

ClearPath Forward® CONNECTION June 2019

Contents

Powered by Choice

With the flexibility to choose between traditional hardware and a software-based implementation, you'll have more ways to utilize the ClearPath Forward environment than ever before.

Introducing the ClearPath OS 2200 Software Series 2.0

The ClearPath OS 2200 Software Series 2.0 introduces new deliverables that replicate specific ClearPath Forward Dorado system capabilities in a software-based package.



Rise Above the Competition with ClearPath MCP Release 19.0

With MCP 19.0, you'll have access to new and enhanced capabilities that help to make your environment more secure, scalable, and ready to integrate with a wider range of systems and applications.



Is DevOps Right for You?

Thanks to its ability to shorten development cycles, accelerate deployments, and increase reliability, many organizations have made the move to DevOps.

New Models Join the ClearPath Forward Libra Family

Please join us in welcoming the mid-range Libra 4500 and high-end Libra 6500 systems to the ClearPath Forward Libra family.



A New XPC Release is Here!

Using the new eXtended Processing Complex Lock processor Release 5.0, you'll dramatically increase the scalability and resiliency of your ClearPath Forward Dorado environment.



Resources

We provide a wide array of materials to help you stay up to date on everything that's happening in the ClearPath Forward world.



Powered by Choice

By Chuck Lefebvre, Senior Director, ClearPath Forward Product Management, Unisys



What does it take to capitalize on – and truly benefit from – the wealth of opportunities the world of digital business presents you?

That's a key question we considered when determining how best to guide the future of the ClearPath Forward® program. And our answer revolved

around a singular concept: choice.

As the system of record at the heart of your IT operations, your ClearPath Forward system will play a central role in defining and driving your organization's strategies for years to come. But, given the numerous routes these strategies could take, we recognize that the flexibility to employ the environment's proven availability, security, and transaction processing attributes where and how you decide is absolutely paramount.

So, as we move forward, we'll be focusing on empowering you with more choice than ever before.

It's Your Call

For the past several years, our strategy centered on readying your organization for the computing demands of tomorrow via the various ClearPath® Software Series deliverables. While the intent behind this decision – giving you the agility to deploy the ClearPath Forward environment on a variety of hardware and hypervisors – remains sound, we realize that not everyone is ready to make this transition.

So instead of following along this software-only path, we're broadening our approach so it continues to include hardware alongside the Software Series deliverables.

As part of this shift, we've begun enhancing the systems that form the core of the ClearPath Forward Libra and Dorado families. >>

You can see evidence of this in the premium-performance [ClearPath Forward Libra 8500 systems](#) we introduced at the start of 2019. And we're taking it a step further with the introduction of the all-new [mid-range ClearPath Forward Libra 4500 systems](#) and [high-end ClearPath Forward Libra 6500 systems](#).

With the availability of these new Libra systems – as well as the comparable Dorado models and [OS 2200 software-based deliverables](#) we'll be introducing soon – you can choose the exact way you want to utilize the ClearPath Forward environment.

Want to deploy a pre-integrated, hardware-based system in your data center? You can. Or, maybe you want it to reside as software on a compatible hypervisor. That's also possible.

The choice is yours.

And to help you maximize the value these choices hold, we'll be there with advice around which option suits your organization best based on its unique business and IT goals.

Our Innovation Workshops and Appraisal Services will play a key role in guiding this decision. By giving you an opportunity to gather stakeholders from across your organization, these engagements help to surface key goals and the steps needed to make them a reality, including where integration and automation will play vital roles. And when you pair free and open collaboration with our expert guidance, you'll be well positioned to determine how best to utilize the choices available to you.

The Next Choice

As we work to realize our plans to offer comparable hardware and software-based versions of the ClearPath Forward environment, we're also keeping one eye focused on the future. And to that end, we're excited to share that plans are underway to have the environment ready for the public cloud by the end of this year.

Although we're still in the process of evaluating and determining the specifics of this strategy – in terms of the products that will be available in the cloud, the providers, etc. – there are a few important themes we know it will encompass.

The first, and arguably most important, point revolves around how the ClearPath Forward environment will transition to the public cloud. While it's understandable to assume that a move of this scale brings with it the requirement to migrate your applications to a new operating system, that's not the case here. Rather, we'll just be moving all of the [tightly integrated components](#) that make up the ClearPath MCP and OS 2200 operating environments to a different location. Simply put, you won't have to migrate or otherwise rework your ClearPath Forward applications for the public cloud.

But we also recognize that simply changing where your applications execute is not enough. That's why we'll be utilizing microservices-enabling middleware to create connections between your ClearPath Forward applications and other cloud-native apps. And as a parallel effort, we'll also be exploring capabilities that integrate the ClearPath Forward environment with systems of engagement, helping you further capitalize on the wealth of opportunities the public cloud offers.

When you combine this forward-looking strategy with the plans we're already building toward today, you're truly empowered to determine where, how, and for what purpose you utilize the ClearPath Forward environment. It's your choice, and we can't wait to see what you do with it.



Introducing the ClearPath OS 2200 Software Series 2.0

As part of our strategy to offer you more and different ways to take advantage of the ClearPath Forward environment, we're thrilled to unveil the next wave of ClearPath Software Series deliverables.

That's right: the ClearPath OS 2200 Software Series 2.0 is here!

This new release builds on the momentum and progress of previous Software Series products by offering full, tightly integrated, software-based implementations of production-ready ClearPath OS 2200 environments. So now, you'll be able to replicate specific ClearPath Forward Dorado system capabilities in a software-based package.

To this end, the OS 2200 Software Series 2.0 includes the following deliverables:

- **ClearPath OS 2200 Gold:** Mid-range production capacity that aligns with the capabilities of ClearPath Forward Dorado 4400 systems.
- **ClearPath OS 2200 Platinum:** High-end production capacity on par with what's delivered by ClearPath Forward Dorado 6400 systems.
- **ClearPath OS 2200 Developer Studio:** A complete development workspace – including the OS 2200 development and runtime software – designed to complement OS 2200 Software Series and ClearPath Forward Dorado production environments.

This release also includes the new ClearPath OS 2200 QProcessor 5.0. With this full, software-based implementation of the standard OS 2200 QProcessor, your OS 2200 Gold, Platinum, or Developer Studio

instances will be able to interoperate with a wide variety of third-party systems that support IBM® MQ Series interconnectivity, giving you more ways to connect applications and the business processes they support.

And as with other Software Series releases, you can run the new OS 2200 deliverables on your choice of compatible Intel® hardware or VMware® hypervisor platforms. So not only will you have the flexibility to choose where OS 2200 Gold, Platinum, or Developer Studio reside, you'll be empowered to make better use of hardware that may already be present in your data center. This way, you'll find it easier to update the underlying technology as new platforms become available.

In addition to having the freedom to deploy the OS 2200 Software Series where and how you desire, you'll also have the flexibility to adopt a business model that fits your organization's unique needs. Similar to the approach we follow with our standard, hardware-based ClearPath Forward Dorado systems, you can choose a traditional, capacity-based licensing model. Or, you can opt for one that uses our unique consumption technology to create a Pay-for-Use model.

The choice, like all things Software Series, is yours.

Please [visit our web site](#) to learn more about the ClearPath OS 2200 Software Series. If you have questions about the deliverables included in the 2.0 release, or the services we offer to help you implement these solutions, please contact your Unisys sales representative.



Rise Above the Competition with ClearPath MCP Release 19.0

ClearPath MCP Release 19.0 is here!

The newest major release of the system software for ClearPath Forward Libra systems and ClearPath MCP Software Series products, MCP 19.0 builds on the rich functionality available in previous releases by introducing numerous enhancements and important new capabilities.

And, as with every new MCP software release, MCP 19.0 is an integrated stack in which all of the products and features have been designed, developed, and tested together, so you can trust they'll deliver the performance and reliability your organization – and its critical applications – demand.

With ClearPath MCP Release 19.0, you'll realize considerable benefits across four important areas:

- Security
- Integration and interoperability
- Application scalability
- Application development and integration

Security

From day one, security has been built directly into the DNA of the MCP operating environment. MCP 19.0 continues this tradition by offering new and expanded capabilities designed to help keep your data secure.

Here's how:

- **Multi-factor Authentication:** Multi-factor authentication is now an available option for MARC and CANDE sessions. When enabled, your users will be required to confirm their identities by entering a single-use passcode in addition to their normal passwords. The single-use passcodes are automatically generated and delivered via email during a login attempt.
- **Database Structure Level Encryption:** This release greatly expands upon the database encryption capabilities originally introduced in MCP 18.0. With the new Structure Level Encryption feature, you can encrypt entire DMSII structures at the file system level, while accessing information using broader querying capabilities than Field Level Encryption permits.
- **New Cryptography Algorithms:** MCP 19.0 enables select algorithms from the CNSA suite, making it compatible with the most important security protocols in use today, including TLS and SSH.
- **Telnet Services (TELNET):** The Telnet client now supports SSL/TLS encrypted connections.
- **File Transfer Protocol (FTP):** You now have the ability to write custom code that specifies the criteria for accepting or rejecting connections.
- **Web Enabler for ClearPath MCP:** Updates to the Web Enabler in MCP 19.0 include support for end-to-end data encryption when using the tunnel component.
- **EMAIL:** The EMAIL utility can now securely access a mail server through a TLS connection.
- **Locum Software Products:** MCP 19.0 includes updates to the following Locum Software products:
 - **Locum SecureAudit:** SecureAudit now includes the MCS Security Violation report, which provides information about MFA failures associated with user login attempts, as well as new batch and client reports that highlight security-relevant issues associated with MCP network shares and FTP transfers. The ability to store log information from non-local or "foreign" SUMLOGs is also available. >>

- **Locum Safe & Secure:** With the product's new system option, you can automatically delete user records in accounts suspended over a specified duration.
- **Locum SafeSurvey:** The Software Versions report in SafeSurvey has been extended to include all active MCS programs and Unisys system programs on the H/L family, as well as improved CFILE analysis.
- **Locum RealTime Monitor:** New RealTime Dashboard alerts have been added for NX Services Security, File Transfer Activity, and Multi-Function Authentication events.

Integration and Interoperability

With MCP 19.0, you'll have new ways to extend your applications and automate your business processes.

Here's how:

- **Secure Shell for ClearPath MCP:** With the new MCP Terminal Sessions, you'll be able to securely operate your MCP environment using industry-standard SSH clients.
- **Client Access Services:** The Launcher can now run as a service on Microsoft® Windows® operating environments, allowing scripts to be launched without requiring a user login.
- **TCP/IP Application Services for ClearPath MCP:** Compliance with latest IPv6 standards is now included.
- **Enterprise Output Manager:** Offered along with MCP 19.0, [Enterprise Output Manager 14.0](#) includes:
 - Digital signing to protect generated PDF documents against unauthorized modification
 - Internet Printing Protocol (IPP) with HTTPS support, which enables you to securely route documents to printers and other Enterprise Output Manager instances
- **Relational Database Server for ClearPath MCP (MCPSQL):** MCP 19.0 introduces improved Microsoft Office 2016 support.

- **Operations Sentinel:** [Operations Sentinel 17.0](#) is included in MCP 19.0. The latest version of our automated system management tool features several noteworthy enhancements:

- Filtering based on multiple thresholds
- Enhanced log consolidation
- Custom textboxes in Topology View
- Better problem reporting

Application Scalability

MCP 19.0 includes numerous updates designed to expand system limits and increase system efficiency.

Here's how:

- **TCP/IP Application Services for ClearPath MCP:** The TCP/IP timers have been updated for today's more powerful systems, enabling you to greatly increase the efficiency of applications that process high volumes of transactions. In addition, connections made via Connectivity Services will benefit from improved performance.
- **Compilers:** The ability to handle Julian dates beyond 2035 is in place, allowing for timestamps up to the year 2147.
- **MCP TapeStack:** The number of tapes that you can stack has been increased from 100 to 500.

Application Development and Integration

With MCP 19.0, you'll have access to a number of optional products that let you use industry-standard skills and tools to bring innovative capabilities to market faster.

Here's how:

- **Application Integration Services (AIS):** With the latest [AIS release](#), you can use Windows development tools to integrate ClearPath MCP applications and data with Windows applications and data, giving your team new ways to extend your existing MCP applications.
- **ClearPath Forward ePortal:** [ClearPath Forward ePortal 9.0](#) facilitates digital transformation with such new features as Web API enhancements that support microservices, improved DevOps support, and a new method for developing multi-platform hybrid apps that leverages the Apache® Cordova™ model. >>

- **Unisys Data Exchange:** With Data Exchange 5.0, you can use Apache Kafka® event-based architecture integration to create new ways to drive your big data analytics, digital business, and business process integration initiatives.
- **ClearPath Visual IDE:** With the ClearPath Visual IDE 3.0, your team can use Microsoft Visual Studio® to develop MCP applications.

Ready to Get Started?

Check out the [MCP homepage](#) to learn about the updates and enhancements included in MCP 19.0. And for even more information about the new products, software, and enhancements included in the release, be sure to check out the MCP 19.0 Software Release Announcement, Migration Guide, and Software Product Catalog.

And please note that this is the first new MCP release to be made available via our new [digital delivery model](#). All content for this release can be downloaded from the Unisys Download Center. If you have any questions about receiving MCP 19.0 using this process, please contact your Unisys sales representative.



It's Time to UNITE Again!

Mark your calendars: The UNITE 2019 Conference will be taking place September 30th through October 2nd, 2019, in downtown Minneapolis, Minnesota.

Titled “Secure Digital Transformation With Your Unisys Environment,” this year’s conference will explore how you can transform your business using the latest digital concepts, tools, and techniques from Unisys and other vendors. You’ll be able to take part in discussions focused on using data and digital technologies to add value to your existing products and services. And, you’ll get important updates about new and improved capabilities designed to support your Unisys environment.

Be sure to check the [UNITE web site](#) often for the latest details on all things UNITE 2019.



Is DevOps Right for You?

In [the previous issue of ClearPath Forward Connection](#), we explored our approach to DevOps and how it's built to help you bring the practice into your organization with ease.

While it's reassuring to know we can support your efforts to adopt DevOps principles, we understand that many ClearPath Forward clients haven't decided if the approach is right for their organizations.

If you're still on the fence, just consider this all-too-common scenario:

Your development team finishes a change, builds the application, and hands it off to operations. As operations begins to deploy and test the changes, they spot a problem and report it to development. And then development has to fix the problem, repackage the release, and reconcile it with other changes that may have happened in the meantime.

The result? Frustration and delays, a greater potential for missed deadlines, and, ultimately, unhappy users.

Now, imagine if all parties communicated better from start to finish. Developers could describe exactly what was changed in a given patch or release, operations could get an early view of these changes, and testers and end users would know what to expect in the next release – before they receive it.

Goals like these are the precise reason why so many companies have turned to DevOps.

By shortening development cycles, increasing deployment frequency, and creating more dependable releases – while keeping everything closely aligned with key business objectives – DevOps results in higher-quality software and happier stakeholders.

Unification, Communication, Automation

DevOps aims to unify development and operations teams by encouraging communication through automation and monitoring at all steps of software construction – from integration, testing, and releasing to deployment and infrastructure management.

By automating source change management and release management, you'll enable testing and operations personnel to know exactly what's been altered in a given release, as well as the impact of those changes. Meanwhile, your developers can build confidence in their changes. And if a bug does slip through, they'll be better positioned to identify and isolate it, even if many things have changed in subsequent releases.

Automated builds and deployments, meanwhile, can help you ensure that every application build is done consistently – with the same compiler options, libraries, subsystems, files, and so on. This way, you'll avoid human errors and skipped steps, while producing a log of everything that was built with each incremental release.

Automated testing, and regression testing in particular, is another way to limit the potential for human error. If you have a good set of automated regression tests, and run them every time the application or system is built and released, you'll free your QA team to concentrate on testing the new or updated functionality. And in many cases, your testing group can have the tests for new functionality ready well ahead of the new release.

When you bring together automated change and release management, automated builds, and automated testing – and place it all within a framework that encourages tracking and communication – you'll have an effective DevOps practice. >>

Realizing the Promise of DevOps

Sometimes, despite everyone's desires and best efforts, a move to DevOps doesn't go as expected.

Some of the most common reasons why this happens include:

- **Lack of trust:** DevOps thrives on transparency, open information sharing, and a belief that all parties are doing their jobs. But silos can encourage isolation, making it tough to see – and trust in – what other groups are doing.
- **Fear of change:** Whether the change comes from the top down, or is driven by users, developers, and operations staff, it requires buy-in from all participants. And that consensus can be difficult to reach, especially if it represents a departure from “business as usual.”
- **A tool-centric mindset:** DevOps is a methodology, a practice you have to instill deeply within your organization. You can't just implement a single tool and expect your teams to become DevOps masters overnight.
- **Time constraints:** Major projects take time, but business leaders aren't always willing to wait to see if DevOps can pay off. That's why it's best to start with a couple smaller projects to learn what works best for your organization, then tweak and fine-tune the process before taking on anything larger.

Making sure you avoid these potential pitfalls – and realize the immense value DevOps can bring to your organization – is where we come in.

Spanning education and training, consulting engagements, assessments, products, proof-of-concept projects, mentoring, and more, our comprehensive approach to DevOps is designed with the specifics of the ClearPath Forward environment in mind.

With it, you can determine which aspects of the practice to prioritize, foster a culture shift across development and operations teams, and deliver the quick successes that convince your stakeholders the approach is a good fit in your organization.

We encourage you to check out [the article](#) from the January 2019 issue of ClearPath Forward Connection for additional details about our unique approach to DevOps. And if you have questions about bringing this approach to life in your organization, please contact your Unisys sales representative.



New Models Join the ClearPath Forward Libra Family

The ClearPath Forward Libra family keeps growing!

As part of our ongoing promise to enhance and evolve the Libra family, we're always working to build systems of record that deliver the utmost in business-critical power, security, availability, and scalability – and do so in a way that matches a variety of business and IT requirements.

This approach led to the recent release of the ultra-powerful, premium-high-end ClearPath Forward Libra 8500 systems.

And, it's also to thank for the newest Libra models: the ClearPath Forward Libra 4500 and ClearPath Forward Libra 6500 systems.

Mid-Range and High-End, Redefined

Emphasizing mid-range performance and flexibility, the Libra 4580 and 4590 systems deliver **single-thread performance of 550 MIPS and single-image performance of 2,200 MIPS**.

Not to be outdone, the Libra 6590 system provides performance characteristics unseen in previous high-end models. With **650 single-thread MIPS and 5,200 single-image MIPS**, the system increases performance over the Libra 6400 systems by roughly 10%.

And as with all previous Libra systems, you have the freedom to utilize a business model that's right for your unique needs.

The Libra 4580 system offers a traditional licensing model with capacity-on-demand options you can tap into to manage dynamically changing workloads or fluctuating seasonal demand. Meanwhile, the Libra 4590 and 6590 systems utilize Unisys unique metering technology to create a Pay-for-Use business model, helping you make costs predictable while offering the flexibility to access additional processing power as business and IT needs dictate.

Beyond Specs

Performance figures aside, the Libra 4500 and 6500 systems carry forward the architectural advances built into recent Libra models.

Between enhanced Intel® components, expanded I/O capacities, and a new, high-speed Ethernet interconnect type between the systems' I/O Service Modules (ISMs) and Processor Memory Modules (PMMs), you'll have the cutting-edge components you need to confidently support a wide range of enterprise applications.

Plus, with the help of native, optional integration with the latest ClearPath Forward ePortal platforms, you'll have a simple means of extending these applications to new channels, devices, and partners – and integrating them with other applications.

High availability is a key point of focus, too. To maximize resiliency – and help you avoid a lasting disruption to your critical workloads – the Libra 4500 and 6500 systems include a high-availability PMM, dual ISMs, and redundant infrastructure components as standard features.

And, like all members of the Libra family, the Libra 4500 and 6500 systems are tightly integrated stacks, and built following an approach where all components are designed, developed, tested, and supported by Unisys. So instead of dedicating considerable time and resources toward connecting components and making sure everything works well together, you'll be free to use the system to do what you do best: run your business.

Please visit our [web site](#) for additional details about the [Libra 4500](#) and [6500](#) systems. And if you have any questions about these new models, please contact your Unisys sales representative.

A New XPC Release is Here!

We're pleased to announce the availability of eXtended Processing Complex Lock processor Release 5.0 (XPC-L-5)!

A complete refresh of the XPC-L record lock processor platform, XPC-L-5 utilizes the latest Intel® components, a hardened Linux® operating system, and industry-standard, high-speed Ethernet connections between the ClearPath Forward Dorado hosts.

When coupled with Unisys OS 2200 Extended Transaction Capacity (XTC) software, the solution provides a multi-host clustering environment that supports extensive horizontal growth, as well as virtually non-stop processing for OS 2200 applications.

In fact, with XPC-L-5, you can enable up to six Dorado hosts to access a shared database, or even the same record. Each host can also operate against its own private database.

This configuration helps to improve capacity, growth, and horizontal scalability – while protecting the integrity of data being updated in a multi-host environment. When combined with a top-tier ClearPath Forward Dorado 8400 system, the solution can make upwards of 48,000 MIPS available to support your OS 2200 transaction processing environment.

And to help you realize exceptionally high levels of business continuity, redundant XPC-L-5 lock processors provide continuous operation in the event that one of the host systems experiences a hardware or software failure. Single hosts can be taken offline for planned maintenance or software upgrades, as well, providing truly uninterrupted OS 2200 application support.

Meanwhile, high-performance Ethernet interfaces provide low-latency connections between the OS 2200 hosts and XPC-L-5 servers, significantly improving locking times. And because the XPC-L-5 platform is built on the latest generation Intel® components and most current OS 2200 XPC firmware, you'll be able to improve transactional work capacity by up to 40% over the previous XPC-L design.

XPC-L-5 is currently available for the following ClearPath Forward Dorado platforms:

- [ClearPath Forward Dorado 4480 and Dorado 4490 systems](#)
- [ClearPath Forward Dorado 6480 and Dorado 6490 systems](#)
- [ClearPath Forward Dorado 8480 and Dorado 8490 systems](#)

[For more information about XPC-L-5, please visit our web site or contact your Unisys sales representative.](#)



Resources

The list below contains quick links that will help you stay up to date on all things ClearPath Forward.

- [ClearPath Forward homepage](#)
- [ClearPath Forward Services homepage](#)
- [Agile Business Suite homepage](#)
- [Business Information Server \(BIS\) homepage](#)
- [ClearPath Forward & Innovation Blog](#)
- [ClearPath Forward How-To Videos on YouTube](#)
- [ClearPath Forward Dorado/OS 2200 webinars](#)
- [ClearPath Forward Libra/MCP webinars](#)
- [Video Playlist: ClearPath OS 2200 Software Release 17.0 Technical Update \(**29 Videos**\)](#)
- [Video playlist: ClearPath OS 2200 Release 18.0 Technical Update \(**30 Videos**\)](#)
- [Video Playlist: ClearPath MCP Software Release 18.0 Technical Update \(**21 Videos**\)](#)
- [Newsletter: ClearPath Forward Connection January 2019](#)
- [Newsletter: Developing Agility January 2019](#)

The latest:

- [Brochure: Unisys ClearPath Forward® Systems: The Heart of Your Digital Business](#)
- [Brochure: From Today to Tomorrow: Using the Unisys ClearPath Forward® Environment to Drive Your Ongoing Digital Business Evolution](#)
- [Brochure: Two Complete Environments: The Unisys ClearPath Forward® Integrated Stacks](#)