# OPERATIONAL MANAGED SERVICES COMPETITIVE ANALYSIS REPORT

*Your business is unique, and so when looking to select a managed service to look after your operational OpenShift environment, you need to know that the solution will be as unique as your business.*

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# Overview

The Crossvale OpenShift Managed Services offering provides a best in class Kubernetes platform solution paired to a service model integrated with your IT operations process. This customized approach to supporting your OpenShift platforms provides unparalleled flexibility and strategic advantage.

Crossvale is a Red Hat Apex Premier partner focused on providing services across the Red Hat portfolio, with emphasis on automation, integration and modernization of IT infrastructure while expanding the capacity and capability of software delivery teams.

This analysis document provides insights into the currently available offerings from vendors for managed OpenShift services and compares features, options and integrations to help you choose the correct platform service for your organization.

## Platform Vendor Offerings

The following vendor products will be considered for this analysis:

- Red Hat OpenShift Dedicated
- Microsoft Azure Red Hat OpenShift
- Crossvale OpenShift Managed Service
- OpenShift Container Platform Standalone

We will contrast the service providers listed above and highlight some of the general benefits of taking a managed service approach to OpenShift as opposed to managing your own platform.

# Core Offering

Deciding on how to support and maintain your Kubernetes environments is a critical step in developing a long-term container adoption strategy. OpenShift straddles many aspects of a traditional IT environment, requiring skilled and diversified teams that can address storage, networking, automation, reporting, software deployments and other core capabilities.

The intent of all dedicated platform service providers is to ease the burden and management requirements of supporting OpenShift clusters, while ensuring along the way that appropriate measures are being taken to enforce security, keep systems performant and address issues proactively and with minimal service interruption.

Each provider accomplishes their mission statement via different processes, requirements and exclusions. In choosing a provider for your OpenShift managed cluster, it is important to understand these differences and choose the one that best aligns to your business needs.

## Comparison of Offerings

| Crossvale MSP | OCP Standalone | Red Hat Dedicated | Azure RH OpenShift |
|---|---|---|---|
| Cluster owner | Self-installed Cluster | Single Tenant | Single Tenant |
| Application nodes | | Application nodes | Application nodes |
| Installation | | Installation | Installation |
| Management by Crossvale | Internal management | Management by Red Hat SRE | Management by Red Hat and Microsoft SRE |
| Red Hat & Crossvale Support | Red Hat Support with appropriate license | Premium Red Hat Support | Premium Red Hat and Microsoft Support |
| Cluster services such as logging, metrics, monitoring | Cluster services such as logging, metrics, monitoring | Cluster services such as logging, metrics, monitoring | Cluster services such as logging, metrics, monitoring |
| Integrated notifications | Manual configuration of alerting | Notifications portal | Notifications portal |
| Cluster portal (OpenShift 4) | Cluster portal | Cluster portal | Cluster portal |

# Infrastructure

Choosing where to run your OpenShift clusters will impact which dedicated managed service provider is right for you. If you would like to maintain multiple clusters in different environments, or across multiple availability zones in the cloud, there might be associated additional costs, as well as having to deal with multiple vendors, support contracts, etc.

If your enterprise already runs primarily in a public cloud provider and minimal integrations are required with other resources, or your specific use cases for OpenShift do not require considerations outside of the cluster environment, then all offerings provide valuable solutions.

However, if your requirements are for a multi-cloud strategy, or a public/private hybrid model – or if you have tooling, security or on-premise data center capacity, you may wish to consider a more tailored offering.

Crossvale's OpenShift Managed Services offering can provide support and management of both newly built clusters as well as existing clusters built by you*. In case of the latter, Crossvale Professional Services will perform an assessment and proscribe any remediation necessary before onboarding an existing cluster.

*Requires VPN/VDI or other remote access to environments.

## Comparison of Offerings

| Crossvale MSP | Red Hat Dedicated | OCP Standalone | Azure RH OpenShift |
|---|---|---|---|
| Public Cloud (AWS/Azure), OpenStack, VMWare, Bare Metal (New or existing clusters) | AWS Shared Hardware (New Clusters Only) | BYO | Azure Shared Hardware (New Clusters Only) |

# Integrations

OpenShift is a powerful tool in the IT organization toolbelt. However, to fully round out its capabilities, OpenShift offers a variety of ways to connect to external systems that can enhance the functionality of the platform.

User authentication on the platform is available in many varieties. While LDAP integration is the most common, SSO, OpenID and other options are also available. Most dedicated hosting providers support a limited number of offerings, primarily the most common platform being Microsoft AD. Crossvale can support the full range of authentication providers for your clusters, if connectivity and proper access can be provided by your IT organization.

Crossvale will also integrate with your current IT ticketing systems*. This allows you to incorporate OpenShift related support practices with your existing infrastructure processes and reduces the need to manage or monitor multiple tools. Email and Crossvale Ticketing support is also available.

Additionally, Crossvale OpenShift MSP can support other integration toolsets, including automation tools like Ansible Tower and CI/CD platforms like Jenkins. Support offerings require additional discovery and support addendums.

*Requires VPN/VDI or other remote access to environments.

## Comparison of Offerings

| Crossvale MSP | Red Hat Dedicated | OCP Standalone | Azure RH OpenShift |
|---|---|---|---|
| • OnPrem /Cloud AD Service<br>• Other OCP supported auth clients<br>• Integrated w/ your ticketing system<br>• Custom alerting | • OnPrem /Cloud AD Service<br>• Notifications portal | • LDAP /OAuth*<br>• Alert manager notification* | • Azure AD<br>• Notifications portal |

*When installed

# Monitoring / Logging

OpenShift Container Platform provides tooling for monitoring cluster health and application logging. Cloud providers can extend these tools with custom, platform specific monitoring tools for their environments.

If deploying OpenShift on-prem, the cluster monitoring tools generally provide satisfactory performance information, and can always be supplemented with your monitoring platform of choice.

Application and cluster logging are provided via the ElasticSearch stack on the platform. Crossvale offers the ability to customize your logging environment to export log data from the cluster to your log aggregator of choice. This integration requires discovery and support addendums.

## Comparison of Offerings

| Crossvale MSP | Red Hat Dedicated | OCP Standalone | Azure RH OpenShift |
|---|---|---|---|
| • On cluster Prometheus/ Grafana<br>• On cluster EFK with log export option | • On cluster Prometheus/ Grafana<br>• On cluster EFK | • On cluster Prometheus/ Grafana*<br>• On cluster EFK* | • On cluster Prometheus/ Grafana<br>• On cluster EFK |

*When installed

# Security

OpenShift's primary security context comes from proper installation, management, patching and design of services. Server and operating system hardening also play a significant factor in cluster security.

Public providers offer rigorous practices locked into their environments, while managing the patching process on their schedule. Opinionated choices on infrastructure provisioning and locked down cluster admin features reduce the possible attack surfaces. This requires some trade-off in capabilities for administering your clusters.

Crossvale support services allow you to retain full control of your cluster, including integrating security agents in your server images if required. Patching and maintenance of your clusters can be scheduled within your organizations change windows to closely follow your planned outages. Custom or extended security profiles and policies will require additional discovery and support addendums.

## Comparison of Offerings

| Crossvale MSP | Red Hat Dedicated | OCP Standalone | Azure RH OpenShift |
|---|---|---|---|
| • Scheduled patching and CVE updates<br>• Infrastructure integration consulting<br>• Flexible change windows | • Scheduled patching and CVE updates<br>• Mandated change windows | • Manual patching | • Scheduled patching and CVE updates<br>• Mandated change windows |

# Service Level Agreements

Cloud providers have a considerable advantage to guaranteeing uptime on cluster platforms due to integrated automation and excess hardware capacities. In addition, their large head count of support resources can provide short wait times on initial response. By tailoring the OpenShift environment to their specific infrastructure, they reduce the scope and complexity of hardware configurations and can offer excellent support within a tightly controlled infrastructure bubble.

For OpenShift platform issues, all providers guarantee a similar level of support as well as access to Red Hat official product support.

If your infrastructure needs require support of platforms and or configurations outside of the standard packages offered by the public cloud providers, Crossvale can create a tailored support package to meet your needs. This includes but is not limited to customized schedules, call time availability, hardware configurations and premier consulting services. Customization of support plans requires additional discovery and support addendums.

## Comparison of Offerings

| Crossvale MSP | Red Hat Dedicated | OCP Standalone | Azure RH OpenShift |
|---|---|---|---|
| Operated and supported by Red Hat (via CCSP subscription) and Crossvale<br><br>Flexible SLAs to meet your budget and uptime requirements | Operated and supported by Red Hat with a 99.5% uptime SLA and 24x7 coverage | Red Hat support based on purchased support subscription | Operated and supported by Red Hat and Microsoft with an integrated support experience and 99.9% uptime SLA |

# Middleware

OpenShift provides capabilities as a hosting platform for additional middleware services. Packages like AMQ, Jenkins, 3Scale, Istio and many others come with Red Hat subscription support when purchased. However, the integrations with OpenShift clusters are still nebulous when troubleshooting multi-layer issues. The dedicated public cloud cluster providers will support infrastructure and platform issues, but they do not support application or middleware solutions.

The MSP offering from Crossvale can be extended to help manage integrations with Red Hat supported middleware components to ensure application uptime. These integrations can get complex and inclusion of Crossvale professional services will be required to validate architecture and design of component systems.

## Comparison of Offerings

| Crossvale MSP | Red Hat Dedicated | OCP Standalone | Azure RH OpenShift |
|---|---|---|---|
| Limited support for Red Hat middleware offerings based on Red Had subscription support options<br><br>Additional support available as a custom add-on for middleware integrations | Limited support for Red Hat middleware offerings based on Red Had subscription support options | Limited support for Red Hat middleware offerings based on Red Had subscription support options | Limited support for Red Hat middleware offerings based on Red Had subscription support options |

# Conclusion

As an enterprise, deciding to take on a new platform as intricate as Kubernetes can be daunting. Finding the right platform vendor, deciding on infrastructure, building teams to support and maintain, developing skillsets in all layers of the OSI model and developing a day to day operations plan all take considerable time and effort. The solutions described in this analysis focus solely on OpenShift, as we believe it is the best in breed Kubernetes solution for enterprises. However, even within the narrower confines of the OpenShift ecosystem, many options exist, and choices need to be made. Each of the vendors compared in this document focus on their strengths and are potentially viable options based on your needs, environment and capabilities. Regardless of your ultimate choice in platform provider and services option, Crossvale's expertise can help guide you through your OpenShift adoption.

# Feature Summary

| FEATURES | CROSSVALE MSP<br>Complete Managed | OCP DIY<br>Unmanaged | RED HAT DEDICATED<br>Fully Managed | AZURE RH OPENSHIFT<br>Fully Managed |
|---|---|---|---|---|
| **Tenancy** | Single (Exclusive) | Single (Exclusive) | Single (Shared) | Single (Shared) |
| **Scheduled Patching/CVE** | ✓ | ✓* | ✓ | ✓ |
| **Alerting** | ✓ | ✓* | ✓** | ✓** |
| **Managed Installation** | ✓ | ✓* | ✓ | ✓ |
| **Managed Prometheus / Grafana** | ✓ | ✓* | ✓ | X |
| **Managed EFK** | ✓ | ✓* | ✓ | X |
| **Award Winning for Red Hat Service Expertise** | ✓ | ✓* | ✓ | X |
| **Full Access to Control Plane** | ✓ | ✓* | X | X |
| **Any Infrastructure** | ✓ | ✓* | X | X |
| **Log Export** | ✓ | ✓* | X | X |
| **Flexible Change Windows** | ✓ | ✓* | X | X |
| **Custom Performance Tuning** | ✓ | ✓* | X | X |
| **No Limitations - All OCP Features** | ✓ | ✓* | X | X |
| **SLA > 99.9%** | ✓ | X | X | X |
| **Integrated Ticketing** | ✓ | X | X | X |
| **Infra Integration Consulting** | ✓ | X | X | X |
| **Day 1 Offload of all Mngt tasks** | ✓ | X | X | X |
| **No need for am Operations Team for OCP** | ✓ | X | X | X |
| **Leadership Support (Reporting, Planning, and Advising)** | ✓ | X | X | X |

**Must have internal resources that know how to design, build, troubleshoot, maintain and keep up with platform changes*
*** Standard Notifications Only*

# Decision Tree