

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



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About This Document

The purpose of this CP1482 CP Consultation is to invite BSC Parties, Party Agents and other interested parties to provide their views on the impacts and the merits of CP1482. The SVG will then consider the consultation responses before making a decision on whether or not 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 initial views on the proposed changes.
- Attachment A contains the specific questions on which we seek your views. Please use this form to provide your response to these questions, and to record any further views or comments you wish to be considered.

1 Why Change?

Background

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.

Proposed solution

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 they upgrade 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 (RDBMS)	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 (JDK)	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 STAG have identified this as an opportune time to carry out this upgrade, based on when Oracle version support expiration, 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

CP Consultation Question

Do you agree with the CP1482 proposed solution?

Please provide your rationale.

We invite you to give your views using the response form in Attachment A

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6 March 2017

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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 Category 1 Configurable Items are impacted.

3 Impacts and Costs

Central impacts and costs

Impacts

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

Impacts	
Document Impacts	System Impacts
<ul style="list-style-type: none">• NHHDA System Management Guide• NHHDA Installation Guide• NHHDA Technical Specification• NHHDA Operations Guide• EAC/AA System Management Guide• EAC/AA Installation Guide• EAC/AA Technical Specification• EAC/AA Operations Guide• ELERT Installation Guide• ELERT Technical Specification• ELERT Operations Guide	<ul style="list-style-type: none">• NHHDA• EAC/AA• Erroneously Large EACAA Reporting Tool (ELERT)

Central Costs

The implementation costs for CP1482 will be approximately £125,000. This is the sum of service provider costs and ELEXON operational costs.

BSC Party & Party Agent impacts

BSC Party & Party Agent Impacts	
BSC Party/Party Agent	Impact
NHHDCs	Install, test and implement upgraded EAC/AA & ELERT software
NHHDAAs	Install, test and implement upgraded NHHDA software

CP Consultation Questions

Will CP1482 impact your organisation?

If 'Yes', please provide a description of the impact(s) on your organisation and any activities which you will need to undertake between the approval of CP1482 and the CP1482 Implementation Date (including any necessary changes to your systems, documents and processes). Where applicable, please state which of the roles that you operate as will be impacted and any differences in the impacts between each role.

Will your organisation incur any costs in implementing CP1482?

If 'Yes', please provide details of these costs, how they arise and whether they are one-off or on-going costs.

Will your organisation need to upgrade your hardware as a result of this upgrade?

If 'Yes', when will your environment be ready to install the new version(s) of the Party Agent Applications?

We invite you to give your views using the response form in Attachment A

4 Implementation Approach

Recommended Implementation Date

ELEXON will deliver the upgraded Oracle 12c applications to Party Agents on or before 22 February 2018 (the Implementation Date for the February 2018 BSC Systems 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.

CP Consultation Question

Do you agree with the proposed implementation approach for CP1482?

Please provide your rationale.

We invite you to give your views using the response form in Attachment A

5 Initial Committee Views

SVG's initial views

No comments were made when CP1482 was presented to the Supplier Volume Allocation Group (SVG).

Appendix 1: Glossary & References

Acronyms

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

Acronyms	
Acronym	Definition
CP	Change Proposal
CPC	Change Proposal Consultation
EAC/AA	Estimation of Annual Consumption / Annual Advance
ELERT	Erroneously Large EAC/AA Reporting Tool
NHHDA	Non Half-Hourly Data Aggregation
STAG	Software Technical Advisory Group
SVG	Supplier Volume Allocation Group