

# ClearPath Forward® CONNECTION December 2018



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## Building Connections in the Digital Age

*By Ritva Kangasperko, ClearPath Forward Team*

As a culture, we've never been closer. And yet, we've never been further away. Just think about how we work, communicate, and socialize in the digital age.

We collaborate, network, and conduct productive meetings virtually with the help of messaging apps, screen shares, and the like. We text, share, tweet, and retweet around the clock. We are never more than a screen away from our friends, families, and colleagues – no matter where in the world they may be at any given moment. We are constantly, endlessly connected.

But, how often do we get to truly connect? When nearly every interaction takes place electronically, is there still value in meeting one another face to face?

After attending the 60th annual UNITE conference, the answer most definitely is “yes.”

### Get to Know UNITE

An association of Unisys users from around the globe, UNITE exists to promote the growth and exchange of information within the Unisys user community.

To achieve this end, UNITE's mission revolves around four core goals: helping new Unisys users learn the basics of the technology; making sure knowledge is effectively transferred among experts and newcomers alike; building a community of like-minded IT professionals; and using outreach to increase awareness around the value Unisys technology brings to the enterprise.

Central to furthering and supporting these goals is the annual UNITE Conference. Each year, the conference provides a great opportunity to meet old acquaintances, make new friends, network with partners, clients, and peers, and spend some dedicated time learning interesting information about all things Unisys.

And the great UNITE 2018 Conference was no different. >>

## Uniting at UNITE 2018

The central theme of UNITE 2018 focused on IT transformation and security in a hybrid-IT world. Like every year, UNITE 2018 boasted a packed program.



Ann Sung Ruckstuhl, Unisys Senior Vice President and Chief Marketing Officer, opened the conference with a keynote titled “Unisys Corporate Update.” During her presentation, Ann detailed how new Unisys initiatives and innovations –

including the latest advances in the ClearPath Forward® environment – exemplify our commitment to enhancing people’s lives through secure, reliable, advanced technology. Ann also shared how Unisys new marketing actions are driving market leadership, global awareness, and top-line growth.



This eye-opening keynote was followed by “Unisys and the National Cybersecurity Moonshot – an Insider’s View,” a general session hosted by Tom Patterson, Unisys Chief Trust Officer.

Tom, who represents National Security Telecommunications Advisory Committee (NSTAC) member and Unisys Chairman and CEO Peter Altabef as the subcommittee’s co-chair, took a look at the “moonshot” approach being drafted by the NSTAC, and the security science that will influence our world for generations. It was a powerful, thought-provoking presentation about a topic that impacts us all.

Steve Koss, Distinguished Engineer and Global Team Lead of our Product Services Solution Office, ran an opening-day session in which he discussed the security issues, impacts, and considerations that are necessary when transitioning workloads – especially when they’re part of the ClearPath Forward environment – to an internal or external cloud.

The conference’s second day featured 16 presentations in all, covering such topics as application development, transaction integration, data protection in a virtual world, data encryption, and the newest ClearPath® MCP and ClearPath OS 2200 software release roadmaps and strategies.

With 19 presentations, day three was just as full. Attendees learned about securing ClearPath MCP Software Series systems, why web services are always cloud ready, version control best practices, integrating data with Unisys Data Exchange 5.0, and driving innovation with the ClearPath Forward environment, to name just a few.

Aside from some exciting, insightful presentations, what really stood out about UNITE 2018 was the diverse nature of the presenters themselves. While Unisys employees certainly had a strong presence, nearly half of the sessions were run by users, partners, or vendors. In fact, the presentation “I Didn’t Know You Could Do That!” was run entirely by ClearPath Forward users, and featured examples of cool things our clients are doing with the technology every day.

## Another Great Year

UNITE 2018 proved that, despite how virtual our “connected” lives have become, there’s no replacing the tried-and-true in-person meeting.

Screen shares are an incredibly easy and convenient means of collaboration. And there really is no faster way to say “hi” than a text message. But when it comes to sharing meaningful time and experiences with your peers, learning from others, and getting energized by interesting, thought-provoking ideas, you can’t beat face-to-face interaction.

With that in mind, we’d like to extend a big “thank you!” to everyone involved in UNITE 2018 – leadership, volunteers, and presenters included – for making this valuable, informative, high-energy conference possible. And, more importantly, for setting the stage for a bigger and better UNITE 2019.

We look forward to seeing you there!



## ClearPath Forward ePortal 9.0 is Here!

We're thrilled to announce the availability of the latest version of our application-modernization and web-enablement tool.

That's right: ClearPath Forward ePortal 9.0 has arrived!

With ePortal 9.0, you'll have access to a wealth of new features and enhanced capabilities that make it easier than ever to modernize your applications and target them for web, mobile, and Web Service environments.

Here's what's new and noteworthy in ePortal 9.0:

- **Enterprise features in Software Edition:** Updates to the ClearPath Forward ePortal Software Edition (ePortal SE) bring a number of the high-availability attributes contained in the ClearPath ePortal Enterprise solution – including failover support, multi-platform clustering, and disaster recovery functions – to VMware® and Microsoft® Hyper-V® virtualized infrastructures. With these capabilities, you'll be well suited to address the unique demands of Software Defined Data Centers, including private cloud deployments.
- **ClearPath ePortal Business and Enterprise (Gen 5):** The “Gen 5” hardware release of ClearPath ePortal Business and Enterprise introduces a new platform that has been designed for today's ePortal use cases, and includes a Platform Management Console for software maintenance, management, and diagnostics.
- **Web API enhancements to support microservices:** With the solution's Web API 2.0, you can build a RESTful interface – containing a detailed response code and response message – for all the operations that can be performed through ePortal Manager, making it easy to support microservices.
- **Improved DevOps support featuring over 200 new automation endpoints:** With a new web-based ePortal Monitor and enhanced Management REST APIs, including role-based support, you'll have access to new DevOps and automation capabilities that help you streamline the processes around developing applications, testing those applications, and delivering them to production.
- **Intranet connections and network security:** The TLS protocol has been incorporated where possible, making it possible for many of your applications to access back-end resources in a much more secure manner.
- **New hybrid mobile device and multi-platform development support:** With ePortal 9.0, we're introducing a new method for developing multi-platform hybrid apps. It still takes advantage of the Apache® Cordova™ model, but introduces industry-standard tools and mechanisms for creating Apple® iOS, Android™, and Universal Windows apps.
- **Updated third-party components and mobile OS support:** As part of our ongoing effort to keep ePortal up to date with changes to third-party ecosystems, ePortal 9.0 supports the latest third-party standards and features – like Cordova and Bootstrap, as well as the newest mobile operating systems – enabling you to create applications that draw from the industry's most contemporary technologies.
- **System restore point:** With this feature, you can capture your current system state and restore to it should an issue arise. Note that this feature is only available on Gen 5 ePortal Business and Enterprise platforms, and will only capture the state of the Manager and Web Partitions. >>

- **The ClearPath Forward ePortal Monitor (EPM):** With this new web-based user interface for the ePortal runtime environment, you'll be able to see visual indications of overall system status and health, monitor the performance of deployed applications, web clusters, and web partitions, and view alerts about the various resources in your ePortal environment.
- **Security roles:** With ePortal 9.0, you can extend enterprise security by using role-based access to restrict specific ePortal manager functions exposed by the Management REST API to a certain set of approved users.
- **Configure backup location:** You now have the ability to target an alternate location for your backup files beyond the default primary back-end server.

- **Certificate install synchronization methods:** In ePortal 9.0, you're free to choose phased or serial synchronization methods when installing a renewal certificate to a web cluster, both of which will allow some members of the cluster to continue processing transactions while the certificate is being installed.

*If you'd like to learn more about how ClearPath Forward ePortal 9.0 can benefit your business, please contact your Unisys sales representative. And for additional information, please visit our web site to see all the value ePortal can bring to [MCP](#) and [OS 2200](#) environments.*





## Assessing ClearPath OS 2200 System Security with Apex

Security auditing and assessment is an integral part of a secure ClearPath OS 2200 system.

This includes both proactive and reactive activities, all of which are typically carried out by your security officer and his or her team.

For instance, they'll proactively verify that your users and the system objects they control – files, subsystems, etc. – comply with the relevant security policies, including government regulations, industry standards, and corporate or departmental guidelines. Part of this effort is confirming that actions are taken when required, such as updating passwords or disabling inactive user-ids, and that security parameters for systems, software, and users are set to values within acceptable ranges.

Additionally, they'll audit security-relevant events to detect intrusion and unauthorized data access attempts, and take steps to prevent them from succeeding. The reaction to this assessment depends in part on the event details available to the security officer.

Typically, your primary tool for auditing and assessing security is the system log file, which contains the records of events and actions on the system, as well as log monitoring and reporting programs.

But there's another tool your security team can rely on to make their audits and assessments more complete, comprehensive, and easier: Apex.

With Apex, your administrators can perform a variety of tasks with greater speed and accuracy. Because Apex reports information from system logs and internal data structures upon request, it streamlines investigations. And it provides visibility into system security settings and security-related events – while providing the tools your team needs to take action when a threat appears.

In particular, Apex provides robust reporting in two areas that are vital to your organization's ability to audit and assess its security posture.

### Defense in Depth

With the defense-in-depth reports in Apex, your security officer will be better positioned to discover – and mitigate – potential attacks.

Key reports include:

- **The Login Failures Report:** Indicates attempts by hackers to infiltrate your systems.
- **The Modified Access Control Records Report:** Shows who modified a record, as well as the values that record had before and after modification, helping your security officer identify and investigate possible unauthorized access modifications.
- **The Modified Users Report:** Identifies possible unauthorized changes to a user's security attributes and notes who made the modification, providing a convenient way for your administrators to revert the properties as needed.
- **The Privilege Escalations Report:** Helps your security officer identify and investigate instances of privilege escalation.
- **The File Assigns Report:** Shows who accessed a file and when, making it easier to detect suspicious activity.

### Compliance

With the compliance information provided by Apex, your security officer will be able to keep a sharp eye on how well the organization is adhering to established security policies. >>

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Key reports include:

- **The Passwords Report:** Flags user-ids that violate site password security policies – including user-ids with expired passwords, passwords with unchanged initial values, passwords set to expire within a specified number of days, and passwords with age limits that don't match system defaults.
- **The Users Report:** Identifies users with specified authentication types, privileges, and other attributes, as well as unexpected new users, so your security officer can verify that these individuals have the appropriate privileges. And by showing inactive user-ids, your team will be able to identify and eliminate a common situation hackers exploit when attempting to penetrate a system.

Frequent audits of your system security protect against undetected intrusions and unauthorized security modifications. With the powerful, flexible reports and information displays in Apex, you'll make it easy for your security officer to assess key areas of OS 2200 system security.

*If you'd like to learn more about the reports described in this article, please check out the ["New and Enhanced Apex Reports"](#) video on the [support site](#) or [YouTube](#). Be sure to check out the ["Apex 4.0 New Features Overview"](#) video on the [support site](#) and [YouTube](#), as well.*



## How are Clients Using ePortal?

With an intuitive, point-and-click environment, the ClearPath Forward ePortal makes application modernization a quick and easy process.

And because you can target your newly modernized apps to web, mobile, and Web Service environments, ePortal opens up a world of possibilities to you, your users, and your business partners.

But what does ePortal look like in the real world? We recently asked several clients to share how they're using ePortal to help drive their organizations forward. Here's what they had to say.

### Online Browsing and Ordering

In our first example, the client is using ePortal to modernize several applications that work in concert to provide a comprehensive online shopping experience.

The first application provides the screen interfaces that allow shoppers to view available inventory over the web. With ePortal, the client modernized these interfaces to include drop-down lists and buttons, as well as a scrolling function enabled by the solution's Orchestration feature.

Another ePortal application was built to automatically load in product photos as shoppers browse the site. And to enable online ordering, the client built a new ClearPath MCP application, imported its COBOL records into ePortal, and then used Microsoft MVC and Bootstrap to generate the front-end experience.

Everything was then made mobile friendly thanks to the combination of ePortal's inherent mobile capabilities and Bootstrap functionality.

### ePortal as Middleware

In this deployment, the client's applications need to access ePortal applications using HTTPS and IBM® MQ Series message queues.

Two Windows Communication Foundation (WCF) routing services running on ePortal accept the incoming messages, one via HTTPS and the other through a custom IBM MQ channel. The messages are then routed through ePortal to the appropriate applications based on content in the messages, some of which reside in a second data center.

To keep security strong at every point in the sequence, mutual authentication was implemented between the clients and ePortal applications, as well as between the ePortal applications in the two data centers.

By thinking outside the box and combining ePortal with a host of tools and utilities, ePortal became more than just a direct interface to the client's existing ClearPath application. It's now serving as a critical piece of middleware in a complex message-queuing deployment.

### Pay-by-Barcode

The client in this example wanted to create a quick, easy way for on-the-go customers to pay their utility bills.

So, the client built a web interface in ePortal that connects to their core payment application. When customers access this secure web portal using their smartphones, the ePortal application returns a unique barcode containing their billing information and account balances. The phone's native optical readers scan the barcode and transmit the payment through the banking network, without requiring the customer to print a payment receipt.

*A special "thank you" to our featured clients for allowing us to share these creative use cases. Have a cool ePortal project you'd like to share? [Email us](#) the details and we'll consider including it in a future article.*



## A New OS 2200 Eclipse Update has Arrived

With the ClearPath OS 2200 IDE for Eclipse™, you'll have access to a modern, contemporary Integrated Development Environment (IDE) that makes it easy to create COBOL, FORTRAN, C, and Java programs targeting OS 2200 systems.

We routinely enhance the software with every new version the Eclipse Foundation releases. And with Eclipse version 4.8.0 now available, we've added some key new features to the IDE that make it compatible with the latest Eclipse version:

- **Default qualifier option:** With this feature, you have the option to define and add your frequently used qualifier or workfile as a default in the OS 2200 File Explorer, making it easier to access the files contained in these qualifiers and workfiles. This new default value will be pre-filled in the OS 2200 File Explorer following the next restart of the IDE, and can be freely updated in the OS 2200 preference page.
- **Opening COBOL Copy Proc as read-only:** In this latest release, you'll be able to open the "Copy Proc" procedures in the read-only editor when you open the Copy Proc that are embedded in the COBOL program. Because the Copy Proc you open requires confirmation to be made writable, you'll eliminate the ability for users to edit this file without your express consent.

*Please [visit our web site](#) to learn more about all the capabilities packed into the OS 2200 IDE for Eclipse.*





## Storage News: DSI Virtualizes Backup and Recovery

For decades, ClearPath Forward clients have looked to the virtual tape library (VTL) backup and recovery systems from Dynamic Solutions International (DSI) to protect their critical business data.

And to keep this data as safe as possible, DSI regularly updates its offerings to reflect and account for the pressures that arise from shifting recovery models, emerging protocol requirements, and evolving security demands.

So while DSI continues to build storage systems that pair server-based appliances with ClearPath MCP and OS 2200 host software, they recently updated the product family with new offerings designed to complement how you're operating today – and how you will tomorrow.

Specifically, as we continue to pursue software-only delivery models for the ClearPath Forward environment, DSI's latest advances will enable you to extend the power of virtualization to your backup and recovery model:

- **DSI TapeManager for MCP Software Series:** With TapeManager, you'll implement peer-to-peer, multi-host, policy-driven enterprise media and backup management, as well as advanced data protection that includes VTL monitoring.
- **DSI LibraryManager for MCP Software Series:** When you use LibraryManager, you'll have access to a standard interface for MCP tape management, as well as user programs that access and manage automated cartridge libraries.
- **DSI Restore:** With Restore, you'll utilize a virtualized backup and recovery system that runs on VMware and supports cloud onboarding and such protocol connectivity as iSCSI.

To learn more about these and other storage innovations, please visit [DSI's web site](#).

### Extra Bits

We recently qualified the following storage technologies for ClearPath Forward Libra and Dorado systems:

- Dell EMC VMAX All Flash arrays Models 250 and 950 with PowerMax Level 5978.144.144
- Dell EMC Unity arrays with Level 4.3
- Dell EMC Unity arrays with Level 4.4 for MCP

*For more information, please review the Customer Technical Bulletins on the [support site](#).*



## Sightline Systems: Streamlining Operations with Real-Time Performance Analytics

Sightline Systems offers real-time performance monitoring, big data analytics, and visualization focused on root cause analysis, anomaly detection, capacity planning, and forecasting for ClearPath Forward systems.

The Sightline software suite is a powerful IT performance analytics solution that provides visibility across today's modern cloud, virtual, and hybrid IT environments. With this single-pane-of-glass solution, you can consolidate infrastructure monitoring tools while collecting metrics from servers, hypervisors, applications, and devices in real time. And with the suite's machine learning and predictive analytics capabilities, you'll find it easier to diagnose infrastructure problems, pinpoint root causes, and forecast capacity constraints.

The suite is available for both ClearPath OS 2200 and ClearPath MCP systems. A Sightline Power Agent resides on the monitored host and collects data on CPU utilization, memory, storage, databases, user-specified programs, and more. The data is then sent via TCP/IP to Sightline Enterprise Data Manager (EDM) for the alerting, analysis, display, and reporting your team needs to continuously monitor systems, proactively predict performance issues, and prevent production outages and data loss.

With the help of these interactive, intuitive visual tools, you'll be able to:

- **Streamline root cause analysis:** By correlating and analyzing alerts and events across all servers, applications, and databases, you'll be able to quickly connect the dots between first alert and final outcome, making it easy to detect patterns, trends, and anomalies that could result in costly downtime.
- **Automate capacity planning:** By analyzing historic resource utilization and application workloads, you'll build a baseline of existing system performance, identify significant behavioral patterns and trends, and use this data to forecast capacity and resource requirements, identify potential bottlenecks, and ready yourself to maintain service levels even during utilization spikes.
- **Advance performance analysis:** By leveraging Sightline's technology today, you'll be primed to take advantage of future releases that use enhanced enrichment, visualization, and reporting capabilities – along with additional cloud and streaming service integrations – to make your data more accessible, visible, and valuable.

*Please contact your Unisys sales representative if you'd like to implement the Sightline software suite in your ClearPath Forward environment. And to learn more about Sightline, please visit their [web site](#).*



## 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](#)
- [Executive Brief: ClearPath Forward Innovation Workshops](#)
- [Video Playlist: ClearPath OS 2200 Software Release 17.0 Technical Update \(29 Videos\)](#)
- [Video playlist: ClearPath OS 2200 Release 18.0 Technical Update \(27 Videos\)](#)
- [Video Playlist: ClearPath MCP Software Release 18.0 Technical Update \(21 Videos\)](#)
- [ClearPath Forward Client Education homepage](#)
- [Newsletter: Developing Agility October 2018](#)
- [Newsletter: ClearPath Forward Connection August 2018](#)

The latest:

- [Brochure: Unisys ClearPath Forward® Systems: The Heart of Your Digital Business](#)
- [Brochure: Unisys Business Information Server: Your Engine for Turning Raw Data Into Actionable Information](#)
- [White Paper: Delivering Value: The Economics of ClearPath Forward Systems](#)
- [White Paper: ClearPath Forward Systems an Introduction](#)
- [White Paper: Unisys ClearPath Forward Systems: The Integrated Stack](#)
- [White Paper: ClearPath Forward as Open Systems](#)
- [Executive Brief: ClearPath® OS 2200: A Premier Operating Environment for Today's Business Demands](#)
- [Executive Brief: Your Data, Transformed: Unisys Business Information Server](#)
- [Executive Brief: Freedom, Power, Flexibility: The ClearPath MCP Software Series Products](#)
- [Executive Brief: ClearPath Application Integration Services - Simplifying Cross-Platform Development](#)
- [Product Information Sheet: ClearPath Application Integration - MCP](#)
- [Product Information Sheet: ClearPath Application Integration - OS 2200](#)