

CP1482 'Upgrade of NHHDA and EAC/AA systems from Oracle 11g to version 12c'



Contact

Jemma Williams

020 7380 4359

Jemma.williams@elexon.co.uk



Contents

1	Why Change?	2
2	Solution	3
3	Impacts and Costs	5
4	Implementation Approach	6
5	Initial Committee Views	7
6	Industry Views	7
7	Final Committee Views and Decision	8
	Appendix 1: Glossary & References	9

About This Document

This document is the CP1482 Final CP Report which ELEXON has published following the final decision from the SVG to approve CP1482.

There are two parts to this document:

- This is the main document. It provides details of the solution, impacts, costs, and proposed implementation approach. It also summarises the SVG's views on the proposed changes and the views of respondents to the CP Consultation, along with the final decision on whether to approve this change.
- Attachment A contains the full responses received to the CP1482 Consultation
- *No changes to Category 1 Configurable Items are required to deliver the solution to CP1482.*



Oracle

The Party Agent applications have been developed using Oracle commercial-off-the-shelf (COTS) products: the Oracle Database and Forms and Reports.

What is the current process?

ELEXON, via its service provider, provides Party Agents with Non Half Hourly Data Aggregation (NHHDA), Estimation of Annual Consumption / Annualised Advance (EAC/AA) and Erroneously Large EACAA Reporting Tool (ELERT) applications. These are known as the Party Agent applications. The current versions of these applications run on Oracle 11g, which is not fully-supported beyond the end of 2018.

Party Agents can run the applications in one of two supported configurations:

- 'Solaris only' (2-tier) running on Oracle Solaris v10 (SunOS 5.10)
- 'Solaris + Windows' (3-tier) running on Oracle Solaris v10 (SunOS 5.10) and Windows Server 2012.

Please note that while the Party Agent applications can be run on operating systems other than these two recommended configurations, ELEXON cannot guarantee that it will be able to provide support for these combinations if any defects cannot be replicated.

Upgrading the Party Agent applications to Oracle 12c will also require Party Agents to upgrade their environments to ensure that third party components are compatible.

What is the issue?

If a problem were encountered in any of the Party Agent applications as a result of an Oracle defect, and Oracle support had expired, it could only be resolved via an upgrade to a fully supported Oracle release, which could not be completed quickly.

If a workaround were possible, it is likely that it would require daily manual intervention, which could be time consuming and prone to human error, and so would only be an interim solution pending an Oracle upgrade.

Whilst there is a low risk of this issue occurring, it could have a significant impact on Settlement. Therefore, after consultation with the Software Technical Advisory Group (STAG), ELEXON agreed that the most cost-effective approach would be to upgrade the Party Agent applications to Oracle 12c before support for Oracle 11g expires, in order to ensure that they remain fully supported.

Party Agents, through the STAG, have requested at least a 12 month lead time to be able to implement the upgrade, with early notification allowing them to efficiently plan and resource the change. This is based on two sets of activities, each spanning roughly six months:

- At least six months between approval of the CP and delivery of the upgraded applications, to allow Party Agents sufficient time to budget, prepare environments and schedule testing; and
- Up to six months between delivery of the upgraded applications and the time by which the Party Agents need to be live with the software. This is to ensure that, were any new functional changes to the software raised, these can be developed and implemented on the upgraded versions of the software.

Approved solution

[CP1482 'Upgrade of NHHDA and EAC/AA systems from Oracle 11g to version 12c'](#) was raised by ELEXON on 3 November 2016.

CP1483 will upgrade the Party Agent applications to run on the latest stable version of Oracle 12c Database and Forms and Reports, and make them available to Non Half Hourly Data Aggregators (NHHDA) and Non Half Hourly Data Collectors (NHHDCs) to test and deploy.

In order to minimise the cost to the Industry, we asked our service provider to carry out the Oracle Database¹ (RDBMS) upgrade to the Party Agent applications at the same time as it upgrades the BSC Central Systems software. As a result, the total costs given for CP1482 are those associated with the Oracle Forms and Reports upgrade only.

The full list of baseline and target versions of all the Oracle and Windows components that will require upgrading as part of this CP is set out below. The upgrades to Oracle Solaris and Windows Server may require Party Agents to procure new or upgraded hardware.

#	Technology	Type	Baseline Version	Target Version	Pre-requisites
1	Oracle Database	Database Server	11g R2 (11.2.x)	v12.1.x	Oracle Solaris v11
2	Oracle Fusion Middleware Forms and Reports	Middleware	11.1.1.6.x or 11.1.2.x	v12.2.1.1.0	Oracle JDK v8
3	Oracle Fusion Middleware: Web logic Server	Middleware	11.1.1.6.x or 11.1.2.x	v12.2.1.1.0	Oracle JDK v8
4	Oracle Java Development Kit	Development environment	v7	v8	-
5	Microsoft Windows Server	Operating System	2012	2012 R2	-
6	Oracle Solaris	Operating System	v10 (5.10)	v11 (5.11)	-

Proposer's rationale

ELEXON and the STAG have identified this as an opportune time to carry out this upgrade, based on when Oracle version support expires, and the expected support period for the new version. Target versions were identified based on maintenance of support levels from Oracle until at least 2021, covering all necessary updates, fixes, security alerts, and patches.

¹ At the time of the contractual discussions, we understood that Oracle Forms and Reports 11g R2 (11.2.1.x) were supported until 2020, and so there was no need to upgrade.

Proposed redlining

No changes to Category 1 Configurable Items are required to deliver the solution to CP1482. Changes to the Category 2 Configurable Items for CP1482 will be delivered as part of the February 2018 Release.

3 Impacts and Costs

Central impacts and costs

Impacts

ELEXON, via its service provider, will install, test and implement upgraded Party Agent applications, along with any required third party software components, and deliver the upgraded software to Party Agents on or before the proposed BSC Systems Release Date.

Central Impacts	
System Impacts	Document Impacts
<ul style="list-style-type: none">NHHDA	<ul style="list-style-type: none">NHHDA System Management GuideNHHDA Installation GuideNHHDA Technical SpecificationNHHDA Operations Guide
<ul style="list-style-type: none">EAC/AA	<ul style="list-style-type: none">EAC/AA System Management GuideEAC/AA Installation GuideEAC/AA Technical SpecificationEAC/AA Operations Guide
<ul style="list-style-type: none">ELERT	<ul style="list-style-type: none">ELERT Installation GuideELERT Technical SpecificationELERT Operations Guide

Central costs

The central implementation costs for CP1482 will be approximately £90k to implement the changes to the Party Agent applications and related documents.

BSC Party & Party Agent impacts and costs

BSC Party & Party Agent Impacts	
BSC Party/Party Agent	Impact
NHHDCs	Not disclosed
NHHDA	

4 Implementation Approach

Recommended Implementation Date

CP1482 will be implemented on **22 February 2018**, as part of the February 2018 BSC Release.

The other milestone dates for this upgrade will be specified as part of the February 2018 BSC Systems Release, but the approach followed will be:

The Oracle upgrade of the Party Agent applications will be carried out as follows:

1. ELEXON's service provider will carry out the upgrade of the Party Agent applications and carry out thorough regression testing;
2. The Party Agent applications will be issued to a single Party Agent that has volunteered to take part in Participant Testing; ELEXON and its service provider will provide support;
3. After successful completion of Participant Testing, ELEXON's service provider will make any necessary changes to the Party Agent applications and will re-test the applications;
4. Prior to carrying out User Acceptance Testing (UAT) of the upgraded applications, Party Agents will prepare their systems for installing the new software by upgrading the necessary third party components, which may require new or upgraded hardware;
5. The Party Agent applications will be released to all Party Agents, along with updated software documentation, on or before the CP1482 Implementation Date, for UAT;
6. Party Agents should carry out UAT and deploy the relevant application(s) into live by 29 June 2018 (the June 2018 Release date). ELEXON and its AMD service provider will provide installation and testing support during this period;
7. ELEXON's service provider will continue to support the Oracle 11g versions alongside the Oracle 12c versions until 29 June 2018, to allow Party Agents to upgrade at their most convenient time between 22 February and 29 July 2018.

5 Initial Committee Views

SVG's initial views

The CP progression paper for CP1482 was presented to the SVG at its meeting on 28 February 2017 ([SVG193/08](#)).

The SVG had no initial comments on CP1482, noting that the STAG had been consulted on the proposed solution and that CP1482 would be issued for industry consultation during March 2017.

6 Industry Views

This section summarises the responses received to the CP Consultation. You can find the full responses in Attachment A.

Summary of CP1482 CP Consultation Responses				
Question	Yes	No	Neutral/ No Comment	Other
Do you agree with the CP1482 proposed solution?	4	0	0	0
Do you agree that the draft redlining delivers the intent of CP1482?	0	0	0	4*
Will CP1482 impact your organisation?	4	0	0	0
Will your organisation incur any costs in implementing CP1482?	4	0	0	0
Do you agree with the proposed implementation approach for CP1482?	4	0	0	0
Will your organisation need to upgrade your hardware as a result of this upgrade?	2	1	0	1
Do you have any further comments on CP1482?	1	3	0	0

* Reflecting that there is no draft redlining for CP1482.

There were four respondents to the CP Consultation and all agreed with the proposed solution and the proposed implementation approach. All four also stated that the changes would impact their organisation and would incur costs. Two respondents stated that they would need to upgrade their hardware before they could implement the Party Agent applications upgraded for CP1482, one stated that they would not need to upgrade their hardware and one noted that this is to be confirmed.

7 Final Committee Views and Decision

SVG's final views

The SVG considered CP1482 at its meeting on 2 May 2017 ([SVG195/03](#)). The SVG did not make any comments.

Final decision

The SVG **APPROVED** CP1482 for implementation on 22 February 2018 as part of the February 2018 BSC Systems Release.

Appendix 1: Glossary & References

Acronyms

Acronyms used in this document are listed in the table below.

Acronyms	
Acronym	Definition
EAC/AA	Estimation of Annual Consumption / Annualised Advance
ELERT	Erroneously Large EACAA Reporting Tool
NHHDA	Non Half Hourly Data Aggregator / Non Half Hourly Data Aggregation
NHHDC	Half Hourly Data Collector
STAG	Software Technical Advisory Group
SVG	Supplier Volume Allocation Group (<i>Panel sub-Committee</i>)
UAT	User Acceptance Testing

External links

A summary of all hyperlinks used in this document are listed in the table below.

All external documents and URL links listed are correct as of the date of this document.

External Links		
Page(s)	Description	URL
1	CP1482 webpage	CP1482 'Upgrade of NHHDA and EAC/AA systems from Oracle 11g to version 12c
6	SVG193 page on the ELEXON website	https://www.elexon.co.uk/meeting/svg-193/?from_url=https://www.elexon.co.uk/events-calendar-item/svg-193/
7	SVG195 page on the ELEXON website	https://www.elexon.co.uk/meeting/svg-195/?from_url=https://www.elexon.co.uk/events-calendar-item/svg-195/