Systems Overview

Version 1.3

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1. Purpose of this document

This document provides an overview of the hardware and systems architecture employed by the ADS to carry out its work and support its data preservation and presentation activities.

2. PC Inventory

The University of York IT Services manage and maintain all PCs utilised by the ADS, with the support of the ADS Systems Manager. IT Services are subject to the *Information Services Service Standards* (2014)[1], and the terms of Service Level Agreement between the ADS and University of York IT Services.[2]

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[1] https://www.york.ac.uk/about/departments/support-and-admin/information-services/performance/standards/ [2] Internal access only.

PC Name	Person	Date Purchased	CPU	RAM	Disk Space	ip Address
REDACTED	REDACTED	From Neil	?	?	?	REDACTED
REDACTED	REDACTED	From AV	Intel i5	4GB	232GB (HD)	REDACTED
REDACTED	REDACTED	Dec 2009	Intel Duo (3.16GHz)	4GB	466GB (HD)	REDACTED
REDACTED	REDACTED	Dec 2010	Intel i5 (2.80GHz)	12GB	255GB (SSD) + 234GB (HD)	REDACTED
REDACTED	REDACTED	Dec 2010	Intel i3 (3.2GHz)	4GB	466GB (HD)	REDACTED
REDACTED	REDACTED	Jul 2012	Intel i7 (3.4GHz)	12GB	500GB (SSD)	REDACTED
REDACTED	REDACTED	Jul 2013	Intel i5 (3GHz)	8GB	500GB (SSD)	REDACTED
REDACTED	REDACTED	Feb 2015	Intel i5 (3GHz)	8GB	500GB (SSD)	REDACTED
REDACTED	REDACTED	Nov 2015	Intel i5 (3.3GHz)	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Nov 2015	Intel i5 (3.3GHz)	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Nov 2015	Intel i5 (3.3GHz)	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Jul 2016	Intel i5 (3.3GHz)	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Nov 2017	Intel i5 (3.3GHz)	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Sep 2018	Intel i5 (3.3GHz)	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Sep 2018	Intel i5 (3.3GHz)	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Sep 2018	Intel i5 (3.3GHz)	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Oct 2019	Intel i7	16GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Oct 2019	Intel i7	16GB	250GB (SSD)	REDACTED

3. Virtual Machines

The University of York IT Services manage and maintain the ADS' virtual machines, with the support of the ADS Systems Manager. Both ADS and IT Services are subject to the *Information Services Service Standards* (2014)[2], and the terms of *Service Level Agreement between the ADS and University of York IT Services*.[4]

Unbuntu Machines						
Server	**Applications / Domains**	**CPUs**	**RAM**	**Disk**	**O/S**	**Version**
REDACTED	*ads*, *ads.ahds*, *data*, *debs* domains	2	2GB	14GB	Ubuntu	18.04
REDACTED	Allegrograph triple store	2	2GB	21GB	Ubuntu	18.04
REDACTED	archsearch, OASIS web service	2	4GB	15GB	Ubuntu	18.04
REDACTED	C14	2	1GB	21GB	Ubuntu	18.04
REDACTED	CMS, Droid, archive solr indexer	2	4GB	19GB	Ubuntu	16.04
REDACTED	Archive Download Servlet	2	2GB	15GB	Ubuntu	18.04
REDACTED	ADS-easy	2	2GB	8.9GB	Ubuntu	18.04
REDACTED	Heritage Gateway web services (x9)	2	2GB	21GB	Ubuntu	18.04
REDACTED	Geoserver	2	4GB	14GB	Ubuntu	18.04
REDACTED	OASIS V	2	2GB	15GB	Ubuntu	18.04
REDACTED	OASIS V postgres	2	2GB	15GB	Ubuntu	18.04
REDACTED	piwik (matomo) and mysql database	2	3GB	15GB	Ubuntu	18.04

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[2] https://www.york.ac.uk/about/departments/support-and-admin/information-services/performance/standards/ [4] Internal access only.

REDACTED	Pubby (linked data interface)	1	1GB	14GB	Ubuntu	18.04
REDACTED	redsquid, archives (lucee)	2	4GB	15GB	Ubuntu	18.04
REDACTED	solr (archives, archsearch, radiocarbon, romangl)	2	2GB	15GB	Ubuntu	18.04
REDACTED	solr (library)	2	2GB	15GB	Ubuntu	18.04
REDACTED	payara (DEV), postgres (DEV)	2	2GB	15GB	Ubuntu	18.04
REDACTED	payara (DEV)	2	2GB	15GB	Ubuntu	18.04
REDACTED	CMS licences, OAI targets	2	2GB	15GB	Ubuntu	18.04
REDACTED	External wikis	2	2GB	14GB	Ubuntu	18.04
REDACTED	archives (java)	2	2GB	15GB	Ubuntu	20.04
REDACTED	Cats tools	2	2GB	14GB	Ubuntu	20.04
REDACTED	archives test	2	2GB	14GB	Ubuntu	20.04
REDACTED	*archaeologydataservice*, *guides* domains	2	2GB	8.9GB	Ubuntu	18.04
REDACTED	checksum program, Ferg's Library loader	4	2GB	15GB	Ubuntu	18.04
REDACTED	*intarch* domain, intarch	2	2GB	8.9GB	Ubuntu	18.04
REDACTED	Library (LIVE)	2	5GB	15GB	Ubuntu	18.04
REDACTED	ADS Wiki	2	2GB	19GB	Ubuntu	18.04
REDACTED	*oasis* domain, OASIS IV	2	4GB	8.9GB	Ubuntu	18.04
Windows Machines						
REDACTED		2	2GB	40GB	Windows	2012

4. Storage

The University of York IT Services, with the support of the ADS Systems Manager, manages local data storage. Off-site/deep storage has now moved to Amazon Web Services (Ireland)[3] and Amazon S3 Glacier, under the terms of a dedicated Service Level Agreement.[456]

University of York					
Name	**Type**	**Managed**	**Size**	**Purpose**	**Backup**
REDACTED	NFS	UoY IT Service	5TB	Data production	28 days of snapshots. 90 day tapped backup.[8]
REDACTED	NFS	UoY IT Service	20TB	Data preservation	a/a
REDACTED	NFS	UoY IT Service	500GB	Other ADS storage	a/a
REDACTED	NFS	UoY IT Service	400GB	Data uploads	a/a
REDACTED	NFS	UoY IT Service	20TB	Active storage	a/a
Off-site Storage					
Name	**Type**	**Managed**	**Size**	**Purpose**	**Backup**
REDACTED	Cloud	Amazon Web Services (Ireland)	-	Off-site deep storage	Amazon S3 Glacier cloud storage[9]

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[3] https://aws.amazon.com/glacier/

[4] https://aws.amazon.com/s3/sla/

[5] https://www.york.ac.uk/it-services/services/backups/

[6] https://aws.amazon.com/glacier/

5. Applications/Websites

External			
Name	**Active**	**Technology**	**Address**
ADS website	Yes	Java application	https://archaeologydataservice.ac.uk/
Archsearch	Yes	Java application	https://archaeologydataservice.ac.uk/archsearch/basic.xhtml
Archives	Yes	Java/Coldfusion	https://archaeologydataservice.ac.uk/archive/
ADS-easy	Yes	Java application	https://archaeologydataservice.ac.uk/easy/
ADS Library	Yes	Java application	https://archaeologydataservice.ac.uk/library/
C14	Yes	Java application	https://archaeologydataservice.ac.uk/c14/
Heritage Gateway	Yes	Java application	https://www.heritagegateway.org.uk/gateway/
OAI targets	Yes	Java application	https://archaeologydataservice.ac.uk/about/endpoints.xhtml
Linked Data	Yes	Java application	http://data.archaeologydataservice.ac.uk/page
Guides to Good Practice	Yes	JSP wiki	http://guides.archaeologydataservice.ac.uk/g2gpwiki/
Informing the Future in the Past	Yes	JSP wiki	https://archaeologydataservice.ac.uk/ifp/
Mesolithic Research and Conservation Framework	Yes	JSP wiki	See note[7]
East Midlands Historic Environment Research Framework	Yes	JSP wiki	See note[8]

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[7] https://archaeologydataservice.ac.uk/researchframeworks/mesolithic/wiki/Mesolithic_Hub
[8] https://archaeologydataservice.ac.uk/researchframeworks/eastmidlands/wiki/

Archaeological Resources in Cultural Heritage: a European Standard	Yes	JSP wiki	https://archaeologydataservice.ac.uk/arches/
ADS Sound Bytes blog	Yes	Wordpress	https://archaeologydataservice.ac.uk/blog/
ADS-easy blog	Yes	Wordpress	https://archaeologydataservice.ac.uk/blog/easy/
OASIS blog	Yes	Wordpress	https://archaeologydataservice.ac.uk/blog/oasis/
Internet Archaeology	Yes	Coldfusion/HTML	https://intarch.ac.uk/
OASIS	Yes	Coldfusion	https://oasis.ac.uk
Discovering England's Burial Places	Yes	HTML	http://www.debs.ac.uk/index.html
HERALD (in development)	No	Java application	https://oasis.ac.uk
Internal (restricted access)			
Matomo analytics	Yes	Web analytics	https://matomo.org/
Collections Management System (CMS)	Yes	Java application	-
CMS Licences	Yes	Java application	-
ADS wiki	Yes	JSP wiki	-
Droid	Yes	Java application	See note[9]
AllegroGraph	Yes	Semantic Graph Database	See note[13]

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[9] http://www.nationalarchives.gov.uk/information-management/manage-information/preserving-digital-records/droid/   [13] https://franz.com/agraph/allegrograph/

GeoServer	Yes	Geospatial server	http://geoserver.org/
Payara (x12 servers)	Yes	Web server	https://javaee.github.io/glassfish/
Tomcat (x5 servers)	Yes	Web server	http://tomcat.apache.org/
Solr (x2 servers)	Yes	Search platform	https://lucene.apache.org/solr/
Apache (x5 servers)	Yes	Web server	https://httpd.apache.org/
Lucee (x5 servers)	Yes	Web server	http://lucee.org/
Checksum checker	Yes	Java application	-

6. Printing, photocopying and scanning

York Print Plus[10] (University of York) provide printing, copying and scanning services for the ADS under the general terms of the *Information Services Service Standards* (2014).[11]

7. Software

The University of York IT Services provide basic software, alongside anti-virus and malware protection, for all managed PCs.[12] In instances where specific software is required to support the provision of preservation services and the dissemination of data, the ADS purchases discreet licences (e.g. Callas pdfToolbox).

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[10] https://www.york.ac.uk/it-services/printing/staff/#tab-1
[11] https://www.york.ac.uk/about/departments/support-and-admin/information-services/performance/standards/
[12] https://www.york.ac.uk/it-services/software/