

# CP Progression Paper

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

**ELEXON**



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### Committee

Supplier Volume Allocation Group



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### About This Document

This document provides information on new Change Proposal (CP) CP1482 and outlines our proposed progression timetable for this change, including when it will be issued for CP Consultation in the next suitable Change Proposal Circular (CPC) batch.

We are presenting this paper to capture any comments or questions from Supplier Volume Allocation Group (SVG) Members on this CP before we issue it for consultation.

There are two parts to this document:

- This is the main document. It provides a summary of the solution, impacts, anticipated costs, and proposed implementation approach, as well as our proposed progression approach for this CP.
- Attachment A contains the CP1482 proposal form.

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# 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.

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## 2 Solution

### 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 to live.

In order to minimise the cost to the Industry, we asked our service provider to carry out the Oracle Database<sup>1</sup> (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 support for the current version is due to expire, and the expected support period for the new version. We have identified the target versions shown in the table above based on maintaining the necessary support levels from Oracle until at least 2021, covering all necessary updates, fixes, security alerts, and critical patch updates.

### Proposed redlining

No Category 1 Configurable Items are impacted.

<sup>1</sup> 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.

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

#### 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          |

## 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.

## 5 Proposed Progression

### Progression timetable

The table below outlines the proposed progression plan for CP1482:

| Progression Timetable                              |   |
|--|---|
| Event  | Date  |
| CP Progression Paper presented to SVG              | 28 February 2017                            |
| CP Consultation                                    | 6 March – 31 March 2017                     |
| CP Assessment Report presented to SVG for decision | 2 May 2017                                  |
| Proposed Implementation Date                       | 22 February 2018<br>(February 2018 Release) |

### CP Consultation questions

In addition to the standard CP Consultation questions for CP1482, we intend to ask the additional questions outlined below.

| Standard CP Consultation Questions  |
|---|
| Will CP1482 impact your organisation?   |
| Will your organisation incur any costs in implementing CP1482?  |
| Will your organisation need to upgrade your hardware as a result of this upgrade?                         |
| If so, when will your environment be ready to install the new version(s) of the Party Agent Applications? |
| Do you agree with the proposed implementation approach for CP1482?  |

## 6 Recommendations

We invite you to:

- **NOTE** that CP1482 has been raised;
- **NOTE** the proposed progression timetable for CP1482;
- **NOTE** the proposed timescales for Party Agent User Acceptance Testing and implementation if CP1482 is approved; and
- **PROVIDE** any comments or additional questions for inclusion in the CP Consultation.

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## 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                  |

### 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 |
|                |             |     |

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