



# LINUX AUTOMATION

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USING RED HAT ENTERPRISE LINUX TO EXTRACT MAXIMUM VALUE FROM IT INFRASTRUCTURE



## SUMMARY STATEMENT

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With Red Hat, information technology (IT) managers can build out an architecture that enables their businesses to scale IT capacity and fuel business growth while reducing IT costs. Red Hat is unique in its ability to enable IT managers to drive out both capital and operating costs, while simultaneously improving service levels and flexibility.

This approach to architecture from Red Hat significantly reduces the cost of owning applications, bridges the silos of IT capacity, and makes infrastructure more efficient, cost-effective, and reliable.

These aren't marginal improvements. They dramatically improve the bottom line and, at the same time, enable IT to consistently deliver better service.

Red Hat uses open standards and open source software to provide customers greater compatibility with existing infrastructure, more flexibility, better software quality, and greater leverage over other IT vendors. All of this ensures the best economics and technology access in the short, medium and long term.

Red Hat calls this architecture **Linux Automation**.



## **CREATING A MORE EFFICIENT INFRASTRUCTURE: ANY APPLICATION. ANYWHERE. ANYTIME.**

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Today, capacity in a typical enterprise IT infrastructure is very fragmented. There are physical servers and virtual servers. Many companies are now taking advantage of distributed computing “clouds,” where capacity is available for purchase on-demand. Capacity is further fragmented into Red Hat Enterprise Linux servers, Microsoft® Windows® servers, VMWare® servers, and Unix servers (among others). This fragmentation results in systemic inefficiencies. Servers are under-utilized. Capacity to run applications is not evenly distributed. Management and administration resources are duplicated making management and provisioning a real headache. Money is wasted and service delivery goals go unmet.

Linux Automation bridges these silos of capacity, making all capacity available for any application. It allows applications to be deployed on any server type – physical, virtual, or cloud – regardless of the underlying OS – Red Hat Enterprise Linux, Microsoft Windows, VMWare, or Sun Solaris™. And as the silos are bridged, one set of tools manages this more flexible capacity as one unified pool.

Linux Automation allows customers to build on-demand distributed computing clouds, creating a flexible inventory of servers that yield redundancy, balanced performance, and additional capacity during peak times – all at a lower cost than before.

New hardware can be utilized immediately, with no need to update and re-qualify each application in the stack. So while application deployments may be in mid-life, the underpinnings can be as recent and up to date as desired with no negative impact on the running applications.

## **MAKING APPLICATION OWNERSHIP MORE COST-EFFECTIVE**

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Linux Automation dramatically reduces the cost of owning applications and increases the flexibility and responsiveness of IT.

In a traditional IT infrastructure, applications are expensive to own. Consider the life-cycle. An application must be procured, along with an operating system to run it on. Both the application and OS must be installed, configured, tuned, and tested. Then the application must be qualified, deployed, and managed. Each stage of implementation incurs significant costs, direct and indirect. This is an expensive process – one which must be repeated every time a new model of server is deployed or a change to the application, operating system, or middleware is made.

Linux Automation eliminates the need to go through this cycle time and time again by enabling every Red Hat Enterprise Linux-certified application to be run as a software appliance. For the first time, developers, independent software vendors (ISVs), and users can realize the advantages of software appliances without increasing the complexity or cost of their development and testing effort. A software appliance is created by combining an application with an operating system into a virtual machine image which can be executed anywhere.



## PERFORMANCE AND COMPATIBILITY

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Linux Automation extends the reach of Red Hat Enterprise Linux applications, so that any certified application runs on all deployment models – physical servers, virtual servers, and cloud servers – identically and without any change to the application.

Included in Red Hat Enterprise Linux is virtualization functionality that has been married to the Red Hat Linux kernel. This virtualization layer provides all the functions needed to create and manage virtual machines, so it is able to power Windows, Solaris, Red Hat Enterprise Linux or any other x86 or x86\_64 operating system. Red Hat already offers virtualization support for Windows and will support it on Solaris in the near future.

The key benefit of virtualization is the broad range of hardware and software compatibility. Every Red Hat Enterprise Linux-certified server and software application works with or without virtualization. And because all of the Linux knowledge your IT team has acquired apply, no additional training is needed to run this new combination. And the economics are compelling. Unlike competitors who require additional payment or charge a premium to use virtualization, this technology is included at no extra charge with Red Hat Enterprise Linux.

## DISTRIBUTED COMPUTING

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Red Hat Enterprise MRG (Messaging, Realtime, Grid) is a platform that brings the values of Linux Automation—flexibility, efficiency, value, and performance—to distributed computing. With Red Hat Enterprise MRG, you can not only run your applications flexibly across a variety of environments, you can scale them for any size workload, with the performance and reliability crucial to your distributed computing needs.

Linux Automation's significant benefits at the application level compound greatly when deployed using a grid scale. Red Hat Enterprise MRG brings the benefits of Linux Automation to all your workloads across all your computing resources, both native and virtual.



## CONCLUSION

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Building an efficient, flexible IT infrastructure is the key to containing both capital and operational costs while boosting business growth, capacity, and performance. Red Hat Enterprise Linux allows IT managers to certify applications once and deploy them anywhere, bridge silos of IT capacity, and build an efficient dynamic architecture that can scale as needed. Linux Automation, Red Hat's holistic approach to IT architecture, leverages all of the technical and economic advantages of open standards and open source for enterprise customers.



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