

ClearPath Connection

UNISYS
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October 2008

A quarterly newsletter for Unisys ClearPath customers

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Not a subscriber of ClearPath Connection?

Don't miss the next issue – [sign up in the eCommunity.](#)

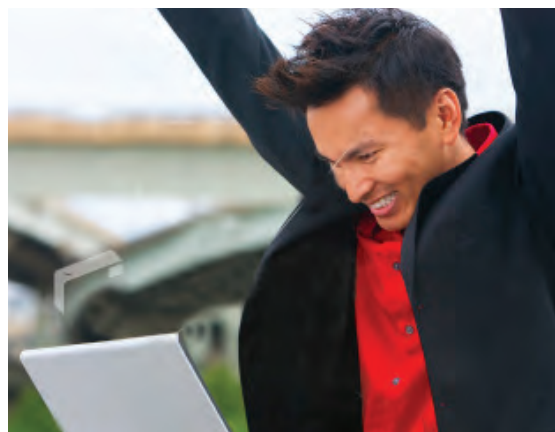
Major ClearPath Announcement: Achieving the Real-Time Enterprise with Unisys ClearPath Servers and Software

2008 is a year to reach for the gold and with the many new hardware platforms and software capabilities we're delivering this year, Unisys is doing just that. There is so much that is new, in fact, that we're dedicating this issue of ClearPath Connection to telling you more about it all.

We are very proud to announce that we are **delivering** on our strategy for ClearPath systems in a major way with:

- **New** Next-Generation Server Architecture ClearPath 4000 Series of Servers
- **New** high-end CMOS-based Dorado Servers
- **New** BIS release
- **New** AB Suite release

What's more, all of these deliverables are designed to help your organization grow in a cost-effective manner, optimize operations, respond to changing business requirements, and mitigate risk.



“In 2006, Unisys committed to deliver innovative, new ClearPath servers leveraging CMOS and Intel® processors. Our investments have already delivered four Next-Generation platforms, including the new Libra 4000 and Dorado 4000 server lines. We have also met our CMOS commitment with the new high-end Dorado 700 family. Complemented with new software releases, our investments continue to keep ClearPath contemporary.”

William Maclean
Vice President, ClearPath and Agile Business Suite
Unisys Systems and Technology

Interested in really pumping up the value of your existing technology investments? Consider how your ClearPath Servers and software can help you create a Real-Time Enterprise (RTE) that provides:

- Automated systems management, business continuance, policy-based, business-rules-driven workload management, and workload discovery
- Instantaneous provisioning of CPU resources via metering and Capacity on Demand technology
- An architecture that easily takes on mixed workloads and enables very high utilization levels

Check out the articles on these major new introductions in this issue of ClearPath Connection, including:

- [Dorado 780 and 790 Servers](#): the newest CMOS-based Dorado products positioned at the high-end of the range
- [Dorado 4080 and 4090 Servers](#): our new entry to mid-range OS 2200 based servers featuring Unisys Next-Generation Server Architecture and Intel® processors
- [Libra 4080 and 4090 Servers](#): our new entry to mid-range MCP based platforms, which also feature Unisys Next-Generation Server Architecture and Intel® processors
- [BIS Release 46R1](#): offering impressive new capabilities in the areas of security, ease of development, administration, and SOA >>

And don't miss our series of webcasts on the overall launch, as well as the new platforms and BIS release – register in the [Webcast & Events](#) section of the eCommunity.

[AB Suite Release 2.0](#) is also an important part of the ClearPath announcements and the next issue of our Developing *Agility* newsletter will feature much more about the release. Here's just a taste of what 2.0 has to offer:

- **Cost:** automated test case development and management features improve developer productivity and enhance application quality
- **Business agility:** increased support for end-user mobile devices and support for the latest operating environment releases on all supported platforms
- **Risk mitigation:** more opportunities to exchange model information with other tools and qualification of AB Suite Developer with Microsoft® Visual Studio® 2008 and SQL Server® 2008

If you haven't read Developing *Agility*, become a subscriber by visiting the [News](#) section of the eCommunity.

A Clear Commitment to ClearPath Customers

Unisys understands that ClearPath customers operate in some of the most demanding environments around and we are committed to helping you succeed.

The ClearPath 4000 Series employs Unisys Next-Generation Server Architecture – enabling you to standardize on Intel® processor-based platforms while offering the proven advantages of the powerful ClearPath MCP and OS 2200 operating environments, including unmatched levels of performance, security, and reliability.

Fast Fact: Since 2001, Unisys has released 54 ClearPath Server lines – a clear commitment to mainframe computing and to meeting the evolving and varied needs of our ClearPath customers.

And, the Dorado 780 and 790 Servers – our latest CMOS-based mainframes – deliver new levels of power with all the security, reliability, and stability that you expect from Unisys.

These latest announcements bring much in the way of Unisys innovations, such as a brand new Dorado I/O subsystem, ClearPath 4000 High-Availability feature, AB Suite rapid application development environment that is a plug-in to Microsoft Visual Studio, and BIS Developer Workbench. Unisys continues to provide the tools ClearPath customers need to innovate and deliver more value within their organizations.

Unisys is continuing our commitment to providing a rich set of powerful capabilities that allow ClearPath mainframe-based applications to participate in a SOA. Additionally, Unisys offers a rich set of industry-standard middleware technologies for you to evolve your ClearPath based applications to meet future needs.

For more information about all the newest products from Unisys, please visit the eCommunity and view the [press release on Unisys.com](#).

We also encourage you to attend our series of webcasts on the overall launch, new mainframe platforms, and BIS and AB Suite releases – register in the [Webcast & Events](#) section of the eCommunity.

Continuing a Strong Tradition of Power and Flexibility: New ClearPath Dorado 780 and 790 Servers

Meet the most powerful ClearPath Dorado Series of mainframes ever built – the ClearPath Dorado 780 and 790 Server lines.

Unisys has just unleashed these high-end CMOS-based beasts to support the most demanding workloads and provide the high availability and absolute data and transaction integrity that you expect from a Unisys mainframe. What's more, these newest members of the Dorado family deliver maximum flexibility with a choice of business models:

- The ClearPath Dorado 780 Servers offer a traditional business model with Capacity on Demand options
- The ClearPath Dorado 790 Servers offer Pay-for-Use business models with metering technology

Both of the Dorado 780 and 790 Server lines are ideal upgrade options for organizations with older OS 2200 platforms.



“We are very proud to bring you these new, high-end ClearPath Dorado Series of systems. The Dorado 780 and 790 Servers are the latest in an impressive line of mainframe systems that showcase Unisys understanding of the needs of mission-critical environments. The new systems demonstrate our on-going engineering commitment to increasing performance and I/O capability on the ClearPath Dorado product lines.”

Ann Thureen
Vice President
ClearPath OS 2200 and RTI Solutions
Unisys Systems & Technology

Key Features At-a-Glance

Your trusted, “bet your business” ClearPath Dorado platforms just got better with improvements in processors, I/O, and memory. Faster processors and I/O means faster transaction response time, less database contention, and shorter batch processing times. The Dorado 780 and 790 Servers also offer huge amounts of memory, which enable database caching for even faster processing.

Read on for a quick overview of the features offered by the new ClearPath Dorado 780 and 790 Servers. >>

Improved processor performance

The ClearPath Dorado 780 and 790 Servers deliver a 16% single thread performance improvement (525 MIPS) compared to the ClearPath Dorado 380 and 390 Servers. In addition, they offer a single image performance range of 300 MIPS at the entry level and maximum single image performance of approximately 5,700 MIPS (32 processor system).

More memory scalability

An expanded memory subsystem supports larger memory capabilities and offers memory configurations that include the ability to expand up to 4GW per cell and up to 32GW for a maximum eight-cell system.

Fast Fact: Unisys has a strong, long-standing commitment to providing the performance our customers demand. Since the release of the ClearPath IX4800 Server in 1996, Unisys has increased single IP performance by an average of 20% each year.

Enhanced high-availability features

Designed for the most demanding mission-critical environments, each individual processor/memory cell in the Dorado 780 and 790 Servers is a complete high-availability system and can also be viewed as a hard partition. A single platform can incorporate up to eight partitions (partition at the cell level) and support up to 32 instruction processors (IPs). Finally, resiliency is built-in as each cell contains its own redundant power and cooling.

Faster, more flexible I/O

A new, advanced I/O subsystem expands performance and configuration flexibility – and provides the high capacity and responsiveness your I/O-intensive workloads demand. Highlights include:

- Improved performance compared to the Dorado 380 Server, including:
 - *Twice* the networking throughput
 - *Double* the small-block storage throughput
 - *More than 1.5 times* the large-block storage throughput
 - *More than twice* the number of I/Os per second
- Expanded configurations
 - The I/O Expansion Module increases connectivity with one I/O Expansion Module per processor/memory cell and the ability of each I/O Expansion Module to support up to six I/O Processors (IOPs)
 - Each IOP connects to a dedicated PCI Channel Module, featuring:
 - Seven PCI-X slots for channels
 - Forty-two PCI-X slots per I/O Expansion Module via six IOPs
 - 336 PCI-X slots per system
 - Extensive connectivity and resiliency is built in with up to 84 fibre or Ethernet ports per cell, continuing support for SCSI and SBCON channels, and an enterprise channel rack design, including dual power supplies
 - Contemporary channel options are available, including high-performance 4Gb fibre channel
- Advanced I/O configuration flexibility:
 - With up to six IOPs with each cell, it's easy to balance the I/O workload across multiple channels and multiple IOPs
 - Automatic redirection of workloads across all available IOPs and channels helps to improve the response to peak processing situations and minimize the impact of channel or IOP failures on system response time or throughput
- *Optional* OS 2200 Cipher API card, which is a U.S. government-certified encryption PCI card that plugs directly into the ClearPath Dorado Server and provides increased performance when large blocks of data must be encrypted >>



Our Commitment to You – Unisys ClearPath Dorado Customers

So there you have it – all the feeds, speeds, and features for the biggest ClearPath Dorado Servers ever built. And as always, no application changes are required when moving to the new Dorado 780 and 790 platforms.

Unisys remains steadfast in our commitment to your continued success with a laser focus on mission-critical support, high performance, enhanced capacity, and robust security.

What's more, we provide a rich set of integration capabilities, industry standard tools, and open source solutions that help you *extend and evolve your ClearPath assets*. These powerful capabilities allow – for example – existing ClearPath OS 2200 applications to participate in a SOA, as well as build and securely deploy new SOA services in a Real-Time Infrastructure (RTI). Visit the eCommunity for white papers and other reference materials about the [SOA for ClearPath](#) program.

Are you ready to learn more about these new ClearPath Dorado mainframes? Please contact your Unisys sales executive or visit the eCommunity for more about the [Dorado 780 Server](#) and [Dorado 790 Server](#).

Case Study Features Service-Oriented Architecture

The [Georgia Technology Authority](#) created Web services from existing OS 2200 transactions to allow its ClearPath server-based applications to participate in a Service-Oriented Architecture (SOA).

ClearPath Dorado 4000 Mainframes: The Next Step in Next-Generation Server Architecture

They're here! The Unisys ClearPath Dorado 4000 Servers – Unisys *second* delivery of OS 2200 platforms leveraging our Next-Generation Server Architecture. The new ClearPath 4000 Servers are positioned to support entry to mid-level environments and continue Unisys commitment to the [ClearPath Next-Generation Architecture](#) and mainframe-class, mission-critical computing environments.

ClearPath Dorado 4000 Servers offer a “best of both worlds” mainframe platform that combines:

- Intel® processors
- Robust OS 2200 operating environment
- Proven ClearPath mainframe attributes of performance, security, reliability, scalability, manageability, and tight integration with open middleware



“Our initial OS 2200 Next-Generation Server Architecture platforms – the ClearPath Dorado Models 420 and 430 – were extremely well received. These first-ever Intel® processor-based OS 2200 servers exceeded our high expectations in terms of performance and reliability. We are proud to build on this exciting momentum with our next Next-Generation Server Architecture ClearPath Dorado 4080 and 4090 Servers.”

Bill Maclean
VP of ClearPath and AB Suite
Unisys Systems and Technology

First, the Facts

The new Dorado 4000 Servers are designed to fit the specific needs of your organization with flexibility that's only available from Unisys. The [ClearPath Dorado 4080 Server](#) offers a traditional, pay-for-peak buying model and Capacity on Demand options, while the [ClearPath Dorado 4090 Server](#) features Unisys innovative Pay-for-Use business models with metering technology. So whatever your business or organization needs, these new Dorado 4000 Servers stand ready to deliver.

Here are just a few of the Dorado 4080 and 4090 system highlights:

- **Twice the performance** over Dorado 400, in terms of both single thread and system capacity
- **A new, state-of-the-art I/O system** built for mission-critical, high-end environments – the same one used in our Dorado 780 and 790 Servers
- **Improved reliability and resiliency**, including a new, high-availability standby option, which provides a hardware configuration and documented procedures that easily allow a second Dorado 4000 node to act as a backup for the primary (rather than having two separate systems)¹ >>

¹ Available in early 2009

ClearPath Dorado 4000 Servers support OS 2200 release 11.3 and BIS 46R1 or 45R1. In addition, they offer powerful capabilities to allow existing ClearPath OS 2200 applications and data to participate in a SOA, as well as build and securely deploy new SOA services in a Real-Time Infrastructure (RTI), including:

- Contemporary middleware connector technologies for data and transactions, including JDBC, ODBC, .NET integration, Java, Open DTP, and [WebSphere MQ for ClearPath OS 2200](#)
- A full set of [Java connectors](#) that allow any Java on any platform to access TIP, HVTIP, and Open DTP applications, as well as BIS, RDMS, and DMS data
- Java applications and Java Platform, Enterprise Edition (Java EE) at level 5.0

With a scalable, pay-as-you-grow system architecture, Dorado 4000 Servers offer stellar performance of:

- 195 MIPS (single processor)
- 600 MIPS (Dorado 4080 Server, single image) or 800 MIPS (Dorado 4090 Server, single image)

Increased Reliability and Resiliency

Unisys mainframes are known for their reliability and resiliency – and the Dorado 4000 Servers are no exception.

Dorado 4000 Servers have excellent memory resiliency, offering the industry-standard Error Checking and Correction (ECC) as well as fully-buffered memory DIMMs (FBDs), which help to increase the memory processing speed. Memory mirroring technology on the Dorado 4000 is yet another capability designed to help minimize downtime caused by memory failures.

ClearPath Dorado 4000 Server platforms have redundant, hot-plug power and cooling, which allows electricity feeds from two different circuits and greatly reduces the opportunity for catastrophic problems due to power interruptions.

The Dorado 4000 Servers also include a resilient internal storage subsystem for boot, dump, etc., and offer an optional external storage boot subsystem that provides greater redundancy.

Powerful, Enterprise-Class I/O

When it comes to ClearPath production workloads, I/O performance is critical. Dorado 4000 Servers use a new enterprise-class I/O subsystem – the same one offered with Dorado 780 and 790 Servers. The result? Seriously improved performance and connectivity when compared to the Dorado 420 and Dorado 430 Servers. The Dorado 4000 Servers' I/O subsystem offers 4Gb fibre channels and enterprise-class bandwidth, as well as increased connectivity of up to 224 ports. Finally, Dorado 4000 mainframes are compatible with storage peripherals used with Dorado 700 Servers, as well as the majority of Dorado 300 peripherals. >>

“As a public sector agency, it’s critical that we manage taxpayer dollars as cost-effectively as possible. By migrating to a new ClearPath Dorado 430 system, we’re taking advantage of metering technology to better align our processing spend with actual system usage. Not only was it an easy transition, but at the same time, we’ve gained a significant performance boost while establishing a more flexible and open IT infrastructure.”

Bill Fatica
IT Manager
City of Akron, Ohio

Extensive System Management Functionality

The Dorado 4000 Servers' system management software is consistent with existing Dorado operations and management systems found on Dorado 100, 200, 300, 400, and 700 Servers. These tools are a key contributor to the enterprise-class reliability and high service levels for which ClearPath Dorado systems are well-known.

High-Availability Standby

The high-availability standby option on the Dorado 4000 Servers is designed for mission-critical environments. In addition to the standard disaster backup arrangements, you now have this cost-effective, dual-cell implementation option where:

- Image Enabler views the cells as two partitions in a single system
- A two-partition system profile can be used in a number of ways, including:
 - One partition using the other cell for cell backup – without the need for a disaster recovery (DR) key
 - Two partitions, each with a separate IOE (production and development), where either cell can back up the other with an optional DR key
 - Two partitions with a shared, partitionable MIPS key for both

Best-of-Both-Worlds Benefits

Thanks to Unisys Next-Generation Server Architecture, the Dorado 4000 Servers deliver the best of both worlds: fantastic business value through standardization of IT infrastructure on Intel® processors combined with the proven ClearPath mission-critical mainframe attributes.

ClearPath Dorado 4000 Servers offer all the capabilities needed to achieve true IT agility, including:

- Support for diverse workloads
- Flexibility in business models, such as Pay-for-Use and Capacity on Demand options
- Popular software standards
- The ability to leverage industry-standard tools and applications, as well as widely available skill sets
- Automated processes and operations
- SOA-based business connectivity

And as with every OS 2200 system, Dorado 4000 servers offer total code and data compatibility – there's no need to change applications or data! Simply connect a compatible storage subsystem with existing program executables and data to your Dorado 4000 Server, boot the system, and you are ready to support your business with your new state-of-the-art systems.

For more information about ClearPath Dorado 4000 Servers, please contact your Unisys sales executive or visit the [eCommunity](#).

Love Your Libra? The 4000 is Here!

We are thrilled to announce the arrival of new MCP platforms – the ClearPath Libra 4000 Servers. These entry to mid-range ClearPath 4000 Servers continue our commitment to the [ClearPath Next-Generation Server Architecture](#) and mainframe-class, mission-critical computing environments – and are the first time Unisys innovative metering technology is available on Intel® processor-based MCP servers.

With a rich set of mainframe capabilities, Libra 4000 Servers offer a “best of both worlds” platform that combines:

- Intel® processors
- Robust MCP operating environment
- ClearPath mainframe attributes of performance, security, reliability, scalability, manageability, and tight integration with open middleware



“Unisys is providing the ultimate in flexibility by allowing customers to choose the optimal platform for any given application or solution. Existing ClearPath MCP based applications can be moved transparently to ClearPath Libra 4000 Servers – without the need to re-architect, recompile, or modify data structures.”

Jim Thompson
Vice President and General Manager
ClearPath MCP and Open Source Solutions
Unisys Systems & Technology

First, the Facts

We’re announcing two Libra 4000 Server lines that are designed to fit the particular needs of your organization:

- [ClearPath Libra 4080 Server](#), which offers a traditional, performance-based buying model with Capacity on Demand options
- [ClearPath Libra 4090 Server](#) with Pay-for-Use business models and metering technology

ClearPath Libra 4000 Servers support the following software:

- [ClearPath MCP 12.0](#), which is full of new products and features, including ClearPath ePortal Business, Business Continuity Accelerator, Locum SecureAudit, workload management and tape encryption enhancements, and JBoss Application Server 4.2.0 for enterprise-class Java applications.
- Powerful capabilities to allow ClearPath applications to participate in a SOA or to build new SOA services and securely deploy them in a Real Time Infrastructure (RTI) including:
 - [Java Platform, Standard Edition](#) (Java SE) 6
 - [Agile Business Suite](#) 1.2
 - [Enterprise Application Environment](#) 3.3
 - Contemporary middleware connector technologies for data and transactions, including JDBC, OLE DB, ODBC, [J2EE™ connectors for MCP Transactions](#), .NET integration, and Open DTP, as well as [WebSphere MQ for ClearPath MCP](#) >>

With a scalable, pay-as-you-grow system architecture, Libra 4000 Servers offer stellar performance for customers that need mid-range power. And, Libra 4000 Servers are designed for enterprise-class environments with extensive redundancy and resiliency features.

Depending on your specific workload and future plans, these new Libra 4000 Servers are ideal for upgrading from older ClearPath NX6800 and ClearPath Libra 180/185 platforms, as well as other systems.

New High-Availability Configuration Option

Get fast, local recovery in the event of a failure with this new capability. Libra 4000 Servers with the high-availability option have two MCP cells in their cabinets:

- An active cell, which runs the production workload
- A standby or warm cell, which is powered on and runs only the MCP operating system plus MCP system software that monitors the active cell and initiates the failover process, if necessary

Both cells have identical hardware configurations, including processor, memory, I/O adapters, and in-built peripherals. Each has its own internal disk for booting the Libra 4000 firmware, as well as a halt/load disk on an external disk array.

In the event of a failure, the two cells swap roles, identities, and MCP halt/load disks. The standby cell assumes the role of the active, production cell and is redirected to boot the MCP using the halt/load disk of the formerly active cell.

The Libra 4000 high-availability solution leverages mature MCP technology – using an automated, scripted failover process, as well as other inherent features to constantly listen for the production platform's heartbeat.

Increased Reliability and Resiliency

ClearPath servers are known for their reliability and resiliency – and Libra 4000 Servers are no exception.

Libra 4000 Servers have excellent memory resiliency, offering the industry-standard Error Checking and Correction (ECC), as well as fully-buffered memory DIMMs, which help to increase the memory processing speed. Memory mirroring technology on the Libra 4000 Servers is yet another capability designed to help minimize downtime caused by memory failures. The memory technology also provides for Chip Fail, which protects memory from any single chip failure and multi-bit errors.

ClearPath Libra 4000 platforms have redundant, hot-plug power and cooling, as well as dual AC outlets, which allow electricity feeds from two different circuits. This greatly reduces the opportunity for catastrophic problems due to power interruptions. >>

Stellar Security

When it comes to ClearPath production workloads, security is always of primary importance. Libra 4000 Servers provide the same security mechanisms as other MCP-based platforms. In addition, these systems leverage existing ClearPath cryptography and cryptographic key storage and protection facilities.

A pre-loaded and configured firewall exploits a deep packet inspection architecture to deliver layered security for the internal maintenance LAN – preventing any attempt to use it as a back door into the system. The firewall technology integrates gateway anti-virus, intrusion detection and prevention, content filtering, and partition security. This approach helps to ensure a high level of security for the overall ClearPath MCP operating environment.

Best-of-Both-Worlds Benefits

Thanks to Unisys Next-Generation Server Architecture, the Libra 4000 Servers deliver the best of both worlds: fantastic business value through standardization of IT infrastructure on Intel® processors combined with the proven ClearPath mission-critical mainframe attributes.

ClearPath Libra 4000 Servers offer all the capabilities needed to achieve true IT agility, including:

- Support for diverse workloads
- Flexibility in business models with traditional, Capacity on Demand, and Pay-for-Use buying options
- Popular software standards
- The ability to leverage industry-standard tools and applications, as well as widely available skill sets
- Automated processes and operations
- SOA-based business connectivity

For more information about ClearPath Libra 4000 Servers, please contact your Unisys sales executive or visit the [eCommunity](#).

From UNIVAC and Datatron to ClearPath – and Everything In Between

Kudos to authors Ronald Q. Smith, Unisys, and George T. Gray, Georgia Technology Authority, for their new book *Unisys Computers: An Introductory History*. A preview of the first 12 pages of the book is available [online](#), including a list of the 80 photos and illustrations that appear throughout the text.

A Blast of New BIS: Announcing Release 46R1

BIS 46R1 is a major announcement with many significant new capabilities for OS 2200 systems. The release offers new features in the areas of security, developer productivity, administration, and SOA, as well as numerous enhancements in BIS overall infrastructure. New features include:

- **Security**
 - Data encryption
 - Network encryption
 - Single sign-on
 - SSL for BIS Java Resource Adapter (BIS-RA)
- **Application Development**
 - BIS script in Developer Workshop
 - Easy date handling
- **Administration**
 - Accounting
 - Enhanced file management
- **SOA**
 - Improved performance of JavaScripts
 - SSL support by BIS-RA



Read on to get a taste of some of these fantastic new features!

Muscle Up

Data encryption: With BIS 46R1 for OS 2200, organizations who bet their businesses on BIS and ClearPath servers will have new capabilities to encrypt information stored in their BIS (MAPPER) database. Leveraging the ClearPath OS 2200 Cipher API, you can encrypt your sensitive data so that even if it falls into the wrong hands, it won't be usable without your encryption key. The Cipher API is a program-callable subsystem that offers a choice of several industry-standard cryptography algorithms, including Advanced Encryption Standard (AES) and Triple DES (3DES). See a [previous article in ClearPath Connection](#) for more about the capabilities of the Cipher API.

Network encryption: This new BIS release provides the ability to encrypt all networking traffic between diverse BIS systems, including the ability to encrypt traffic between BIS servers, workstations using the Graphical Interface (MPC), relational databases (MRI), and other BIS servers. When one of the interfaces communicates with a BIS that has a lower level of encryption specified, it automatically negotiates the appropriate encryption level. Network encryption is specified on a system level within MAPADMIN.

Single sign-on: With BIS 46R1 for OS 2200, we've extended the use of OS 2200 user credential impersonation so that it applies to the DTM and SCHDLR modules.

SSL for Java Resource Adapters: BIS Resource Adapter (BIS-RA) enables any Java application on any platform to access a ClearPath-based BIS environment, including data and scripts. While this capability has been available since 45R1, it has now been enhanced with SSL security, which provides a secure communication layer when accessing your BIS information through a network. >>

Dynamite Development

BIS script in Developer Workshop: The popular BIS script editor and debugger – Developer Workshop – is now available to support BIS Scripts. This modern point-and-click tool makes it even easier to build and test new BIS solutions that contain either JavaScript and/or BIS Script, providing such capabilities as enhanced BIS scripting support via statement syntax, ToolTips, context-sensitive help, call stack tracking, visual application tree information on you BIS application, and much more!

BIS 46R1 field testers have been very enthusiastic about the capability – particularly when it comes to debugging. Developer Workshop provides a comprehensive set of debugging facilities that allow you to establish conditional and line breakpoints, track and evaluate expressions during execution, evaluate variables, and examine execution flow.

Easy date handling: Did you know that there are more than 30 date formats in use around the world today? Have you ever struggled to accurately compare dates stored in different formats and in different database products? Do leap years drive you nuts?

Date calculations are always a bit tricky but worry no more – BIS 46R1 offers a new library routine that calculates the difference between two dates in any format. The result is returned as total days and as years, months, and days.

Now you never have to factor in leap years or think about whether the date has a two or four-digit year. The Date Difference subroutine knows all and does all – YYYYMMDD to DDMMYY, 08 dates to 19xx dates, and everything in between. So if dates factor into your BIS applications, give the new Date Difference subroutine a try!

Easier Administration

Enhanced file management: A new feature in 46R1 allows the MAPERO database to dynamically expand and contract. Previously, if MAPERO expanded due to some operation within BIS, it would not shrink to its original size until the BIS system was taken down. With the new parameter, you now have the option to allow automatic contraction based on a cycle merge operation.

SOA with a Smile

Improved performance of JavaScripts: JavaScript enhancements have been made to give you the ability to execute an unregistered JavaScript routine. We have also implemented a JavaScript session object that allows a developer using JavaScript to initiate debugging or access BIS reserved words.

For more information about BIS 46R1, please sign up for our [webcast](#) or visit the [BIS](#) section of the eCommunity.

Calendar

There are many learning opportunities available to you. Please be sure to check the Webcasts & Events section of the [eCommunity](#) for the latest information.

What	Where	When
<p>ClearPath Launch webcasts on a range of exciting topics, including:</p> <ul style="list-style-type: none"> • Achieving the Real-Time Enterprise with Unisys ClearPath • NEW Dorado 780 and 790 and NEW Dorado 4080 and 4090 Servers • NEW Libra 4080 and 4090 Servers • NEW BIS Release 46R1 Overview • NEW AB Suite 2.0 Overview 	Online via the eCommunity	<p>Starting October 8, 2008.</p> <p>Check Webcasts & Events area in the eCommunity for details.</p>
UNITE Annual Technology Conference	Caribe Royale Orlando, Orlando, FL	October 19-23, 2008

Looking for more about development tools from Unisys? Sign up for [Developing Agility](#), a quarterly newsletter dedicated to helping organizations obtain maximum value from Agile Business Suite (AB Suite) and Enterprise Application Environment (EAE).

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