


ClearPath Forward[®] Product Roadmap

ClearPath Forward Solution Management

SEPTEMBER 28, 2023





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Statements about future product releases are based on current plans that are subject to change and non-binding.

SAFE HARBOR STATEMENT



ClearPath® Software Strategy and Direction

01

Choose where you deploy ClearPath workloads

02

Integrate ClearPath into the cloud – and keep it secure

03

Enable digital transformation – transactions and data

04

Extend MCP & OS 2200 applications with
Python and Java



ClearPath Forward Platforms

Systems and Software

01

ClearPath Forward[®] Fits Your Current Needs



PRE-INTEGRATED SYSTEMS
on-premises, Unisys or co-location
hosted



PRIVATE CLOUD
deployment on VMware or bare-
metal on-premises, Unisys or co-
location hosted



PUBLIC CLOUD
deployment on
Microsoft Azure 2022-23
AWS 2024-2025

Unisys ClearPath Managed Services Available



ClearPath Forward® MCP / Libra Current Portfolio

MCP Software Series

Public Cloud

Private Cloud

Libra Integrated Systems

Dev Studio

MCP Titanium

Capacity or Consumption

MCP Platinum

Capacity or Consumption

MCP Gold

Capacity or Consumption

MCP Bronze

User-Based

MCP Silver

Capacity

Windows

Azure, VMware on AWS

Dev Studio

MCP Titanium

Capacity or Consumption

MCP Platinum

Capacity or Consumption

MCP Gold

Capacity or Consumption

MCP Bronze

User-Based

MCP Silver

Capacity

Windows

VMware, Hyper-V

1,000 MIPS Single Thread
14,600 MIPS Single Image

Libra 8500
Premium

650 MIPS Single Thread
5,200 MIPS Single Image

Libra 6500
High-end

550 MIPS Single Thread
2,200 MIPS Single Image

Libra 4500
Mid-range

Available through 2023,
supported through 2028

* Additional market-specific packages not presented here



ClearPath Forward® 4 Year Roadmap

Libra / MCP

- ✓ MCP Software Release 21.0
- ✓ MCP Software Series 5.0
- ✓ MCP Software Series 4.0, 5.0
VMware on AWS

Dorado/OS 2200

- ✓ OS 2200 Software Release 20.0
- ✓ OS 2200 Software Series 3.0
- ✓ OS 2200 Software Series 3.0
VMware on AWS

Cross-Platform

- ✓ BIS 51R1 / 15R1 / 15.1

Libra / MCP

- Libra 4600, 6600, 8600, FS860
- MCP Software Series 5.1 (AWS)

Dorado/OS 2200

- Dorado 4600, 6600, 8600
- XPC-L 6.0
- OS 2200 Software Release 21.0

Cross-Platform

- AB Suite 9.0
- ePortal 12.0
- Data Exchange 8.0

Libra / MCP

- MCP Software Release 22.0
- MCP Software Series 6.0

Dorado/OS 2200

- OS 2200 Software Series 4.0
- Titanium (Premium), AWS

Cross-Platform

- AB Suite 10.0
- BIS 52R1 / 16R1 / 16.1
- ePortal 13.0

Libra / MCP

- MCP Software Series 6.1

Dorado/OS 2200

- OS 2200 Software Release 22.0

Cross-Platform

- Data Exchange 9.0

2023

2024


2025

2026



ClearPath MCP

Systems and Software



02

ClearPath Forward[®] – MCP Systems and Software

4 YEAR ROADMAP

2023

✓ MCP Software Series 5.0

- Additional Azure Cloud Capabilities
- VMware deployment templates
- Windows 2022 support
- License Management Improvements

✓ MCP Software Rel 21.0

- Reorganize Large Databases
- Codefile Verification
- IPSEC IKEv2 support
- TLS 1.2 expanded algorithms
- Windows 2022 support
- WebSphere MQ 9.2 and 9.3 Support

June 2023

2024

Libra 4600, 6600, 8600

- 4680, 4690 (550 / 2,200 MIPS)
- 6690 (650 / 5,200 MIPS)
- 8680, 8690 (1,000+ / 22,000 MIPS)
- Server technology refresh
- Windows 2022 hosted

January 2024

MCP Software Series 5.1

- AWS (native) all editions

2Q 2024

2025

MCP Software Series 6.0

- Cloud Integration
- License Management
- Automation
- Azure Accelerated Network support

MCP Software Rel 22.0

- TLS 1.3
- Code Signing for Unisys Products
- Post Quantum Crypto (Crypto Agility)
- SMB Multiuser Support
- DBCertification Performance

2Q 2025

2026

MCP Software Series 6.1

- Windows Updates without outage
- Additional License Manager features
- Public Cloud DR for On-premise MCP system
- Skip level migration support

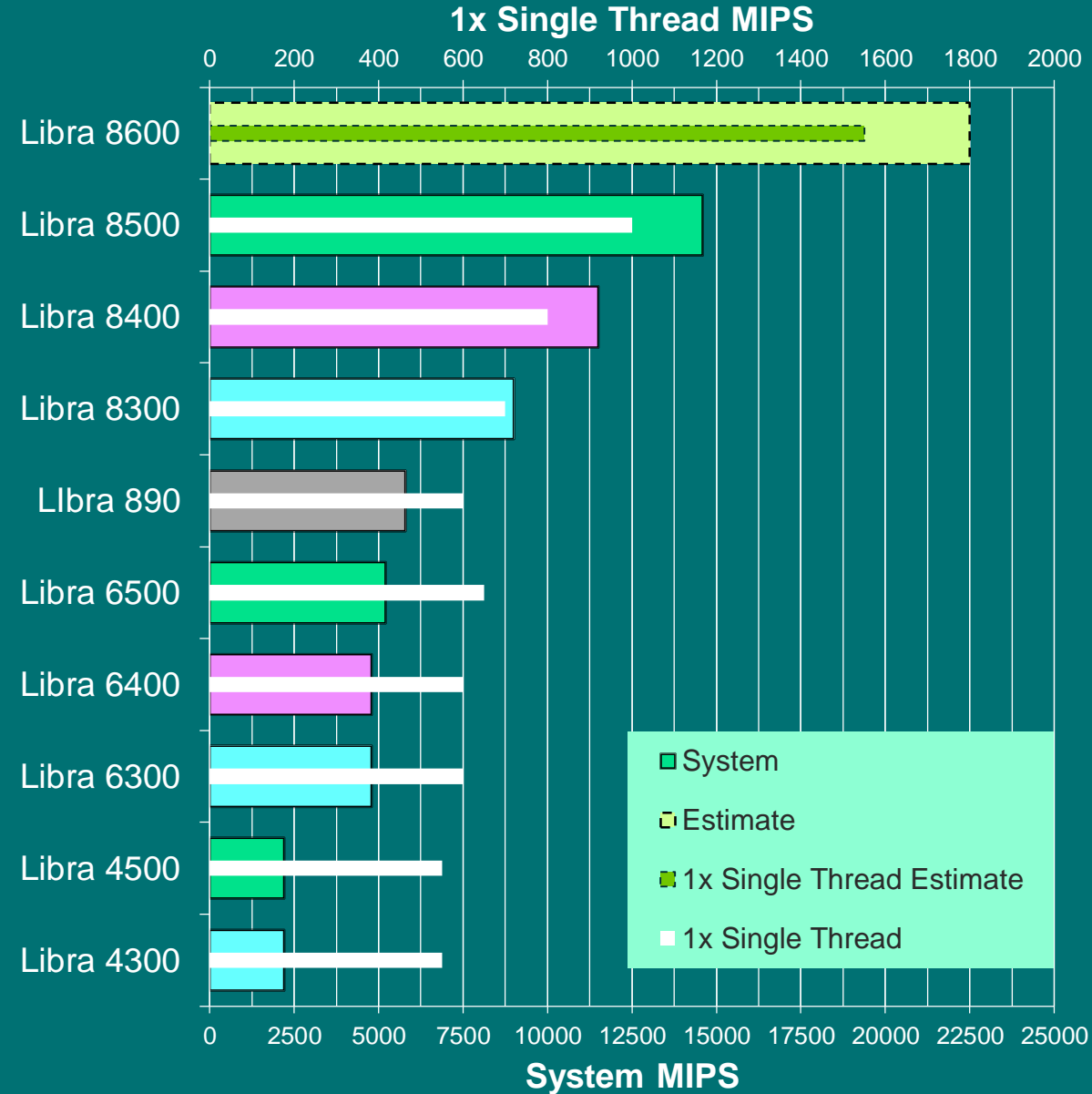


CLEARPATH FORWARD LIBRA INTEGRATED SYSTEMS

- Integrated systems remain a key element of our portfolio
- Tracking workload growth of large clients to ensure we introduce new systems before they are needed
- Projecting need, and new premium performance systems by early-2024
- Targeting 50% capacity growth
- Smaller, 5-10% single thread improvement
- **Now confident we will meet or exceed these targets with 8600**

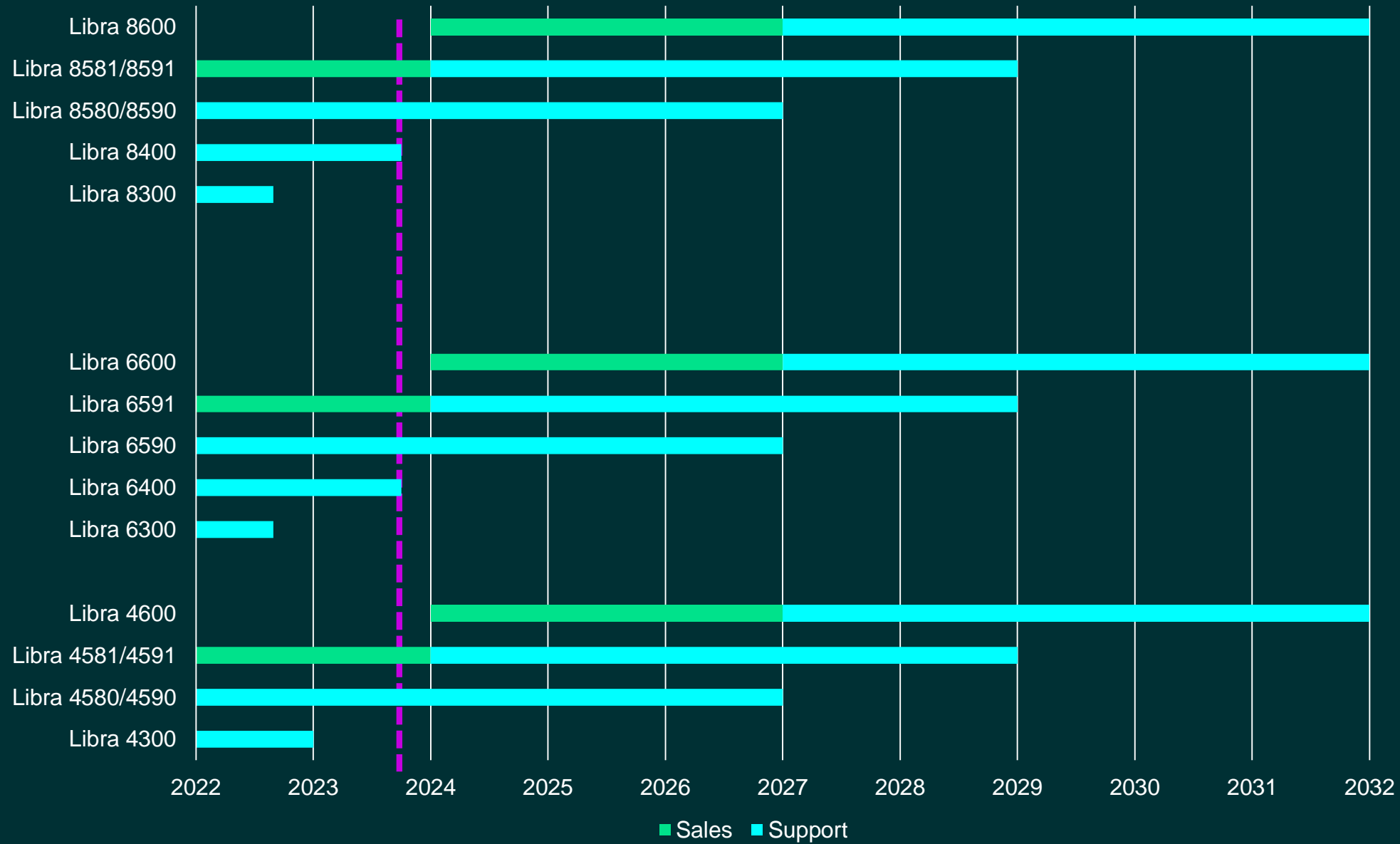


Libra Systems Performance



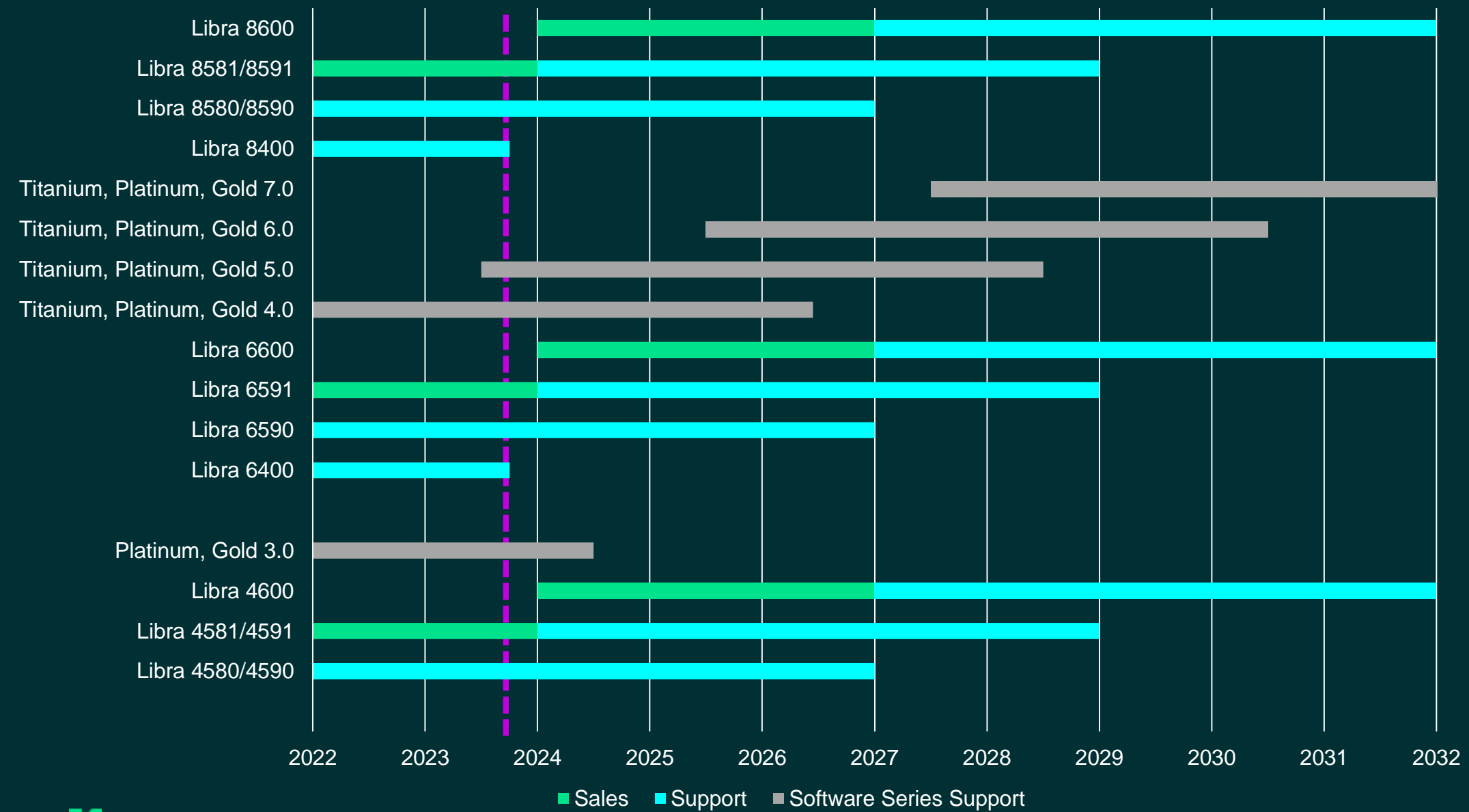
MCP Libra System Portfolio Sales and Support Life

Official end support dates documented here:
[MCP Based Systems Support Plan](#)



MCP Software Series & Libra Portfolio Sales and Support

Official end support dates documented here: [MCP Software Series Support Plan](#)



■ Sales ■ Support ■ Software Series Support



Growing Capabilities & Confidence

Public Cloud

Dev Studio

- Gold Capacity
- Bronze User-Based Capacity
- Silver Capacity

Windows
Azure

Dev Studio

- Titanium Capacity or Consumption
- Platinum Capacity or Consumption
- Gold Capacity or Consumption
- Bronze User-Based Capacity
- Silver Capacity

Windows
Azure

Dev Studio

- Titanium Capacity or Consumption
- Platinum Capacity or Consumption
- Gold Capacity or Consumption
- Bronze User-Based Capacity
- Silver Capacity

Windows
Azure, VMware on AWS

Dev Studio

- Titanium Capacity or Consumption
- Platinum Capacity or Consumption
- Gold Capacity or Consumption
- Bronze User-Based Capacity
- Silver Capacity

Windows
Azure, AWS

Private Cloud

Dev Studio

- Platinum Capacity or Consumption
- Gold Capacity or Consumption
- Bronze User-Based Capacity
- Silver Capacity

Windows
Bare Metal, VMware, Hyper-V

Dev Studio

- Titanium Capacity or Consumption
- Platinum Capacity or Consumption
- Gold Capacity or Consumption
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Windows
Bare Metal, VMware, Hyper-V

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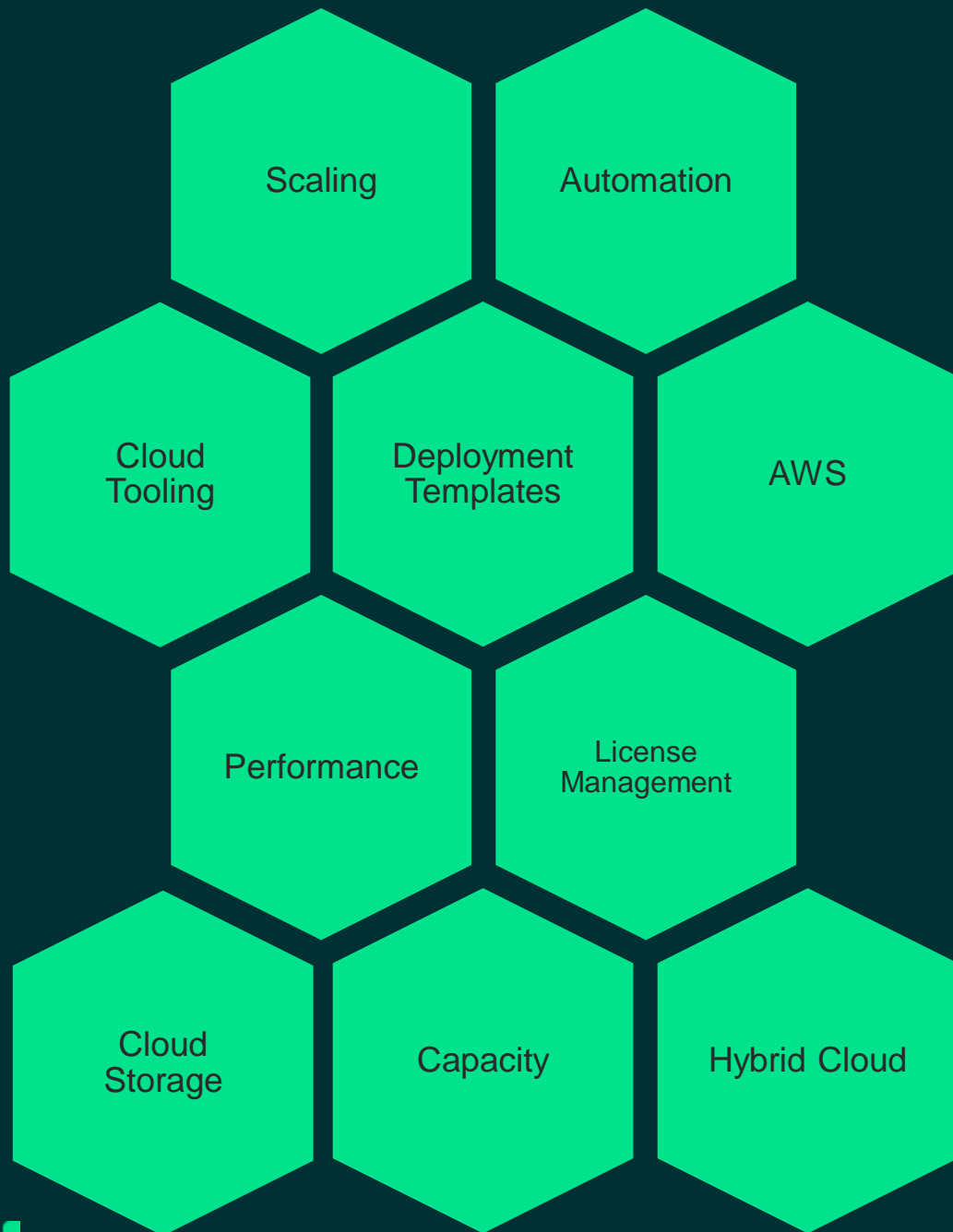
Windows
Bare Metal, VMware, Hyper-V

3.0
July 2019

4.0
February 2021

5.0
June 2023

5.1
2Q 2024



Transition from “on the cloud” to “in the cloud”



Delivering \$1B Unemployment Benefits

“*The COVID-19 pandemic has made it clear that we need to be more agile than ever in developing and deploying new applications to deliver benefits to citizens in immediate need. ClearPath MCP Software Series for Azure, combined with the Unisys CloudForte consulting services in the Azure GovCloud, enables us to achieve our goal while reducing costs, streamlining IT operations and enabling compliance with regulations.*”

Pat Kelly, IT Director
Job Service North Dakota

- **Business challenge:** Provide services to citizens while addressing a surge in unemployment claims due to the COVID-19 pandemic and complying with new government programs.
- **Business outcomes:**
 - Processed unemployment benefits for 3.7 times more citizens from March to April 2020 due to the spike at the onset of COVID-19 (from 9.5k to 35.6k*)
 - Processed and paid out 14 times more claims (280k up from 20k) valued over a billion dollars in benefits (up from \$80 million annually) during April '20 to October '21
 - Reduced recovery time from up to 2 weeks to a few minutes and increased production processing speed from 25% to a peak of 100%
 - Reduced capital-equipment costs (by minimizing the cost of maintaining a data center footprint and eliminating physical data tapes) and gained access to highly skilled resources available around the clock
- **Solution:** Unisys ClearPath® MCP Software Series for Microsoft Azure to transition applications from hardware-based systems to the GovCloud using CloudForte®; Azure Site Recovery; Application Services to develop and maintain mission-critical applications; virtual tape library; remote system monitoring, database administration, batch operations and systems administration.

*Source: U.S Bureau of Labor Statistics

Roadmap Subject to Change. Updated September 27, 2023. Expires December 31, 2023

Safe and Predictable Cloud Transition with ClearPath Forward



No third-party provider worries about how to balance cloud migration risk, time, and costs.



No worries about application code changes, refactoring, and re-architecting apps.



No worries about failed migrations and the effects it could have on business continuity and mission critical applications.



**NO
WORRIES**



ClearPath Forward® MCP Software

RELEASE AND SUPPORT

Official end support dates documented here:
[MCP Software Support Plan](#)

TODAY

UPGRADES
MAY SKIP
ONE
RELEASE
LEVEL

LAST
RELEASE
THAT
SUPPORTS
PLATFORM

RELEASE 19.0
Libra x501, x500, 8400/6400,
x300, 470*, MCP CSS 3.0, 4.0

RELEASE 20.0
Libra x501, x500, 8400/6400, x300*,
MCP CSS 4.0, 5.0

RELEASE 21.0
Libra x600, x501, x500, 8400/6400*,
CSS 5.0

RELEASE 22.0
Libra x600, x501, x500,
MCP CSS 6.0

RELEASE 23.0
Libra x600,
MCP CSS 7.0

2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033

ClearPath MCP Release 21.0 Features

Security

- TLS 1.2 Enhancements:
 - Support for CNSA elliptic curve certificates and elliptic curve keys
 - SHA384 and SHA512 certificates
 - Trust only certificates
 - Option to disable AESCBC cipher
- CCF support for mutual authenticated TLS connections
- Unisys Locum SafeSurvey Security Policy Report enhanced to show children of securecomm
- WebEnabler restricts modification of station names to administrators

Database

- Removed DMSII 300 structure limitations for OFFLINE reorganization and USEREORGDB
- DMSII improved buffer management
- MCPSQL now permits limiting the number of concurrent users

Networking

- IPSEC support for Internet Key Exchange (IKEv2)
- TCP-IP Fetch ACCESSCODE and CHARGECODE from SOCKLIB Identity
- TELNET improved scalability with increased MAX passive offer limit.

Detailed information on new features:

[ClearPath MCP 21.0 Software Release Announcement](#) (section 2)
[ClearPath MCP Technical Updates](#) (voice over PPTs)



ClearPath MCP Release 21.0 Features (Continued)

Operating Environment

- Codefile Verification utilizes stored checksums to check code files when they are opened for execution.
- PDIR command usability enhancements

Systems Management

- Workload Center reports Cloud Value Units (CVUs) consumption for ClearPath Software Series
- SAN DataMover clients running in VMs can use MCP Shared Disk Transfer Volumes

Compatibility

- MQMCP supports IBM Message Queue release 9.1 and 9.2
- All Windows client applications are qualified on Windows 11 and Windows Server 2022

Detailed information on new features:

[ClearPath MCP 21.0 Software Release Announcement](#) (section 2)
[ClearPath MCP Technical Updates](#) (voice over PPTs)



ClearPath MCP Software Series 5.0 Features

Ease of Use Enhancements

- Deployment of CSS instances from a VMware template
- Moving a CSS license from one CSS instance to another
- Releasing a CSS license from an inaccessible CSS instance
- Flexible External Device Number (EDN) renumbering

Azure Enhancements

- Use of Azure Site Recovery (ASR) for Disaster Recovery (DR)
- Option to control Azure Network connection timeouts

Infrastructure Enhancements

- Windows Server 2022 support
- Windows 11 support
- Best practices audit tool
- Intel CPUs having more than 64 cores
- System ID values unchanged for all capacity sets



ClearPath MCP Release 22.0 Features

Security

- Post quantum crypto (crypto agility)
- TLS 1.3
- Code signing for Unisys products
- IPSEC stronger encryption ciphers
- Multifactor authentication (MFA) support for ACCESSCODES
- Least privilege security model
- SSH enhancements
- Operations Sentinel secure communications

Database

- DBCertification performance improvements
- Remote Database Backup (RDB) and Online Garbage Collection (OLGC) compatibility with Database Encryption
- Database structure level encryption support for additional structure types

Operating Environment

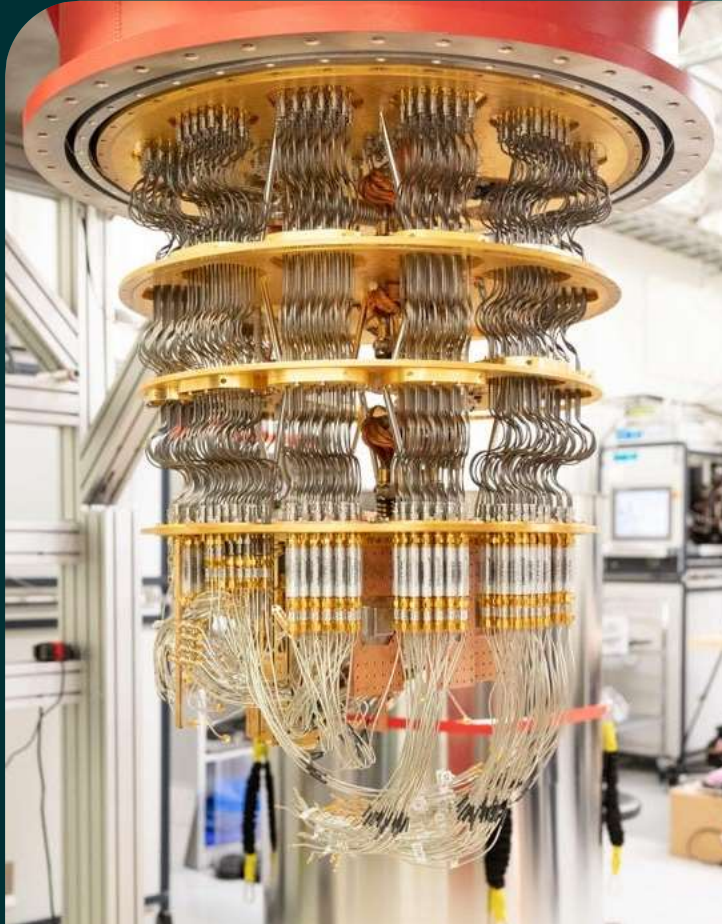
- Server message block (SMB) 3.0 multiuser support

Compatibility

- MQMCP supports IBM Message Queue release 9.3



Addressing the Quantum Threat



- Today's encryption relies on computers being unable to solve certain kinds of problems through brute force
- Quantum computers solve problems that standard computers can't, including some used for securing encryption. This is the Quantum Threat.
- To minimize the threat to our clients, we are making ClearPath platforms quantum resistant by leveraging Post Quantum Cryptography (PQC) as early as possible

PQC Readiness: Unisys ClearPath vs. Industry Guidance*

	NIST Readiness Steps dhs.gov	Industry Guidance RSAConference 2023*	Unisys ClearPath Timeline
PHASE 1 Planning	Awareness Creation & Preparation Phase	Target 2023 Awareness, planning, & budgets	Completed in 2022 Completed crypto inventory, QRE plan & budget review
	Proactive Discovery & Engagement	Target 2024 Crypto inventory, vendor engagement, & NIST Standards	To Complete in 2023 Engaged partners & exploring solutions with PQC vendors
PHASE 2 Execution	Implementation	Target 2025 Solutions selection, pilots, implementation, & testing	Implementation in Progress Implementing Crypto Agility in CPF, industry monitoring, & evaluating options.
	Backup & Monitoring	Target 2026 Backup Planning, crypto agility & monitoring	

*RSAConference 2023 - Preparing for Quantum: A Pragmatic Approach towards Readiness (Rapid 7, EvolutionQ)
[Preparing for Post-Quantum Cryptography Infographic \(dhs.gov\)](https://dhs.gov)



ClearPath Forward[®] – MCP Storage

3Q 2023

4Q 2023

1Q 2024

2Q 2024

3Q 2024

4Q 2024

PowerStore 4.0

- Replacement for Unity.
- BCA automation to begin in Jan 2024. PowerStore APIs have been provided by Dell.
- Qualification expected to begin in Q1 with beta code.
- URD is expected by the end of Q2.
- Unity sales to be discontinued when we start selling PowerStore.

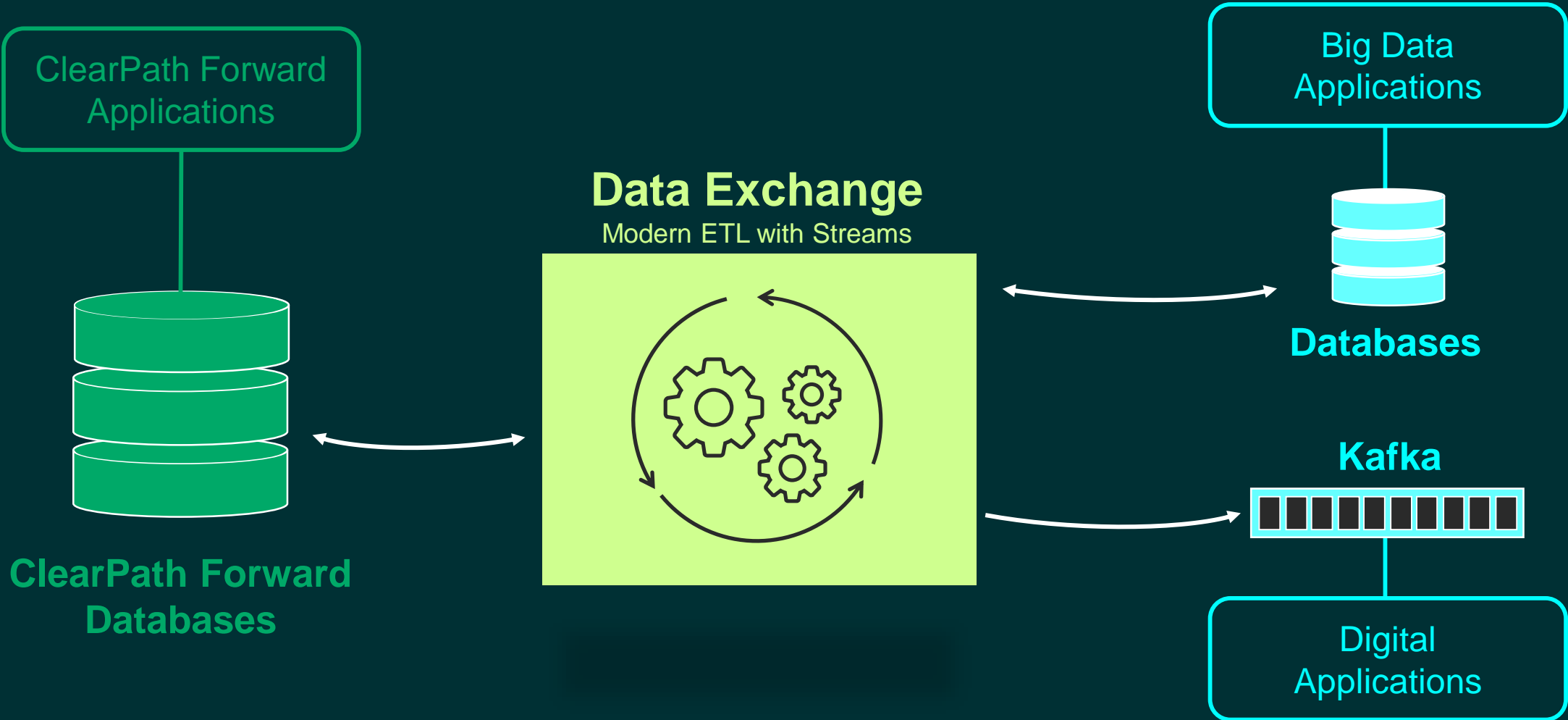


ClearPath Forward Integration Software

Enable digital transformation – transactions and data

03

Unisys Data Exchange



ClearPath Forward ePortal

CPF ePortal has an integral role in customer environments – Service Integration

CPF ePortal

The role of ePortal has evolved with each release and in line with ClearPath Forward vision.

The product has added capabilities – what our customers demand and where they are headed next

Freedom of Choice

Deployment Choices



- Available on **H/W Appliance** as Business and Enterprise offering
- **Comparable offerings** available in Software Edition
- ePortal Azure gives option to **use on Cloud**

Integration

Expanded capabilities Microservices



- The customer infrastructure is **additive**
- ePortal helps a customer even if they are on Green Screens or have opened up to ESBs or Transactional Interfaces
- At each stage ePortal can help in **opening up to microservices**

Cloud

Next Growth Avenue



- Provide option to use Azure services and infrastructure
- Allow usage on a Hybrid setup
- Act as enabler for CPF Cloud use cases



ClearPath Forward® – Cross Platform Software

2023

2024

2025

2026

4 YEAR ROADMAP

✓ BIS 51R1 / 15.1

- AWS & Azure qualification
- User defined date/time formats

January 18, 2023

AB Suite 9.0

- Reduced downtime of AB Suite and High Availability
- Optimize application for easier maintenance
- DevOps and Security enhancements

January 2024

BIS 52R1 / 16R1 / 16.1

- MySQL 8.0 and Visual Studio 2022 qualification
- Additional database files (from 20 to 32 or 64)
- Support BIS MQ as well as IBM WebSphere MQ Remote Queue.
- Updates to Developer work bench
- Modifications to 'Optional Adjust run choices'

1Q 2025

Data Exchange 9.0

- Automatically create and maintain companion database
- Integration with AB Suite
- Containerization of DE Windows component for cloud deployment
- Further integration with SightLine
- Security Enhancements (PQC)

2025

ePortal 12.0

- New HW appliance
- Windows Server 2022
- Visual Studio 2022
- Developer and Runtime updates

1Q 2024

Data Exchange 8.0

- Integration with Azure event Hub
- Veracity of data
- Improved Logging contents
- Database Replication
- Security Enhancements
- DEMS Security Report
- Enhancements to DDW

3Q 2024

ePortal 13.0

- Active Directory Integration
- Agent monitoring flexibility
- Runtime updates
- AWS Support

2025

AB Suite 10.0

- Install and run AB Suite Developer with lower privilege
- .NET Core-based AB Suite client
- OO Experience – Lists and Arrays Enhancements

2025



Data Exchange 8.0



Data Veracity



Integration with
Azure Event Hub



Improved Logging
Contents



Database
Replication



Enhanced Security



Upgraded DDW



ClearPath Forward ePortal 12.0

- New HW appliance (R660) and Dell Switches
 - Introduction of new powerful HW appliance (R660)
 - New Enterprise Class Dell switches
- Windows Server 2022
 - ePortal HW, ePortal Software Edition and ePortal Azure can operate as expected on WS2022
- Visual Studio 2022
 - ePortal developer tech-ups ; 64-bit Support for ePortal Developer
- Windows 11
 - ePortal Developer 12.0 can be used on Windows 11
- New Runtime Management CLI
 - Manage and automate aspects of ePortal Runtime environment
- Support .NET 6.0
 - ePortal Platform software 12.0 supports the installation of .NET 6.0 packages



AB Suite 9.0 Release (for MCP and OS 2200)

Low Code Development Enhancements

- Refactoring & Static Code Analysis
 - Detect and Report elements that need to be fixed
 - Correct and fix elements
 - Protect the application
- Debugger Performance Enhancements

Enabling Near 24x7 Availability

- Minimize downtime during Interim Correction (IC) Upgrade for AB Suite MCP

Security

- Secured Connection for AB Suite OS 2200
- Secured FTP for AB Suite OS 2200

Client Requests

- DevOps Enhancements – Merge Utility
- MCP Group Arrays and Class Arrays
- Modelling and Language Improvements - AB Suite OS 2200
- Support for OS 2200 CSS 3.0 on Azure



AB Suite 10.0 Release – Strategic Focus

Low Code Development Enhancements

- Latest version of Visual Studio Qualification
- Install and run AB Suite Developer with lower privilege
- Continue improving Debugger Performance
- OO Experience – Lists and Arrays Enhancements (MCP)

Client Tools/ User Experience Modernization

- .NET Core-based AB Suite client

REST API Integration and Connectivity

- Outbound REST API (MCP)
- Inbound REST API

Client Requests / New Feature Suggestions

- MCP NFS
 - Support singleton DB record access
 - Extend REORGDB management of active AB Suite reports
 - Delayed Deployment
- OS 2200
 - AB Suite OS 2200 Runtime Enhancements
 - Increased availability and reduced downtime



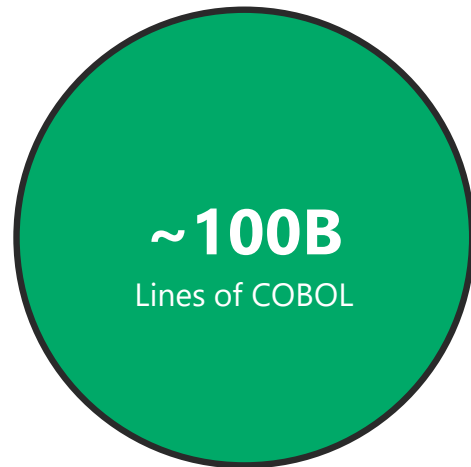
ClearPath Forward Application Development

Extend MCP & OS 2200 applications with Python

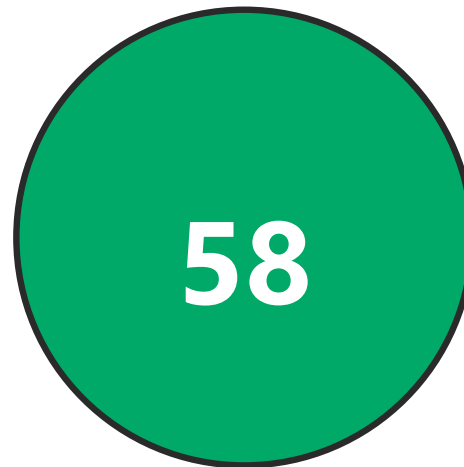
04

Modern Languages

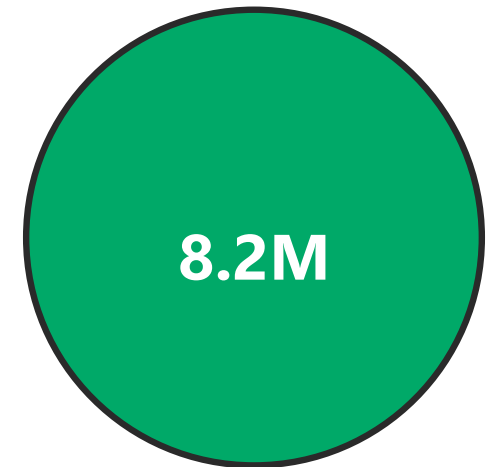
Significant need to bridge the old with the new



Drive more than 70% of the global transactions



Average age of a COBOL programmer



Python developers in the world



Modern Languages

ClearPath Forward®

Server systems and operating system software and services that are secure, innovative, and reliable for mission-critical solutions

Disruptions and challenges our clients face

What we do to support ClearPath Forward® clients

Erosion of COBOL skills



Provide the ability to utilize Python as a peer to COBOL

Novice to Expert takes too long



Provide infrastructure to enable industry standard, open-source technology

Innovation is hindered by legacy solutions not being written in modern languages



Provide application modernization services utilizing most-modern programming languages (e.g. Python)

Available today for MCP Software Series, Dorado and OS 2200 Software Series



Unisys ClearPath Forward Services

05

Enterprise Computing Solutions Services

Enabling Innovation while leveraging Investments

Application Services



EVOLVE

- Application Development & Maintenance
- Application Modernization
- Application Management Services
- Staff Augmentation

Technology Consulting Services



IMPLEMENT

- ClearPath Forward Implementation Services
- Cross Platform Software Services
- Storage Services
- Technology Advisory Services

Infrastructure Managed Services



MANAGE

- Infrastructure Operations Services
- Administration Services
- Infrastructure Advisory Services



Thank You

