

State Patrol Message Switching System (MSS) Modernization Project

MARCH 24, 2023



Demonstration and Presentation Schedule

01

8:30-8:40am

Introductions
and Guidelines
10 minutes

05

10:15-11:30am

Focused
Demonstration
75 minutes

02

8:40-9:00am

Product Approach
and Overview
20 minutes

06

11:30-12:00am

Additional Topics
30 minutes

03

9:00-10:00am

Focused
Demonstration
50 minutes

07

12:00-1:00pm

Lunch
60 minutes

04

10:00-10:15am

Break
15 minutes

08

1:00-2:00pm

Additional Topics
and Closing
60 minutes

Introductions and Guidelines

Patrick Doyle
Jamie Blakley

01

Meet our team

Jamie Blakley
Law Enforcement SME



Patrick Doyle
Director, Justice & Law
Enforcement Practice



Mike Hulme
Lead Solution Architect



Keifer Hudson
DCI Technical Support



Terry Willert
Senior Technical
Delivery Manager



Jeff Corn
Architect



Virtual Team

Unisys

Jim Gschwend
Engagement Executive

Ravindra Kotikalapudi
Enterprise Architect

Kurt Martin
Cloud Architect

Theresa Huhn
LEMS Training Lead

Leighann Mansfield
Business Development Manager

Diverse Computing

Melissa Ehster
Product Development Manager

Nichole Moore
Chief Operating Officer

Product Approach and Overview

Patrick Doyle
Jamie Blakley

02

Why Unisys and DCI



Established, Attested



Unbeatable Pairing



Cloud Experts

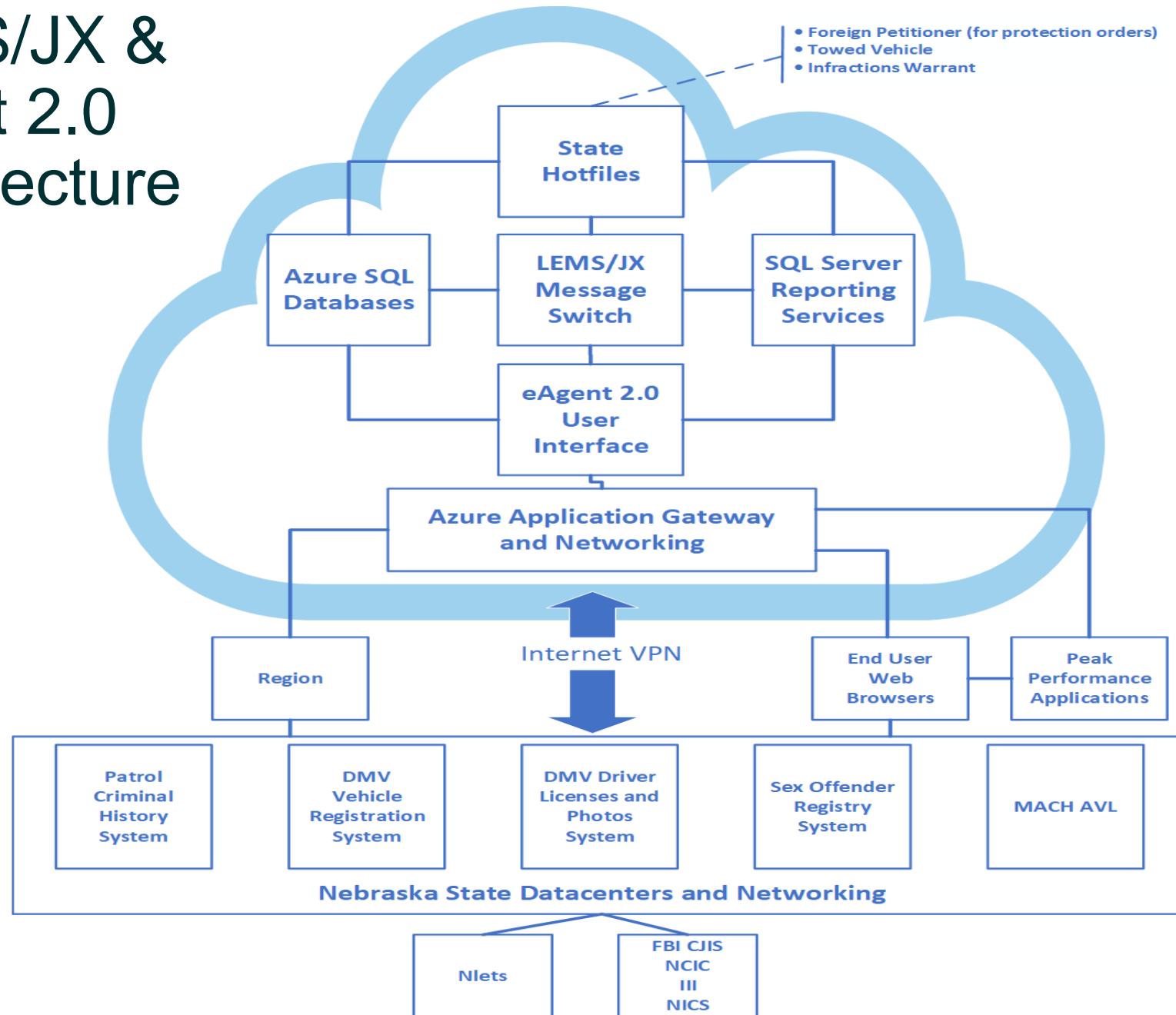


Customer Driven

Unisys LEMS/JX & DCI eAgent Product Overviews

- eAgent 2.0
- Zero Footprint End User Interface
- Customer Driven Design
- Flexible and Configurable
- Look for these Features
 - Hit Confirmation Workflow
 - eAgent Response Buttons (ERB)
 - VIN Assist
 - Smart Message
 - Device Independent
 - Team Inbox
- LEMS/JX -
- Highly attested/mature M/S tech stack
- Table driven with no code changes needed
- Complete & configurable message processing (parsing, field validations, reformatting, routing, etc.)
- Configurable interfaces using both modern and legacy technologies
- Cloud architected an eAgent 2.0 integrated
- Security supports both enterprise or application authentication
- Extremely reliable/2 billion+ messages routed yearly

Unisys LEMS/JX & DCI eAgent 2.0 "To Be" Architecture



Focused Demonstration Scenario 1

User maintenance

03

Scenario 1: User maintenance

Demonstrate / Present:

- user capabilities available to an agency and system administrator to create new users with various roles, and if applicable, how capabilities can be added or configured in the system
- process of adding each of the noted users with functions indicated above in Table 3
- process of updating the capabilities for three existing users in Table 3; for example, add a new capability to allow Community Service Officer Smith, created in step #2, above, to conduct record file maintenance and run reports and logs
- process of deactivating two of the above users
- how a user role can be removed for all users of an agency quickly without updating each and all users of that agency
- authentication process, including an overview of passwords and the sign-on process
- role-based user views once signed on to the system
- process for resetting a user password
- how a user would reset his/her own password

Scenario 1: User maintenance (continued)

Demonstrate / Present:

- process for adding and deactivating an MKE
- process for modifying an existing MKE
- process for making changes to message routing
- how to modify the originating agency identifier (ORI) table
- real-time system monitoring and diagnostics capabilities, including connectivity, central processing unit (CPU) utilization, and storage capacity
- ability to provide remote administrative access to the system
- ability to translate an ASCII dot delimited transaction to an XML schema and route that XML packet to a location using web services, then route the ASCII packet to another location
- ability to translate an XML schema received via web services to an ASCII dot delimited format and transmit that dot delimited transaction to a location
- ability to translate an XML schema received via web services to an ASCII dot delimited format, transmit that dot delimited transaction to a location, and transmit the XML packet to another location

Demonstrate/present the user capabilities available to an agency and system administrator to create new users with various roles

- NSP and local agency user administrators manage LEMS/JX / eAgent 2.0 user profiles using the LEMS/JX User Management Console
- NSP user administrators can manage all users
- Local agency user administrators can only manage users in their own agency
- NSP manages who is a local agency user administrator
- Permissions for eAgent 2.0 users and some local agency interface users are managed using LEMS/JX Function Groups
- Permissions for LEMS/JX Console users and LEMS/JX User Management Console users are managed using LEMS Console Roles



DEMO

Authentication process, including an overview of passwords and the sign-on process

- Sign-on through eAgent 2.0 uses Azure Active Directory (AD) authentication – user ID, password, and multifactor authentication (MFA) – Authentication App (Microsoft, Google, FortiToken, YubiKey)
- If authentication is successful, eAgent 2.0 verifies user is enabled and certification not expired; retrieves function group
- Self-service Password Management application allows users to:
 - Set their email address for password expiration notifications
 - Change their password (to change their password before it expires)
 - Enroll in self-services password reset
 - Reset their password (to reset their password if they forgot it or it has expired)
- Video demonstration of Self-service Password Management

DEMO

Real-time System Monitoring and Diagnostics Capabilities

The screenshot displays the Azure portal interface for a virtual machine. The top navigation bar includes the Microsoft Azure Government logo, a search bar, and utility icons. The left sidebar contains a navigation menu with categories like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Settings, Networking, Connect, Disks, Size, Microsoft Defender for Cloud, Advisor recommendations, Extensions + applications, Availability + scaling, Configuration, Identity, Export template, Properties, Locks, Operations, Bastion, Auto-shutdown, Backup, Disaster recovery, and Updates.

The main content area shows the virtual machine 'az-jumpvm11s' with various configuration and monitoring details:

- Advisor (1 of 7):** Virtual machines should encrypt temp disks, caches, and data flows between Compute and Storage resources →
- Essentials:**
 - Resource group (move): [ncjis-shared-utility-rg](#)
 - Status: Running
 - Location: USGov Arizona
 - Subscription (move): [Azure Government CSP](#)
 - Subscription ID: 31f7f956-5ffc-4134-b272-d1d36afd92f4
 - Tags (edit): Organization : ncjis, environment : shared
- Operating system:** Windows (Windows Server 2019 Datacenter)
- Size:** Standard B2ms (2 vcpus, 8 GiB memory)
- Public IP address:** [52.235.130.66](#)
- Virtual network/subnet:** [ncjis-shared-hub-vnet/ManagementSubnet](#)
- DNS name:** [Not configured](#)

The **Properties** tab is active, showing the following details:

Property	Value
Computer name	az-jumpvm11s
Health state	-
Operating system	Windows (Windows Server 2019 Datacenter)
Publisher	MicrosoftWindowsServer
Offer	WindowsServer
Plan	2019-Datacenter
VM generation	V1
Agent status	Ready
Agent version	2.7.41491.1075
Host group	None
Host	-
Proximity placement group	-
Colocation status	N/A

The **Availability + scaling** tab shows:

Availability zone	-
Availability set	-

The **Networking** tab shows:

Public IP address	52.235.130.66 (Network interface az-jumpvm11s158)
Public IP address (IPv6)	-
Private IP address	10.14.15.117
Private IP address (IPv6)	-
Virtual network/subnet	ncjis-shared-hub-vnet/ManagementSubnet
DNS name	Configure

The **Size** tab shows:

Size	Standard B2ms
vCPUs	2
RAM	8 GiB

The **Disk** tab shows:

OS disk	az-jumpvm11s_OsDisk_1_739fde21e6e0447cb0922c4e392d6545
Azure disk encryption	Not enabled
Ephemeral OS disk	N/A
Data disks	0

Real-time System Monitoring and Diagnostics Capabilities

Properties Monitoring Capabilities (7) Recommendations (7) Tutorials

Alerts

 Enable recommended alert rules

Get notified on important monitoring events by enabling commonly used alert rules or creating your own custom rules.

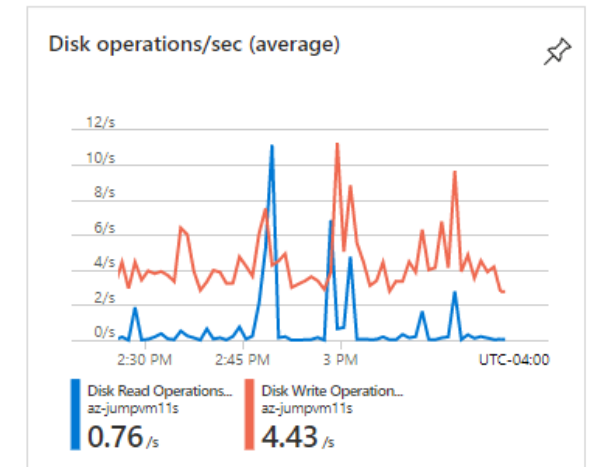
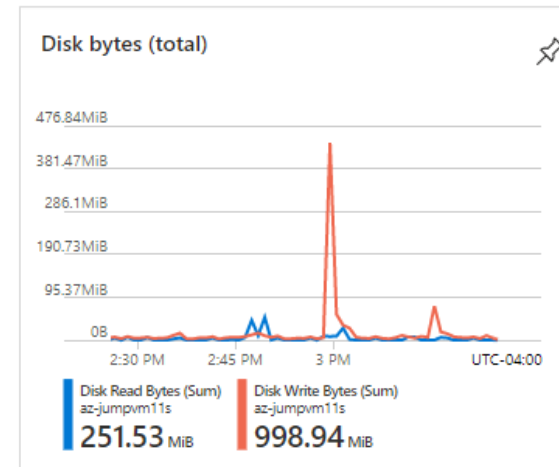
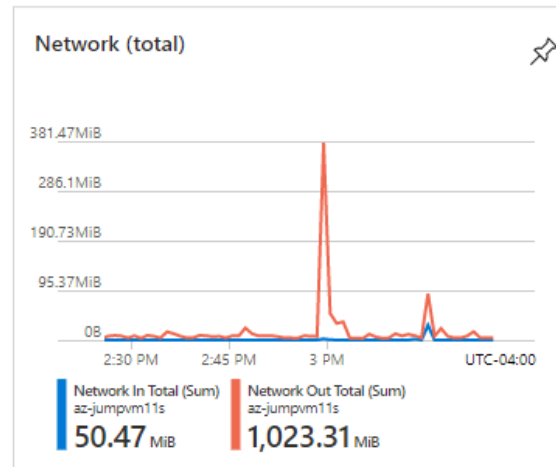
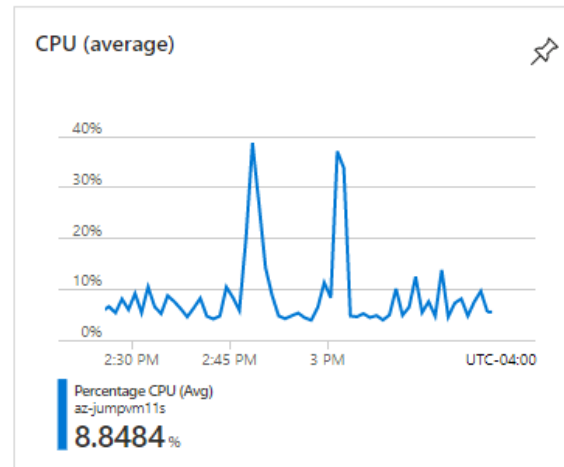
Enable

Create alert rule

Key Metrics [See all metrics](#)

Show data for last:

1 hour 6 hours 12 hours 1 day 7 days 30 days



Ability to provide remote administrative access to the system

- LEMS/JX User Management Console for administration of users and eAgent user inboxes/team inboxes
 - Agencies and NSP
- LEMS/JX Console for LEMS/JX operation, administration, and configuration (NSP)
- Microsoft Azure Government Portal for infrastructure administration

ASCII dot delimited and XML schema format transformation

- LEMS/JX uses XML Stylesheet Transformations (XSLT) to transform transactions from XML formats to other XML formats and to text
- XSLT is a W3C standard – not proprietary
- XSLT is defined in a stylesheet file written in XML and provides the transformation instructions
- XSLT files are tested, then deployed to production and take effect immediately without requiring any software code changes
- An “Output Stylesheet” specifies the transformation from an input transaction format to an output transaction format

```
<?xml version="1.0" encoding="US-ASCII"?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform" xmlns:nc="h
  <xsl:output method="xml" version="1.0" encoding="US-ASCII" indent="yes" cdata-section-
  <xsl:include href="../Common/NletsHeader-NletsNIEM.xslt"/>
  <xsl:include href="../Common/NletsConversions.xslt"/>
  <xsl:variable name="mke" select="LEMSMSG/HEADER/OUT-MKE"/>
  <xsl:template match="/">
    <n2:NLETS>
      <xsl:attribute name="n2:version">4.00</xsl:attribute>
      <xsl:apply-templates select="LEMSMSG/HEADER"/>
      <n2:NLETSInquiryData>
        <xsl:attribute name="n2:key"><xsl:value-of select="$mke"/></xsl:attribute>
        <xsl:choose>
          <xsl:when test="$mke='DQ'">
            <xsl:apply-templates select="LEMSMSG/BODY/MESSAGE" mode="DQ"/>
          </xsl:when>
          <xsl:when test="$mke='DQG'">
            <xsl:apply-templates select="LEMSMSG/BODY/MESSAGE" mode="DQG"/>
          </xsl:when>
          <xsl:when test="$mke='DNQ'">
            <xsl:apply-templates select="LEMSMSG/BODY/MESSAGE" mode="DNQ"/>
          </xsl:when>
          <xsl:otherwise/>
        </xsl:choose>
      </n2:NLETSInquiryData>
    </n2:NLETS>
  </xsl:template>
  <!-- DQ -->
  <xsl:template match="LEMSMSG/BODY/MESSAGE" mode="DQ">
    <n2:Person>
      <xsl:apply-templates select="DOB"/>
      <xsl:apply-templates select="NAM"/>
      <xsl:apply-templates select="SEX"/>
      <xsl:apply-templates select="OLN"/>
    </n2:Person>
    <xsl:apply-templates select="IMQ"/>
  </xsl:template>
```

Ability to translate an ASCII dot delimited transaction to an XML schema and route that XML packet to a location using web services, then route the ASCII packet to another location

- LEMS/JX provides a capability to automatically create an XML file in internal “LEMS Basic XML Format” from the fields parsed out of an ASCII dot delimited message
- A first output stylesheet is written and deployed to specify the transformation from the LEMS Basic XML Format to the output XML schema format
- A second output stylesheet is written and deployed to specify the transformation from the LEMS Basic XML Format to the output ASCII dot delimited format
- A first LEMS/JX output control entry specifies the first output stylesheet and destination for the web service
- A second LEMS/JX output control entry specifies the second output stylesheet and destination for other location

Ability to translate an XML schema received via web services to an ASCII dot delimited format and transmit that dot delimited transaction to a location

- An output stylesheet is written and deployed to specify the transformation from the web services XML Format to the output ASCII dot delimited format
- A LEMS/JX output control entry specifies the output stylesheet and destination for the location

Ability to translate an XML schema received via web services to an ASCII dot delimited format, transmit that dot delimited transaction to a location, and transmit the XML packet to another location

- A first output stylesheet is written and deployed to specify the transformation from the web services XML Format to the output ASCII dot delimited format
- A second output stylesheet is written and deployed to specify the transformation from the web services XML Format XML Format to the output XML schema format
- A first LEMS/JX output control entry specifies the first output stylesheet and destination for the other location
- A second LEMS/JX output control entry specifies the second output stylesheet and destination for web service

Scenario 1: User maintenance

Demonstrate / Present:

- user capabilities available to an agency and system administrator to create new users with various roles, and if applicable, how capabilities can be added or configured in the system
- process of adding each of the noted users with functions indicated above in Table 3
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- role-based user views once signed on to the system
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- how a user would reset his/her own password

Scenario 1: User maintenance (continued)

Demonstrate / Present:

- process for adding and deactivating an MKE
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- ability to translate an XML schema received via web services to an ASCII dot delimited format, transmit that dot delimited transaction to a location, and transmit the XML packet to another location

Focused Demonstration Scenario 2

Reports and logging

03

Scenario 2: Reports and logging

Demonstrate / Present:

- range of available standard system logs
- utilization of user-based roles or permissions associated with the system logs
- process for generating a standard system log
- process for generating an ad hoc system log for audit purposes
- process of viewing, saving, and printing any system log that is generated
- how an administrator could generate both a daily log of system activity and an activity log for a specific user for a specific month
- utilization of user-based roles or permissions associated with the management reporting solution
- general management reporting solution proposed for the system
- range of available standard system management reports
- process for generating a standard management report

Scenario 2: Reports and logging

Demonstrate / Present:

- generation and output of the following three sample reports:
 - System uptime
 - Number of transactions or inquiries performed by agency, for a user-definable period of time
 - Number of input/output transactions conducted for a given period
- process for generating an ad hoc report for data
- how an administrator can select and export log data into CSV and XML formats
- generation and output of the following three ad hoc reports:
 - All transactions related to a specific vehicle, article, or person
 - All transactions entered by a specific user
 - All queries submitted by a specific user or agency
- how an administrator could create a custom report of summary monthly administrative messaging by agency which will be generated quarterly
- process of viewing, saving, printing, and deleting any report that is generated, including exports to other file formats, such as Excel, Word, or PDF

Scenario 2: Reports and logging

Logs & Ad-hoc Reporting Capabilities – Event Logs

Demonstrate / Present:

- range of available standard system logs
- process for generating a standard system log
- process for generating an ad hoc system log for audit purposes
- process of viewing, saving, and printing any system log that is generated
- how an administrator could generate both a daily log of system activity and an activity log for a specific user for a specific month
- process for generating an ad hoc report for data



Scenario 2: Reports and logging

Logs & Ad-hoc Reporting Capabilities – Event Logs – Cont.

Demonstrate / Present:

- process for generating an ad hoc report for data
- generation and output of the following three ad hoc reports:
 - All transactions related to a specific vehicle, article, or person
 - All queries submitted by a specific user or agency
- how an administrator can select and export log data into CSV and XML formats



DEMO

Scenario 2: Reports and logging

Standard Management Reports – Overview

Demonstrate / Present:

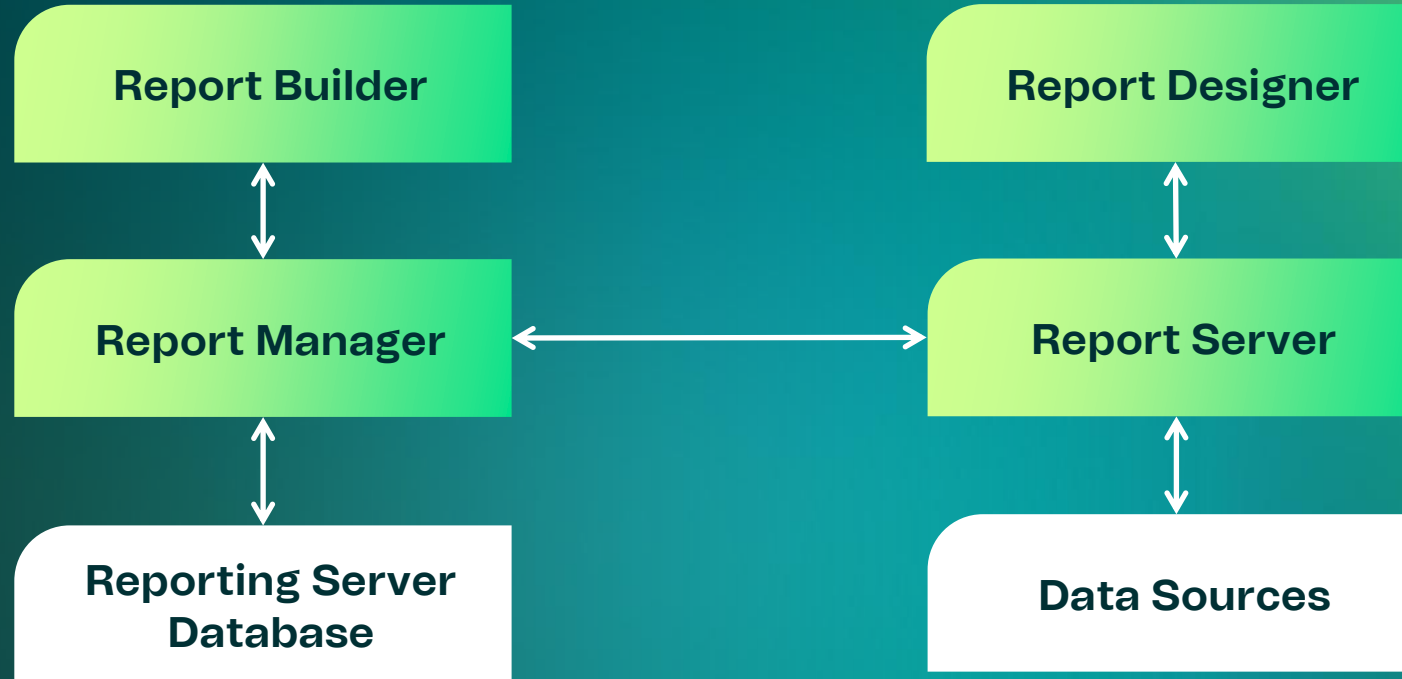
- general management reporting solution proposed for the system
- how an administrator could create a custom report of summary monthly administrative messaging by agency which will be generated quarterly



Scenario 2: Reports and logging

Standards Management Reports – Reporting Architecture

SSRS Architecture



Scenario 2: Reports and logging

Customized Reports – Report Builder

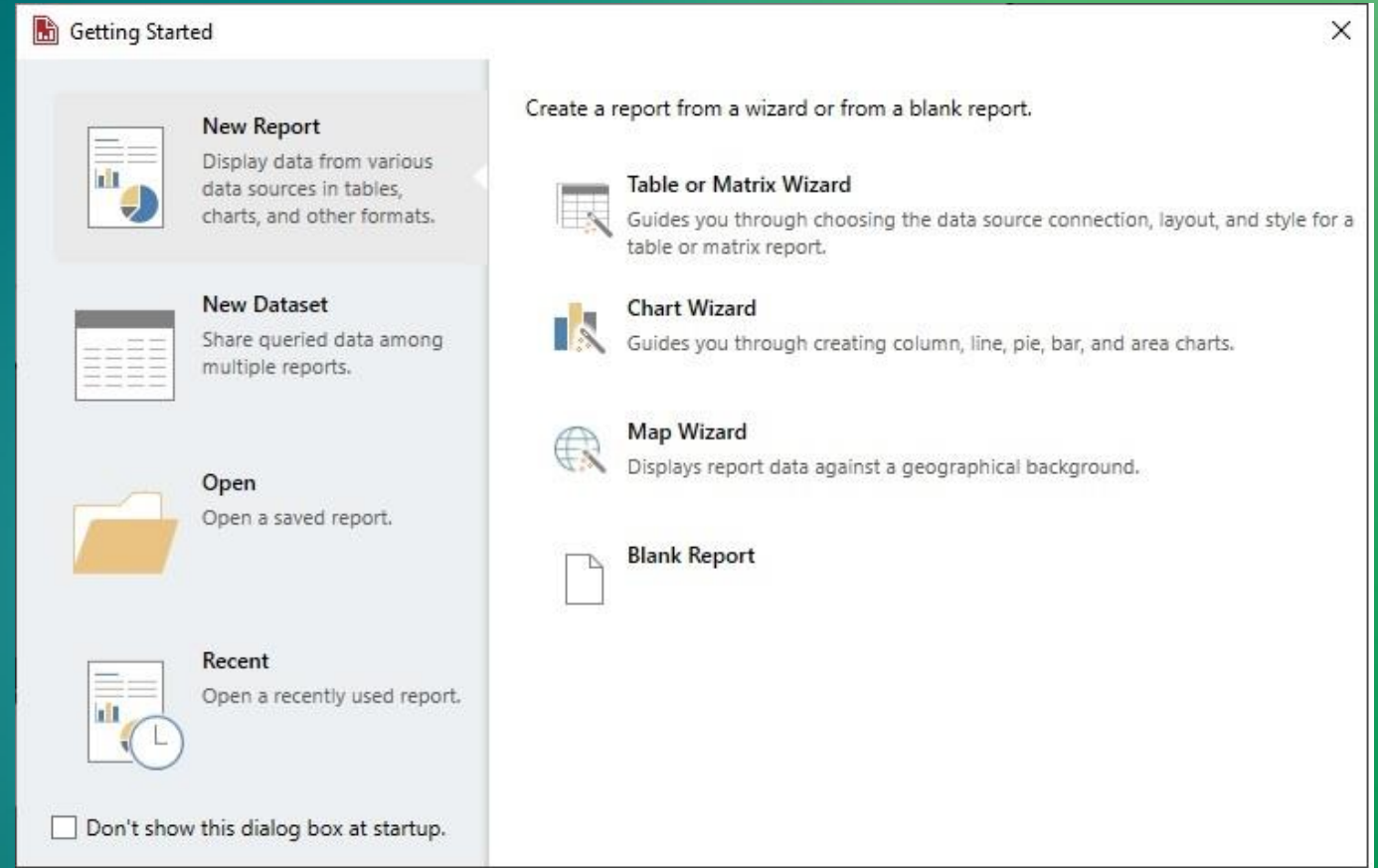
SQL Server – Report Builder

Guided Flow

Design Report Layout

Leveraged Shared Datasets

Targets: Power Users or IT Pros



Scenario 2: Reports and logging

Standards Management Reports – Reporting Permission

Demonstrate / Present:

- utilization of user-based roles or permissions associated with the system logs
- utilization of user-based roles or permissions associated with the management reporting solution



Scenario 2: Reports and logging

Standard Management Reports – Reporting Permission – Cont.

The screenshot displays the LEMS/JX Web Console Manager interface. The main window is titled "LEMS/JX Web Console Manager - [Users]". It features a table of users with columns for User ID, Full Name, Enabled, Email Address, and Telephone Number. A user named "Wilma Jones" is selected, and a sub-panel below shows "User Access" details, including Environment ID, Role ID, Last Logon Date, and Logons.

User ID	Full Name	Enabled	Email Address	Telephone Number
* Click to enter a new User				
uc-lemstraining\kotikar	Ravi	<input checked="" type="checkbox"/>		
uc-lemstraining\MiltonM	Mike Milton	<input checked="" type="checkbox"/>		
uc-lemstraining\pahreng	Greg Pahren	<input checked="" type="checkbox"/>	greg.pahren@unisys.com	757-202-9860
uc-lemstraining\testre...	Test Readonly	<input checked="" type="checkbox"/>		
uc-lemstraining\testus...	test user 1	<input checked="" type="checkbox"/>		
uc-lemstraining\testus...	test user 2	<input checked="" type="checkbox"/>		
uc-lemstraining\testus...	test user 3	<input checked="" type="checkbox"/>		
uc-lemstraining\testus...	test user 4	<input checked="" type="checkbox"/>		
uc-lemstraining\testus...	test user 5	<input checked="" type="checkbox"/>		
uc-lemstraining\testus...	test user 6	<input checked="" type="checkbox"/>		
uc-lemstraining\willertt	Terry Willert	<input checked="" type="checkbox"/>		
WilmaJones	Wilma Jones	<input type="checkbox"/>		

Environment ID	Role ID	Last Logon Date	Logons
* Click to add a new access			
Training	Device	1970-01-01 12:00:00 AM	0
Training	Query_User_Maintenance	1970-01-01 12:00:00 AM	0
Training	Reports_User_Main_Mess...	1970-01-01 12:00:00 AM	0

Completed updating the permissions configuration at 3/23/2023 8:36:02 AM

Users Environments Roles Features PickLists Web.Config Event Viewer ...

UNISYS | Securing Your Tomorrow™ LEMS/JX Console 9.2.0.29 LEMS/JX Console Manager 9.2.0.26

Scenario 2: Reports and logging

Standard Management Reports – Reporting Permission – Cont.

The screenshot displays the 'LEMS/JX Web Console Manager - [Roles]' interface. The main area shows a list of roles with columns for 'Role ID' and 'Description'. The role 'Reports_User_Main_Messa...' is selected, and its configuration is shown in a sub-panel with tabs for 'Role Features' and 'Role Access'. The 'Role Access' tab is active, showing a table of permissions for various features.

Feature	Query	Add	Modify	Delete
EventLogs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Function	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
InputControl	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MessageFormat	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
OutputControl	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
User	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
UserGroups	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Completed updating the permissions configuration at 3/23/2023 8:36:02 AM

Users Environments **Roles** Features PickLists Web.Config Event Viewer ...

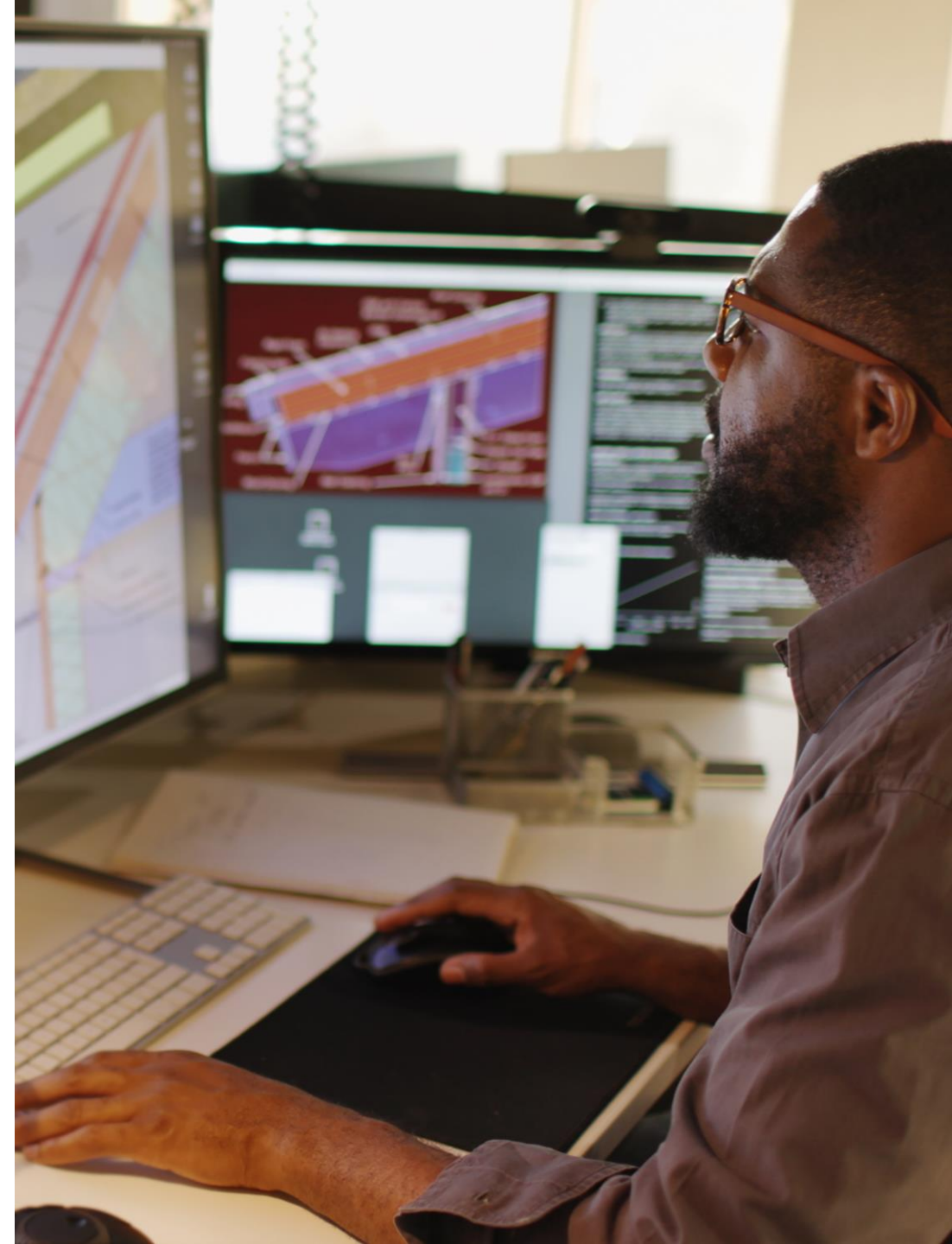
UNISYS | Securing Your Tomorrow LEMS/JX Console 9.2.0.29 LEMS/JX Console Manager 9.2.0.26

Scenario 2: Reports and logging

Standards Management Reports – Statistics Report

Demonstrate / Present:

- how an administrator could generate both a daily log of system activity and an activity log for a specific user for a specific month
- range of available standard system management reports
- process for generating a standard management report
- generation and output of the following three sample reports:
 - Number of input/output transactions conducted for a given period
- process of viewing, saving, printing, and deleting any report that is generated, including exports to other file formats, such as Excel, Word, or PDF

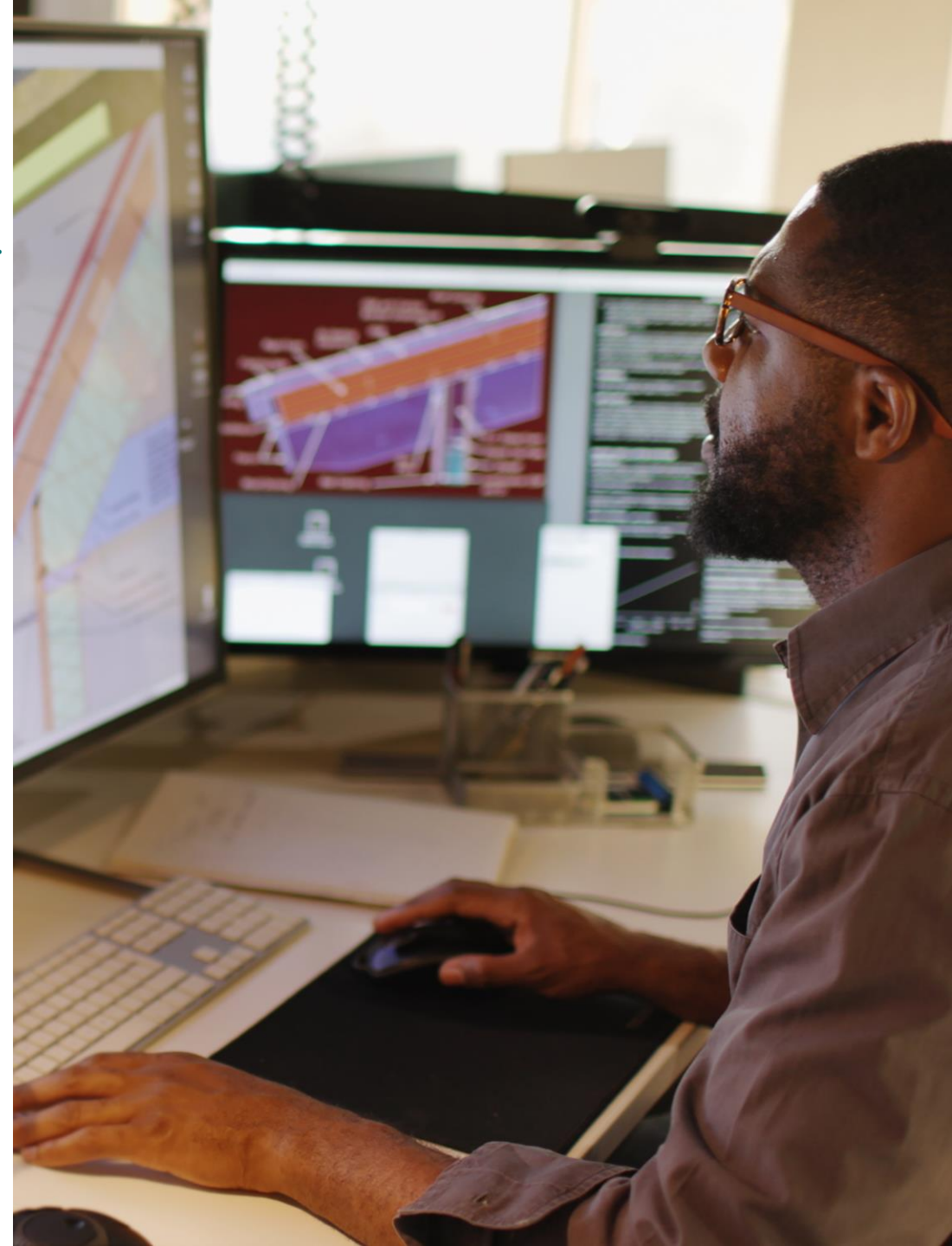


Scenario 2: Reports and logging

Standards Management Reports – Statistics Report – Cont.

Demonstrate / Present:

- how an administrator can select and export log data into CSV and XML formats



DEMO

Scenario 2: Reports and logging

Daily activity for specific user

Demonstrate / Present:

generation and output of the following three ad-hoc reports:

- All transactions entered by a specific user

2023-02-25		TRAFFIC REPORT	
2023-02-01 0:00:00 TO 2023-02-29 23:59:59			
Date: 2/4/2023 11:15:10 AM	MSN: 0013000AE5		
MKE: DQ	User: 11TW01	Source Device: LEMS01	Dest Device: N/A
DQ.PAPEPDEI1.PA.TXTOLN/26496250.IMQ/Y			
Date: 2/4/2023 11:15:11 AM	MSN: 0013000AE5		
MKE: QWTV	User: 11TW01	Source Device: ETIMS	Dest Device: LEMS01
053756678200.LEMS01-00008055.ETIMS.20200204.11:15:11.11:15:11.0013000AE5 RESPONSE FROM ETIMS FOR OLN/26496250.OLG/PA DRIVER LICENSE RECORD NOT FOUND			
Date: 2/4/2023 11:15:11 AM	MSN: 0013000AE5		
MKE: QWA	User: 11TW01	Source Device: HOTQ	Dest Device: LEMS01
053756678200.LEMS01-00008056.LOCAL.PPD.20200204.11:15:11.11:15:11.0013000AE5 **** RESPONSE FROM PHILADELPHIA HOT FILE **** 1N010013000AE5QWA PAPEPDEI1 NO RECORDS FOUND OLN/26496250			
Date: 2/4/2023 11:15:12 AM	MSN: 0013000AE5		
MKE: QWA	User: 11TW01	Source Device: PHILO	Dest Device: LEMS01
053756678200.LEMS01-00008057.NCIC.20200204.11:15:12.11:15:11.0013000AE5 PAPEPDEI1 ***MESSAGE KEY QWA SEARCHED ALL NCIC PERSONS FILES WITHOUT LIMITATIONS. NO NCIC WANT OLN/26496250			

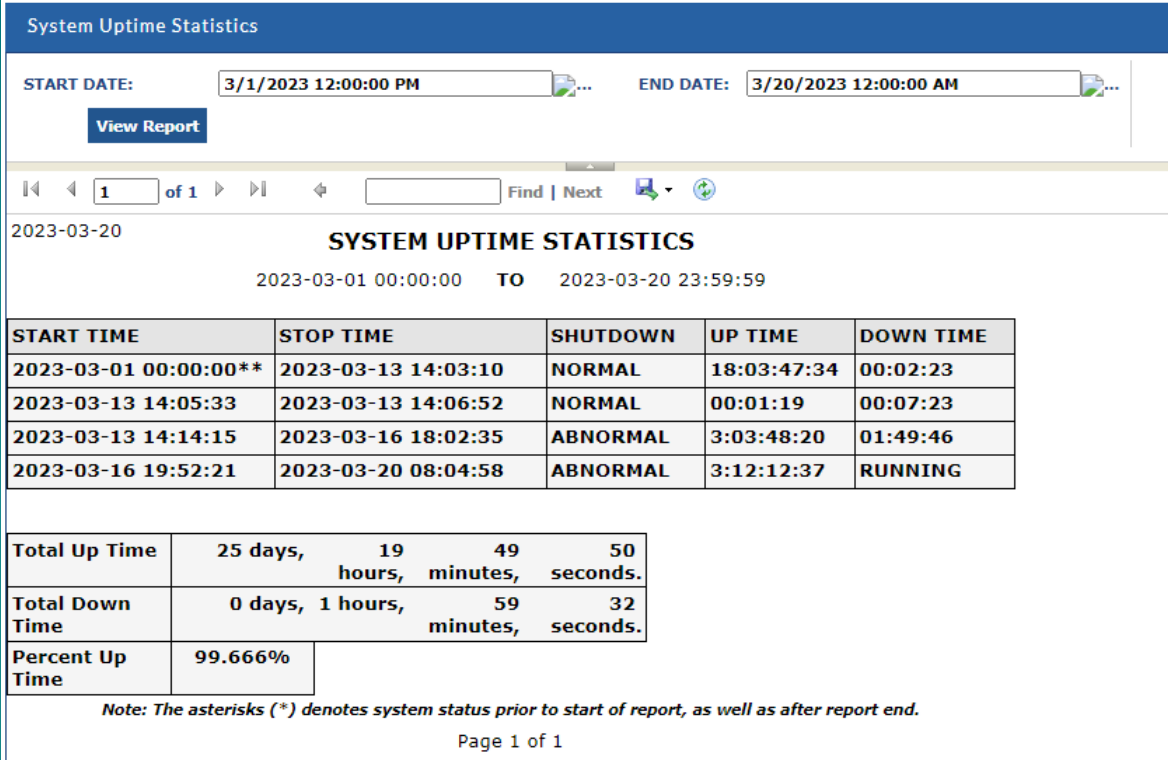
Scenario 2: Reports and logging

Uptime Report

Demonstrate / Present:

generation and output of the following three sample reports:

- System uptime



The screenshot shows a web-based interface for 'System Uptime Statistics'. At the top, there are input fields for 'START DATE' (3/1/2023 12:00:00 PM) and 'END DATE' (3/20/2023 12:00:00 AM), with a 'View Report' button below them. Below the date fields is a navigation bar with '1 of 1' and 'Find | Next' options. The main content area is titled 'SYSTEM UPTIME STATISTICS' and shows the date range '2023-03-01 00:00:00 TO 2023-03-20 23:59:59'. A table follows with columns for 'START TIME', 'STOP TIME', 'SHUTDOWN', 'UP TIME', and 'DOWN TIME'. Below this table is a summary table with rows for 'Total Up Time', 'Total Down Time', and 'Percent Up Time'. A note at the bottom explains that asterisks (*) denote system status prior to the start of the report and after the report end. The page is labeled 'Page 1 of 1'.

START TIME	STOP TIME	SHUTDOWN	UP TIME	DOWN TIME
2023-03-01 00:00:00**	2023-03-13 14:03:10	NORMAL	18:03:47:34	00:02:23
2023-03-13 14:05:33	2023-03-13 14:06:52	NORMAL	00:01:19	00:07:23
2023-03-13 14:14:15	2023-03-16 18:02:35	ABNORMAL	3:03:48:20	01:49:46
2023-03-16 19:52:21	2023-03-20 08:04:58	ABNORMAL	3:12:12:37	RUNNING

Total Up Time	25 days, 19 hours, 49 minutes, 50 seconds.
Total Down Time	0 days, 1 hours, 59 minutes, 32 seconds.
Percent Up Time	99.666%

Note: The asterisks () denotes system status prior to start of report, as well as after report end.*

Page 1 of 1

Scenario 2: Reports and logging

Custom Statistics by Agency

Demonstrate / Present:

following three sample reports:

- Number of transactions or inquiries performed by agency, for a user-definable period of time

2023-02-22

CUSTOM STATISTICS

2023-02-14 0:00:00 TO 2023-02-21 23:59:59

<u>ORI</u>	<u>I-Msg</u>	<u>O-Msg</u>	<u>T-Msg</u>
PAPEP0000	3	3	6
PAPEP0003	41	115	156
PAPEP0A25	8	19	27
PAPEP0E11	6	15	21
PAPEP0E14	149	393	542
PAPEP0EM2	23	66	89
Total:	230	611	841

Scenario 2: Reports and logging

Demonstrate / Present:

- ✓ range of available standard system logs
- ✓ utilization of user-based roles or permissions associated with the system logs
- ✓ process for generating a standard system log
- ✓ process for generating an ad hoc system log for audit purposes
- ✓ process of viewing, saving, and printing any system log that is generated
- ✓ how an administrator could generate both a daily log of system activity and an activity log for a specific user for a specific month
- ✓ utilization of user-based roles or permissions associated with the management reporting solution
- ✓ general management reporting solution proposed for the system
- ✓ range of available standard system management reports
- ✓ process for generating a standard management report

Scenario 2: Reports and logging

Demonstrate / Present:

- ✓ generation and output of the following three sample reports:
 - System uptime
 - Number of transactions or inquiries performed by agency, for a user-definable period of time
 - Number of input/output transactions conducted for a given period

✓ process for generating an ad hoc report for data

✓ how an administrator can select and export log data into CSV and XML formats

- ✓ generation and output of the following three ad hoc reports:

- All transactions related to a specific vehicle, article, or person
- All transactions entered by a specific user
- All queries submitted by a specific user or agency

✓ how an administrator could create a custom report of summary monthly administrative messaging by agency which will be generated quarterly

✓ process of viewing, saving, printing, and deleting any report that is generated, including exports to other file formats, such as Excel, Word, or PDF

Break

04

Focused Demonstration Scenario 3

MSS Interfaces

05

Scenario 3: MSS Interfaces

Demonstrate / Present:

- logging into the user interface
- how the graphical user interface (GUI) utilizes features such as drop-down menus, autofill, and lookup tables
- processing of responses back from NCIC such as the capture and forwarding of "\$" messages through the proposed message switch
- process of viewing, saving, printing, and deleting the system responses received from a wanted person entry as well as other solicited messages
- how the system performs image processing
- batch file processing
- following record queries:
 - Query vehicle (QV)
 - Driver query (DQ)
 - Criminal history search (QH)
- sending of an administrative message to a group of agencies
- process of viewing, saving, printing, and deleting administrative messages received as well as other unsolicited messages
- Discuss options for providing statewide training user interface
- Understanding of existing external interface protocols
- following interfaces:
 - DMV interface
 - Web service to Nlets
 - Web service from an in-state agency to NSP
- product readiness for XML interfaces

DEMO

Batch File Processing

- The LEMS/JX batch file capability provides the ability to read transaction requests from input batch files and write responses to output batch files
- Input batch files are transferred by external systems or administrators to batch folders accessible by LEMS/JX
- Output batch files are transferred by external systems or administrators from the batch folders accessible by LEMS/JX
- Batch LEMS/JX devices are used to read the input batch files and write the output batch files
- Two methods are available:
 - Run whenever an input batch file appears in a specified folder
 - Run specified input batch file on specified days of the week and times
- Note that FBI CJIS does not support batch queries (QAB, QBB, QGB, QSB, QVB, QWB) in NCIC NIEM XML

Understanding of existing external interface protocols

- National systems: Unisys is an industry leader in the implementation of modern national interface standards – the first or among the first few
 - Nlets NIEM web services
 - NCIC NIEM web services
 - III NIEM web services
 - NICS NIEM web services
- State systems: Unisys applies our system integration expertise and LEMS/JX interface capabilities to configure legacy interface technologies (e.g., TCP/IP socket, IBM mainframe) and modern interface technologies (e.g., XML web services) required for state systems
 - Patrol Criminal History (PCH)
 - DMV vehicle registrations, driver licenses, and photos
 - Sex offender registry
 - MACH AVL
- Local agency systems:
 - Modern: LEMS Web Services: standards-based NIEM XML web services
 - Legacy: DMPP-2020/OFML

Specific interfaces

- DMV interface
 - Vehicle Title and Registration: LEMS/JX web services interface configured to conform to existing specifications provided by DMV/NSP
 - Driver licenses and photos: IBM mainframe interface using Microsoft Host Integration Server or other interface specifications provided by DMV/NSP
- Web service to Nlets
 - Standard Nlets NIEM web services – all Nlets transactions (in production in other states)
- Web service from an in-state agency to NSP (in production in other states)
 - LEMS Request Service provided by LEMS/JX and consumed by in-state agency to send request messages
 - LEMS Response Service provided by in-state agency and consumed by LEMS/JX to receive response messages and unsolicited messages
 - Simple, Web Services-Interoperability (WS-I) compliant Soap web service
 - Uses standard Nlets, NCIC, III, NICS, and State XML formats – no reinventing the wheel with a proprietary XML format
 - Uses Transport Layer Security (TLS) with certificate-based mutual authentication and FIPS 140-2 certified cryptographic modules for CJISSECPOL compliant encryption and authentication

Product readiness for XML interfaces

- Unisys has provided XML capabilities in LEMS/JX for over 20 years and is an industry leader in the implementation of XML interfaces
- LEMS/JX provides highly configurable capabilities for XML interfaces and XML message handling
 - Parsing XML input messages using parsing stylesheet files
 - Validating parsed XML input message field content and relationships using LEMS/JX validation tables
 - Transforming from dot-slash or any parsable input message format to XML output format using stylesheet files
 - Transforming an XML input message format to a different output XML format using stylesheet files
 - Transforming an XML input message format to a text or output XML format using stylesheet files
 - Specification of parsing stylesheet files in input control table
 - Specification of output stylesheet files in output control table
 - XML Groups to specify interfaces that use the same XML formats







Statewide Training








Discuss options for providing statewide training user interface

- Statewide Train the Trainer
- Training system with simulated responses

Scenario 3: MSS Interfaces

Demonstrate / Present:

-  logging into the user interface
-  how the graphical user interface (GUI) utilizes features such as drop-down menus, autofill, and lookup tables
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-  batch file processing

-  following record queries:
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-  Discuss options for providing statewide training user interface
-  Understanding of existing external interface protocols
-  following interfaces:
 - DMV interface
 - Web service to Nlets
 - Web service from an in-state agency to NSP
-  product readiness for XML interfaces

Focused Demonstration Scenario 4

Administrative maintenance

05

Scenario 4: Administrative maintenance

Demonstrate / Present:

- process of performing a system shutdown and restart under routine and emergency situations
- any tools or GUIs that would be used to monitor the real-time status of the MSS
- any tools or GUIs that would be used to monitor/verify the status of interface (NCIC, Nlets, DMV, etc.) connections
- process of creating, modifying, and maintaining product forms and how those forms are rolled out to the clients
- process of adding and disabling various codes (ORIs, uniform offense codes, vehicle codes, etc.) to the MSS code database/tables

Scenario 4: Administrative maintenance

Demonstrate / Present:

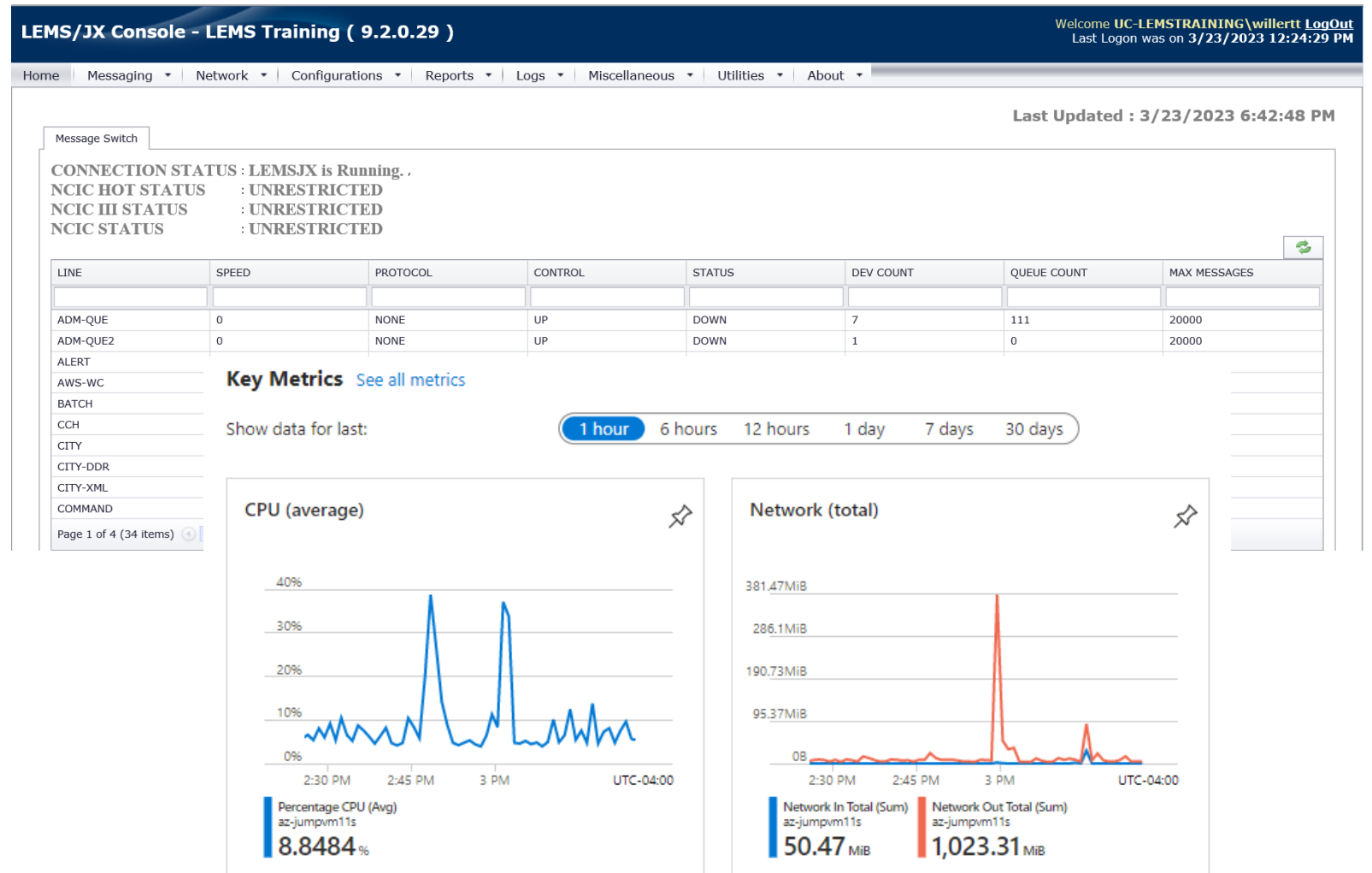
- process of performing a system shutdown and restart under routine and emergency situations
- any tools or GUIs that would be used to monitor the real-time status of the MSS
- any tools or GUIs that would be used to monitor/verify the status of interface (NCIC, Nlets, DMV, etc.) connections

Performing a system shutdown and restart under routine and emergency situations

- LEMS/JX is manually shut down, restarted, and failed over to the secondary virtual machine using Microsoft Failover Cluster Manager for both routine and emergency situations
- Microsoft Failover Cluster automatically transfers LEMS/JX operation from the primary VM to the secondary VM in the rare event the primary VM fails

Tools or GUIs that would be used to monitor the real-time status of the MSS

- The LEMS/JX Console is used to monitor the real-time status of the LEMS/JX application
- The Azure Government Portal is used to monitor the real-time status of the MSS infrastructure
- Azure Application Monitoring is configured to notify support personnel of
 - Infrastructure failure events
 - Key LEMS/JX interface status changes (up to down)
 - Other key LEMS/JX events requiring operational support, such as queues exceeding a specified threshold



Tools or GUIs that would be used to monitor/verify the status of interface (NCIC, Nlets, DMV, etc.) connections

- The LEMS/JX Console is used to monitor the real-time status of the LEMS/JX interfaces
- Azure Application Monitoring is configured to notify support personnel of
 - LEMS/JX interface status changes
 - LEMS/JX interface queues exceeding a specified threshold

Scenario 4: Administrative maintenance

Demonstrate / Present:



process of creating, modifying, and maintaining product forms

and how those forms are rolled out to the clients

Scenario 4: Administrative maintenance

Demonstrate / Present:



process of adding and disabling various codes (ORIs, uniform offense codes, vehicle codes, etc.) to the MSS code database/tables

DEMO

Scenario 4: Administrative maintenance

Demonstrate / Present:

- process of performing a system shutdown and restart under routine and emergency situations
- any tools or GUIs that would be used to monitor the real-time status of the MSS
- any tools or GUIs that would be used to monitor/verify the status of interface (NCIC, Nlets, DMV, etc.) connections
- process of creating, modifying, and maintaining product forms and how those forms are rolled out to the clients
- process of adding and disabling various codes (ORIs, uniform offense codes, vehicle codes, etc.) to the MSS code database/tables

Focused Demonstration Scenario 5

Hot Files

05

Scenario 5: Hot Files

Demonstrate / Present:

- general hot file maintenance solution proposed for the system
- entry of a general wanted person record into the system, both via a command line and the GUI
- processing of a wanted person entry into NCIC, and include a demonstration of how the wanted person entry generates specific types of messages through the system
- ability to run a report of hot files data (e.g., the number of open warrants from a specific ORI or statewide)
- utilization of user-based roles or permissions associated with the hot file maintenance solution
- following hot file record queries:
 - Query wanted person (QW)
 - Registration query (RQ)
 - Query all state warrants (QWA)
- processing of a towed vehicle entry into Nebraska's hot file system
- processing of a wanted person into Nebraska's hot file system

Scenario 5: Hot Files

Demonstrate / Present:

- general hot file maintenance solution proposed for the system
- entry of a general wanted person record into the system, both via a command line and the GUI
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- processing of a wanted person into Nebraska's hot file system

DEMO

Scenario 5: Hot Files

Demonstrate / Present:

- ability to run a report of hot files data (e.g., the number of open warrants from a specific ORI or statewide)

2023-03-20

HOTFILES PFA AUDIT
(All Time) TO 3/20/2023 12:00:00 AM

Record Type	NCIC & HF Records	State-Only Records	Total	Mismatched* PFAs
Active Records	48	8	56	0
Cleared / Cancelled Records	19240	850	20090	
Total	19288	858	20146	

** A 'Mismatched' PFA is a record that should have qualified for entry into NCIC, but the entry failed to complete for some reason.*

Page 1 of 1

Scenario 5: Hot files

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Additional Presentation Topics

06

Additional Topics

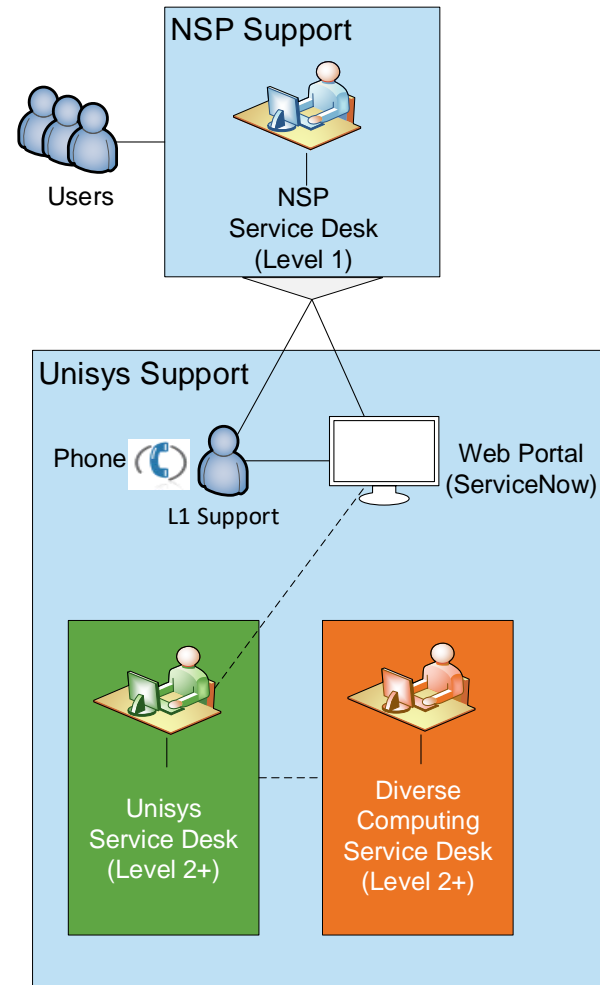
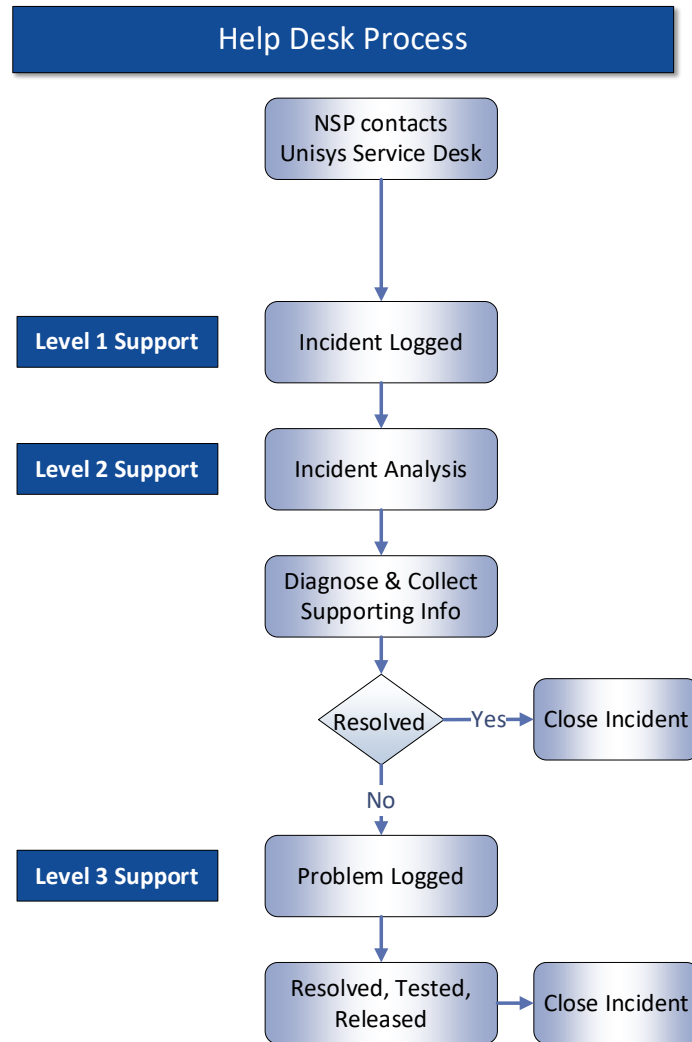
Compliance and Strategy:

- FBI Criminal Justice Information Services Security Policy Compliance – Please explain how the proposed MSS environment is compliant with the key aspects of this policy including network, system, data, and user security. entry of a general wanted person record into the system, both via a command line and the GUI
- MSS Application Support – Explain how the proposed MSS application will be supported and upgraded over the life of the contract while ensuring NSP-specific code customizations/interfaces remain intact.
- MSS Hardware/Software Interoperability – Explain how the proposed MSS environment is designed to allow for hardware and software upgrades/replacements without affecting the application.
- Integration With Current Environment – Explain how the NSP solution will integrate with the current environment and other related applications.
- Certification Tracking – Describe how the NSP solution will integrate with the Peak Performance user certification program and describe how certifications will relate to user authorizations in the new environment.
- MSS Migration – Elaborate on your strategy to migrate to the proposed new environment while minimizing the impact to the operational production environment.
- Available MKEs – Please discuss what MKEs are currently available in your proposed solution in comparison to the current Nebraska MKEs, placing particular focus on the activities necessary to bring the bidder's product into compliance with Nebraska's current MKEs, including those used by the State of Nebraska only.

FBI Criminal Justice Information Services Security Policy Compliance

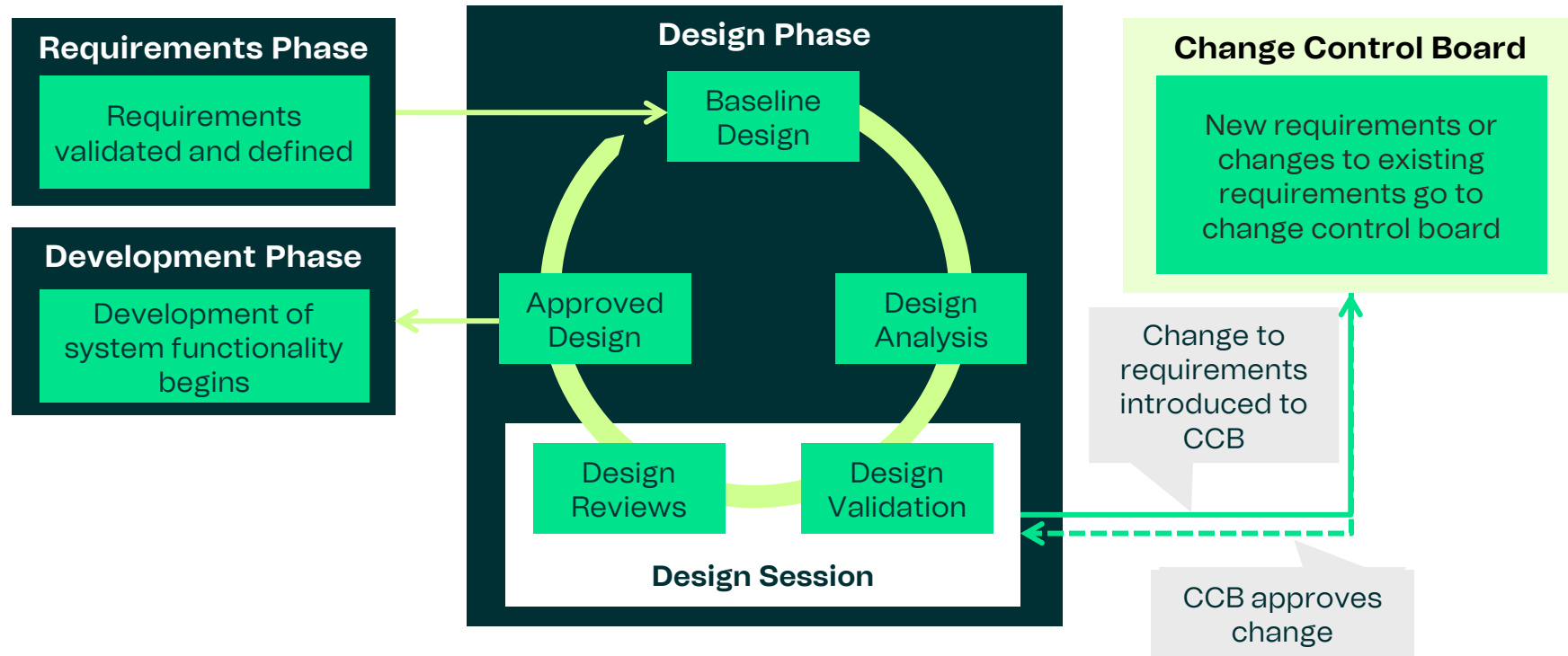
- Explain how the proposed MSS environment is compliant with the key aspects of this policy including network, system, data, and user security
- The MSS solution complies with the FBI CJIS Security Policy (CJISSECPOL v5.9.1) in force at the time of RFP release for policy requirements applicable to an MSS
 - Policy Area 4: Auditing and Accountability
 - Policy Area 5: Access Control
 - Policy Area 6: Identification and Authentication
 - Policy Area 7: Configuration Management
 - Policy Area 8: Media Protection
 - Policy Area 9: Physical Protection
 - Policy Area 10: System and Communications Protection and Information Integrity

MSS Application Support – Service Desk



MSS Application Support

Configuration Management / Change Control



MSS Hardware/Software Interoperability

- Explain how the proposed MSS environment is designed to allow for hardware and software upgrades/replacements without affecting the application
- Hardware upgrades are performed by Microsoft as needed – deployed Azure infrastructure resources (VMs, disk storage, etc.) are automatically and silently transferred to upgraded hardware
- All Azure VMs running MSS components are load balanced or failover clustered to allow for software upgrades (such as operating system patches and application version upgrades) with only very brief or no user impact
- Software upgrades are performed at planned time during off hours
- Software upgrades are deployed to the test environment and tested prior to deploying to the production environment

Integration With Current Environment

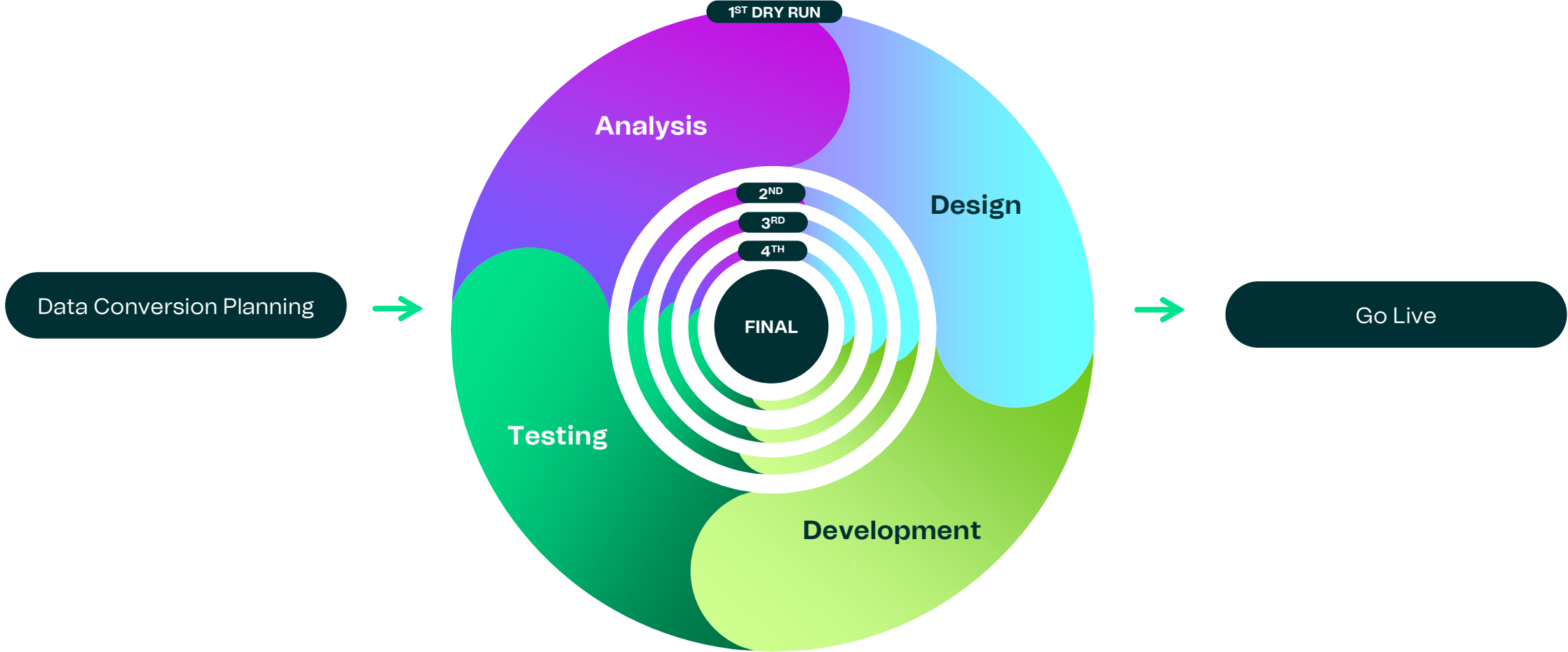
- Explain how the NSP solution will integrate with the current environment and other related applications
- The solution will be configured to integrate with the current environment with only brief impact to the current environment
 - NCIC NIEM web services, III web services, and NICS NIEM web services will be deployed and verified independent of the existing MSS connection to NCIC TCP/IP sockets and will be switched from the current environment to the new environment at cutover
 - Nlets NIEM web services will be deployed and verified independent of the existing MSS connection to Nlets using a range of ORIs used for verification and will be switched from the current environment to the new environment at cutover
 - Interfaces to state systems will be implemented to comply with the current environment interface specifications and will be switched from the current environment to the new environment at cutover
 - Interfaces to local agency systems will be implemented to comply with the current environment DMPP/OFML specifications and will be switched from the current environment to the new environment at cutover; the new MSS LEMS Web Services will also be available at cutover
 - The Hot Files will be switched from the current environment to the new environment with migrated data at cutover
 - The User Interface will be switched from the current environment to the new environment (eAgent 2.0) at cutover
 - There is no anticipated need for interface with the current MSS or parallel operation of the new and current MSS

Certification Tracking

- Describe how the NSP solution will integrate with the Peak Performance user certification program and describe how certifications will relate to user authorizations in the new environment
- The solution will integrate with the Peak Performance nexTEST user certification program using LEMS Web Services in accordance with interface specifications agreed to by Unisys and Peak Performance as currently used in other states
- nexTEST retrieves user information from LEMS/JX over the interface
- When a user passes an authorized test, nexTEST sends the certification information to LEMS/JX to update the user's function group (role permissions) and certifications date

MSS Migration

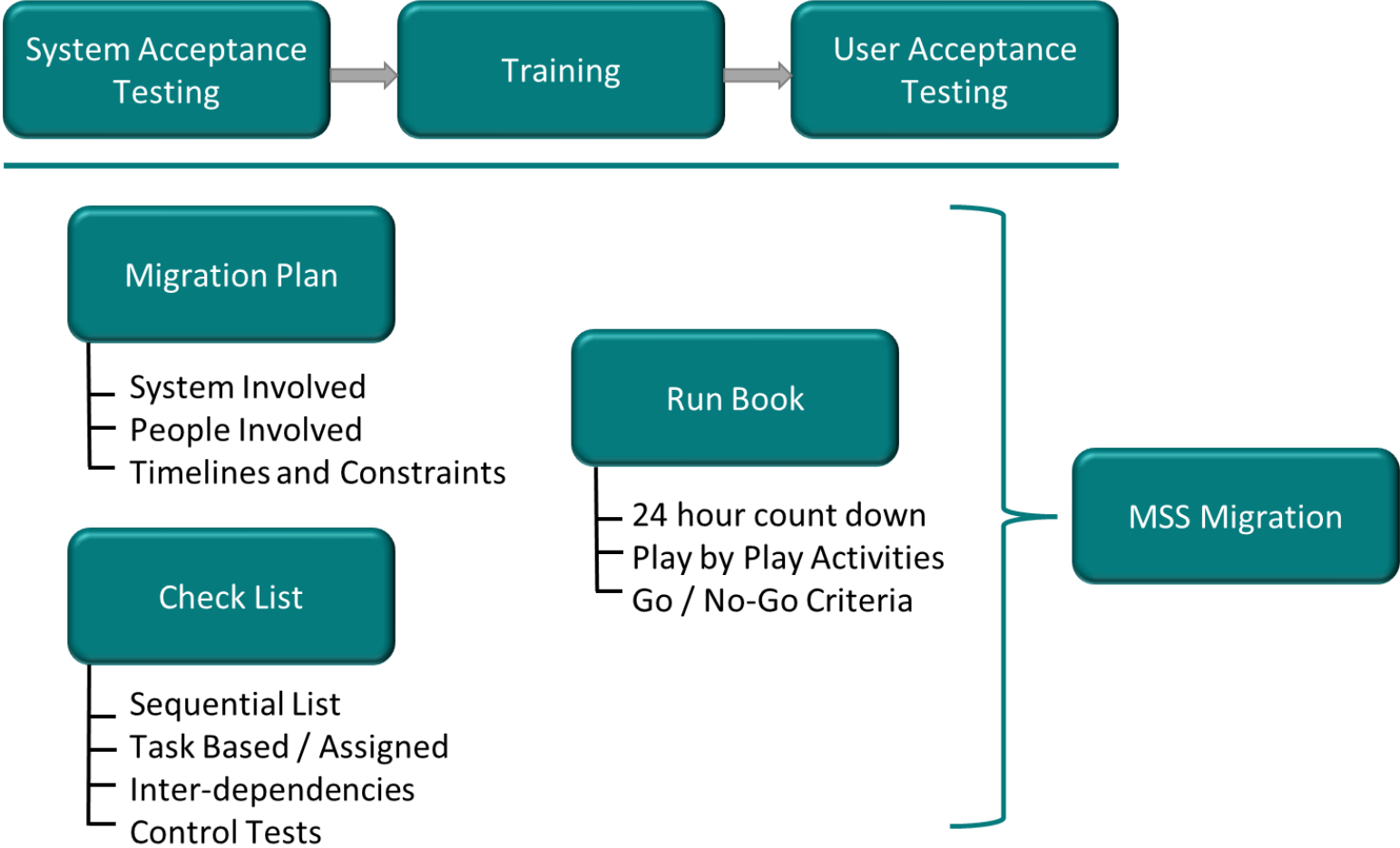
Data Migration



MSS Migration

Migration Process

High Level Implementation



Available MKEs

Standard for LEMS

- All NCIC MKEs
- All III MKEs
- All NICS MKEs
- All Nlets MKEs, including
 - National Drug Pointer Index System (NDPIX) MKEs
 - National Insurance Crime Bureau (NICB) MKEs
 - Canadian MKEs
 - Interpol MKEs

Configure for NSP MSS








- CLEIN MKEs
 - Administrative
 - Criminal History
 - RITS
 - Stolen Vehicle/Parts
 - Towed Vehicle
 - Wanted Person
 - Internal
 - In-State Gun Check

Retired MKEs

- Obsolete and no longer supported by III, such as:
 - \$.A.AFC
 - \$.A.FNC
 - \$.A.FCC
 - \$.A.NAC
- No longer supported by NCIC in NIEM XML, as referenced in NCIC TOU 22-3

Additional Topics

Compliance and Strategy:

-  FBI Criminal Justice Information Services Security Policy Compliance – Please explain how the proposed MSS environment is compliant with the key aspects of this policy including network, system, data, and user security. entry of a general wanted person record into the system, both via a command line and the GUI
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-  Integration With Current Environment – Explain how the NSP solution will integrate with the current environment and other related applications.
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Lunch

07

Hot Files and General Topics

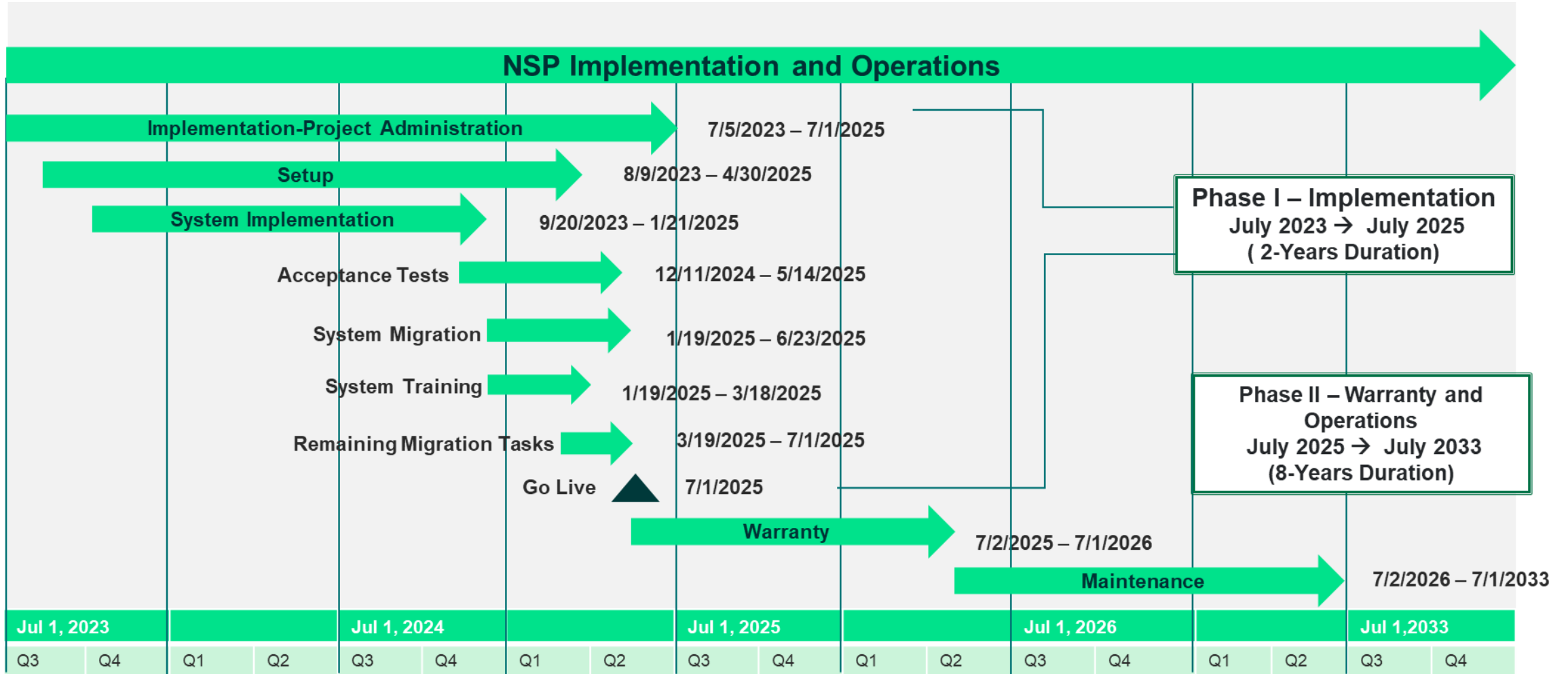
Compliance and Strategy:

- Hosting Hot Files at NCIC – Please elaborate on your experiences with other clients in terms of hosting hot files at NCIC as opposed to the state repository.
- Hosting Hot Files at Hosting Site/State Repository –Elaborate on your experiences with other clients in terms of hosting state-specific hot files at the proposed hosting site/state repository.
- Project Overview – Please provide an overview of the project roadmap, delivery schedule, and initial project plan.
- Customized Functions – For those requirements where the bidder indicated that the solution would meet the requirement through customized functions, describe the modification to the solution and its approach for delivering the required functionality.

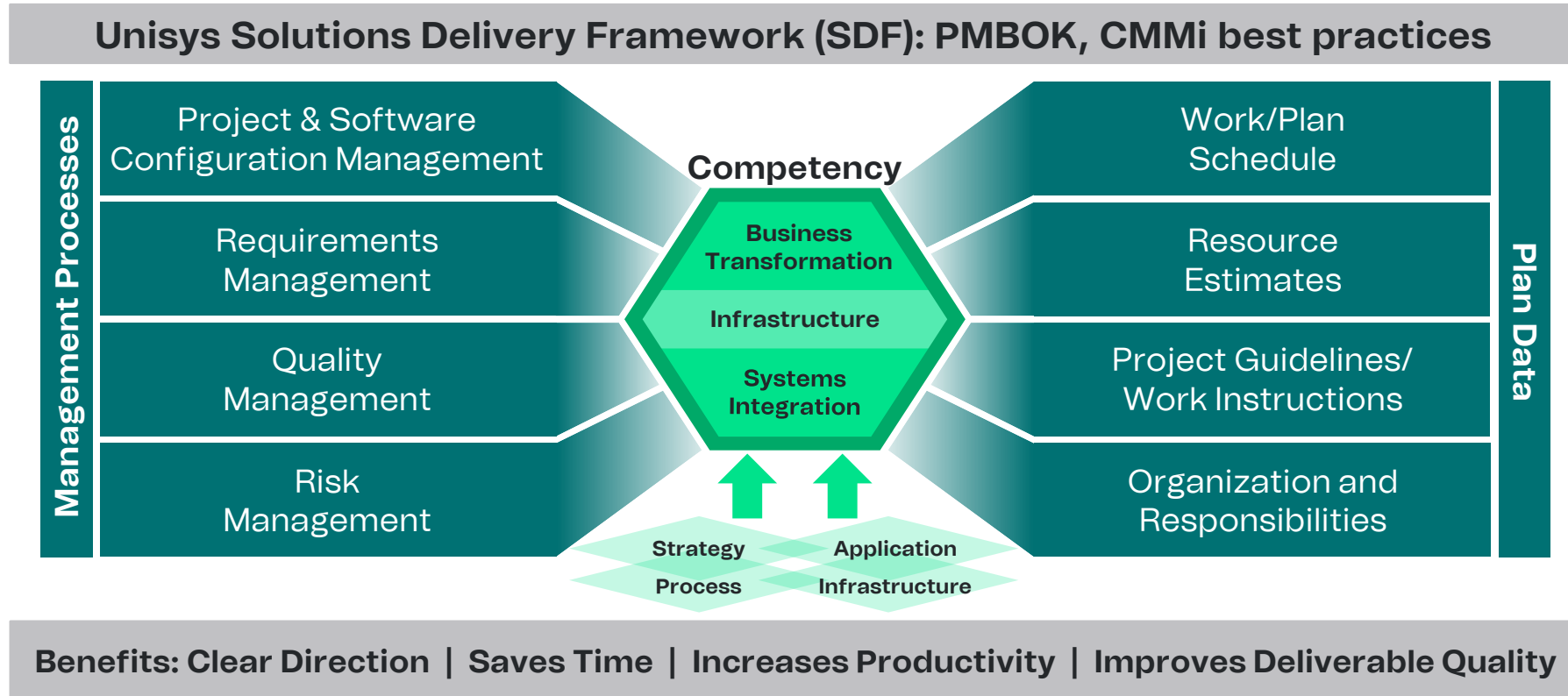
Hosting Hot Files at NCIC vs. Hosting at Site/State Repository

- The Unisys State hot files solution is a framework that allows us to efficiently develop and maintain State hot files
 - Separate application loosely coupled to LEMS/JX using secure web services
 - Configurable/customizable business rules and workflows
- Reasons states host hot files at their hosting site/state repository
 - A need for a hot file not maintained by NCIC
 - Entry criteria that differs from that of NCIC
 - Additional fields beyond those maintained by NCIC
 - A need for hot file reporting capabilities beyond those offered by NCIC
 - Can be synced from State to NCIC where needed/appropriate
- Reasons states host hot files at NCIC
 - Reduces State footprint, deployment complexity, and costs that would otherwise be needed for State hot files
 - NCIC is highly available and responsive (wasn't always that way)
 - Obviates the need to sync State hot file to NCIC or to modify State hot file design to keep up with NCIC hot file design
 - Doesn't meet the criteria for hosting at hosting site/state repository

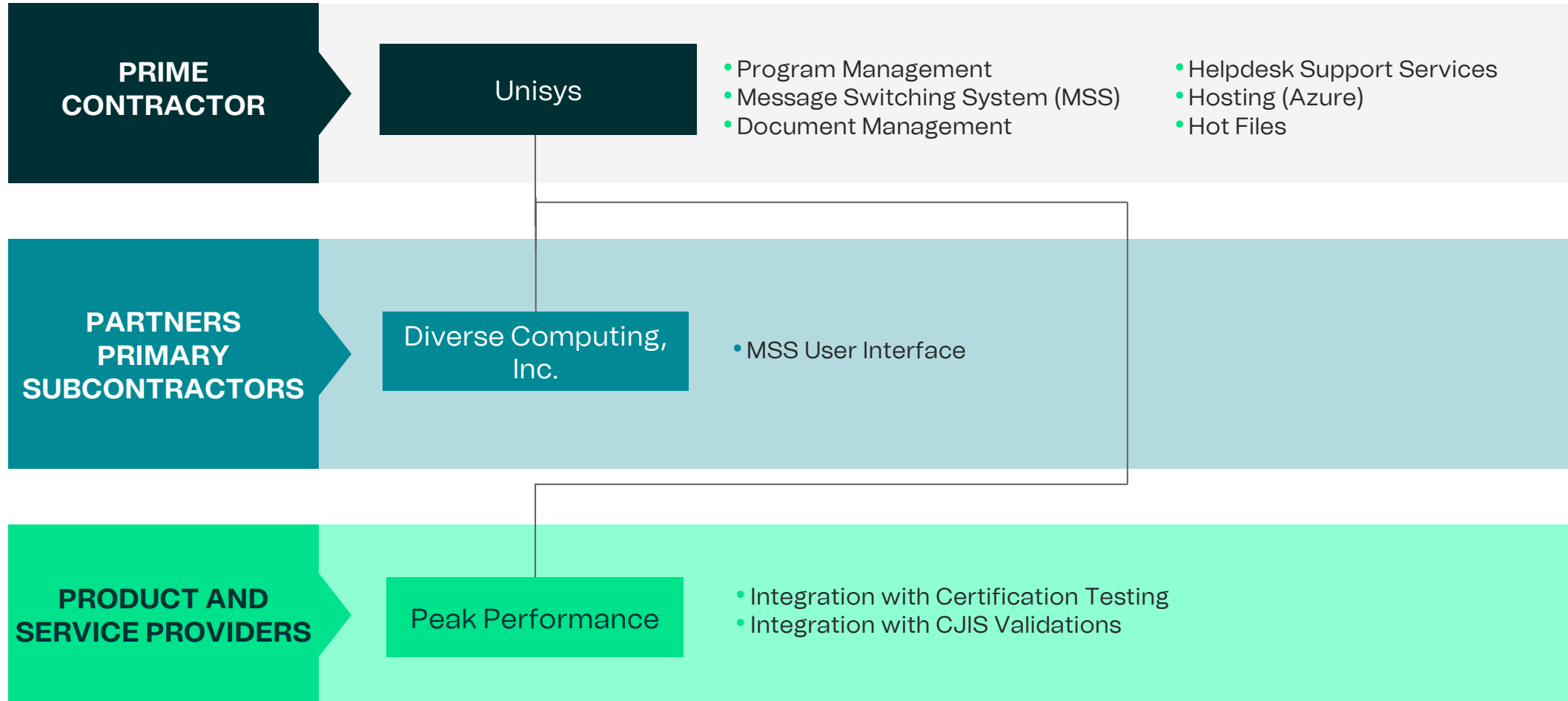
Project Overview – Delivery Schedule



Project Overview – Project Management Planning

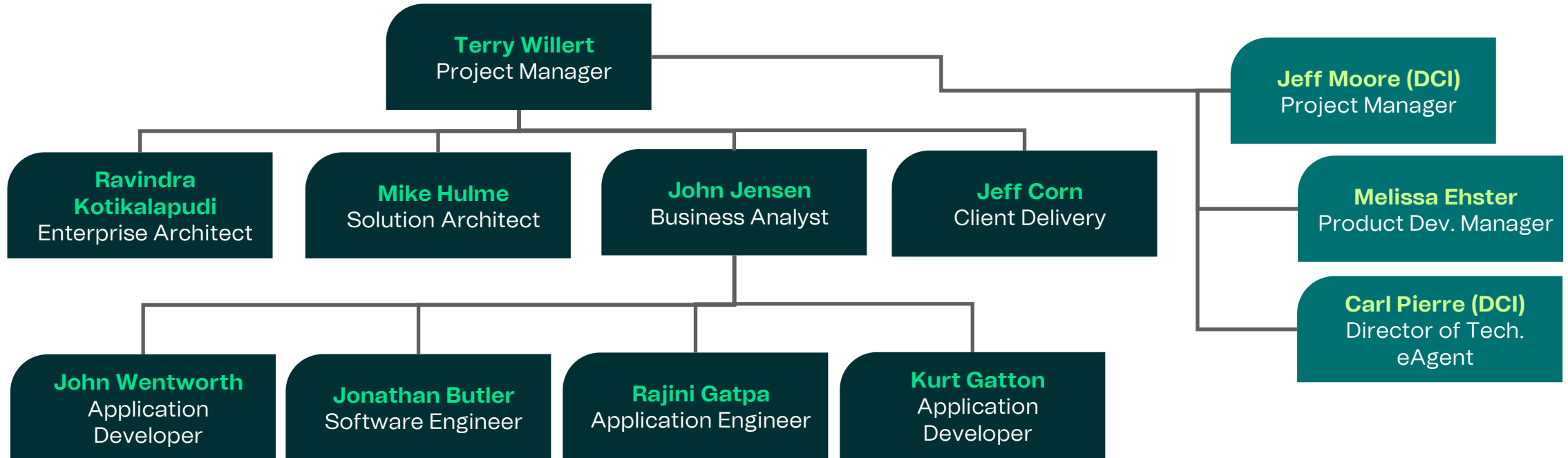


Project Overview – Initial Project Plan – Project Team



Project Overview – Initial Project Plan

Leadership and Organizational Structure



Customized Functions

- Customized Functions – For those requirements where the bidder indicated that the solution would meet the requirement through customized functions, describe the modification to the solution and its approach for delivering the required functionality.

Hot Files and General Topics

Compliance and Strategy:

- Hosting Hot Files at NCIC – Please elaborate on your experiences with other clients in terms of hosting hot files at NCIC as opposed to the state repository.
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Wrap Up and Closing Comments

08

Thank you

