



Archaeology
Data Service

ADS Systems Overview

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Authors:	Paul Young
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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.

PC Name	Person	Date Purchased	CPU	RAM	Disk Space	ip Address
REDACTED	REDACTED	N/A	Intel i5	8GB	232GB (HD)	REDACTED
REDACTED	REDACTED	N/A	N/A	N/A	N/A	REDACTED
REDACTED	REDACTED	N/A	Intel i5	4GB	232GB (HD)	REDACTED

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

REDACTED	REDACTED	Dec 2009	Intel Duo	4GB	466GB (HD)	REDACTED
REDACTED	REDACTED	Dec 2010	Intel i3	4GB	466GB (HD)	REDACTED
REDACTED	REDACTED	Jul 2012	Intel i7	12GB	500GB (SSD)	REDACTED
REDACTED	REDACTED	Feb 2015	Intel i5	8GB	500GB (SSD)	REDACTED
REDACTED	REDACTED	Nov 2015	Intel i5	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Nov 2015	Intel i5	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Jul 2016	Intel i5	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Nov 2017	Intel i5	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Sep 2018	Intel i5	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Sep 2018	Intel i5	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Sep 2018	Intel i5	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Oct 2019	Intel i7	16GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Oct 2019	Intel i7	16GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Oct 2019	Intel i7	16GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	July 2021	Intel i5	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	July 2021	Intel i5	8GB	500GB (SSD)	REDACTED
REDACTED	REDACTED	Nov 2021	Intel i5	8GB	250GB (SSD)	REDACTED
REDACTED	REDACTED	Aug 2021	Intel i7	16GB	2 x 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*.

Unbuntu Machines						
Server	Applications / Domains	CPUs	RAM	Disk	O/S	Version
REDACTED	<i>archaeologydataservice, guides domains</i>	1	2GB	8.9GB	Ubuntu	18.04
REDACTED	<i>intarch domain, intarch</i>	2	2GB	8.9GB	Ubuntu	18.04
REDACTED	ADS Wiki	2	2GB	19GB	Ubuntu	18.04
REDACTED	<i>oasis domain, OASIS IV</i>	3	4GB	8.9GB	Ubuntu	18.04
REDACTED	archsearch	2	4GB	15GB	Ubuntu	18.04
REDACTED	CMS, Droid, archive solr indexer	2	4GB	19GB	Ubuntu	18.04
REDACTED	OASIS V	2	4GB	15GB	Ubuntu	18.04
REDACTED	OASIS V postgres	2	2GB	15GB	Ubuntu	18.04

² <https://www.york.ac.uk/about/departments/support-and-admin/information-services/performance/standards/>

REDACTED	matomo and mysql database	2	3GB	15GB	Ubuntu	18.04
REDACTED	Pubby (linked data interface)	1	1GB	14GB	Ubuntu	18.04
REDACTED	redsquid	2	4GB	15GB	Ubuntu	18.04
REDACTED	solr (archives, archsearch, radiocarbon, romangl)	2	2GB	15GB	Ubuntu	18.04
REDACTED	DEV programs 1	2	2GB	15GB	Ubuntu	18.04
REDACTED	DEV programs 2	2	2GB	15GB	Ubuntu	18.04
REDACTED	External wikis	2	2GB	14GB	Ubuntu	18.04
REDACTED	<i>ads, ads.ahds, data, debs</i> domain	2	2GB	14GB	Ubuntu	20.04
REDACTED	Allegrograph triple store	2	2GB	19GB	Ubuntu	20.04
REDACTED	<i>archaeologydataservice, guides</i> domains, main website	2	2GB	14GB	Ubuntu	20.04
REDACTED	archives (lucee)	2	4GB	14GB	Ubuntu	20.04
REDACTED	archives (java)	2	2GB	15GB	Ubuntu	20.04
REDACTED	C14	2	2GB	14GB	Ubuntu	20.04
REDACTED	Cats tools	2	2GB	14GB	Ubuntu	20.04
REDACTED	checksum program	4	2GB	14GB	Ubuntu	20.04
REDACTED	Public demo apps	2	2GB	14GB	Ubuntu	20.04
REDACTED	Archive Download Servlet	2	2GB	14GB	Ubuntu	20.04
REDACTED	ADS-easy	2	2GB	14GB	Ubuntu	20.04

REDACTED	Heritage Gateway web services (x9)	2	2GB	14GB	Ubuntu	20.04
REDACTED	Dockerised internal apps	2	8GB	14GB	Ubuntu	20.04
REDACTED	Geoserver	2	4GB	14GB	Ubuntu	20.04
REDACTED	Library (LIVE)	2	4GB	15GB	Ubuntu	20.04
REDACTED	OASIS V API	2	2GB	14GB	Ubuntu	20.04
REDACTED	OASIS V (DEV)	2	2GB	14GB	Ubuntu	20.04
REDACTED	solr (Library)	2	2GB	15GB	Ubuntu	20.04
REDACTED	Private staging server	2	2GB	14GB	Ubuntu	20.04
REDACTED	archives (DEV)	2	2GB	14GB	Ubuntu	20.04
REDACTED	CMS Licences, OAI targets	2	2GB	14GB	Ubuntu	20.04

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	9TB	Data production	28 days of snapshots, 90 day tapped backup
REDACTED	NFS	UoY IT Service	40TB	Data preservation	28 days of snapshots, 90 day tapped backup
REDACTED	NFS	UoY IT Service	44TB	Active storage	28 days of snapshots, 90 day tapped backup
Off-site Storage					
Name	Type	Managed	Size	Purpose	Backup
REDACTED	Cloud	Amazon Web Service (Ireland)	-	Off-site deep storage	Amazon S3 Glacier cloud storage

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 webapp	https://archaeologydataservice.ac.uk
Archsearch	Yes	Java webapp	https://archaeologydataservice.ac.uk/archsearch
Archives	Yes	Java/Coldfusion webapp	https://archaeologydataservice.ac.uk/archive
ADS-easy	Yes	Java webapp	https://archaeologydataservice.ac.uk/easy
ADS Library	Yes	Java webapp	https://archaeologydataservice.ac.uk/library
C14	Yes	Java webapp	https://archaeologydataservice.ac.uk/c14
Heritage Gateway	Yes	Java web services	https://www.heritagegateway.org.uk
OAI targets	Yes	Java webapp	https://archaeologydataservice.ac.uk/about/endpoints.xhtml
Linked Data	Yes	Java webapp	http://data.archaeologydataservice.ac.uk
Guides to Good Practice	Yes	JSP wiki	https://guides.archaeologydataservice.ac.uk
Informing the Future in the Past	Yes	JSP wiki	https://archaeologydataservice.ac.uk/ifp

Mesolithic Research and Conservation Framework	Yes	JSP wiki	https://archaeologydataservice.ac.uk/researchframeworksolithic
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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 4	Yes	Coldfusion	https://oasis.ac.uk
OASIS 5 (HERALD)	Yes	Java webapp	https://oasis.ac.uk
OASIS API	Yes	Vue, PHP	https://docs.oasis.ac.uk/api
Discovering England's Burial Pla	Yes	HTML	http://www.debs.ac.uk
Internal (restricted access)			
Matomo analytics	Yes	Web analytics	https://matomo.org
Collections Management System (CMS)	Yes	Java application	-

CMS Dashboard	Yes	Vue, PHP	-
CMS Licences	Yes	Java application	-
ADS wiki	Yes	JSP wiki	-
Droid	Yes	Java application	See note ⁷
AllegroGraph	Yes	Semantic Graph Database	See note ¹³
GeoServer	Yes	Geospatial server	http://geoserver.org
Payara (x12 servers)	Yes	Web server	https://www.payara.fish
Tomcat (x7 servers)	Yes	Web server	http://tomcat.apache.org
Solr (x2 servers)	Yes	Search platform	https://lucene.apache.org/solr
Apache (x7 servers)	Yes	Web server	https://httpd.apache.org
Lucee (x5 servers)	Yes	Web server	http://lucee.org
Checksum checker	Yes	Java application	-

⁷ <http://www.nationalarchives.gov.uk/information-management/manage-information/preserving-digital-records/droid/>

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

6. Printing, photocopying and scanning

York Print Plus⁸ (University of York) provide printing, copying and scanning services for the ADS under the general terms of the *Information Services Service Standards* (2014).⁹

7. Software

The University of York IT Services provide basic software, alongside anti-virus and malware protection, for all managed PCs.¹⁰ In instances where specific software is required to support the provision of preservation services and the dissemination of data, the ADS purchases discreet licences.

⁸ <https://www.york.ac.uk/it-services/printing/staff/#tab-1>

⁹ <https://www.york.ac.uk/about/departments/support-and-admin/information-services/performance/standards/>

¹⁰ <https://www.york.ac.uk/it-services/software/>