Red Hat {Product} Enablement

Engagement Journal

**Prepared For:**

{Client}

{Date delivered (DD Month YYYY)}

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# Document Information

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Red Hat Consulting

## Owner

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## Additional Copies

Additional copies of this document can be obtained from the Service Delivery Manager listed in the [Red Hat Consulting Contact Information](#_9ka5wto7raif) section.

# Purpose

This report documents the overview, contact information, and technical details of the activities performed during the consulting engagement. Its purpose is to serve as a reference after the engagement is complete.

# Executive Summary

{Provide Overview of Engagement

Example:

Red Hat Consulting was contracted to assist in a Proof-of-Concept (POC) effort led by Intel, NEC America, and Black Box Network Services. Red Hat Consulting’s role was to set up a foundation of OpenStack, Ceph, and CloudForms with in the lab environment as a series of prototypes. The key objective was to establish a proof of concept environment to demonstrate the capabilities of an OpenStack cloud solution featuring Software Defined Networking (SDN) and Software Defined Storage (SDS) running on Intel-based hardware. Upon successful completion of the proof of concept, the solution will be marketed and sold to government agencies.

Red Hat Consulting developed a four-phase approach to complete the engagement. The Red Hat Consulting team began work onsite in Black Box Network Services’ Herndon office on 21 December 2015. This document provides details relating to the OpenStack install and configuration.

}

## 

# Red Hat Consulting Contact Information

The table below contains the contact information for the Red Hat Consulting personnel that supported the delivery of this consulting engagement.

{Insert the contact information of all RH team members}

|  |  |  |
| --- | --- | --- |
| **Role** | **Name** | **Email** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

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# Engagement Approach

{Provide Approach Details in terms of how the engagement was planned to be completed. Include breakdown of phases and associated deliverables, project schedules, focus areas, etc. as applicable.

**Example 1:**

The engagement will be completed in six weeks broken down as follows:

1. Week 1
   1. Build out of IdM and Satellite 6 server on bare metal on unclassified network.
2. Week 2
   1. Satellite 6 preparation setup (e.g., content views, host groups) on classified network.
3. Week 3
   1. Build out of Idm and Satellite 6 server on bare metal servers on the unclassified network to be moved to classified network.
   2. Satellite 6 preparation setup (e.g., content views, host groups) on classified network.
4. Week 4
   1. Setting up Satellite 6 for provisioning new systems on the unclassified network.
5. Week 5 & 6
   1. Standard STIG build for RHEL 6.x and RHEL 7.x
6. Optional if time permits
   1. Puppet configuration management examples and direction.
   2. Clustering systems examples and direction.

**Example 2:**

|  |  |  |
| --- | --- | --- |
| **Phase** | **Tasks** | **Deliverable(s)** |
| 1a: OpenStack Prep & Checklist | · Performing a hardware check  · Performing a task checklist  · Verifying hardware is racked and stacked  · Verifying RAID configuration  · Verifying VLAN configured on servers  · Verifying TXT turned on in BIOS and RHT Trust Agent  · Verifying base OS is installed  · Verifying OS is registered  · Verifying firewall configurations  · Verifying systems can access necessary clients  · Verifying Network Performance between systems  · Determining desired Pool names by resource | OpenStack Prep Checklist |
| 1b: OpenStack Install & Configure | · Configure OpenStack Director to provision / configure required OpenStack components  · Installing up to one (1) RHEL-OSP controller nodes  · Installing up to two (2) RHEL-OSP compute nodes  · Configuring Neutron with tenant networks  · Configuring RHEL-OSP for Ceph integration  · Configuring RHEL-OSP with compute node images  · Enabling TXT in OpenStack  · Configuring Swift backed Glance  · Creating RHEL images and providing insight on how End Customer can create other OS images  · Configuring tenant networks on Neutron | OpenStack Engagement Journal |
| 2a: Ceph Prep & Checklist | · Verifying Hardware is Racked and Stacked  · Verifying RAID Configuration  · Verifying VLAN configured on servers  · Verifying base OS is installed  · Verifying OS is registered  · Verifying Firewall configurations  · Verifying Systems can access necessary clients  · Verifying Network Performance between systems  · Determining desired Pool names by resource | Ceph Prep Checklist |
| 2b: Ceph Install & Configure | · Installing the Ceph monitoring software on the OSP controller nodes  · Installing the Ceph software on up to three (3) OSD nodes  · Configuring the ceph.conf for the Ceph cluster  · Creating the initial Ceph cluster with monitor deployment  · Deploying OSDs based on the OSD journal size configuration  · Configuring public/cluster networks & management network if needed  · Verifying the OSDs start / stop / restart  · Configuring Ceph Block Storage to work with OpenStack Cinder | Ceph Engagement Journal |
| 3a: CloudForms Prep & Checklist | · Deploying Base CFME Appliances in the environment  · Verifying there is sufficient space of Datastore for CFME Appliances  · Assigning Network/Subnet for Appliances  · Assigning an IP address for each CFME Appliance  · Configuring NTP/SMTP settings  · Registering Appliances to RHN  · Updating Appliances  · Adding necessary DNS entries  · Gathering additional software | CloudForms Prep Checklist |
| 3b: CloudForms Install & Configure | · Installing a CloudForms Database Appliance  · Installing CloudForms with up to two UI Appliances  · Installing and configuring up to three (3) worker appliances for CloudForms for OpenStack workloads  · Configuring one region for CloudForms  · Configuring CloudForms to integrate with the RHEL-OSP instance  · Configuring CloudForms with basic tagging  · Configuring two (2) simple service dialogs to deploy from Linux templates  · Configuring example fixed rate Chargeback/Showback based on tags  · Configuring two (2) example utilization/chargeback reports  · Configuring a provisioning workflow to deploy VM/instances based on tag allocations  · Configuring Role Based Access Control  · Configuring Dashboard for Admins with Default widgets  · Configuring DB backups to NFS mount point  · Configuring Schedules for SmartState Analysis and DB Backups  · Integrating Authentication with AD (or IDM, IPA) to access objects based on groups  · Demonstrating multiple user type access within the interface  · Demonstrating Self Service provisioning of Linux templates to OpenStack | CloudForms Engagement Journal |
| 4: System Validation | · Validating provisioning workflow using CloudForms  · Verifying Storage pool creation  · Verifying Glance functionality  · Verifying Cloud Infrastructure within CloudForms  · Verifying OpenStack configuration using Rally | Rally Report,  Final Engagement Journal |

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# Terminology

Understanding and alignment of common vocabulary is critical to any engagement’s success. The following table is a reference guide of acronyms/words/phrases and their definitions/meanings that appear in this document.

|  |  |
| --- | --- |
| **Acronym/Word/Phrase** | **Definition/Meaning** |
|  |  |
|  |  |
|  |  |
|  |  |

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# Technical Details

This section details the engagement tasks conducted during the consulting engagement.

{Provide step-by-step details (including CLI commands) for activities performed during the engagement.}

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# Challenges, Resolutions, and Recommendations

Based on the work performed during the engagement, Red Hat Consulting has documented resolutions and recommendations for issues encountered during the engagement.

## 

{Provide background, resolution, and any recommendations for all notable challenges that were encountered during the engagement.

Example:

## Intel X520-SR2 10gb Network Interface Cards (NICs) Compatibility

### Background

There were initial issues with the Intel 10gb NIC drivers. The provided drivers would not work with RHEL 7.2 and the NICs were not recognized by the operating system. Eventually the drivers were modified via patch to enable RHEL 7.2 to detect the cards. The cards at that point were functioning as expected, though the issue was reported to Intel.

Although the patch for the NIC drivers was effective, it prevented an automatic installation utilizing OSP Director. So the team had to perform the installation manually with Packstack and deploy the Ceph nodes manually.

### Resolution

In January, Intel provided provided a new driver for the NICs, version 4.4.0.19. The network cards worked as expected with the driver, so the driver was applied to all servers (both OpenStack and Ceph nodes).}

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# Relevant Red Hat Documentation

This section contains links to online Red Hat documentation that is relevant to this engagement.

{Include relevant online documentation that may be helpful to the client

Example:

* Red Hat Enterprise Linux OpenStack Platform Documentation: <https://access.redhat.com/documentation/en/red-hat-enterprise-linux-openstack-platform/>

}

# Relevant Red Hat Training

This section contains links to Red Hat trainings that are relevant to this engagement.

{Include relevant Red Hat training that may be helpful to the client

Example:

* Red Hat OpenStack Administration (CL210): <https://www.redhat.com/en/services/training/cl210-red-hat-openstack-administration>

}

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# Appendix A: Engaging Red Hat Global Support Services

More information on how to engage support can be found at:

<http://www.redhat.com/support>

In some cases, it has been found that your questions or challenges may have been seen already. In this scenario, either Red Hat or a Client teammate has documented the challenge and resolution. To expedite your search on areas specific to Red Hat based solutions, please visit Red Hat's Knowledgebase:

<http://kbase.redhat.com/faq/en>

If you are unable to find what you are looking for, please feel free to engage Red Hat's Global Support Services (GSS).

Valid subscriptions include access to GSS. To understand the level of service your subscription includes, please visit:

<https://www.redhat.com/support/policy/sla/production/>

To expedite your support request, it would be helpful to have the following prior to engaging GSS:

* Define the Problem. Please include use case/scenario. For example, “The server is used for batch processing and run at desired rate up through # of jobs. After that, server performance reduces by X.”
* Gather Background Information. For example, the application stack, drivers, of the server or workstation itself along with servers or peripherals that interact with the server in question.
* Gather Relevant diagnostic information.
* Determine the severity level (1-4). For severity level definitions, please visit <https://www.redhat.com/support/policy/GSS_severity.html>
* Ensure you have an RHN Login or your account number.

When you are ready to contact GSS, there are a few ways for you to do so – based on your severity.

Support requests may be initiated and updated at anytime. For support that is included with your valid subscription, our Production Support team is available via web (<https://www.redhat.com/wapps/support/>) or phone (<https://www.redhat.com/wapps/support/>).

If you have a Technical Account Manager (TAM), please initiate/update support via the dedicated Issue Tracker queue or call your TAM directly.

*For Severity 1, it is highly recommended to call us immediately after you have initiated a ticket.*

A GSS Quick Guide (pdf) may be found at:

<https://www.redhat.com/support/process/production/#howto>