UNISYS

ClearPath Connection

A Quarterly Newsletter for Unisys ClearPath Customers

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ClearPath 2015: We Are Ready to Make a Real Business Impact

By Ann Thureen, Vice President, ClearPath and Transportation Development, Unisys

As our market research reveals, CIOs are looking to make bigger differences in the businesses they support now and for years to come. They want to demonstrate that the investments they've made in IT are in fact capable of enabling significant business results.

And here's the good news: We are ready to help you achieve real business results in 2015 and beyond!

This year, we plan to extend the core values that have long made ClearPath® the standard for mission-critical processing – namely, the environment's performance, stability, and security – in ways that make significant change a real possibility.

We've done so by intensifying our focus on three core strategies:

- Helping you make better use of widely available skills in your ClearPath environment
- Simplifying system management and maintenance
- Extending the reach of the ClearPath fabric-based infrastructure   **>>**

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ClearPath Connection

Closing the Skills Divide

In many industries, the gap between the skills organizations need to advance their businesses and what's available on the market continues to be a concern. That's why we remain committed to delivering contemporary, intuitive interfaces that help new team members, even those who have just graduated college, make immediate, significant contributions to the organization.

Take the ClearPath OS 2200 and MCP IDEs *for Eclipse™*, for example. Eclipse is something many programmers routinely use in their college coursework, and the integration between it and the OS 2200 and MCP environments is a key way we're helping new hires feel immediately comfortable working on projects that advance the business.

We've upped the performance and scalability of the Eclipse integration in ClearPath OS 2200 Release 16.0 – and introduced similar enhancements into the MCP version of the IDE. So now, it's possible to leverage the IDE for larger-scale application development and modernization projects, making it easy for you to use widely available skillsets to do some truly impressive things.

Simplify, Simplify, Simplify

Aside from determining the best ways to connect with a younger generation of IT professionals, we recognize that the daily, nuts-and-bolts act of managing and maintaining a complex IT environment can also demand a significant amount of time and energy. If we can make these activities simpler, then you'll be able to dedicate more resources toward defining and executing the strategies that help your organization excel.

Security is one area where our push for simplification really shows. Updates to our Apex product in OS 2200 Release 16.0 make it easier to configure security settings, track incidents, and view reports – even for less-experienced admins. And in the MCP environment, Security Center uses a GUI and built-in help to simplify many of the tasks associated with managing system security.

Likewise, our "secure by default" concept offers you a set of out-of-the-box parameters that closely aligns with recognized security best practices. Even if you do nothing to tweak your system's security beyond its default settings, you can trust that it will still be one of the most protected in the industry.

In addition, we also plan to use social media and smaller, more intimate engagements to forge tighter connections with the ClearPath user community. We want to better understand how you manage your systems and use these insights to consistently deliver releases and training that align with how you operate.

More Fabric, More Innovation

When it released last year, we knew the ClearPath fabric-based infrastructure would be a revolutionary concept. What we didn't know at the time, and are now so thrilled to see, is how quickly our clients would recognize this and jump at the opportunity to bring the benefits of the fabric to their organizations. It validates the goals we set out to achieve when we developed the fabric – namely, make the ClearPath environment as flexible as the cloud while continuing to deliver proven, mission-critical security, performance, and availability. This acceptance motivates us to keep innovating, to push ourselves to make the fabric capable of more and more.

Along those lines, this year will see all of the Microsoft® Windows® and Linux® based components that complement the OS 2200 and MCP operating environments execute on fabric-enabled systems. Our goal is to help your system staff closely manage these environments in much the same way as they manage your existing Dorado or Libra partitions.

Enterprise Output Manager, SMA OpCon, and the QProcessor specialty partition are great examples of software that can move to a partition in the fabric. Same goes for Open BIS executing on Windows partitions, which provides the Internet-enabling interface to your Business Information Server (BIS) applications.   **>>**

Just imagine the boost in network performance that could happen when multiple BIS instances and external databases are able to interact across the high-speed interconnects within the fabric environment.

But that's just the start. Newer, bigger, and more powerful fabric-based systems are on the horizon, as well. And with them come greater benefits, additional cutting-edge capabilities, and more opportunities to advance your business.
So taken as a whole, how will these three strategies help you achieve real business results?

You can now hire new people and quickly make them effective members of your data center and development teams – all while increasing the productivity of your existing staff. And the advancement of the ClearPath fabric-based infrastructure delivers dramatic, new flexibility to your environment, allowing you to seamlessly match it to your changing business needs.

Add everything up and it's clear that we've put the pieces in place to help you make a big difference in your organization.

Now, are you ready to make it happen?

Important Update: Changes to the Subscription Process

We've combined our newsletter and mailing list subscriptions, making it easier for you to connect with us and stay on top of the latest news and innovations from Unisys.

Sign up here to subscribe to ClearPath Connection and receive the latest ClearPath related news.

Sign up here for the Developing *Agility* newsletter and updates on all things Agile Business Suite.

Hello and Welcome, ClearPath OS 2200 Release 16.0

ClearPath OS 2200 Release 16.0 is here! This major release of the operating environment for ClearPath Dorado systems delivers 110 software products, 135 feature updates, and 27 stability enhancements. Plus, it incorporates 23 New Feature Suggestions requested by the OS 2200 user community.

And as we do with every new version of OS 2200, all of the products and features of this release have been designed, developed, and tested as one whole, so they can be quickly and cost-effectively implemented – and deliver the performance and reliability your mission-critical applications require.

The new features, updates, and enhancements we've added into ClearPath OS 2200 Release 16.0 work in concert to deliver considerable benefits across three important areas:

• Data center transformation
• Application modernization
• Security

Data Center Transformation

ClearPath OS 2200 Release 16.0 includes several enhancements that improve the ways you interact with and process data:

RDMS: OS 2200 16.0 significantly enhances the performance of our popular RDMS database, helping you access the data you need faster. For example, this release includes improvements to query syntax that support more complex SQL queries, allowing your applications to more efficiently retrieve the required data. These updates will also help you better support emerging business requirements, particularly those that involve data warehousing and online analytical processing (OLAP).

cpFTP: cpFTP enhancements in this release boost file transfer performance by leveraging the innovative fabric-based infrastructure in the ClearPath Dorado 4300 and 6300 systems, as well as 10 Gb Ethernet NICs, allowing you to transfer more data faster.

Operations Sentinel: Operations Sentinel 15.0 is included in OS 2200 Release 16.0. The latest version of our automated system management tool includes the new Autoaction Database Scanner, which makes it easier to migrate from one OS 2200 release to the next by detecting changed message patterns within the Autoaction Message System database. In addition, Operations Sentinel 15.0 delivers several noteworthy enhancements:

• Advanced editing capabilities and a richer GUI experience in the Autoaction Database Manager (ADBM) Editor that enable you to quickly automate actions based on system alerts

• Flexible time scheduling capabilities that allow you to disable the Alert Policy action as necessary

• The ability to remotely install the Operations Sentinel Windows Resource Monitor (WRM) and Unix/Linux Resource Monitor (ULRM) agents on multiple systems

• SNMP v2 support

• ULRM agent qualification and support for Red Hat v5 and v6   **>>**

Enterprise Output Manager: Offered alongside OS 2200 16.0, Enterprise Output Manager 12.0 allows you to insert file content, images, and logos into emails and personalize your messages with new font and color options. In addition, Enterprise Output Manager now supports large file transfers – those with greater than 262,143 tracks – from OS 2200 systems. Enterprise Output Manager 12.0 also includes the following new features:

- The ability to hide the URLs of files in the File Finder search results page
- Enhancements to the Data Dependent Attribute (DDA) conditional commands, set variable, and convert variable
- A find and replace function in the Configuration Explorer that helps you quickly locate an attribute or piece of text and replace it with the desired value

Application Modernization

Thanks to the following enhancements in ClearPath OS 2200 Release 16.0, you can more effectively utilize widely available developer skills and execute new initiatives that better align IT investments with business objectives:

ClearPath ePortal for OS 2200: The ClearPath ePortal for OS 2200 has been updated in OS 2200 16.0 to include support for the latest version of Microsoft Visual Studio® 2013. Plus, with the Unisys Hybrid App Build Service – our new cloud-based mobile application build offering – you can easily create hybrid mobile applications that take advantage of native smartphone capabilities, such as GPS maps and barcode readers, without needing to master each platform's proprietary language, SDK, and tool set.

ClearPath OS 2200 IDE *for Eclipse*: ClearPath OS 2200 16.0 supports Eclipse version 4.3.2 and includes updates that help developers improve productivity when working with large projects, record keystroke macros for frequently used tasks, and use content assist for DMS, RDMS, and ECL commands.

Java: Updates in OS 2200 16.0 allow you to take advantage of the Java development environment's latest productivity, ease-of-use, security, and performance improvements.

Security

ClearPath OS 2200 Release 16.0 builds on the proven security of the OS 2200 environment by adding new features to several key capabilities:

Apex: Originally introduced in ClearPath OS 2200 Release 15.0, Apex provides an easy-to-use, intuitive, web-based user interface for managing the OS 2200 operating environment. The initial release of Apex focused on simplifying OS 2200 security administration. OS 2200 16.0 enhances the product's security configuration and reporting capabilities, making it easier for less experienced staff to effectively manage OS 2200 security.

Secure by Default: First delivered in ClearPath OS 2200 Release 15.0, "secure by default" refers to a set of capabilities that aligns the environment's default security settings with industry best practices. We've enhanced this capability in OS 2200 16.0 by making it easier and faster to configure security settings on ClearPath OS 2200 systems – while helping you stay more secure from the start.

Additional security-related enhancements in OS 2200 16.0 include:

- Encryption updates for CIFS ZIPUT, Enterprise Output Manager, and Web Transaction Server for ClearPath OS 2200 (WebTS)
- CPCommOS support for TLS protocol versions 1.1 and 1.2 and FIPS 140-2-validated SSL/TLS
- Siman support for User Authentication Module 19 (Configured Password Profiles)
- Web-enabled DPS transactions using signed applets with WebTS JavaClient   **>>**

Learn More About ClearPath OS 2200 16.0

Please visit the OS 2200 homepage to learn more about the updates and enhancements included in OS 2200 Release 16.0. And be sure to check out the OS 2200 16.0 Software Release Announcement, Planning and Migration Overview, and Software Product Catalog for further information about the new products, software, and enhancements featured in this release.

And please do not hesitate to reach out to us if you need any assistance migrating to OS 2200 16.0 or implementing any of the release's new features. We offer a portfolio of services that can help you quickly benefit from everything the new release has to offer. Please contact your Unisys sales representative for details.

Learning About MCP, One Day at a Time

By Devon Beckett, Associate Engineer, Unisys

Demographic shifts are pushing many MCP clients to uncover new ways to bring the latest additions to their teams up to speed as quickly as possible. In this article, a recent college grad discusses the tools and programs that helped him understand the ClearPath MCP world.

Joining Unisys in June of 2014, almost immediately upon my graduation from college, was an extremely exciting moment in my life. I studied the software development process at a high level in school – with a focus on documentation, design, and implementation – and was eager to put what I had learned to use.

Of course, I also realized that every day would bring unique challenges, as well as new opportunities to learn more about how things work at Unisys. Thankfully, though, I had access to a number of tools and programs that helped me utilize the skills I acquired in college to great effect in the MCP environment.

For instance, I routinely leveraged Programmer's Workbench, an integrated development environment (IDE) that's included in all ClearPath MCP systems, in many of my software development projects. One of my key areas of responsibility is Client Access Services (NX/Services), a networking function that supports file communications between the MCP and Windows environments. My work in NX/Services typically revolves around reviewing code, determining how to incorporate updates, performing iterative testing, and ensuring networking specs maintain the appropriate levels of compliance.

Programmer's Workbench made these tasks easy because it showed everything in an approachable, Windows like look and feel – the same as the development tools I used in college. So, when I needed to write a small patch and apply it against an original piece of code, for example, I knew I could step through the process in a manner that was immediately familiar. This made it easy for me to work independently and with a great level of efficiency.

My role also requires me to read a significant amount of documentation, and I've found the extensive technical resources we offer on the Unisys Support site to be immensely helpful. For example, one of the big things I had to learn when I first started here was how to program in ALGOL. While this could have presented a significant hurdle to my development, having the documentation on hand ensured it went as smoothly as possible.

And the best part about this documentation? It's available to all ClearPath clients via the support site, so you'll be able to benefit from it as much as I have.

Getting an Insider's Perspective

Prior to graduating college and joining the team as a full-time employee, I was lucky enough to spend two six-month periods with Unisys as part of my university's co-op program. I interviewed with several potential co-op partners, but immediately knew after my initial visit that Unisys was where I wanted to land.   **>>**

I loved the company's history and the people I met were extremely friendly and seemed like they'd be wonderful guides throughout the program. Everything suited my interests so well, I didn't hesitate to join when they accepted my application.

Far more than just a simple internship, the co-op program gave me the opportunity to see how the content of my studies could be utilized in the real world. And, best of all, it actually gave me the chance to apply some of it on projects the company had in process at the time. Specifically, I spent a significant amount of my time during the two co-op periods using Work Flow Language (WFL) in MCP, as well as Batch and JScript in Windows, to script and run automated tests for the MCP networking team.

The emphasis on doing actual work made my co-op experience very valuable, as it gave me the chance to see what the software development process was really like and if it was something I actually wanted to do following my graduation.

So once my schooling completed, I didn't hesitate to accept Unisys offer to become a full-time member of the team. And the great thing about joining the same company that had me as a co-op – aside from getting to spend more time with such welcoming, encouraging people – is that I feel as though I'm bringing an insider's perspective to the work I do every day.

Because what I'm doing today is in many ways a natural extension of what I completed during the co-op program, I'm able to work confidently and know I'm making positive contributions to the company. In particular, it's extremely gratifying to know that the projects I'm currently working on will eventually become a core component of a future MCP software release.

We asked Devon's manager, Paul Dowell, to talk about the contributions he's made in his short time with Unisys. Here's what Paul had to say:

"The work Devon completed during his stint as a co-op made an immediate, positive impact on the MCP team. And he's just kept on going from there. Thanks to his familiarity with our processes and drive to achieve great things, Devon has been a productive member of our team since day one."

ClearPath ePortal: Delivering Business Value Every Day

The ClearPath ePortal specialty partition is loaded with impressive technological innovations.

Its edge-of-market application modernization capabilities help developers automatically and rapidly extend ClearPath applications to new partners, channels, and markets through Web, mobile, or Web Services technologies.

But what does all of this mean from a business perspective? What makes ePortal resonate with people who are tasked with driving growth and getting new products and services to market faster than the competition?

To put it simply, quite a bit.

For evidence, let's take a look at the four key ways ePortal delivers value to the business.

Boosting Productivity

Speed to market is one of the founding tenets of ePortal. Say you want to extend an app to sales people in the field, so they can provide customers with real-time quotes. Typically, you would have to dedicate a significant amount of time and money toward analyzing, obtaining, and integrating the assets to make this happen. But since ePortal comes equipped with all the elements needed to execute a project – and doesn't require you to acquire new skills and specialized technologies – taking that existing ClearPath app and mobile-enabling it for use in the field is a quick, efficient process. In the end, you'll get to market faster while minimizing the time-consuming and costly acquire-prototype-scale-deploy cycle.

Reducing Costs

With ePortal, it's easy to deliver the capabilities the business demands without overpaying to bring them to life. As a complete, end-to-end solution, ePortal eliminates the need to purchase and integrate additional technologies. Since it offers a modern, point-and-click interface – as well as templates for all popular mobile platforms – you don't have to spend the time and money training programmers to master a specific development approach or mobile ecosystem. Simply choose the target mobile environment, and you're set. And because we routinely incorporate the latest technologies into ePortal releases – and automatically deliver them to you – you'll be able to focus less of your budget on maintenance, and more on creating new services that solve business problems.

Minimizing Risk

It can be tough to quantify the financial risk of an IT initiative that drags on too long or delivers limited functionality. But with ePortal, you won't have to. Because it's so easy to use, there's no need to worry that you don't have specialized mobile-app development expertise in house. You also won't have to commit a significant amount of capital to the initial rollout of a new service. Since ePortal was built with elasticity in mind, you have the freedom to start small and scale as demand dictates. And like all other aspects of the ClearPath environment, security is a core principle of ePortal, so you can feel confident that the services you push out to both employees and customers are as secure as the environment where they were created.   >>

Increasing Revenue

Business requirements can change overnight, and yet it still falls to IT to deliver capabilities that directly contribute to the bottom line. With ePortal, you can deploy a solution in a matter of weeks – rather than months – making it possible to provide the functions the business needs, when it needs them. And by quickly delivering what your employees and customers are asking for, you'll be able to realize revenue from IT services faster – and help separate your organization from its competitors.

Want to see what else ePortal can do for your business? Visit our web site to learn about the benefits it can bring to [MCP](#) and [OS 2200](#) environments. And for additional information, please watch the following videos: "[Project Dragon: Unisys ClearPath ePortal](#)" and "[ClearPath and Smartphones](#)."

OS 2200

Tools of the Trade: How I Learned the OS 2200 Environment

By Grant Elbert, Associate Engineer, Unisyss

We recognize that changing demographics are pushing many OS 2200 shops to search for ways to accelerate the onboarding of their newest team members. In this article, a recent college grad talks about the resources, practices, tools, and techniques he used to quickly come up to speed on all things OS 2200.

I started with Unisys as a member of the OS 2200 team in June of 2014. As a fresh college graduate, I knew I could rely on my software engineering studies, along with everything else that went into my computer science degree, to inform my work on the Relational JDBC Driver for ClearPath OS 2200 (RDMS-JDBC) and Enterprise Relational Database Server for ClearPath OS 2200.

But, as with any new job, there's always an element of the unknown to contend with.

However, I soon found that the ClearPath environment has many tools and resources a new hire like me can use to quickly learn the ins and outs of the OS 2200 world.

Here are just a few things I frequently relied on to accelerate my development:

- **Eclipse Integrated Development Environment (IDE):** I was familiar with the Eclipse IDE from my college coursework, so it was a great way to get introduced to some of the code in the OS 2200 environment. The RDMS-JDBC client component and server component are two of my main areas of focus, and since both are editable in Eclipse, I felt comfortable working on JDBC projects, testing features, and the like on day one. The Autocomplete feature in Eclipse was a big help, as well. An incredible number of classes interact with one another in the JDBC API, but Autocomplete kept it all clear by showing me what's related to what, recognizing what I'm typing, and providing options for what can be done with a certain class. It took a lot of the guesswork out of an otherwise complicated concept.

- **Telnet Terminal Emulators:** I routinely relied on these emulators to make it easier to communicate with the OS 2200 host, access it, and execute OS 2200 runstreams.

- **CIFS for ClearPath OS 2200:** CIFS allowed me to view the files located on an OS 2200 system from a traditional Windows file explorer. So, navigating the landscape felt immediately familiar. There was no reason to worry that I didn't know the underlying command-line structure of the OS 2200 environment – seeing it all displayed in a clear, intuitive, graphical way was all the help I needed.

- **OS 2200 Executive Control Language (ECL):** I've used ECL to create runstreams in the OS 2200 environment that compile, start, stop, and check on the RDMS-JDBC server. I've also combined these runstreams with JUnit tests to see how many requests the server has processed since startup, how many clients are currently being served, if it's in an error state, and much more. In one instance, this combination of information helped me see that a JUnit test failed because the server was stuck in an infinite loop. Knowing this helped me more efficiently locate the bug in the code.   **>>**

In addition to these resources, I often referred to the OS 2200 Knowledge Base, our internal Microsoft SharePoint® repository, any time I needed additional information about a specific product or process. Knowledge Base is filled with informative presentations, design documents, and the like, which makes it an incredibly valuable asset for a new hire like me.

I also used our group documentation to understand how products are built, tested, and released. It's a great complement to the technical documentation offered by the ClearPath OS 2200 Master Glossary and Unisys CDLib Manager, which you can easily find on the Unisys Support site.

A Helping Hand Proves Invaluable

Tools like CIFS and the Eclipse IDE were incredibly important pieces of my development. But if I had to point to the one, single thing that made the greatest impact in my early days on the job, it's definitely mentoring.

It could have been so easy to come into the office on day one and immediately feel as if I was in over my head. But thanks to the guidance of my mentor, that was never the case.

My mentor always took the time to answer my questions, outline what to do in certain situations, and help me understand specific ideas, like the concept of an OS 2200 runstream, for example. Having ready access to an expert on such a wide variety of topics really helped to increase my comfort level.

Another thing I appreciated about the mentoring relationship was the emphasis it placed on learning by doing. For example, my mentor encouraged me to develop test programs within the OS 2200 database environment, which helped me get a feel for how things work without the pressure of actually building a feature in the product. I also spent some time experimenting with the tools we use to discover, analyze, and remediate any problems that may occur.

In both cases, getting immediate, hands-on exposure to the inner workings of the OS 2200 environment helped me feel as though I could confidently contribute to the team about a month into my tenure. And while I recognize that my development is an ongoing process, the support of my mentor – along with the various tools and resources I have at my disposal – have certainly put me on the road to success.

Introducing the ClearPath Libra 470 System

We are excited to announce the availability of the new ClearPath Libra 470 system! This latest addition to the ClearPath Libra family extends the definition of an entry-level, Intel® based ClearPath system by offering greater performance, improved manageability, and enhanced I/O capabilities.

In terms of performance, the Libra 470 system scales from 40 to 450 MIPS, with single-thread performance of 225 MIPS. Single-image performance is increased to 450 MIPS, which represents a 50%, or 150 MIPS, improvement over the Libra 460 system.

These performance gains are backed by an advanced, all-new I/O architecture that was previously available in mid-range and high-end models only. With it, the Libra 470 system can support 8 and 16 Gb Fibre Channel connections and 1 and 10 Gb Ethernet connections. And with 19.2 TB of internal memory, as well as support for self-encrypting disk drives, the system can store – and protect – a significant amount of data.
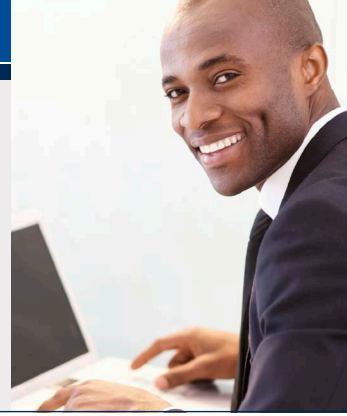
What's more, this model includes the popular Call Home feature that's been available on larger systems for years. With this feature, the Libra 470 system can automatically monitor event logs and notify a designated list of contacts, as well as the Unisys Customer Support Center (CSC), any time an alert event occurs.

And, it offers four distinct software licensing options:

- User-based
- General-purpose
- Agile Business Suite
- Software Development Kit (SDK)

Please visit our web site for more details about the Libra 470 system. And be sure to check out the Libra homepage for information about the other members of the ClearPath Libra family.

XPC-L3 Now Available for Fabric-Based Dorado Systems

We are excited to announce that Unisys eXtended Processing Complex Locking (XPC-L3) is now available for the latest, fabric-based ClearPath Dorado 4380, 4390, 6380, and 6390 systems.

XPC-L3 is a database record locking solution designed to allow OS 2200 systems to participate in multi-host clusters and concurrently access the same record in the same database. With it, a maximum of six heterogeneous Dorado systems can join a single cluster, opening up new opportunities for capacity, growth, and horizontal scalability.

XPC-L3 also enables Dorado systems to achieve improved failover and redistribute performance across hosts as needed – further enriching the already high levels of mission-critical availability and stability inherent in the OS 2200 environment. So from a business-continuity perspective, it can help you move closer to virtually non-stop operations should one of the systems in the cluster experience a failure.

Please visit our web site to learn more about the benefits XPC-L3 can bring to your business.

Resources

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

- ClearPath homepage
- ClearPath Libra homepage
- ClearPath Dorado homepage
- ClearPath OS 2200 homepage
- ClearPath MCP homepage
- ClearPath Services homepage
- Agile Business Suite homepage
- Business Information Server (BIS) homepage
- ClearPath & Innovation Blog
- ClearPath How-To Videos on YouTube
- ClearPath Libra/MCP Webinars
- ClearPath Dorado/OS 2200 Webinars
- eBook: Built for Today, Ready for Tomorrow: Unisys ClearPath Systems
- eBook: Understanding the Economics of ClearPath Systems
- eBook: How to Shift Your IT Focus from Administration to Innovation

- eBook: ClearPath MCP Case Studies – Success through Business Process Automation
- ClearPath Customer Education homepage
- Guide: ClearPath OS 2200 Course Catalog
- Guide: ClearPath MCP Course Catalog
- Guide: ClearPath OS 2200 and MCP Specialty Partitions Course Catalog
- Guide: Agile Business Suite Course Catalog
- Newsletter: Developing *Agility* December 2014
- Newsletter: ClearPath Connection December 2014
- White Paper: Understanding IT Cost **(NEW)**
- White Paper: Delivering Value: The Economics of ClearPath Systems **(UPDATED)**
- White Paper: Unisys ClearPath Systems: Integrated Hardware/Software Stacks **(UPDATED)**
- White Paper: ClearPath as an Open System **(UPDATED)**