

# Six Success Factors for MSPs

*Oracle Linux value perceptions identified by Managed Service Providers*

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## Executive Summary

Managed Services Providers (MSPs) have choices when it comes to delivering and supporting Linux-based applications and services including Red Hat Enterprise Linux (RHEL), CentOS and Oracle Linux. However, many of them are now leveraging Oracle Linux to deliver and support a stable, reliable and cloud-consistent environment for their customers. Here we evaluate the findings of three MSPs who now use the Oracle Linux operating environment to grow and satisfy the demands of customers – both on-premises and in the cloud. We do so by looking at their key requirements for success and relating them to their use of Oracle Linux as a services delivery platform. Among the value-related benefits we observed are:

- Application stability leads to customer satisfaction and retention
- Delivering greater value at lower cost maximizes profitability, even in highly competitive markets
- Deploying integrated application “stacks” speeds services delivery and aids in maximizing the efficiency of MSP staff
- Helping customers advance their Cloud Native transformation objectives will attract new opportunities for growth
- Reducing the complexity of hybrid cloud deployment will advance customers’ cloud migration objectives

As we shall show, these and other factors, lead to both business and customer-related and gains for MSPs.

## Key Success Factors for MSPs

Evaluator Group conducted three in-depth interviews with MSPs that were delivering managed IT services based on Oracle Linux. All were global in scale and are delivering their managed services to enterprise IT customers. When we combine the results of these interviews with our own research, six common themes emerge:

### **1. Application Stability**

Oracle Linux was the preferred platform for applications running on Oracle Database. These are often transaction-oriented, business critical-applications. Downtime here can result in lost revenue for customers and negative impact to overall customer satisfaction for MSPs. For this reason, the MSPs we spoke to were unanimous in their assessment of using Oracle Linux to deliver the most stable operating environment for Oracle-supported business applications. This allows them to deliver services at levels that meet and often exceed customer expectations. As one global MSP that specializes in Oracle applications put it, “We under promise and over provision. We’ve had environments running for two to

three years without issues.” This particular MSP has a 100% customer retention rate. But even outside of the Oracle application environment, another MSP noted that they have accounts that don’t have Oracle but still want them to deliver their services on Oracle Linux. A third, the largest deployer of Oracle managed services, stated that Oracle Database on Oracle Linux was the most stable environment for these applications.

## ***2. Greater Value at Lower Cost***

All three MSPs cited the fact that costs involved with using Oracle Linux were generally lower than those seen with using RHEL. This perception was voiced for both software licensing and support costs. Internal cost savings allows them to compete more effectively in a global market on the basis of price for value of services delivered. As one interviewee stated, “Our services have to be agile. Price competition is fierce and we have to justify our price.”

Delivering greater value at lower cost helped all three maintain their current customer relationships and gain new ones. We believe this to be the case because Oracle Linux can now be used as a hybrid cloud infrastructure stack which includes KVM virtualization plus Smart Flash Cache that, when used together, help optimize the density of virtual machines per server. All result in lowering the overall cost of supporting applications that rely on Linux without paying more for additional OS services when these are needed. Oracle Linux KVM may be used as hard partitioning technology for Oracle software licensing. With this technology, virtual machines can be pinned to specific physical cores on a server. Once pinned, the Oracle Database or application only needs to be licensed for the number of physical cores it is pinned to which can help optimize and lower licensing costs for MSPs.

## ***3. Delivering the Oracle “Stack.”***

When customers want managed services for applications driven by Oracle Database, all of the MSPs we interviewed choose to run them on Oracle Linux. There were two reasons for this. One, already mentioned above, was applications stability. The other was operational simplicity. As one MSP said, “We have a good relationship with Oracle which has allowed us to develop lots of Oracle Linux skills and get what we need from a single source. When we surface issues they are resolved quicker.” Another MSP noted that delivering a full Oracle solution that included Oracle Linux was easier for the customer to consume and easier for them as a services provider to manage. However, we note that Oracle Linux also makes it easier for MSP’s to manage an Oracle workload environment when all of the elements in the application stack are optimized for performance and allow the MSP to better control Oracle workload licensing costs.

#### ***4. Advancement of Cloud Native Transformation***

All three MSPs reported that demand for container virtualization managed by Kubernetes was nascent but increasing as enterprises move to operationalize Kubernetes deployments. All three cited complexity and in-house staff inexperience as demand drivers for managed Kubernetes services. For MSPs, the Oracle Cloud Native Environment delivers a simplified framework for installation, updating, upgrading, and configuring key features for platform observability and the orchestration of microservices. The Cloud Native Environment also includes Kubernetes, Kata Containers, CRI-O, Helm, Istio and other open source services. The implementation of Kubernetes is Certified Kubernetes by the Cloud Native Computing Foundation (CNCF). Oracle Linux Premier support includes support for the Oracle Cloud Native environment at no extra cost. It also includes Oracle Linux Automation Engine and Automation Manager which are based on the open source projects Ansible and AWX, an automation tool for deploying software, configuring systems, and orchestrating tasks such as upgrades and updates, in the form of playbooks. Open source was cited by one MSP as critical to their cloud strategy going forward.

#### ***5. Addressing Hybrid Cloud Complexity***

Our survey research shows that the degree of complexity involved with implementing hybrid cloud architectures as experienced by enterprise IT administrators is greater than originally thought. This can include unexpectedly complex processes when incompatibilities between on- and off-premises clouds arise. IT operations staff have established familiar ways of managing their on-premises data center infrastructure environments and implementing compliance and data governance policies. Ideally, they would like to integrate public cloud services with minimum friction.

Our MSP interviewees were often engaged in application modernization projects that included a substantial public cloud integration component. In that Oracle Linux is available on multiple public clouds, it was called upon to simplify these integrations and deliver efficiencies for both their customers and the MSPs themselves. One stated that Oracle Linux enabled them to add their own unique value when migrating applications to the cloud. Another noted not only having positive experiences so far with integration, but also using Oracle Cloud as a competitive differentiator.

#### ***6. Ksplice as a Specific Value Driver***

While not common to all interviews, one MSP spoke to how they rely on Ksplice to assure application availability, contributing directly to compliance with customer Service Level Agreements (SLAs). Ksplice, a capability that is unique to Oracle Linux, was also credited with reducing the overall cost of customer support that included staff time. Ksplice enables zero-downtime updates of the Linux Operating System (OS) kernel, hypervisor and critical user space libraries, while it is running, and without a system reboot.

With Ksplice, MSPs can keep up with important Linux kernel updates and patches without interruption to customer operations. This MSP reported that this capability was particularly useful when applying security patches – a key customer concern. In addition, Ksplice detects attempts to exploit kernel vulnerabilities that have been patched in memory while proactively alerting an MSP’s administrator if any compromised code tries to get executed on a server.

## Additional Oracle Linux Advantages

While not called-out by our interviewees, there are specific aspects of the Oracle Linux application environment that Evaluator Group believes to be advantageous for MSPs. Oracle Linux runs directly on the MSP’s bare metal systems or as a virtual guest on many virtualization technologies in use by MSPs such as KVM, Xen, VirtualBox, Hyper-V, and VMware. For cloud instantiations, Oracle Linux images are also available on all major public clouds such as AWS and Azure, as well as Oracle Cloud.

The Unbreakable Enterprise Kernel (UEK) for Oracle Linux is optimized for software performance, especially in Oracle Database and applications environments. The UEK is developed and continuously updated using the latest stable Linux kernel release from the mainline/upstream source. UEK testing and security validation is widespread across IT development systems running the portfolio or Oracle Database applications on premises and in the Oracle Cloud. In addition, all of Oracle’s x86-based engineered systems, such as Oracle Exadata, use the UEK which is open source and available at [github.com/oracle/linux-uek](https://github.com/oracle/linux-uek).

Oracle Linux-specific features that we believe to be of strategic importance to MSPs include:

### ***Database Smart Flash Cache***

The Database Smart Flash Cache feature can be integrated with server-based PCIe Flash storage devices to yield up to 5x performance gains for I/O intensive database applications. It functions as a **secondary cache** by allowing the database buffer cache to be expanded beyond the System Global Area (SGA) in main memory to a second level cache on flash memory. For MSPs, this delivers enhanced productivity for customers, boosting overall satisfaction that positively impacts customer retention.

### ***High Availability Clustering***

To support high availability SLAs between MSPs and customers, Oracle Linux offers high availability clustering based on several open-source packages, including the Corosync and Pacemaker features.

### *DTrace*

DTrace is a dynamic tracing framework that provides robust operating system monitoring and management. MSPs can use it to explore an entire Oracle Linux system to understand how it works, track down problems across many layers of software, and locate the root cause of aberrant behavior. DTrace also gives operational insights into memory consumption, CPU time or what specific function calls are being made by an application – all in real time.

### *No Licensing Cost, Basic and Premier Support Optional*

Oracle Linux includes source code, binaries, updates, and patches for free. Users have a choice between two kernels: the Red Hat Compatible Kernel (RHCK) or the UEK. And both allow MSPs to add Basic or Premier support as an option. For MSPs running CentOS environments who are now seeking an alternative<sup>1</sup>, migrating to Oracle Linux will offer a considerable upgrade in functionality while preserving a free licensing opportunity. For MSPs using both CentOS and RHEL, consolidation to Oracle Linux will simplify operations and save on internal support costs.

## **Premier Support: A Complete Operating Environment**

As mentioned, MSPs looking for a complete, fully integrated Linux operational environment can take advantage of Oracle Linux Premier Support which includes 19 additional features including:

### *Oracle Enterprise Manager for Linux*

MSPs delivering the “full stack” can leverage the Enterprise Manager that gives them Oracle Fusion Middleware, Oracle database management, and cloud management. For cloud environments, Enterprise Manager includes resource provisioning by the MSP, policy-based resource management, integrated chargeback, and capacity planning.

### *Oracle Linux Manager*

Oracle Linux Manager includes a set of tools for managing Oracle Linux software life cycles for small to large customer deployments. Oracle Linux Manager can also help MSPs automate a kickstart installation, system configuration and maintenance tasks, which enables them to deploy

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<sup>1</sup> CentOS Linux 8 will **reach End of Life (EOL)** on December 31st, 2021.

consistent software configurations for Oracle Linux systems across customer installations, allowing them to standardize environments across the customers they serve.

### ***Oracle Linux Automation Manager/Automation Engine***

Oracle Linux Automation Manager and Automation Engine, based on open source projects AWX and Ansible, tools for deploying software, configuring systems, and orchestrating tasks such as upgrades and updates, in the form of playbooks. For MSPs, these tools can greatly reduce the effort expended by MSP staff when administering customers' Linux-based application deployments and lower the overall cost of customer support.

### ***Oracle Linux Virtualization Manager***

Virtualization is a key enabler of MSP efficiency. Virtualization Manager is a comprehensive management solution that can be deployed to configure, monitor, and manage an Oracle Linux Kernel-based Virtual Machine (KVM) environment with enterprise-grade performance and support from Oracle.

## **Evaluator Group Assessment**

Today, staffing issues can hamper enterprise IT's directives to modernize. This is where MSPs play a critical role. MSPs can apply competent staff to a modernization project, or fill-in for staff members that are being shifted from established application environments to ones that drive transformational activities forward. They can also use automated processes to maximize staff efficiency.

Here we have focused on Oracle Linux as a platform for managed services delivery. Our interviews show that this platform enables them to address a number of critical factors for success.

First, public clouds have conditioned customers to expect continuous system uptime. MSPs will be looked upon to also deliver a cloud-like experience to their customers in the form of uninterrupted on-premises application availability. It is clear from our interviews that Oracle Linux, when used to support Oracle Database environments, is the most stable and predictable option available. MSPs must also be responsive to a variety of customer needs that include new applications, application modifications and new business user priorities as they arise. The transportability of Oracle Linux across on premises and public cloud environments addresses this need.

Second, platforming on Oracle Linux helps MSPs retain current customers and gain new ones. Customers who engage an MSP for Oracle Database and application services will appreciate the use of Oracle Linux as a stable, reliable, and high performance foundation. Prospects looking to migrate Oracle applications to the cloud will appreciate the conformity and availability of Oracle Linux within a hybrid cloud



architecture. And in highly competitive markets, offering a rich and cost-efficient services delivery platform offers high value at lower cost.

Finally, because MSPs must constantly keep an eye on the bottom line, standardizing on a platform that that delivers significant reductions in support and licensing costs for all Linux systems environments not only feeds bottom line profitability but allows an MSP to be competitive with cost-conscious prospects. For MSPs supporting Oracle plus other Linux-based application environments, consolidation of different versions of Linux to Oracle Linux can result in increased management simplification and lower overall customer support costs.

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