



Contract Lifecycle Management (CLM) White Paper

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Converting Purchasing Data to Oracle Contract Lifecycle Management

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Introduction

DAI (Defense Agency Initiative) is an Oracle Federal Financials based shared service enterprise solution which supports the financial management goals of the Department of Defense (DoD). In fiscal year 2015, the existing Oracle 11.5.10 EBS (enterprise business suite) solution was upgraded to Oracle EBS Release 12.2.3 which includes the Contract Lifecycle Management (CLM) module. One of the primary objectives was ensuring all existing procure-to-pay (P2P) data was properly upgraded and could be used going forward within CLM. This whitepaper will present the overall solution chosen, benefits of utilizing CLM, some of the challenges faced and how the DAI team resolved them during the upgrade process.

Business Need

In the 11.5.10 DAI environment, there were many customizations, personalizations, and extensions in place to meet the increasingly evolving customer requirements. It was determined the new capabilities offered as a part of CLM in Oracle Release 12.2.3 would streamline the overall business process but in particular, provide much needed out of the box features in P2P. However, CLM transactions and non-CLM transactions are logically segmented and cannot cross between CLM and non-CLM responsibilities within the purchasing module (they can, however, be transacted on by the same payables responsibilities). Therefore, in order to fully leverage the upgraded CLM capabilities for new R12 DAI transactions, the existing transactions had to be upgraded to CLM documents. This process has been labeled as “CLMizing” and this term will be used throughout this document.

The following high-level requirements, per DAI, had to be met after to consider the CLMizing process successful:

- Convert DAI 11.5.10 purchase requisitions to CLM purchase requisitions.
- Convert DAI 11.5.10 change requests to CLM purchase requisitions.
- Convert DAI 11.5.10 purchase orders to CLM awards.
- Allow CLMized PRs to be amended or cancelled.
- Allow CLMized PRs to be incorporated into new CLM awards.
- Allow CLMized awards to be modified.
- Allow CLMized awards to be referenced in receipts.
- Maintain linkage to original financial transactions.
- Maintain linkage between originally linked documents.

Benefits of CLM

Beyond the high-level requirements from DAI, several important features provided through CLM in Oracle Release 12.2.3 led to the decision to move forward with deployment at DAI.

Requisition Linking

In 11.5.10, if the requisition line was not a one-to-one match on the purchase order, users would have to split requisitions or “trick” the system in order to have the desired funded value on the award. The requisition linking feature provides users the flexibility to split the commitment funding value across multiple lines, schedules and/or distributions on one or many awards without losing the traceability back to the requisition.

Requisition Amendments

The change request process in 11.5.10 did not provide enough traceability and auditable for any changes made to requisitions. The new requisition amendment capability allows users to change line item information, add/remove funds, add new lines or cancel existing lines on requisitions. Additionally, the amendment structure provides users with a history of all changes made to a

requisition and also allows them to compare changes from a specific amendment against the conformed requisition.

Award Modifications

In CLM, modifications on awards capture changes or updates to a previously approved award. They are treated as individual transactions, separate from the base award until approved & merged. This allows downstream transactions (receipts, invoices, payments) to continue to process against the award while the modification is pending final approval. Additionally, like the requisition amendment, the modifications provide traceability on the specific changes made (adding funding, de-obligation, etc.) to the award.

DOD standards for interfacing

CLM provides the standardization required to meet FAR (Federal Acquisition Regulation) and DFARS (Defense Federal Acquisition Regulation Supplement) requirements. The CLIN/SLIN/ACRN combination in CLM is important to maintain standards and accurately match the underlying contract structure. This also helps ensure integration with inbound and outbound processes including automated receipt/invoice/payment creation and capability with future enhancements such as Procurement Request Data Standard (PRDS) and Procurement Data Standard (PDS).

DOD MIPR capabilities

Oracle 11.5.10 required significant custom objects to allow for Military Interdepartmental Purchase Request (MIPR) creation and processing. CLM provides specific functionality for MIPRs that is compliant with the DOD standards, include separate functionality for MIPR acceptance. Additionally, CLM out of the box generates the standard DOD forms for MIPR creation (DD448) and MIPR acceptance (DD448-2).

UDA Framework

Over time, 11.5.10 relied heavily upon DFFs (descriptive flexfields) to capture federal and DOD specific data that was not provided in the out of the box solution. CLM introduces many of these federal and DOD specific fields available out-of-the-box at the header, line, shipment, and distribution levels of requisitions and awards. It also includes the UDA (user defined attribute) framework to allow specific types of documents to be personalized to dynamically capture information and is available to revise the existing fields and/or add DAI-specific fields going forward.

Solution Approach

When the instance was upgraded from 11.5.10 to 12.2.3, the procurement documents and all related financial entries as well as related receipts, invoices, payments already existed in the core EBS tables. However, they were not accessible or actionable within the CLM responsibilities until newly introduced CLM-specific attributes were populated or defaulted in the tables.

In order to allow the documents to be transacted against, the following was decided upon for the CLMizing effort:

- Determine what CLM specific database entries are necessary to make the existing transactions accessible from CLM responsibilities and validate CLM documents are available for future actions.
- Document what data the existing customizations, personalizations, flexfields, etc. contains that also need to be mapped to leverage new CLM fields in these transactions.
- For requisitions, the new concept of a conformed requisition was introduced. In order to utilize the feature and capture changes via amendments, during CLMizing, a base copy of the requisition had to be created.

CLMizing Action Plan

Prior to the production upgrade, DAI performed several rounds of “mock” CLMizing tests where the mapping documents and data upgrade scripts would execute the upgrade of 11.5.10 data to a 12.2.3 test environment. Within each round of testing, issues were identified and resolved such as the performance of the data upgrade scripts and the resolution of exceptions against upgrading data. For each round of mock testing and, ultimately, the final production upgrade, the following action plan was conducted:

1. As much as possible, only update scripts are to be run against existing rows in the database. Since CLM uses the same core tables for these transactions, there should be an entry already existing in most tables. Therefore, the mapping documents and data upgrade scripts should be performing updates where default data or data derived from existing DAI fields is being populated into new CLM specific columns.
2. To the extent possible, existing DAI fields that contain data will not be deleted, dropped, truncated, or repurposed. Some of the existing DAI fields will not be used in the same way moving forward (i.e., no longer visible to the user or updated, etc.), but they will not be modified as part of the CLMizing scripts in order to ensure data integrity as part of the upgrade.
3. The CLMizing process will occur after the application and databases have been upgraded to 12.2.3. The steps consist of the following:
 - a. Execution of concurrent request to migrate contracting transactions to Direct Cite Contract (Other) purchase orders at agency responsibility level.
 - b. Execution of concurrent request to CLMize all eligible awards at agency responsibility level.
 - c. Execution of concurrent request to CLMize all requisitions at agency responsibility level. This concurrent program includes use of an API provided and approved by Oracle to populate the conformed record for Requisitions.

Eligibility for CLMizing

All P2P data created in 11.5.10 was evaluated for upgrade into 12.2.3 through the set of CLMizing concurrent programs and scripts. Once upgraded, these documents were able to be viewed and maintained via amendments or modifications using the appropriate CLM responsibilities. As mentioned earlier, in order to utilize the amendments on requisitions, a base copy of the requisition was created in the table prior to CLMizing. This was important for any new amendments created after the upgrade to ensure users saw the accurate data and no changes to the requisition were lost.

The table below outlines which documents and their appropriate statuses were eligible for CLMizing to 12.2.3 with any actions necessary to correct the document.

Document Status	Upgrade Eligible?	Action Needed / Notes
Requisition, Approved	Yes	These documents are able to be amended / modified or used to create downstream documents
Requisition, Incomplete	No	Must get into an Approved status prior to upgrade; otherwise will be skipped.
Requisition, In Process	No	Must get into an Approved status prior to upgrade; otherwise will be skipped.
Requisition, Pre-Approved	No	Must get into an Approved status prior to upgrade; otherwise will be skipped.
Requisition, Rejected	Yes	These documents are in an editable state and can be edited / completed and submitted for approval.
Requisition, Returned	Yes	These can be amended in R12 whether or not the price was reduced to \$0.001 on the returned line(s) in 11.5.10. There are no active commitment funds against the returned lines.
Requisition, Cancelled	Yes	These documents are in a terminal state ("dead" documents in 11.5.10) and remain so in R12.
Purchase Order, Approved	Yes	These documents are able to be modified or used to create downstream documents
Purchase Order, Incomplete	No	Must get into an Approved status prior to upgrade; otherwise will be skipped.
Purchase Order, In Process	No	Must get into an Approved status prior to upgrade; otherwise will be skipped.
Purchase Order, Pre-Approved	No	Must get into an Approved status prior to upgrade; otherwise will be skipped.
Purchase Order, Rejected	Yes	These documents are in an editable state and can be edited / completed and submitted for approval.
Purchase Order, Requires Re-approval	Yes	These documents can be approved in R12 and completed.
Purchase Order, Cancelled	Yes	These documents are in a terminal state ("dead" documents in 11.5.10) and remain so in R12.

Issues Faced

In analyzing the CLMizing solution and throughout the mock CLMizing rounds, the following major issues surfaced regarding the upgrade of existing data.

Duplicate CLIN/SLIN across different PO line numbers

A large number of the 11.5.10 purchase order data had the same Contract Line Item Number (CLIN) on the descriptive flexfield (DFF) across multiple PO lines. This affected over 97,000 records in the database. In CLM, the CLIN must be unique per line and therefore cannot be assigned from the DFF value for the duplicate lines. It was decided that where there was duplicate CLIN information the CLMizing process created an informational parent line item and

made each of the 11.5.10 duplicate lines a Sub-contract Line Item Number (SLIN) under that CLIN. The CLINs were then renumbered as priced SLINs to provide a unique line number display across all the lines. For duplicate CLIN/SLIN DFFs they also had an information line inserted with the CLIN/SLIN number showing as a priced SLIN. The duplicate SLINs were renumbered with the DFF SLIN on the latest line number, the previous line numbers that contain the same SLIN were renumbered using the SLIN starting with 'IA' and continuing through 'IZ' to 'OA' – 'OZ'. The original DFF values from 11.5.10 remain available in the existing DFF at the distribution level in R12.

Attribute 5 Missing / MIPR Assisting Flag / No ACRN

Throughout the mock CLMizing, several exceptions surfaced specific to supplier sites and Accounting Classification Reference Number (ACRN) on awards.

After all upgrade scripts completed, an output provided exception documents that had to be updated in order to successfully be upgraded to R12. The exceptions were broken into different buckets and had to be resolved against the production data for the next round of CLMizing. The first exception group contained documents with the supplier site not flagged as a MIPR Assisting Office. This is a new flag under the business classification for suppliers in R12 and had to be manually updated for each supplier in each agency/operating unit. The universe to update these suppliers was not large, but an automated script would be beneficial for a greater list of supplier sites.

The next exception group contained a missing or incorrect Attribute5 value for MIPR type requisition conversion. To resolve these, a new supplier site was created or the existing site was updated in Production with the correct recipient/KO DODAAC. Additionally, the value had to be flagged as MIPR Assisting Office in 12.2.3 so the converted MIPR accurately contained the value in the receiving office field in the iProcurement module.

The last group contained award lines without an ACRN value. This was not a required field in 11.5.10 but is required for Contract (Other) and Direct Cite type awards in 12.2.3. To resolve these exceptions, we engaged the agency users during weekly meetings to have them manually update the ACRN values. By producing a listing from each mock round, it allowed the user community to view a snapshot of outstanding exceptions as well as adequate time to resolve the exceptions before the final CLMizing cutover to production.

Conclusion

At DAI, in order for the 12.2.3 upgrade and more specifically, CLM, to meet the agency requirements, all existing 11.5.10 P2P transactions had to be upgraded properly and efficiently. Ultimately, the upgrade was successful, but the path to achieving it came from identifying a clear approach to the CLMizing process and observing and correcting issues as they surfaced during the mock CLMizing rounds. No data upgrade will process without issues, but building out lead-time prior to the upgrade and resolving issues during mock upgrade events will be worth it in the end.

Appendix A - List of Acronyms

ACRN	Accounting Classification Reference Number
CLIN	Contract Line Item Number
CLM	Contract Lifecycle Management
DAI	Defense Agencies Initiative
DFARS	Defense Federal Acquisition Regulation
DFF	Descriptive Flexfield
DLA	Defense Logistics Agency
DOD	Department of Defense
DODAAC	Department of Defense Activity Address Code
EBS	Enterprise Business Suite
FAR	Federal Acquisition Regulation
MIPR	Military Interdepartmental Purchase Requests
P2P	Procure to Pay
PDS	Procurement Data Standard
PRDS	Procurement Request Data Standard
SLIN	Sub-contract Line Item Number
UDA	User Defined Attributes



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