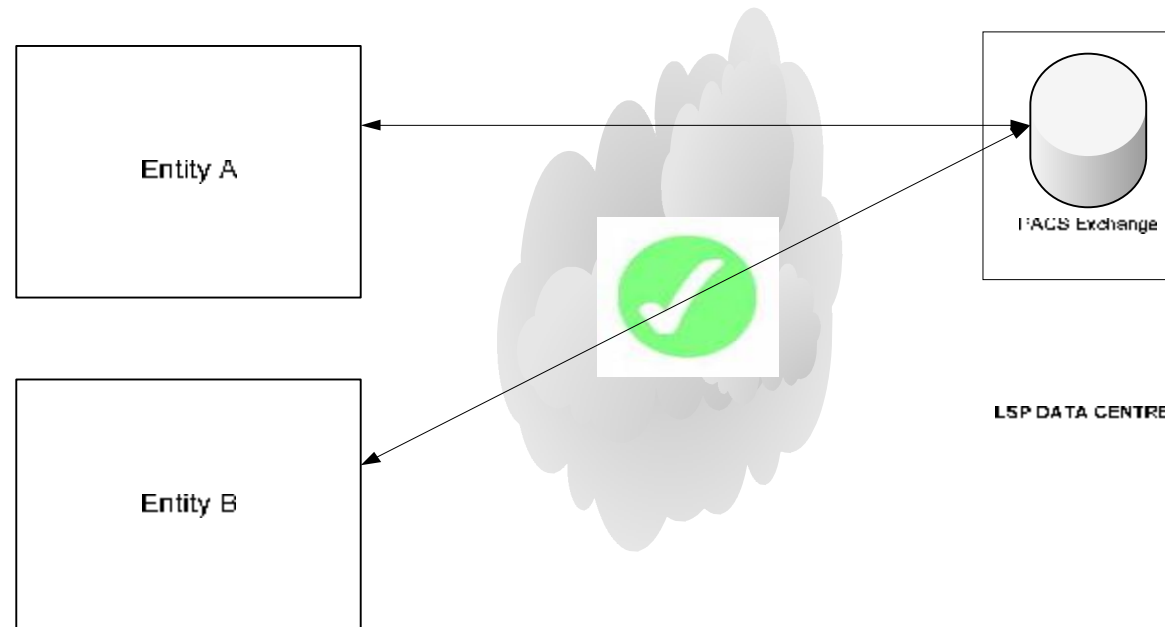
Archiving to CDS



No Sharing via CDS - Today



PACS Exchange – London Only



Data Sharing -Today

In the short term, where available and supported, the following image sharing mechanisms can be facilitated:

- London only – PACS exchange
- Point-to-Point sender initiated 'Push' DICOM image transfer e.g. via Teleradiology products
- Secure removable media
- Web access another PACS Entity's Local Data Store (LDS).

Integrating NBSS with LSP PACS

- Just 'pop' the Breast Screening Images into the local PACS – job done!

Challenges

Two million examinations (Eight million images) per year equates to approx 50 TB total storage.

Central and/or local

Challenges

- Impact on the N3 network
 - All images archived to central data stores
 - **Required again in three years** – held local or central?
 - Image transfer for change of address
 - Image transfer from screening to treatment centre

Challenges

- NHS number is used by NBSS – hospital number is used by LSP PACS

Challenges

- Modalities are shared between Screening and Radiology Departments. RIS creates worklists and accession number as does the NBSS application.

Challenges

- Transfer of worklists to mobile screening modalities and the retrieval of images back in to the PACS.

Challenges

- Reports – a code is generated by the NBSS application RR for no action, i.e. repeat screen in three years or RC for any abnormality needing further investigation.

Where should this code be stored?

Progress with NBSS

- All three PACS suppliers GE, Agfa and Sectra have successfully tested interfaces with the NBSS application although not with LSP PACS.
- GE / NBSS is deployed at Brighton and Derby
- Sectra / NBSS is deployed at Coventry.

LSP Proposed Solutions

- Three LSPs, three different approaches
- Accenture – images held in the Central Data Store
- CSC – images held locally and archived to the central data store
- BT – Initial proposal is for one centrally hosted dedicated breast screening PACS

Implications

- The Accenture proposal requires minimal additional hardware deployed in the trust but all the (previous) images will be required to be retrieved from the CDS in 3 years – N3 Implications
- The CSC proposal requires additional hardware at the trust but is far less reliant on N3 than the Accenture proposal

NHS number

- Today the solutions proposed by both LSPs are unable to provide a single view of a person's screening and radiology images based on either NHS or hospital number.
- Both LSPs have potential solutions on the horizon

Worklists

- The solutions will enable worklists originating from either the RIS or the NBSS application to be sent to the same modality

Mobile Units

- Development has taken place on NBSS which enables work list to be generated to a file. This can then be transferred to a mobile unit via a secure medium, e.g. encrypted USB stick.
- Images can be retrieved by
 - Encrypted laptop or removable hard drive
 - Mobile data (3G+)
 - Network access points

Reports

- Jury still out – but not to be forgotten

Data Sharing

- Use existing solutions
- The central solution proposed by BT for London reduces the need for data sharing
- Solutions will benefit from any future developments in data sharing undertaken by the LSPs

What's next

- Pilot sites have been identified
- When successful solutions available from the LSP catalogue
- Hopefully by the end of summer (2009)