

Systems Overview

Version 1.283

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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

No	PC Name	Person	Date Purchased	CPU	RAM	Disk Space	ip Address
1	REDACTED	REDACTED	From Neil	?	?	?	REDACTED
2	REDACTED	REDACTED	From AV	Intel i5	4GB	232GB (HD)	REDACTED
3	REDACTED	REDACTED	Dec-09	Intel Duo (3.16GHz)	4GB	466GB (HD)	REDACTED
4	REDACTED	REDACTED	Dec-10	Intel i5 (2.80GHz)	12GB	255GB (SSD) + 234GB (HD)	REDACTED
5	REDACTED	REDACTED	Dec-10	Intel i3 (3.2GHz)	4GB	466GB (HD)	REDACTED
6	REDACTED	REDACTED	Oct-12	Intel i3 (3.4GHz)	8GB	55GB (SSD) + 148GB (HD)	REDACTED
7	REDACTED	REDACTED	Jul-13	Intel i5 (3GHz)	8GB	500GB (SSD)	REDACTED
8	REDACTED	REDACTED	Feb-15	Intel i5 (3GHz)	8GB	500GB (SSD)	REDACTED
9	REDACTED	REDACTED	Nov-15	Intel i5 (3.3GHz)	8GB	250GB (SSD)	REDACTED
10	REDACTED	REDACTED	Nov-15	Intel i5 (3.3GHz)	8GB	250GB (SSD)	REDACTED
11	REDACTED	REDACTED	Nov-15	Intel i5 (3.3GHz)	8GB	250GB (SSD)	REDACTED
12	REDACTED	REDACTED	Jul-16	Intel i5 (3.3GHz)	8GB	250GB (SSD)	REDACTED
13	REDACTED	REDACTED	Nov-17	Intel i5 (3.3GHz)	8GB	250GB (SSD)	REDACTED

¹ <https://www.york.ac.uk/about/departments/support-and-admin/information-services/performance/standards/>

² Internal access only.

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14	REDACTED	REDACTED	Sep-18 (Not new)	Intel i5 (3.3GHz)	8GB	250GB (SSD)	REDACTED
15	REDACTED	REDACTED	Sep-18 (Not new)	Intel i5 (3.3GHz)	8GB	250GB (SSD)	REDACTED
16	REDACTED	REDACTED	Sep-18 (Not new)	Intel i5 (3.3GHz)	8GB	250GB (SSD)	REDACTED
17	REDACTED	REDACTED	Oct-19 (Not new)	Intel i7	16GB	250GB (SSD)	REDACTED
18	REDACTED	REDACTED	Oct-19 (Not new)	Intel i7	16GB	250GB (SSD)	REDACTED
19	REDACTED	REDACTED	Oct-19 (Not new)	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)*³, and the terms of *Service Level Agreement between the ADS and University of York IT Services*.⁴

Unbunto Machines							
No	Server	Applications / Domains	CPUs	RAM	Disk	O/S	Version
1	REDACTED	Allegrograph triple store	2	4GB	29GB	Ubuntu	16.04
2	REDACTED	AWS	2	2GB	19GB	Ubuntu	18.04
3	REDACTED	<i>archaeologydataservice</i> , <i>guides</i> domains	1	2GB	8.9GB	Ubuntu	18.04
4	REDACTED	C14	2	1GB	15GB	Ubuntu	16.04
5	REDACTED	checksum program, Ferg's Library loader	4	2GB	15GB	Ubuntu	18.04
6	REDACTED	<i>dayofarchaeology</i> domain	2	2GB	11GB	Ubuntu	18.04
7	REDACTED	Droid?	2	2GB	15GB	Ubuntu	18.04
8	REDACTED	ADS-easy	2	2GB	8.8GB	Ubuntu	16.04
9	REDACTED	Heritage Gateway web services (x8)	2	2GB	15GB	Ubuntu	16.04
10	REDACTED	Geoserver	2	4GB	39GB	Ubuntu	16.04
11	REDACTED	<i>intarch</i> domain, <i>intarch</i>	2	2GB	8.9GB	Ubuntu	18.04
12	REDACTED	Library (LIVE), Solr	2	4GB	15GB	Ubuntu	18.04
13	REDACTED	ADS Wiki	2	2GB	19GB	Ubuntu	18.04
14	REDACTED	<i>ads</i> , <i>ads.ahds</i> , <i>data</i> , <i>mapserver</i> and <i>debs</i> domains	2	1GB	8.8GB	Ubuntu	16.04

³ <https://www.york.ac.uk/about/departments/support-and-admin/information-services/performance/standards/>

⁴ Internal access only.

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15	REDACTED	CMS, Droid, archive solr indexer	2	2GB	29GB	Ubuntu	16.04
16	REDACTED	piwik (matomo) and mysql database	2	3GB	39GB	Ubuntu	16.04
17	REDACTED	Pubby (linked data interface)	2	1GB	8.8GB	Ubuntu	16.04
18	REDACTED	archsearch, OASIS web service	2	4GB	29GB	Ubuntu	16.04
19	REDACTED	Spring services (admin, geo, mail, ner, solr)	2	2GB	15GB	Ubuntu	16.04
20	REDACTED	Archive download servlet	2	1GB	8.8GB	Ubuntu	16.04
21	REDACTED	solr (archives, archsearch, etc)	2	1GB	29GB	Ubuntu	16.04
22	REDACTED	postgres, library (DEV), CMS (project cilla)	2	2GB	15GB	Ubuntu	16.04
23	REDACTED	HERALD (DEV), Solr (DEV), Solr proxy (DEV)	2	2GB	15GB	Ubuntu	16.04
24	REDACTED	Cat's tools, ADS-easy (DEV), Redsquid pages (DEV), intarch (test), openlayers (test)	2	2GB	19GB	Ubuntu	18.04
25	REDACTED	OAI targets, CMS Licence	2	1GB	19GB	Ubuntu	16.04
26	REDACTED	External wikis	2	2GB	15GB	Ubuntu	16.04
27	REDACTED	ERA (temporary)	2	1GB	19GB	Ubuntu	16.04
28	REDACTED	oasis domain, OASIS, File upload WS, DataCiteToolkit.jar	1	2GB	19GB	Ubuntu	14.04
29	REDACTED	redsquid, archives	2	4GB	29GB	Ubuntu	16.04
Windows Machines							
30	REDACTED		2	2GB	40GB	Windows	2012

4. Storage

The University of York IT Services, with the support of the ADS Systems Manager, manage local data storage. The UK Data Archive⁵ (University of Essex) under the terms of the *Service Level Agreement* between the ADS and the UK Data Archive, provide and maintain the physical architecture for off-site/deep storage for the ADS. This agreement is changing as the provision of off-site/deep storage moves towards Amazon Web Services (Ireland)⁶ and Amazon S3 Glacier, under the terms of a dedicated Service Level Agreement.⁷

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	SAN	UK Data Archive	24 TB	Off-site deep storage	Thecus N8900 with 8 x 3TB drives in a RAID 6 combination (available 6 x 3TB) with tapped backup
REDACTED	Cloud	Amazon Web Services (Ireland)	-	Off-site deep storage	Amazon S3 Glacier cloud storage ⁹

⁵ <https://www.data-archive.ac.uk/>

⁶ <https://aws.amazon.com/glacier/>

⁷ <https://aws.amazon.com/s3/sla/>

⁸ <https://www.york.ac.uk/it-services/services/backups/>

⁹ <https://aws.amazon.com/glacier/>

5.Applications/Websites

External				
No	Name	Active	Technology	Address
1	ADS website	Yes	Java Application	https://archaeologydataservice.ac.uk/
2	Archsearch	Yes	Java Application	https://archaeologydataservice.ac.uk/archsearch/basic.xhtml
3	Archives	Yes	Java/Coldfusion	https://archaeologydataservice.ac.uk/archive/
4	ADS-easy	Yes	Java Application	https://archaeologydataservice.ac.uk/easy/
5	ADS Library	Yes	Java Application	https://archaeologydataservice.ac.uk/library/
6	C14	Yes	Java Application	https://archaeologydataservice.ac.uk/c14/
7	England's Rock Art	Yes	Java Application	https://archaeologydataservice.ac.uk/era/
8	Heritage Gateway	Yes	Java Application	https://www.heritagegateway.org.uk/gateway/
9	OAI targets	Yes	Java Application	https://archaeologydataservice.ac.uk/about/endpoints.xhtml
10	Linked Data	Yes	Java Application	http://data.archaeologydataservice.ac.uk/page
11	Guides to Good Practice	Yes	JSP wiki	http://guides.archaeologydataservice.ac.uk/g2gpwiki/
12	Informing the Future in the Past	Yes	JSP wiki	https://archaeologydataservice.ac.uk/ifp/
13	Mesolithic Research and Conservation Framework	Yes	JSP wiki	See note ¹⁰
14	East Midlands Historic Environment Research Framework	Yes	JSP wiki	See note ¹¹

¹⁰ https://archaeologydataservice.ac.uk/researchframeworks/mesolithic/wiki/Mesolithic_Hub

¹¹ <https://archaeologydataservice.ac.uk/researchframeworks/eastmidlands/wiki/>

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15	Archaeological Resources in Cultural Heritage: a European Standard	Yes	JSP wiki	https://archaeologydataservice.ac.uk/arches/
16	ADS Sound Bytes blog	Yes	Wordpress 5.2.2	https://archaeologydataservice.ac.uk/blog/
17	ADS-easy blog	Yes	Wordpress 5.2.2	https://archaeologydataservice.ac.uk/blog/easy/
18	OASIS blog	Yes	Wordpress 5.2.2	https://archaeologydataservice.ac.uk/blog/oasis/
19	Day of Archaeology	Yes	Wordpress 5.2.2	https://www.dayofarchaeology.com/
20	Internet Archaeology	Yes	Coldfusion/HTML	https://intarch.ac.uk/
21	OASIS	Yes	Java/JSP wiki/Coldfusion	https://oasis.ac.uk/pages/wiki/Main
22	Discovering England's Burial Places	Yes	HTML	http://www.debs.ac.uk/index.html
23	HERALD (in development)	No	Java Application	-
Internal (restricted access)				
1	Matomo analytics	Yes	Web analytics	https://matomo.org/
2	Collections Management System (CMS)	Yes	Java Application	-
3	CMS Licences	Yes	Java Application	-
4	ADS wiki	Yes	JSP wiki	-
5	Droid	Yes	Java Application	See note ¹²
6	AllegroGraph	Yes	Semantic Graph Database	See note ¹³

¹² <http://www.nationalarchives.gov.uk/information-management/manage-information/preserving-digital-records/droid/>

¹³ <https://franz.com/agraph/allegrograph/>

7	GeoServer	Yes	Geospatial server	http://geoserver.org/
8	Glassfish(x10 servers)	Yes	Web Server	https://javaee.github.io/glassfish/
9	Tomcat (x5 servers)	Yes	Web Server	http://tomcat.apache.org/
10	TomEE (x5 servers)	Yes	Web Server	https://tomEE.apache.org/
11	Solr (x2 servers)	Yes	Search Platform	https://lucene.apache.org/solr/
12	Apache (x5 servers)	Yes	Web Server	https://httpd.apache.org/
13	Lucee (x4 servers)	Yes	Web Server	http://lucee.org/
14	Checksum checker	Yes	Java Application	-

6. Printing, photocopying and scanning

York Print Plus¹⁴ (University of York) provide printing, copying and scanning services for the ADS under the general terms of the *Information Services Service Standards* (2014).¹⁵

7. Software

The University of York IT Services provide basic software, alongside anti-virus and malware protection, for all managed PCs.¹⁶ 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).

¹⁴ <https://www.york.ac.uk/it-services/printing/staff/#tab-1>

¹⁵ <https://www.york.ac.uk/about/departments/support-and-admin/information-services/performance/standards/>

¹⁶ <https://www.york.ac.uk/it-services/software/>