



ClearPath Connection

A Quarterly Newsletter for Unisys ClearPath Customers

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Are We There Yet?

By Ron Voight, Engineering Director, ClearPath Middleware, Unisys TCIS

Anyone who has ever taken a long car ride with a young child – or been that kid in the backseat – knows all too well that it only takes an hour or so before the question “are we there yet?” is first asked.

While this question – and its hourly refrain – is quite common on family vacations, what you may not realize is that it’s also a favorite query of CIOs during the application modernization journey. But when you think about the time it typically takes such projects to complete, it’s no wonder that your CIO may frequently ask you the same question.

With this in mind, I have five application modernization tips you can use to get “there” faster.

1. Have an application architecture in place before you start.

Avoid “random acts of modernization” – those little, one-off projects that occur in a vacuum and don’t contribute to the initiative as a whole. Instead, you should determine a specific technical direction before any actual modernization work occurs. When you start by understanding the business requirements, defining the scope, choosing a framework, determining a SOA model, identifying a tool set, and selecting a repository and user interface, it will help you understand the essence of your modernization project. Simply put, you’ll have a clear vision of the as-is and to-be states – and be able to closely link your modernization goals with business needs. >>

The [ClearPath Appraisal Service](#) can help you take this important first step. During the workshop, you'll look at the business needs your modernization efforts should address, examine the integration and automation levels in your current environment, and identify any roadblocks you may encounter along the way. Plus, it delivers a full report and recommends next steps.

2. Be sure to leverage existing assets.

Your applications represent a significant investment of both human and material capital – as well as intellectual property – so why not use them going forward? Treat these as a baseline from which to add new capabilities – like a modern Graphical User Interface (GUI) – and integrate with other applications. When you adopt this approach, you'll be able to preserve existing data, transactions, and business rules. You'll also lower cost and risk, and accelerate time to market – while significantly limiting the need to rewrite code.

Your ClearPath system is primed for this type of approach. There are many built-in capabilities you can use to integrate and extend your applications. For example, you can allow Java and .NET applications to access ClearPath application and data assets in a standard way. Or, you can employ message queuing to integrate with applications running on other platforms inside or outside your data center. You can even securely extend

a ClearPath application for use on smartphones and tablets. When you do, you'll be taking the value inherent in your data and applications and extending it to help your business operate in new, efficient ways. To learn more about how to integrate existing assets into your modernization strategy, see the following Unisys white papers:

- [“ClearPath Middleware Strategy and Products for MCP Systems”](#)
- [“ClearPath Middleware Strategy and Products for OS 2200 Systems”](#)

3. Don't go for the “big bang.”

Some modernization projects aim too high, and overemphasize the big, “one and done” approach. The challenge with this tactic is that it often requires you to start from scratch, which can lead to lost functionality, security concerns, and performance issues. Plus, it creates a lengthy time to value – and can even cause you to lose support for your initiative. When you remember that modernization is an ongoing, evolutionary process, you'll be better suited to take a measured approach that keeps business and technical needs in mind, while delivering value early and often.

Adding a mobile interface to an existing ClearPath application is a great example of the type of small project you could consider. It's a highly visible way to embrace modern technology, and it can quickly bring a lot of value to your organization.

4. Don't forget about integration.

Modernization doesn't always have to be synonymous with creating a fresh UI or developing in a hot new language. Integration projects are just as valuable for several reasons. For starters, integrating your ClearPath software and data with business processes residing in other apps and/or platforms can help you break down silos and create a more agile IT infrastructure. Integration makes it possible for many applications to access data from its primary “location of record,” reducing the need for redundant – and frequently inconsistent – copies of data. And, this type of integration strategy enables you to connect some of the packaged software in your data center with core business applications in a simple, straightforward way.

While people may not think of the mainframe as a key player in a SOA initiative, this perception is actually far from the truth. Have you considered all the ways your ClearPath system can contribute to, and enable, integration projects? The following Unisys white papers have some great insights and pointers:

- [“ClearPath as an Open System”](#)
- [“Service-Oriented Architecture: ClearPath Systems in SOA”](#)
- [“Service-Oriented Architecture: Delivering for Business”](#) >>

5. Migration isn't the only answer.

Some people believe that you have to leave the mainframe environment to achieve true modernization – that “mainframe” and “modern” are two concepts that just don't mesh. But as you've seen above, nothing could be further from the truth. There's plenty you can do with your existing architecture

and assets without having to take on a risky, time- and labor-intensive platform migration.

To learn more about the benefits of using the mainframe as the engine of modernization, check out the “[Delivering Value: The Economics of ClearPath Systems](#)” and “[The Business Case for Integrated IT Infrastructure Stacks](#)” white papers.

Use these five tips in your next modernization project, and when your CIO asks “are we there yet?” you can confidently respond “Yes!”

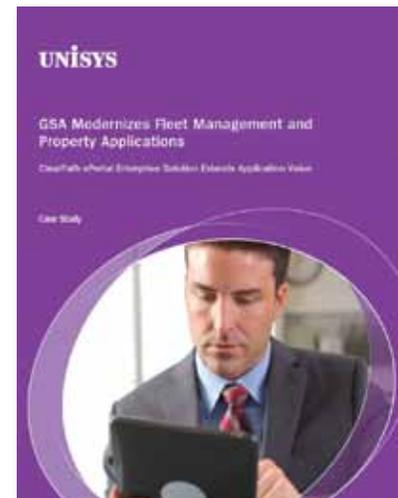
GSA Modernizes Fleet Management and Property Applications

To streamline administrative work – and more effectively deliver on its mission-critical requirements – the U.S. General Services Administration Federal Acquisition Service (GSA FAS) needed to move its Fleet Management and Property Disposal functions from an existing “green-screen” interface to a user-friendly GUI, without having to make extensive, time-consuming, and costly application changes.

GSA employed the browser-based, point-and-click development capabilities of the [ClearPath ePortal for MCP](#) specialty engine to web-enable key Fleet Management and Property Disposal transactions in its green-screen environment.

GSA completed the project in 10 months, using the equivalent of only two full-time developers in the process. Had the Agency engaged in new application development – instead of a simple modernization initiative – GSA estimates that these projects would have taken at least nine developers 18 months to complete.

With the help of ClearPath ePortal for MCP, GSA enhanced its high-value applications in a way that is streamlined, cost effective, and aligned with end-user expectations for a modern, easy-to-use GUI. At the same time, the Agency positioned itself to readily handle future modernization efforts and extend application access to mobile users as required.



Read the full story on Unisys.com.



Native or Browser-Based Mobile Enabling for ClearPath – It’s Your Choice

By Pramod Nair, Senior Solutions Architect, ClearPath Application Modernization Center of Excellence

With the mobility trend in full swing, IT organizations are being challenged to create new mobile services and deliver them to a wide array of smartphones and tablets.

The good news is that your ClearPath system has all of the capabilities you’ll need to capitalize on this trend. In fact, it supports the two key mobile enablement approaches: mobile web apps and native mobile apps.

Mobile Web Apps and Native Mobile Apps

The **mobile web app** approach – where the app is deployed in a web server and accessed using a device’s network connection and browser – is likely the more familiar of the two for regular ClearPath Connection readers. The beauty of mobile web apps is that they are platform independent, which means you develop one application that can be accessed from a wide range of mobile devices, regardless of operating system. This process is a key feature of the ClearPath ePortal specialty engine’s mobile controls. Most ClearPath clients will favor this mobile-enablement approach for its simplicity, rapid availability for end users, and ease of support.

Native mobile apps are those that end users download from an external source, such as the Apple® App StoreSM or Android

Marketplace, and run directly from their mobile devices. These apps are written for a specific operating system, which enables them to efficiently use a device’s hardware and unique features, such as the GPS and camera. And, many native mobile apps can function without a network connection – using local storage to save/access data.

There is a specific process for creating each type of app, so it’s best to know which way you want to go before your development efforts start in earnest.

Taking Your App to the Web

One of the most attractive qualities of the web-based approach is that ClearPath developers have many options for making ClearPath applications and data available via the Web. These include the ePortal specialty engine, Web Transaction Server, and JBoss or a PHP engine running on the ClearPath JProcessor specialty engine.

If you’re new to web development, ePortal’s point-and-click development environment helps you render a mobile web app

to look like a native mobile app with pages that are optimized for reading/interacting on mobile devices – without compromising the look and feel to the end user. Plus, new technologies like HTML5 have introduced features that enable you to manipulate a device’s built-in functions, like its internal GPS and accelerometer, leading to a more robust end-user experience.

The advantage of this approach is that the apps you create will be supported on most popular mobile web browsers – eliminating the need to rewrite based on the target platform.

Going Native on a Mobile Device

Because native mobile apps must be designed for a specific platform or hardware, the first step is to determine the target device (or devices) for your app – iOS, Android, or other. Once you do, you can use the specific software developer’s kit, such as iOS SDK from Apple or Android SDK from Google, to create the app.

As a part of the development process, you’ll need to determine how you want to provide >>

access to your ClearPath data from the native mobile app. The good news is that it's relatively easy to do with the ClearPath JProcessor or ePortal specialty engines. These specialty engines provide the web services interface the app needs to call out to ClearPath data – while at the same time ensuring enterprise-class levels of security and performance are part of the solution.

In fact, we recently developed a native mobile app for iOS devices – the [Unisys ClearPath MCP Mobile Monitor](#) – which we created using the [ClearPath ePortal for MCP](#). Available for download in the App Store, the MCP Mobile Monitor enables you to easily and securely track the performance of an MCP server from anywhere, at anytime, using an Apple iPhone®, iPad®, or iPod Touch®.

The Sky's the Limit with ClearPath Apps

Today, the only limit to what you can do with mobile web apps, native mobile apps, and your ClearPath applications and data is your imagination. If you're interested in creating either type of app, please e-mail the ClearPath Application Modernization Center of Excellence (CAMCOE) at CAMCOE@unisys.com for tips, advice, and resources you can use to get started.

About CAMCOE

Staffed by Unisys experts with deep application modernization experience, CAMCOE helps our clients' ongoing efforts to modernize their application environments using the tools and technologies available for development on the ClearPath system, including mobile and service-enabling technologies.

CAMCOE also creates prototypes using new products released by Unisys Engineering to rapidly and effectively demonstrate new modernization techniques, helping clients learn about new tools and the best ways to use them.

Tech Corner: XML Parser Simplifies MCP Data Exchanges

By Mitchell Fisher, Lead Engineer, Unisys TCIS, ESC, ClearPath MCP

Back in the dark ages – before the advent of Extensible Markup Language (XML) – any electronic exchange of information had to occur in a platform-specific binary format. Needless to say, this made data sharing between different systems extremely difficult. With XML, organizations have a standardized means of exchanging information – in a format that is readable by both humans and machines – making it much easier for complex systems and applications to communicate.

And the best news of all? There's a tool available in your ClearPath MCP operating environment designed to help you seamlessly leverage XML and enable your ClearPath server to efficiently integrate with other systems. It's called the XML Parser for ClearPath MCP, and it's a standard part of the MCP Integrated Operating Environment (IOE) from Release 12.0 forward.

The XML Parser is an application programming interface (API) that a COBOL85 or an ALGOL application can use to parse, create, or modify XML documents. In this way, you can easily include calls to XML Parser procedures in your applications – rather than write the code required for XML documents. The procedures are in the WEBAPPSUPPORT library and can read or modify parts of, or an entire, XML document – or create a brand-new one.

So if your company is getting more active in building and expanding its business partnerships by exchanging

data in XML, this solution allows you to create, update, and read XML documents natively from ClearPath applications.

You're able to execute this process natively because the XML Parser leverages the existing "create," "read," and "update" XML capabilities found in COBOL and ALGOL MCP library function calls. Since these are simply another set of functions residing in a COBOL or ALGOL application, there is no need to send a message to Java to parse, and no special Java skills are required.

How it Works

The basic integration process using XML Parser is as follows:

- XML data is received on your ClearPath MCP platform via MCP file transfer, an application with a TCP socket to another system, or by accessing the XML via a URL to an external server
- The ALGOL or COBOL application calls the WEBAPPSUPPORT library to access the XML document (or create a new one)
- The application processes the resulting XML data using traditional COBOL or ALGOL constructs – and, based on the conditions of the original transfer, a new XML response can be generated or the original message can be updated using the library
- The XML document is then saved and ready to be sent to its final destination

Throughout this process, calls can be made to the XML Parser WEBAPPSUPPORT library to perform numerous functions that may be required by a specific transfer (see Figure 1). For example, you can:

- Validate a parsed document against a Document Type Definition (DTD) or other XML schema
 - Transform documents using XML stylesheets (XSLT)
 - Modify documents that have been parsed or created
 - Access data in documents using XPath query expressions
- >>

In addition, the forthcoming release of MCP 14.0 will include two valuable XML-related updates:

- **XML Encryption:** Allows you to selectively encrypt specific, sensitive portions of the XML document – such as credit card numbers – and decrypt data from received documents.
- **XML to JSON:** Converts XML documents to JavaScript Object Notification (JSON), an alternative means of representing structured data, which is typically used for JavaScript applications and web service implementations. Note that we do not yet support parsing JSON; this feature is for output only.

What ClearPath Developers are Doing with XML Parser

Numerous ClearPath clients are leveraging the XML Parser API to simplify XML exchanges in their MCP environments. These highlighted projects show great examples of the many ways the

solution can be used – and may offer some inspiration for ways you can put the XML Parser API to work in your organization:

- A customer was struggling with making a Comma Separated Value (CSV) file-based data exchange process work reliably – and is now leveraging the XML Parser to create XML-formatted spreadsheets, enabling greater control over the documents it produces
- A company used the solution to parse the XML coming into an MCP-hosted COBOL application from a .NET middle tier and update the XML response
- A customer created a prototype for parsing XML documents that it plans to use to replace an in-house developed parser written in ALGOL

Want to know more about the XML Parser?

To help you learn about all the great things the XML Parser can do, and give you some ideas to kick-start projects in your

organization, we've gathered some useful educational resources about the solution:

- We've released sample COBOL and ALGOL sources for creating, parsing, and transforming XML documents, giving you the freedom to explore these functions, see how the code works, and have a baseline to build from during your own implementation
- The "WEBAPPSUPPORT Application Program Guide" provides both an administration view regarding installation and management of XML Parser, and technical application interface information

And remember, all the software you need to use XML is included in your MCP IOE. All that is needed to complete the solution is a host for the XML Parser Java Parser Module, such as a [ClearPath MCP JProcessor specialty engine](#) or a [Microsoft® Windows®](#) system.

Figure 1: A sample COBOL call that executes the parsing function.

```
CALL "PARSE_XML_DOCUMENT OF WEBAPPSUPPORT"  
  USING SOURCE-FILE, FILE-NAME, START-AT-ZERO, LENGTH-ZERO,  
        DOC-TAG,      DOC-NODE  
  GIVING WEB-RESULT.
```



Product News

NEW ClearPath OS 2200 QProcessor Release 2.0

The Unisys ClearPath OS 2200 QProcessor specialty engine is optimized and dedicated to run message queuing middleware based on IBM® WebSphere® MQ. It enables ClearPath clients to integrate their OS 2200 applications with a wide variety of external applications from over 80 different platforms.

The latest version of the ClearPath OS 2200 QProcessor supports WebSphere MQ version 7.0, enabling message-based integration with applications and data on other platforms. This release also facilitates high availability implementations via automatic failover and Unisys multi-cluster XTC hosts.

Check out the OS 2200 QProcessor YouTube playlist for more information. It contains all-new technical how-to videos for ClearPath OS 2200 QProcessor 2.0 and IBM WebSphere MQ version 7.0.

NEW ClearPath LX180 Laptops

The ClearPath LX Series Laptops replicate the MCP Software Developer's Kit (SDK) on a Unisys qualified PC, enabling you to develop, compile, test, and demonstrate ClearPath MCP-based applications at your convenience. The ClearPath LX180 – our newest “mainframe on a laptop” offering – has recently been qualified for the Dell Latitude E6250 platform, MCP Release 13.1, 64-bit Microsoft Windows 7 operating systems, dual- and quad-core processors, and MCPvm 10.0 Service Pack 2.

In order to use the LX180 laptop, you must purchase a Dell Latitude E6250 machine directly from the manufacturer or an authorized reseller. Unisys will provide licenses for the LX Laptop software.

NEW ClearPath ePortal for MCP and OS 2200 Release 4.7

ClearPath ePortal is an end-to-end solution that automates every step from development to deployment, enabling the rapid interface modernization of ClearPath applications through web, mobile and smart devices, and web services (SOA) options.

The software updates delivered in ClearPath ePortal for MCP Release 4.7 and ClearPath ePortal for OS 2200 Release 4.7 extend our commitment to bringing industry-standard tools into the ClearPath environment by introducing support for Microsoft Visual Studio® 2010. As a plug-in to the Visual Studio environment, ePortal leverages the investments Microsoft has made in native Visual Studio capabilities, helping you easily deliver web-enabled applications to your ClearPath end users.

Because this new release can be used in parallel with earlier ePortal versions running in Visual Studio 2008, you have the freedom to migrate your existing ePortal applications to the new release on a timetable that fits your needs. And when you're ready to do so, ePortal Release 4.7 features intuitive tools that let you migrate projects in just a few simple clicks.

The 4.7 release also leverages the new “Help Viewer” functionality in Visual Studio 2010 to make ePortal documentation available with the click of a button. In addition, ePortal Release 4.7 supports multi-language functionality and, most notably, a Japanese language environment.

For more information about these new products, please contact your Unisys account executive.



Virtual Tape Solutions for ClearPath Continue to Evolve

The concept of virtual tape has been around since the late 1990s, but the earliest solutions were seen as exclusive to the high-end mainframe market. The advent of more cost-effective disk arrays in the mid 2000s made the Virtual Tape Library (VTL), which emulates physical tape libraries and drives, available to the midrange market space and open systems platforms. And it was around this time that Unisys partner Dynamic Solutions International (DSI) developed a VTL solution for the ClearPath mainframe.

DSI has routinely added features to each version of its VTL offerings, and in the second quarter of 2012, the company will introduce its latest generation – and offer an affordable, self-managed solution for small and medium businesses. As with previous iterations of DSI VTLs, these new solutions can be implemented and managed by ClearPath MCP, MCPvm, and OS 2200 operating environments. Plus, they can integrate with Microsoft Windows and Intel® processor-based systems using such software as Symantec® Backup Exec™ and NetBackup™, helping you solidify the value of an enterprise-wide solution.

Set-it-and-forget-it for Every ClearPath Shop

DSI VTL solutions have been proven in some of the largest ClearPath deployments across the globe, and now bring the “set-it-and-forget-it” policy-managed operations to users that may have previously felt the cost of these capabilities was too high. In addition, these new solutions feature industry-standard connectivity and components, offering either fibre channel or IP (iSCSI) support.

Once configured, DSI VTLs are very much a plug-and-play implementation. They simply assign tape activity to new device addresses, enabling backups to run faster than a physical tape solution – while protecting your important data

in a RAID array. If your business and operational obligations require you to move certain information into a long-term archive, any DSI VTL can support the creation of physical tapes. And if you need to move your data offsite on physical media or via a network connection, the VTL can encrypt it to help maintain regulatory compliance and protect you from certain liabilities should a piece of media be lost.

More information about DSI VTL solutions can be found on the [DSI website](#). Unisys and DSI will be providing additional information about the new solutions over the coming weeks, in advance of the general release in the second quarter of 2012.



Resources and Calendar

The list below contains resources that will help you stay up to date on all the latest news and announcements in the ClearPath world.

- [ClearPath Libra homepage](#)
- [ClearPath Dorado homepage](#)
- [ClearPath OS 2200 homepage](#)
- [ClearPath MCP homepage](#)
- [Agile Business Suite homepage](#)
- [Business Information Server \(BIS\) homepage](#)
- [ClearPath & Innovation blog](#)
- [ClearPath How-To Videos on YouTube](#)
- **NEW** [ClearPath MCP Workload Management Videos](#)
- **NEW** [ClearPath OS 2200 QProcessor Videos](#)
- [ClearPath Libra/MCP Webinars](#)
- [ClearPath Dorado/OS 2200 Webinars](#)

WHAT	WHERE	WHEN
ClearPath Briefing	Far Eastern Plaza Hotel , Taipei	May 8-9, 2012 For additional information, please contact Anita Margetts .
UNITE Annual Technology Conference	Hyatt Regency St. Louis , St. Louis, MO	May 13-16, 2012
ClearPath Briefing	Golden Tulip Mastbosch Breda , the Netherlands	May 22, 2012
ClearPath Briefing	Blenheim Palace , UK	May 24, 2012
ClearPath Briefing	Maison de la Recherche , Paris, France	June 21, 2012

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