

# ***CLJ-CMS***

## ***Integration Architecture***

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*EXHIBIT L of ACQ-2016-0701-RFP is provided for informational purposes only. As required under Section 5.3, any proposed CLJ-CMS systems and services for the Courts of Limited Jurisdiction Case Management System is expected to interoperate with and leverage the information in this document regarding the CLJ-CMS Integration Architecture.*

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## Executive Summary

This document identifies the integration architecture adopted by the Courts of Limited Jurisdiction Case Management System (CLJ-CMS) project and the interdependencies with other Administrative Office of the Courts (AOC) projects.

## Background

The execution of the CLJ-CMS integration strategy relies heavily on the lessons learned from the project efforts that have preceded us, such as the Superior Court Case Management System (SC-CMS) and the Superior Court Data Exchange (SCDX). The CLJ-CMS project intends to leverage the strengths of those project integration solutions while seeking improvements in technology and efficiencies in data exchange services to provide the best integration methods for satisfying our data exchange requirements.

The CLJ-CMS project faces some of the same business problems as the SC-CMS with respect to:

- Courts that have migrated to the new CMS still need access to statewide data from those who are not on the new CMS.
- Courts that have not migrated and are still on the Judicial Information System (JIS) still need access to statewide data from those that are on the new CMS.
- Courts that have migrated to their own CMS still need access to statewide data from those on the new CMS and on JIS.
- Justice partners need to continue to send/receive data regardless of the CMS used by a specific court.

The SC-CMS project utilizes an integration strategy of:

1. Replicating case data originating in the new system into the legacy system and
2. Synchronizing party data between the two.

Although the strategy was considered a sound integration solution at the time of the SC-CMS RFP, the post implementation review of the integration outcomes and the lessons learned from that implementation show:

- Utilizing screen scraping technology limits the ability to tune or provide integration efficiencies. This method was used for Case and Party replications in an effort to leverage existing business rules from the legacy system code.

- The new system does not enforce the same set of processing rules as the legacy systems, which causes replication events to be out of order or data exchange transactions to fail as incomplete.
- Fixing the data exchange to conform to the legacy business rules is a tedious manual process which requires a commitment of time and a repurpose of AOC and court resources to complete.
- The delay of data moving between the systems could impact judicial decision making and potentially put a victim and/or society at risk.
- Failure to identify (up front) all requirements for critical security controls could result in unacceptable levels of residual risk, adding costly mitigation requirements and inconvenience to court customers.

Other AOC data integration projects have been initiated since the SC-CMS and SCDX projects were implemented. These projects have leveraged technologies and processing efficiencies to improve service delivery. The CLJ-CMS project has learned from these projects to present an integration architecture that best satisfies our integration requirements.

Specifically, we are monitoring the following projects:

### **1. Information Networking Hub (INH)**

The INH is now a functioning AOC Enterprise Service Bus (ESB). Design patterns have been established and a few key data exchanges have been implemented successfully.

### **2. Expedited Data Exchange (EDE)**

The EDE project, which focuses on the use of the Enterprise Data Repository (EDR), is underway and is scheduled to implement King County District Court's (KCDC) Case Management Solution as its pilot. The schedule allows sufficient time for the CLJ-CMS project to utilize the services that provide for a common data exchange.

Many of the data exchanges with justice partners will be satisfied through the EDR by the EDE Application Integration Track. The EDE Data Integration Track ensures that statewide case and person data captured in JIS is placed into the EDR, conforming to the data standards set forth by the Judicial Information System Committee (JISC).

### **3. JABS Statewide Viewer**

The statewide viewer, which currently uses the Judicial Access Browser System (JABS), will enable users to view data from courts that are not on the same systems.

Capitalizing on the successes of each of the above projects is at the heart of the Integration Strategy.

- Utilizing INH services for data transmission and receipt.
- Leveraging the EDR for storage and data management.
- Exercising the JABS Statewide Viewer to enable courts to view the statewide data from the courts on other case management systems.

## Our Current State

For many years, the paradigm for integration has been to use multiple applications connected to a central database. Although a central database has some advantages, such as central data administration, this approach lacks the flexibility needed by today's courts to provide varying levels of functionality at each court level.

When new functionality is needed by a court level, either existing applications are modified or new ones are developed. Often, that leads to another court level requiring similar functionality, but with enough differences so as to not reuse what exists. Even though data is centralized, any changes to the structure of the data have to be carefully vetted and coordinated with the other applications. This, in turn, increases the level of effort and duration required to make changes, whether to add new or modify existing data structures.

AOC's systems are aging and are nearing the end of their life-spans. AOC has adopted the approach of purchasing commercial off-the-shelf (COTS) products to satisfy the needs of the courts. In addition, some courts have chosen to implement their own CMS. This means data is no longer housed in a single database. To address this, the JISC has passed a set of standard data elements that are to be shared amongst all courts.

The Appellate and Superior court levels have each chosen a COTS package to deliver the functionality needed by their courts, and implementation is underway. The EDR, which has been designed to conform to the standards adopted by the JISC, is also well underway. The EDE project has fast tracked the implementation of the EDR to support the decision by KCDC to purchase their own COTS program and not wait for the CLJ-CMS solution to be implemented and deployed.

With all of the above projects going on, it is natural to ask the question "Do we know where we are going and how we are going to get there?"

## The Future State

The following table identifies the three key components that are at the core of the future state of integration at AOC.

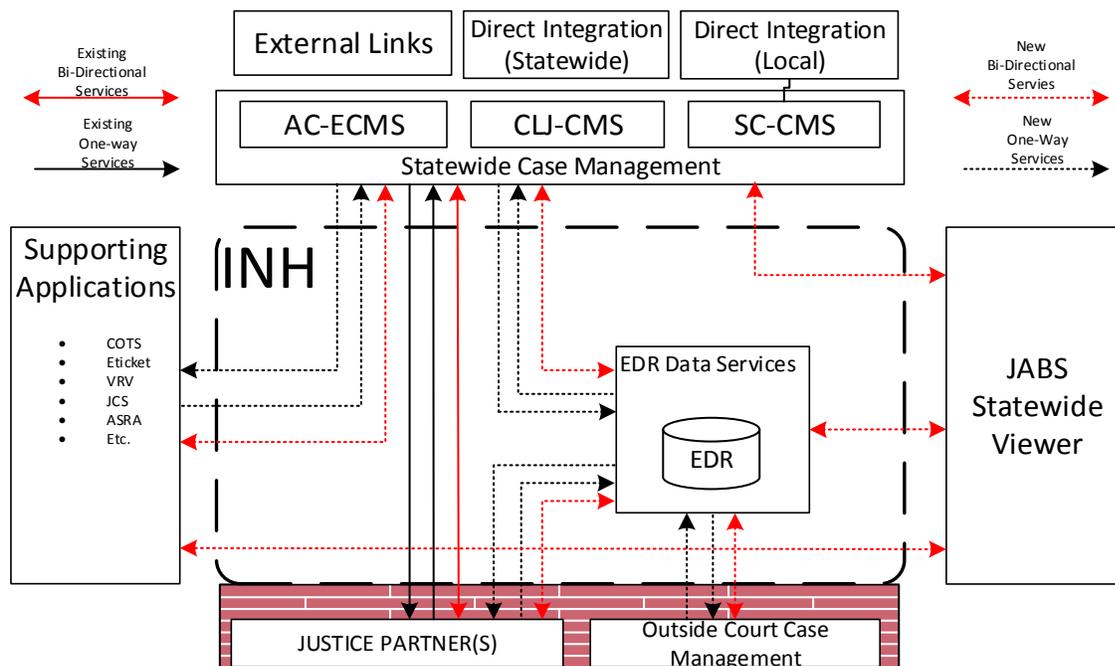
INH	The INH, as a component of our future state, contains the communication pathways for applications and justice partners to interact with AOC systems. Re-usable patterns simplify the addition of new services that provide integration of data between data providers and data consumers.
EDR	The EDR is our storage component. As courts from various levels and different systems need to share data, the EDR provides a common structure and location for that shared data. In addition to the common structure, mechanisms are built into the EDR that provide for data validation and a common representation of values, which may differ between systems.
JABS Statewide Viewer	Where statewide data needs to be viewed, but not necessarily shared and/or stored with a particular system, the JABS Statewide Viewer acts as that presentation level. The viewer will present the statewide data stored within the EDR. If an occasion exists where the data is not in the EDR, the JABS Statewide Viewer can utilize an INH service to display data from one of the other providers.

The diagram below shows the target end-state architecture. All AOC managed communications go through INH services. Utilizing the INH services as a transport mechanism to move data from provider to consumer allows the courts to leverage the flexibility of a modern system. Use of INH services also support application integration between the case management systems and supporting applications, however the system is used.

In contrast, with Data Integration, the case management systems will send shared statewide data to the EDR and, where appropriate, will send that data to justice partners. In the event where the EDR does not house data that needs to be sent to justice partners, the INH will distribute the data from the case management systems to justice partners. Courts that have opted not to join the statewide case management systems managed by AOC, still need to share statewide context data and will do so with data level integrations to the EDR.

The JABS Statewide Viewer is able to retrieve data from one or more of the statewide case management systems and read data from the EDR where much of the integration has already taken place.

From the CLJ perspective, data integration with the EDR and select justice partners, as well as Application Integration with supporting apps, all pass through the INH. While the EDR will provide the data, the INH will serve to integrate with the remainder of justice partners, the JABS Statewide Viewer, and outside court case-management systems.

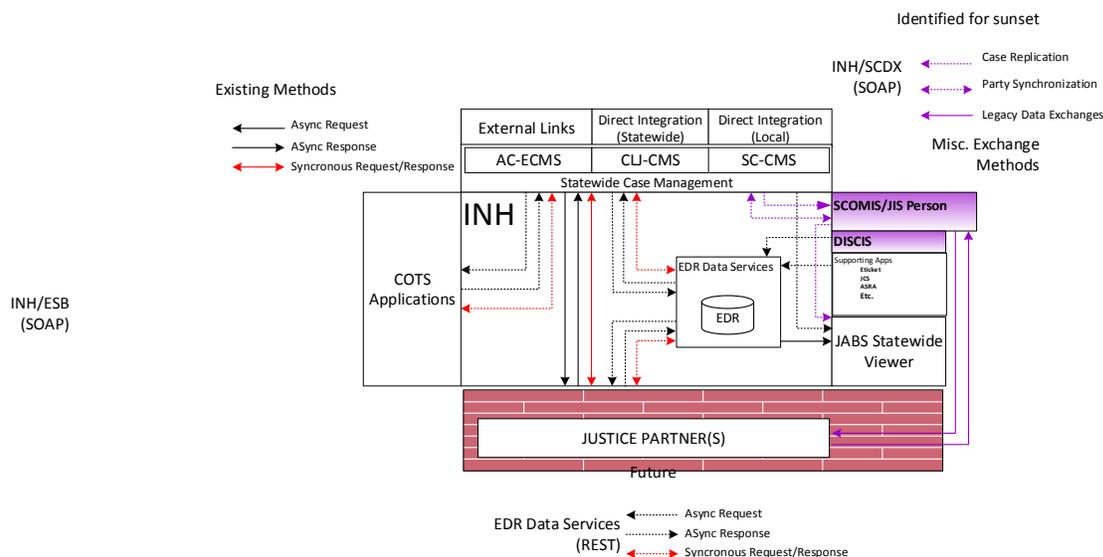


## The Transition State

As previously stated, the CLJ-CMS project has some advantages over the SC-CMS project. For example, the INH was still in infancy, the EDR was completely non-existent, and the JABS Statewide Viewer was just being discussed as a need. Additionally, the SC-CMS project used case replication and party synchronization between the new system and the legacy systems; issues arose when the legacy system, which requires data to be entered in a specific order, began receiving data from the more modern CMS that allows flexible data entry practices.

The CLJ-CMS project is committed to not duplicate those pain points. There will be no replication of data back to the legacy system. Instead, the Data Integration Track of the EDE project will seed the EDR with existing JIS person and case data. The Application Integration track of EDE will keep ongoing JIS data moving to the EDR. And, the CLJ-CMS will send data to the EDR.

The business problem that must be solved during the transition stage is when “Court A” transitions to the new system, they still need to have access to data from “Court B.” And conversely, “Court B”, which is still in the legacy system still needs access to the data generated by “Court A.”



As stated earlier, the INH component already has the infrastructure in place to enable communication pathways needed to solve the problem. The JABS Statewide Viewer is already pulling from multiple systems. As the EDR is completed, the transition phase is simplified. With the CLJ-CMS and JIS systems both providing data to the EDR, the JABS Statewide Viewer is being modified to read from the EDR to retrieve and display the data in a consolidated format. The CLJ-CMS will also have integration points with the EDR for retrieving and displaying data from the EDR without having to exit out of the CMS. The JABS Statewide Viewer will then be used by courts still on the legacy system to view the data captured in the new CMS.

After all the courts have moved off the legacy system, those systems and their integrations can be retired --thus bringing us to our future state.

Note: The diagram shows those to be retired in purple.

## In Summary

The CLJ-CMS project is excluding the use of replication and synchronization. Our integration architecture is tied to the use of INH services which enable:

- Shared statewide data to be consumed and displayed by the new CMS from the EDR.
- Shared statewide data to be consumed and displayed by the JABS Statewide Viewer for use by courts yet to migrate from the legacy systems.
- Justice partners to receive shared statewide data from the EDR.
- The transportation of local data between CLJ-CMS and supporting statewide applications.
- The transportation of local data between CLJ-CMS and justice partners.

Individual integration solutions utilize one or more of the following integration patterns:

Source	Destination	Integration Pattern(s)
<b>CLJ-CMS</b>	EDR	Publisher-Subscriber Request-Response Service Activator
<b>CLJ-CMS</b>	Justice Partner(s)	Publisher-Subscriber Request-Response Service Activator
<b>CLJ-CMS</b>	Supporting Application(s)	Publisher-Subscriber Request-Response Service Activator Event-Driven Consumer Durable-Subscriber Transactional-Client
<b>EDR</b>	CLJ-CMS	Event-Driven Consumer Transactional-Client Content-Based Routing
<b>Justice Partner</b>	CLJ-CMS	Event-Driven Consumer Transactional-Client