Brochure
Application Modernization and Connectivity

Enterprise Suite 5.0— The New Economics of Enterprise Computing

MICRO FOCUS®

Enterprise IT—the DX Effect

The digital era means faster delivery. But greater speed means more risk. IT is under increasing pressure to deliver IT value, rapidly yet predictably. Micro Focus' Modernization solution makes this possible using contemporary, scalable technology: Enterprise Suite 5.0.

Why Modernization Matters

The digital era has literally transformed how the organization sees IT. Rising demand for more dramatic change, at greater pace, has put IT under greater pressure than ever. No longer can it offer questionable return on investment, as the organization strives to become more nimble and customer-focused than ever. The facts are stark—88% of the Fortune 500 companies dropped off that list within a 50 year period. Failure to change, and fast, means an inevitable downturn in fortunes.

But rapid change can be expensive, and risky. Studies reveal eye-wateringly high failure rates of "rip and replace" IT projects. Instead, organizations can accelerate their digital transformation journeys by reusing their unique and business-critical core applications and data, which will have been enhanced repeatedly in the past, in the context of fresh innovation. In other words, not replacing, or rewriting—but modernizing, a pragmatic, low-cost, low-risk transformation model.

Micro Focus' comprehensive Modernization capabilities embraces three aspects of core IT:

- **Application**—Increase application value with low-risk innovation. From a modernized, secure web and mobile experience, to process automation, to APIs, web services and managed code models that support composite application delivery
- **Process**—Match application delivery speed to the pace of change. Achieve rapid application analysis, agile development, enable continuous testing and accelerated delivery
- **Infrastructure**—Organizations seeking greater connectivity, flexibility, security and cost efficiency can rapidly deploy applications across host, server, Cloud and mobile, insulating valued IT systems from infrastructure changes and security risks

Modernization Must-Haves

Each modernization journey will be driven by the uniqueness of the business situation and technology strategy, and will need to consider Application, Process and Infrastructure questions. However, two specific, critical needs emerge all too often. These are guiding principles that seem to find their way on to most enlightened CIOs' success criteria for digital-ready enterprise systems:

- At Scale
- With Skill

To remain business-critical, enterprise computing must be delivered at the right scale, and with the right skill. Meaning what exactly? First, the scale of the IT provision must have no boundaries in terms of compute power, performance and availability; and secondly the IT skills to deliver those core systems must be in ready supply.

Which is where the focus for Micro Focus' latest release of its Enterprise Suite has been placed.

AT SCALE

For decades, Enterprise-scale computing has meant limited choice of supplier for simple reason that to achieve appropriate (by which we mean large scale) reliability, availability, serviceability and performance criteria as the business demands meant the IBM mainframe was not just the best option, but for serious, scalable operations, really the only option.

And in some cases, that remains true.

Alternative environments couldn't achieve five-nine availability or performance benchmarks that were possible, with the right level of investment, on big iron. But as evidenced by the new market successes of

Amazon, Netflix, Uber and others, all of whom are wholly reliant on a cloud based infrastructure, there is now a genuine alternative. The economics are shifting, the benchmark results are converging, and for many the time is now to reassess trusted perspectives on the best enterprise deployment model of core business systems. With new business drivers affecting IT strategy, such as reaching new geographies or markets, supporting a blended, Hybrid infrastructure strategy, finding "spare" MIPS capacity for new business on the mainframe, and many others, the reality of today's mainframe CIO is that they need to examine once again the right blend of platform deployment strategy.

For some, the economics of scalable enterprise computing are at the tipping point in favor of scale-out (multiple commodity servers running parallel workload deployments) instead of scale-up (workload consolidated on a single, large-scale platform) to meet certain business requirements. The advent of mainstream cloud computing offers a genuinely new way of looking at performance, cost and scalability. Behind the curtain of innovation is a lot of technological advances that make the concept of deploying mainframe workload into the cloud even feasible, let alone possible. Micro Focus' has invested in such advances to offer genuine choice for those looking at scalability options.

Included in the 5.0 release of the Micro Focus® Enterprise Suite include new facilities to support scale-out architecture for large, complex enterprise systems:

- Providing linear performance scaling means applications running on scale-out environments that can expand and contract on demand
- Providing highly available support and redundancy that removes single points of failure across infrastructure, applications and data
- Allowing you to service and operate business systems that are running across multiple nodes to achieve continuous operation

The question on the lips of many larger IT shops is how to embrace a Hybrid scalable computing model, rather than if.

One of the big questions is of course how that revised Hybrid IT model might be operated. To which end a further key investment from Micro Focus is on the operational side of application deployment, in the following key areas:

- Applications can be deployed onto multiple Enterprise server regions that can be scaled on premise, in cloud instances or in containers which provides predictable application performance throughput
- Running across multiple instances of our deployment engine removes single points of application failure. One Enterprise Server instance failing will not interrupt business continuity as capacity can be shared with other regions whilst new instances are automatically started.
- Removing availability issues with COBOL or PL/I data, by hosting VSAM files in a relational database. With the choice of MS SQL Server or PostGres (Aurora in AWS), indexed data can be moved incrementally to the database which provides transnationality and high availability, without changing application logic
- Scaling out across many nodes inevitably means more complexity in how your applications are maintained and operated. Enterprise Server regions can be grouped in a scale-out architecture as logical clusters (performance and availability clusters) to allow participating regions to be operated together through a new administrative interface. The new Enterprise Server common administration Web UI can manage all Enterprise Server assets regardless of where they reside in the hybrid infrastructure, greatly simplifying system administration activities. And with all these activities exposed through Restful services, applications deployed into a scale-out architecture under Enterprise Server can be operated as part of an enterprise operations management policy.
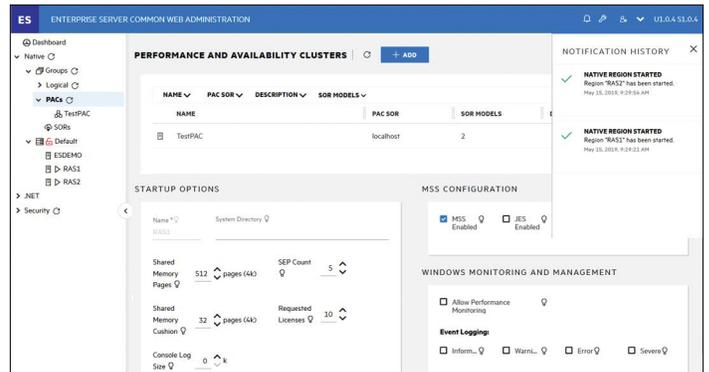

Figure 1. Enterprise Server Common Web Administration
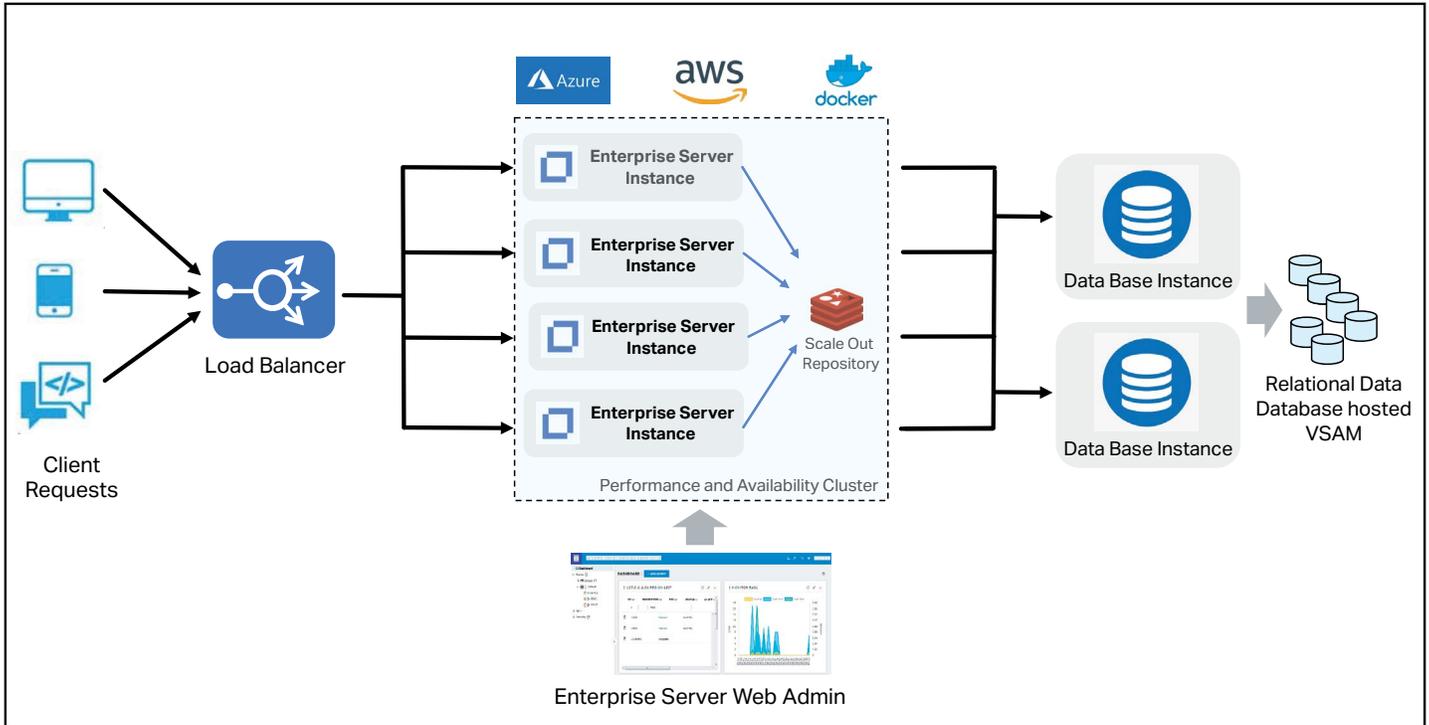
Figure 2. A schematic showing Enterprise Server application regions operating in a cluster and managed through a common web admin tool. VSAM data is hosted as a relational data for high availability and throughput is managed through a system load balancer.
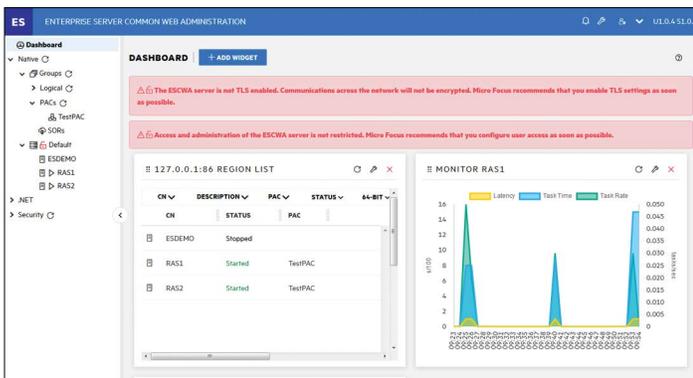

Figure 3. New Enterprise Server Common Web Administration UI. This allows you to manage all Enterprise Server resources in your network and setup, configure and deploy Enterprise Server regions running as a cluster.

WITH SKILL

Enterprise-class, scalable deployment environments require enterprise class expertise to continue to build, maintain and modernize those systems, regardless of where they are deployed. While a flexible technology is vital, it is not good enough to have the flexibility to deploy to the cloud without also having need to have the people, the process and modern tools to ensure IT can respond quickly to change.

One of the operational realities facing many organizations is that those skilled in the task are often incumbents who have based an entire career on said environments, and are diminishing number as they reach retirement age. The very specific and unique nature of those platforms make training new professionals a long-term and comparatively expensive task. Moreover, no-one coming out of college wants to learn ISPF these days.

By contrast, commodity-platform based scale-out architectures are now largely mainstream and such environments are the norm from an IT education stand. Everyone is learning Cloud, IDEs, and Hybrid computing. Everyone is learning about agile and DevOps, continuous integration and delivery. Today's application development graduates are well-versed in Java, C# and other modern languages and are perfectly capable of learning others.

As many organizations are now finding, the task of cross-training those already knowledgeable in Java or C#, the additional syntax of COBOL or PL/I systems can be largely straightforward and is a much lower overall effort than finding and training mainframe professionals on traditional tooling. What's important is that mainframe technology is made available to this new breed of IT professionals in the same way other technology is—through modern IDEs, embracing agile development processes. Today's IT graduate just expects that level of capability, even if they are being asked to build mainframe applications.

Which is why Micro Focus has included additional capabilities provided in the latest Enterprise Suite release to further support application delivery for today's mainframe developer.

- Modern integrated development environments built on the latest Microsoft Visual Studio or Eclipse based frameworks provide a robust, contemporary mainframe application development interface
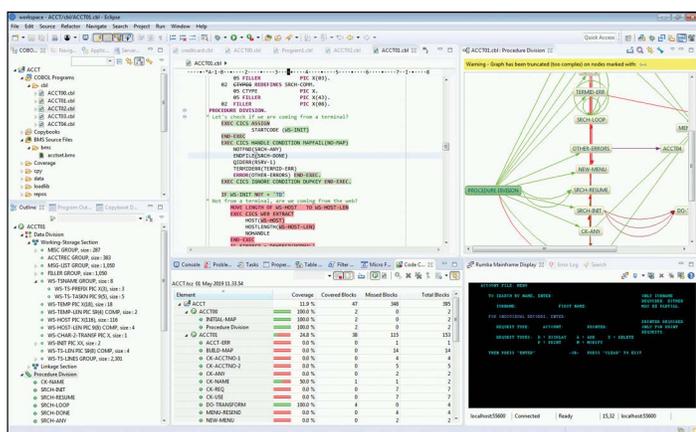

Figure 4. Modern mainframe development under Eclipse showing Application structure analysis, code coverage statistics, smart editing and debugging capabilities for mainframe COBOL and PL/I applications.

- Contemporary development capabilities for mainframe COBOL and PL/I applications such as instant feedback on syntax errors, content assist, syntax colorization, outline view and a comprehensive debug environment provide a faster change of mainframe application source

- Application analysis, code visualization and coding standards checking removes the need to have access to application experts and offers application knowledge at the point of change

- Unit test capabilities with a local execution engine that supports unit test framework and provides code coverage and performance statistics

- REST APIs to better support integration of Enterprise tools into an existing toolchain or to provide automated tasks as part of a continuous integration or delivery process

While the IT Skills plan should align to the IT strategy, it holds true that the larger the talent pool available from which a modest training step can be offered, this represents a far easier way of establishing a dependable incumbent skills pool with which to build, deploy and manage the next generation of scalable core business systems.

Enterprise Application Modernization from Micro Focus

Our track record and credentials in Enterprise Modernization offers our customers a unique and comprehensive capability.

- **Efficiency:** We can help streamline development and delivery activities by 40%, using contemporary technology, DevOps agility and unrivalled flexibility

- **Experience:** We have delivered 1,000+ modernization projects in recent years and we are supported by the best global partner network

- **Keep what works:** Deploy COBOL and PL/I applications in a native or managed code environment, and across all major supported platforms on the market *unchanged*.

- **Be supported:** Works for all core applications and major data stores. Take your database variants into both mainframe and distributed worlds.

- **Stay current:** Rest assured with certification of virtualized and Cloud environments including AWS and Azure, and containerization, including Docker.

- **Reduce and improve:** Customers can expect 50%–90% reduction in IT operations costs and a performance improvement of up to 50% for batch and online transactions

Enterprise Suite Products

- **Application Analysis**—Enterprise Analyzer
- **Application Development**—Enterprise Developer for Z
- **Application Testing**—Enterprise Test Server
- **Application Deployment**—Enterprise Server™

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