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ClearPath Forward®
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Contents

Success Through Succession Planning

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After decades of commercial availability – and just as many years serving as the cornerstone of our clients' business and IT operations – the ClearPath Forward® environment is facing a transition.

Workforce demographics are in the midst of a dramatic shift. And with turnover accelerating, many clients face a reality in which the people they've entrusted with knowledge of their ClearPath Forward environment may soon be departing the team.

But in no way is this situation unique to our clients. It's happening in many industries, and impacting a wide array of businesses, the world over.

After working to get out ahead of this issue – and successfully implementing processes designed to quickly onboard new team members – what we've determined is that a formalized, proactive succession plan is critical to making sure you continue to get the most out of your environment, even as one generation of employees gives way to the next.

In this context, a succession plan should achieve two main aims: Limit the impact these departures have on your operations, and make it easier to attract, hire, and onboard new team members.

To support and facilitate these goals, we've outlined four key strategies you can utilize to simplify your succession planning, while making sure it accounts for your most critical business, IT, and staffing needs.

Evolving the Core

When it comes to creating an environment that's welcoming – and attractive – to new programmers, familiarity is everything. >>

That's why we've invested considerable time and effort around utilizing contemporary technologies and UIs wherever applicable within the ClearPath Forward environment. For instance, since Microsoft® Visual Studio® and the Eclipse IDE are both are mainstays in the curriculum at many universities, we've made these tools cornerstones of the environment's development capabilities. Likewise, we're working more point-and-click interfaces into the environment – and continue to update tools like the ClearPath Forward ePortal – so new team members can work in a manner that's immediately intuitive.

Emphasizing familiarity in this way essentially removes deep knowledge of the ClearPath Forward environment as a prerequisite to success. Instead, your new hires just need to focus on the goals they want to accomplish, and the tools that will help them get there.

Handling it for You

Your business is your main focus – and rightly so. But for some, it can be challenging to find the time and resources to help the organization capitalize on the latest opportunities.

With our help, you can stay focused on critical business strategies, not tactical IT matters.

We can work with you to augment your staff, giving you access to a deep pool of proven ClearPath Forward experts you can turn to as needs dictate. Or, we can take it a step further and oversee parts or all of your ClearPath Forward environment, so you can focus more attention on advancing your business.

As a result, you'll be able to keep your environment in a state of continuous optimization, get more from your investments, and free up resources to support the innovation initiatives you need to stay relevant and differentiated.

Capturing Knowledge Before it's Gone

When a valued team member retires, the void they leave behind isn't purely physical. They'll also be taking considerable expertise with them.

To mitigate any lasting effects of these departures, we'll work with you to capture and automate specific processes and actions, so the newest additions to your team can easily carry forward the work of their predecessors.

Application discovery – the process of extracting and documenting the knowledge of how your programs work – is equally as important. Because this critical knowledge usually resides in the heads of just a few key individuals, formally capturing and documenting it will help you further minimize knowledge gaps that could emerge during periods of turnover.

Building Your Proficiency

We learn best by doing. So the sooner you're able to let your new hires get their hands on the systems they'll be interacting with every day, the quicker they'll become productive members of the team.

With access to a blend of training courses – available onsite, online, and via self-study – you'll help your staff come up to speed faster. And even though the environment is becoming more and more intuitive by the day, making these courses a core component of your onboarding process will help new hires deliver more value to the business sooner.

Getting Started

While we've provided a fairly prescriptive outline for what it should include, your succession plan is sure to be as unique as your business.

To help it reflect your specific needs, we recommend starting with a formal skills assessment. By understanding what you have today, what's leaving, what you'll be left with, and what you'll need, the assessment will help you proactively manage these changes – and leave you better equipped to absorb their impact.

Pair this with one of our Innovation Workshops, which help your organization identify key goals and any barriers standing in their way, and you'll feel confident knowing your succession plan incorporates the proper strategic considerations.

Ultimately, it's about more than simply knowing what people to replace. It's about building a lasting continuity of skills, knowledge, and expertise, so nothing stands between you and where the ClearPath Forward environment can take your business tomorrow.

It's Here:
ClearPath® OS 2200 Release 18.0 is Now Available!

By Adam Gallagher, ClearPath OS 2200 Product Manager, Unisys

ClearPath® OS 2200 Release 18.0 is here!

The latest major release of the operating environment for ClearPath Forward Dorado systems, OS 2200 18.0 delivers new-feature updates to a number of products. And because all of the well over 100 enhancements in this release have been designed, developed, and qualified together, you can trust they'll deliver the seamless operations your business-critical applications demand.

With ClearPath OS 2200 Release 18.0, you'll realize considerable benefits across three important areas:

• Security
• Data center transformation
• Application modernization

Security

With OS 2200 18.0, you'll build on the ClearPath Forward environment's proven security by utilizing networking products, system authentication functions, and document creation capabilities that have all received significant security-centric upgrades.

Here's how:

• **Communications Interface for Transaction Applications (CITA):** With the ability to use the SSL/TLS security protocol in CITA, you'll be able to encrypt network data, use message digests to protect messages from modification, and authenticate using PKI certificates.
• **Communications Platform (CPComm) and CPComm for Open Systems (CPCommOS):** Following the advice of security experts, CPComm and CPCommOS now disable the TLS version 1.0 security protocol by default. Additionally, CPCommOS allows you to use Elliptic Curve-based cryptographic algorithms for authentication and key exchange. With this update, you'll increase performance by using keys that are smaller than, but just as effective as, RSA and DSA keys.
• **Cryptographic Library (CryptoLib):** We've recertified the CryptoLib to comply with the Federal Information Processing Standards (FIPS) 140-2 standard. With this update, you'll be able to use callable functions that can generate FIPS 140-2 approved random numbers.
• **Enterprise Output Manager:** With the ability to digitally sign PDF documents, you'll be able to effectively protect the contents of the document, as well as the identity of its creator and approver.

Data Center Transformation

When you use OS 2200 18.0, you'll make it easier to manage, process, and interact with the data that flows into and out of your ClearPath Forward system each day.

Here's how:

• **Apex:** Apex receives a number of important enhancements in OS 2200 18.0:
  • A new report shows you who accessed a file and when, making it easier to detect suspicious activity and spot inadequate security policies
  • SECMGR is now a part of Apex, providing compatibility for existing scripts and runstreams
  • With the ability to disable a user ID on a specific date, you'll be better equipped to avoid unauthorized system access >>

- Enhancements to the Users Report give you more flexibility in the selection criteria and more ways of organizing the results
- Your administrators can now use a search field to find EXEC configuration parameters utilizing either the dynamic or static parameter names, eliminating the need for time-consuming manual searches
- The UDS Active Configuration page now displays configuration source details
- Columns, Indexes, Constraints, Views, Triggers, Routines, and Parameters are now selectable from the UDS Object Explorer
- **DBAGENT:** By making the DBAGENT a separate installable product, you'll have greater flexibility in terms of when you receive the latest features and fixes.
- **FTP Services for ClearPath OS 2200 (cpFTP):** With the ability to translate files between EBCDIC and ASCII formats, you'll simplify transfers between heterogeneous systems.
- **Enterprise Output Manager:** Offered with OS 2200 18.0, Enterprise Output Manager 14.0 includes:
    - Internet Printing Protocol (IPP) support, which allows you to encrypt data transfers between Enterprise Output Manager and other sources
    - A client that helps you monitor jobs and management queues over the web
    - Enhanced File Masks and keywords for greater flexibility when routing and processing data
    - New SNMP nodes
    - Single sign-on in Web Assistant that can use Microsoft Windows® credentials
- **ClearPath Forward ePortal Software Edition (SE):** Included alongside the rest of the ePortal functionality in OS 2200 18.0 is ePortal SE. With ePortal SE, you'll have a software-based version of ePortal that can be freely deployed on industry-standard virtualization platforms, including Microsoft Hyper-V® or VMware® ESX™.

- **EXEC:** OS 2200 18.0 includes many important updates to EXEC:
    - The new Expand Pack capability helps you fully utilize the capacity of a newly installed storage system
    - The data collected to analyze system performance now reports I/O component time at a finer granularity
    - A refactored system file lessens time limitations in the run scheduling complex and removes limitations related to the data stored in that file
    - Simplified authentication for first-time users eliminates the need for assistance from a system administrator
    - An enhanced, easier method of replicating and migrating your system's VALTAB/VINDEX has been added to EXEC
- **Operations Sentinel:** Operations Sentinel 17.0 is included in OS 2200 18.0. The latest version of our automated data center management tool features several noteworthy enhancements:
    - Centralized monitoring, which allows you to view all alerts in a single window
    - The ability to detect when the UNIX/Linux Resource Monitor (ULRM) fails and send an alert to the appropriate administrative personnel
- **Universal Database Control (UDSC) module:** When you use the enhanced UDSC module in ClearPath Forward Dorado eXtended Processing Complex (XPC-L4) deployments, you'll have access to additional information that helps you spot any programs involved in a deadlock, making it faster and easier to resolve these issues.
- **WebSphere MQ version 9 for ClearPath Forward Dorado Servers (WMQ2200):** Based on IBM® MQ 9.0.0, the latest version of WMQ2200 includes the new QPMonitor. With it, you'll be able to monitor system resources and events, as well as generate alerts. And with the ability to monitor clustered queues, you can make sure messages are processed and traffic is sent to the correct destinations. >>

Application Modernization

With OS 2200 18.0, you'll be able to make better use of readily available developer skills, while executing modernization initiatives that align IT investments with business objectives.

Here's how:

- **ClearPath Forward ePortal:** ClearPath Forward ePortal 8.0 is included in OS 2200 18.0. The latest version of ePortal includes numerous features that help to increase the reach and value of your applications. For instance, with the enhanced COBOL Import Wizard, you'll streamline the process of importing and maintaining the COBOL records used in ePortal COBOL data source projects. And with the COBOL Data Source Orchestration Connect feature, you can dynamically specify the host name, window name, and port number of the back-end server your application will target.
- **RDMS:** Updates to RDMS improve the performance of arithmetic expression evaluations, hybrid hash joins, and searches. You can also use more file names in a thread, reference a view in more FROM clauses, and use FETCH commands in Routines and Triggers.
- **OLTP:** With the new configuration parameters in OLTP, you can utilize more fine-grained timeouts, helping you detect failing applications faster.

Ready to Get Started?

Please visit the OS 2200 homepage to learn about all of the enhancements and updated capabilities we've packed into OS 2200 Release 18.0. For even more information about this release, please give the OS 2200 18.0 Software Release Announcement, Migration Guide, and Software Product Catalog a read. And be sure to watch the videos in our technical update playlist on YouTube.

If you need any assistance using these enhancements to modernize your applications, transform your data center, or enhance security, we'd be happy to set up a services engagement to assist you. Contact your Unisys sales representative to get started.

Please note that, as recently announced, OS 2200 18.0 will be made available by digital download, via the Unisys Download Center. If you have any questions about acquiring OS 2200 18.0 using our new digital delivery model, please reach out to your sales representative.

A New Enterprise Output Manager Release is on the Way!

Our comprehensive output-management solution has received its next major update.

That's right: Enterprise Output Manager 14.0 is now available!

With this latest release, you'll be even better equipped to distribute output where, when, and to whom you want, modernize your documents, automate workflows, and monitor and secure your output from a single point of control.

Key enhancements in Enterprise Output Manager 14.0 include:

- **IPP support:** With support for IPP and HTTPS inbound connections, you can securely transfer files from external sources to Enterprise Output Manager over LAN or WAN – and even encrypt transfers taking place over public networks.
- **Digital PDF signatures:** While using the Output Manager PDF Writer, you now have the option to digitally sign PDF documents as you create them, helping you protect the content of the document, along with the identities of its creators and approvers. The digital email signing certificate included in this feature captures the reason for signing, physical location of the signing user, and an optional image that can be used as part of the signature.
- **Multiple email addresses:** With a new enhancement to the email receive options, you have the flexibility to configure Enterprise Output Manager to route emails to multiple accounts.

- **EOM WebClient:** With the EOM WebClient, you're able to monitor your Enterprise Output Manager environment using a web browser. You'll have access to much of the functionality included in the desktop client application, including access to the job queue and the ability to delete jobs, lock and unlock specific printers, and enable and disable certain jobs.
- **File Mask enhancements:** With the new "Pages" property added to the File Mask attributes, your administrators can choose which pages to print when triggering the print job through file masking statements.
- **Automatic configuration backups:** With this new feature, you can automatically schedule the backup of your Enterprise Output Manager configuration data, specify the target location for the backup, and compress the backup file as needed to save disk space.
- **Web Assistant password encryption:** Any user passwords stored in the Web Assistant will now be encrypted with the AES 256-bit algorithm, eliminating the potential that passwords could be exposed in plain text form. Additionally, the web API used to authenticate users has been configured to accept the password as an encrypted string.

Check out our web site to learn more about everything Enterprise Output Manager can do for your business. And if you'd like more information about the new features included in release 14.0, or need help putting them to use in your organization, please contact your Unisys sales representative.

Unisys Data Exchange 5.0:
Data Transformation Made Easier

When you use Unisys Data Exchange, you can perform selective and near-real-time data replication and propagation from a source data store to one or more target data stores. As you do, you'll be able to apply transformations that support business process integration, reporting, big data analytics, and business intelligence activities.

As a result, you'll increase operational efficiency, avoid the costs inherent in developing and maintaining data integration and transformation tools, and make IT more flexible and responsive to the business's changing needs.

And with the release of Data Exchange 5.0, we're extending these benefits by delivering new capabilities that make it easier to transmit, transform, and secure your data.

It's all made possible by the following key features:

- **Apache Kafka integration:** By adding this new integration, you can now propagate data to Apache Kafka from Enterprise Server for ClearPath MCP databases and Relational Database Server for ClearPath OS 2200 databases.
- **Role-based access control:** With the help of the new Data Exchange Management Studio (DEMS), you'll be able to increase data security by defining and validating your users' security roles.
- **Secure data transfers:** Support for the TLS protocol in Data Exchange 5.0 means you'll be able to better secure any data you send via a network connection.

- **Multi-version support:** With the ability to run different versions of the Data Exchange runtime or development workbench in the same environment, you'll reduce hardware costs, simplify migration between versions, and empower your teams to be more productive.
- **Transformation creation:** By importing existing transformations as new ones – and leveraging several enhancements to the development workbench – you'll accelerate the process of creating new transformations.
- **Improved error management:** You now have the ability to ignore certain target commit errors when running a transformation – without interrupting the transformation.
- **Transformation flexibility:** With Data Exchange 5.0, you can utilize read-only properties for the source, target, or transformation in expressions, extending the business requirements in your transformation definitions.
- **Performance improvements:** With the help of several new performance improvements, you'll be able to execute data transfers much faster.
- **Gaiji support:** Data Exchange now includes support for any Gaiji characters you may have in your source data stores.
- **Reduced dependencies:** By eliminating Message Queuing and OLEDB as prerequisites, you'll simplify and accelerate installations.

Be sure to visit our web site to see all the great things Data Exchange can help your business do with its valuable data assets. And if you'd like to put Data Exchange 5.0 to use in your organization, please contact your Unisys sales representative today.

Operations Sentinel 17.0 has Arrived

We're thrilled to announce the availability of Operations Sentinel 17.0!

The updates and enhancements included in the latest release of our feature-rich, end-to-end data center management tool make it easier to automate, consolidate, access, monitor, and manage heterogeneous systems and applications. Plus, you'll be well equipped to facilitate anytime, anywhere remote operations, anticipate and address abnormal conditions, and reduce the resources dedicated to operations and support activities.

Operations Sentinel 17.0 makes this all possible with the help of the following key new features:

- **Centralized monitoring:** Instead of toggling between multiple UIs and combining information from separate displays, you now have the ability to monitor your entire ClearPath Forward environment in a single window.
- **UNIX/Linux Resource Monitor (ULRM) failure alerts:** With the ability to report on ULRM status in Operations Sentinel – and receive an alert if it stops running – you'll be able to quickly spot and address any issues that may prevent you from monitoring your critical UNIX® and Linux® resources.
- **Eliminate reboots during installation:** Rather than requiring users to wait through multiple reboots when Operations Sentinel is loaded onto their workstations, you can now complete the installation process without any reboots, helping them use the software sooner.

- **Multi-threshold filtering:** Sometimes, relying on a single property isn't enough to know whether or not an alert should be raised. With this new feature, you can define the alert criteria for multiple thresholds, then use these to raise alerts accordingly.
- **Report Problem tool enhancements:** The Report Problem tool receives several enhancements in Operation Sentinel 17.0. Activities are now included in Application Event Logs, which enable you to detect failures during data collection. Similarly, collecting Windows memory dumps and application dumps helps you understand why an application crashed. And with the ability to enter such data as the customer name, date and time the issue occurred, and a description of the problem, you'll improve the accuracy of log analyses.
- **Text boxes in Topology:** With this feature, you can use text boxes to display information about managed objects, helping your operators spot critical details faster.
- **Enhanced Log consolidation:** By creating a set of logs that belong to multiple managed objects – and saving them for future use – you can reduce the time it takes to consolidate logs.

Please visit the Operations Sentinel homepage to learn about the wealth of capabilities included in this release. And if you need any help putting these new features, updates, and enhancements to use in your data center, don't hesitate to contact your Unisys sales representative.

What's New in the Unisys ClearPath Visual IDE?

ClearPath MCP developers, take note: a new release of the Unisys ClearPath Visual IDE is now available.

With the arrival of the ClearPath Visual IDE 3.0, we're providing a suite of new and richer functionality you can leverage to develop distributed applications with greater speed and efficiency. And because the latest additions to the Visual IDE continue to draw on the breadth and depth of the Microsoft Visual Studio community, you'll have even more ways to help your newest team members quickly become productive developers.

Here's what's new in the ClearPath Visual IDE 3.0:

- **Offline editing:** With this update, you can edit and save changes to files in projects when the connection to the MCP host is unavailable. No active connection is required – you can continue working as you normally would, and simply upload back to the host once you're reconnected.
- **Set Sequence Number and Mark ID:** With this new addition to the Visual IDE, you can explicitly set the Sequence Number and Mark ID in the Visual Studio editor, helping you accelerate operations and reduce the time it takes to find the right Sequence Number.
- **Hidden columns:** A new option in the Visual IDE allows you to see Sequence Numbers, Mark IDs, and any other hidden columns in the Visual Studio editor.

- **Additional programming language support:** With this update, the Visual IDE includes all supported MCP programming languages and data file types. The following are now supported:
  - Pascal
  - Pascal83
  - Binder
  - CC
  - CPP
  - Java
  - Fortran
  - Fortran77
  - XFortran
  - COBOL
  - LCOBOL
  - Modula2
  - Basic
  - RPG
  - ESPOL
  - SANS
  - OHNE
- **New file types:** The Visual IDE now supports CDATA, DCP, NDL, NDLII, PL/I, SORT, and WIDE MCP file types. Plus, you can customize the text length in the newly supported DATA, SCHEDULEFILE, and CSEQDATA file types.
- **Editing non-display characters:** You can now edit files containing characters that cannot be displayed – including custom characters in files – in the Visual Studio editor.
- **WFL syntax checking:** With this feature, you can check the syntax of a WFL file in a project without executing it. By highlighting any incorrect code syntax, you'll no longer have to compile the program first before finding and correcting errors.
- **Local save as:** You now have the flexibility to save a copy of a file in your project to a Windows file in another location.
- **Intellisense support:** With the Visual IDE 3.0, you can make use of such Intellisense features as Go To Definition and Find All to locate references in your ALGOL and COBOL files. >>

- **Secure communications:** By utilizing the Visual IDE's new connection encryption, you'll secure all communications between Visual Studio and the MCP host, while increasing usability.
- **Importing and exporting patches:** You can now export changes as a patch to the MCP host, as well as import a patch from a host file. It's the same way patches are handled in the ClearPath MCP environment, so there's no need for you to learn a new patching process specifically for the Visual IDE.

To learn more about the features included in the ClearPath Visual IDE 3.0, or to view configuration, compatibility, and licensing requirements, please visit our web site. And if you need assistance putting any of these new features to use in your organization, please contact your Unisys sales representative.

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 December 2017
- Newsletter: ClearPath Forward Connection June 2018

The latest:

- Brochure: ClearPath Application Integration Services - Simplifying Cross-Platform Development
- Product Information Sheet: ClearPath Application Integration - MCP
- Product Information Sheet: ClearPath Application Integration - OS 2200
- White Paper: ClearPath Forward Systems an Introduction
- White Paper: Delivering Value: The Economics of ClearPath Forward Systems
- White Paper: Upgrading ClearPath OS 2200 QProcessor, ClearPath OS 2200 Interconnect, and WebSphere MQ for ClearPath OS 2200
- Brochure: Unisys Business Information Server: Your Engine for Turning Raw Data Into Actionable Information
- Executive Brief: Your Data, Transformed: Unisys Business Information Server
- Executive Brief: Freedom, Power, Flexibility: The ClearPath MCP Software Series Products