

Delivering Consistent, Relevant and Personalized Customer Experiences by Powering Oracle® Commerce Stores with Rackspace® Hosting and Critical Application Services

Industry-leading SLA with a 100% production platform uptime guarantee from Rackspace keeps the doors to your Oracle Commerce online store always open.

A Rackspace whitepaper written by:

Maresh Gandhe, Sr. Solutions Manager for Ecommerce

Robert Davis, Product Manager for Critical Application Services

Michael Canter, Web Scale Engineer for Critical Application Services for Oracle Commerce

Lizetta Staplefoote, Content Strategist

Table of Contents

1. Introduction	2
2. Oracle Commerce – Leading Ecommerce Platform	4
3. Rackspace Hosting – Retail Hosting Specialists	5
4. Overview of Rackspace Oracle Commerce Hosting Solutions	7
5. Considerations for Oracle Commerce	8
6. Oracle Commerce Hosting Reference Architectures:	9
a. Basic Reference Architecture	9
b. Intermediate Reference Architecture	12
c. Advanced Reference Architecture	15
d. Enterprise Reference architecture with Disaster Recovery	18
7. PCI Compliance	20
8. Conclusion	22

1. Introduction

By 2015, global ecommerce sales are projected to top \$338 billion¹. To keep up with the growth, retailers are seeking out technology solutions that allow them to deliver customer experience and performance efficiencies to take advantage of the growth. The majority of ecommerce technology decisions are being driven by these trends that are changing the ecommerce landscape:

TREND #1: MORE TRAFFIC

Shoppers on mobile devices, smartphones, and desktops have sustained double-digit growth in online spending for over a decade². In 2013, weekend sales traffic ballooned four times the pace of weekday sales³. The crush of performance demands to keep up with the increased traffic is pushing ecommerce operators to re-think the technology that fuels their sales engines.

TREND #2: OMNI-CHANNEL COMMERCE

In-store, kiosk, mobile, and web are becoming increasingly integrated into omni-channel commerce. Channel integration allows 37 percent of U.S. consumers the ability to use their smartphones while in a brick and mortar store to check prices, inventory, or options or to even purchase a product⁴. This model requires traditionally fragmented channels to share and process information across multiple sales platforms.

TREND #3: EVOLVED SHOPPERS

Though retailers consistently rank at the top of the industry rankings for customer experience, a majority of consumers (61%) rate ecommerce customer experience as okay, poor, or very poor⁵ leaving a lot of room for progress. To improve experience often means improving underlying systems from the front end all the way down to the hardware running it to support enhanced, customized, and brand differentiating experiences.

TREND #4: GLOBAL AND LOCAL MARKETPLACES

The macro demands of delivering consistent site performance across continents is coming fast on the heels of the demand for more personalized experiences based on location-aware tools that work on the micro level. Both marketplace challenges require creative thinking backed by strong technology solutions for execution.

Oracle Commerce is designed to meet the emerging challenges of ecommerce. When customized by a skilled System Integrator (SI), it can generate extraordinary results. However, the hosted infrastructure is the critical foundation that makes it all possible. Whether supporting Oracle Commerce users directly, or in partnership with leading Oracle Commerce System Integrators (SI), Rackspace delivers Oracle Commerce

customers infrastructure, Fanatical Support® for the overall environment, and deep application expertise for Oracle ATG Web Commerce, Oracle Endeca, and Oracle Database. Services include architecting, installing, configuring, deploying and monitoring Oracle Commerce applications for more relevant, personalized, and consistent experiences across multiple online channels

This white paper will explore how Critical Application Services for Oracle Commerce at Rackspace provides the best hosting platform and application management services for Oracle's market-leading ecommerce solution.

The vertical integration of hardware and services for application management can lead to benefits that could not be achieved through other means, for example:

- **100% production platform uptime guarantee.** The highest level of possible availability within a single data center
- **Support for customer experience initiatives.** When customers are more satisfied due to high availability and fast performance, increased conversion rates can follow.
- **Transform return on investment (ROI).** Improved performance and converting CAPEX to OPEX can lead to higher conversion rates and increased profits.

Together, these benefits make Rackspace hosting and application management services for Oracle Commerce an unparalleled platform for ecommerce operation.

2. Oracle Commerce – A Leading Ecommerce Platform

Oracle Commerce leads the pack and is identified as a leader in Gartner's 2013 Magic Quadrant for E-Commerce. Increasingly, retailers are realizing the need to support cross-channel commerce, search, and personalization. Oracle refers to this as, Commerce Anywhere, allowing customers to interact with brands on their own terms. This trend is reinforced by findings from the Oracle 2013 B2B Commerce Trends survey showing personalization, online catalogs, and SEO as the top B2C practices most influencing revenue. The survey also reports a third of respondents plan on investing in cross-channel integration and managing and leveraging product content to improve customer experience.

Customers now expect relevant, personalized, and consistent experiences across the multiple touch points they engage with to make purchase decisions. Retailers are now forced to manage and scale consumer-driven, cross-channel experiences and meet business goals. This balancing act results in cobbling together siloed tools and systems to support online channels. These technology limitations create frustration and degraded customer experiences for users and missed goals for retailers.

Oracle got ahead of the trend by acquiring both ATG for cross-channel commerce and Endeca for customer experience. These assets have been combined as Oracle Commerce. The Oracle Commerce Solution unifies best in class commerce applications focused on personalized user experiences, business user enablement, and scalability to meet the evolving demands of commerce. Oracle Commerce consists of:

- **Oracle ATG Web Commerce.** A robust development framework, built on over 10 million lines of Java code. On top of this framework is a set of pre-built functionality. ATG is primarily used for B2C commerce through the web channel but it may also be used for B2B and C2C across channels ranging from mobile to embedded video game consoles. ATG uses a traditional three-tier architecture, with a relational database in the back-end.
- **Oracle Endeca.** An in-memory columnar database and a framework for loading and querying data. The columnar database is used for typical search queries (e.g. "red shirt"), faceted navigation queries (e.g. show all red shirts < \$10), and for the placement of content on pages (e.g. which product should fill the hero image slot on the home page). Endeca is deployed as a series of standalone C/C++ executables accessible over web services.

3. Rackspace Hosting – A Retail Hosting Specialist

For the third consecutive year, InternetRetailer.com named Rackspace the number one hosting provider to the top 1,000 retailers in the US. Rackspace is not just another hosting provider to retailers; it is a retail hosting specialist with the following benefits:

- **A unique understanding of the hosting needs of retailers.** Based on experience in helping thousands of retailers, Rackspace has built a set of ecommerce reference architectures based on their hybrid hosting portfolio. **Critical Application Services** offers an optional 100 percent production platform uptime guarantee on approved environments. Rackspace helps you load pages stored on **Cloud Files** faster by delivering them globally at blazing speeds over Akamai's content delivery network (CDN) and by helping you tune your applications, databases, web servers and load balancers for faster page loads.
- **Infrastructure guidance to help you plan for high traffic events.** According to the National Retail Federation (NRF), the holiday season can represent anywhere between 20 percent and 40 percent of annual sales for retailers. Preparing for the holidays or other high traffic events, like big sporting events advertising, flash sales, or marketing campaign launches are critical to revenue. The Rackspace **hybrid cloud** portfolio makes it possible for you to buy the base and rent the spike. The Rackspace Web Scale Engineers (WSEs) provide Critical Application Services to help you run load tests for pilot testing phases. Based on the results of the load testing and anticipated load forecast, Rackspace provides you with recommendations that can vary from vertical or horizontal scaling to caching for your database servers, web servers and load balancers.
- **Differentiated application management expertise for Oracle platforms.** Along with providing hybrid cloud hosting infrastructure and Fanatical Support for the overall environment, Rackspace offers application management expertise for ecommerce platforms.

Rackspace is an Oracle Gold Partner. Our Oracle Commerce trained and experienced WSEs can help you architect, install, deploy, configure and monitor Oracle Commerce applications. Our WSEs can also help you monitor your other Oracle applications and provide you deep application insight. For an added layer of protection, Critical Application Services offers an industry-leading 100% production platform uptime guarantee for your Oracle Commerce applications on fully approved high availability environments.



- Solutions and advice to support PCI compliance**
 Rackspace has a breadth of experience with hundreds of customers' hosted environments. We can help you navigate through the complex maze by providing infrastructure and solutions so you can implement the technology needed to support your compliance efforts.
- One-stop shop for common retail hosting workloads**
 In addition to ecommerce, Rackspace can help you with other hosting needs. Whether you are working on leveraging big data technologies for better customer insights or expanding into mobile commerce, Rackspace offers hosting solutions to meet your needs beyond ecommerce.

ENABLING YOUR JOURNEY TO THE NEXT GENERATION OF RETAIL

We can host your common workloads

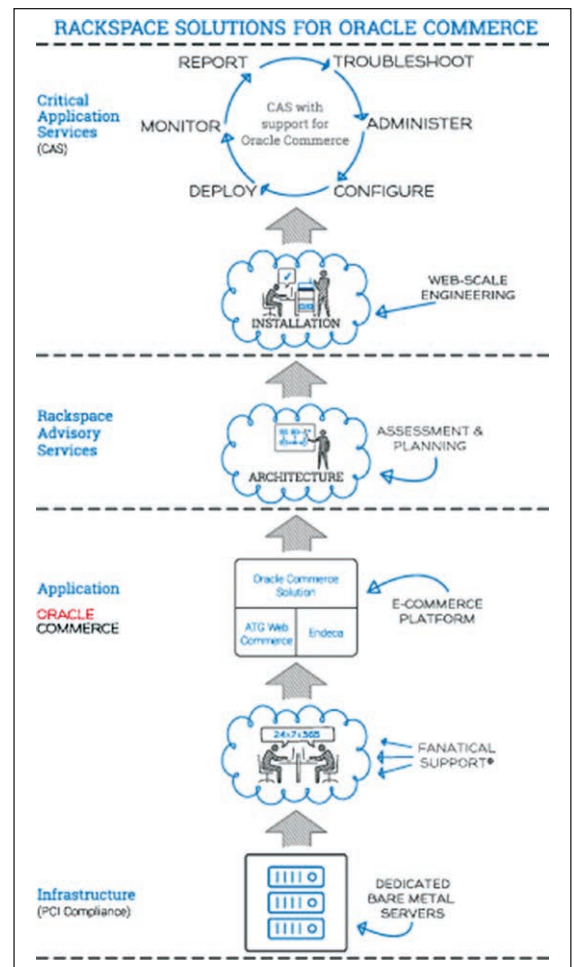


4. Overview of the Rackspace Oracle Commerce Hosting Solution

Together, Rackspace Oracle Commerce hosting solutions help you get the most out of your Oracle Commerce application.

Acting as an extension of your staff, Rackspace provides:

- Custom installation and configuration for Oracle Commerce including:
 - Installation of Oracle ATG Web Commerce, Oracle Endeca and Oracle Database
 - Configuration of the development, UAT, and production environments
 - Documenting procedures and processes to produce a runbook
- Day-to-day application and infrastructure administration services including:
 - Patching, upgrades and scheduled maintenance
 - Providing alerts indicating bottlenecks, degradations and impending failures
 - Diagnostic performance reporting
 - Identification and resolution of potential problems by proactively monitoring application and infrastructure
- Tools for gaining end-to-end visibility of your application including:
 - Providing a holistic view of the transaction cycle from the application layer through the infrastructure layers
 - End-user experience analysis and incident detection



5. Considerations for Oracle Commerce

Before implementing Oracle Commerce, use these questions to help you guide, plan and execute a your ideal Oracle solution:

BASIC PLATFORM QUESTIONS

- What version of Web Commerce Solution is being implemented (both ATG and Endeca)?
- What Operating System and version number is the solution being implemented on?
- What database and version number is the solution being implemented with?
- What Application Server (JBOSS/Weblogic) and JDK (Sun/JRockit) will be used (also need version numbers if possible)?
- What modules of ATG will be implemented (Commerce (estore), Content Administration (BCC/CA), Commerce Service Center (CSC))?
- Any special instances of Commerce (mobile, bot, kiosk, etc) that may need to be separated if Multi-Site is not used?
- If Endeca is used, will Experience Manager be required (this is typically yes but depends on the implementation)?
- Will Coherence or a Data Grid be part of the solution?
- Will Session Replication be required?

SIZING QUESTIONS

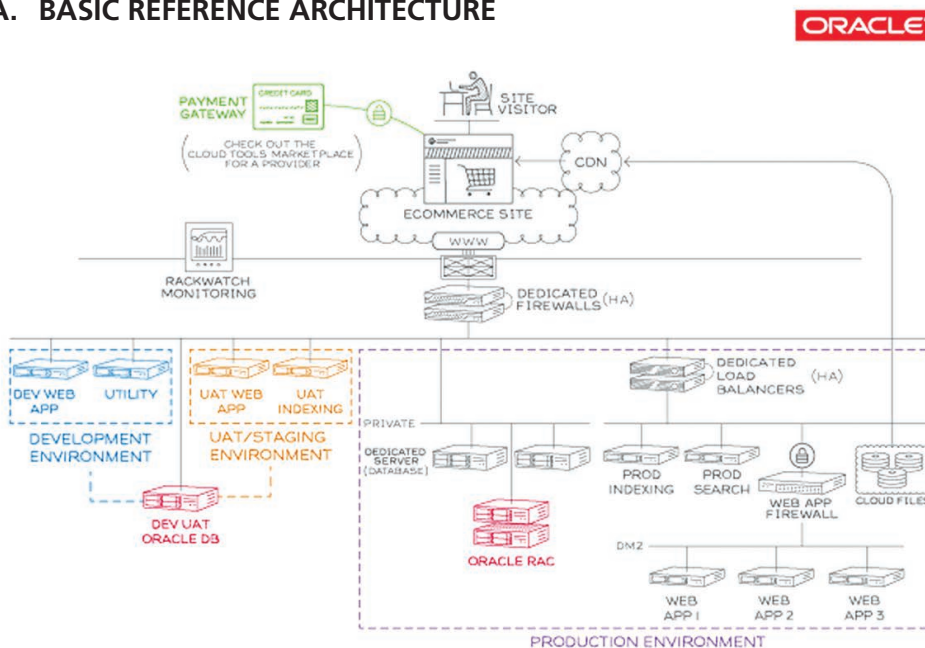
- What is the anticipated peak traffic volume (typically holiday traffic)?
- What is the typical weekly peak traffic volume (non-holiday)?
- How many orders are associated with the traffic asked in the previous questions?
- Any SLA requirements for page load times and if so what are the anticipated page sizes? (i.e. < 4 second homepage and < 1 sec product page)
- Any "burst" instances anticipated? (Burst instances are instances that are started up to handle heavy loads of traffic to avoid outages)
- What are the current JVM sizes recommended by development for the various types of instances? (BCC/CA typically is very large while some instances of estore can be very small)
- Are there an estimated number of instances needed for each environment (DEV, QA, Prod) and for each module type? (Number of estore instances (divided by type if needed (e.g. estore, bot, mobile, lock manager, etc)), number of CSC instances if CSC is implemented, and if BCC/CA is clustered (non-standard) number of instances anticipated)

6. Oracle Commerce Reference Architectures

Based on our experience serving thousands of retailers in the past and our Oracle Commerce expertise, we recommend following reference architectures.

Sizing and platform questions discussed in previous section can help you decide sizing of servers and choose right reference architecture.

A. BASIC REFERENCE ARCHITECTURE



CONFIGURATION NOTES:

- Ideal for sites with up to approximately 320 page views/sec
- Dual web and database servers segmented behind physical firewall
- Web tier containing product catalog logic built on dedicated servers
- Customer credit card information stored in third-party payment gateway

INCLUDED SERVICES:

- Critical Application Services with support for Oracle Commerce. Let Rackspace manage your hosting infrastructure and Oracle Commerce application.
- Work with our Advisory Services team to plan your journey to the cloud.

RECOMMENDED LICENSES (PURCHASED BY CUSTOMER):

- ATG Staging Commerce - 6 licenses
- ATG Prod Commerce - 16 licenses
- ATG Staging Search - 6 licenses
- ATG Prod Search - 12 licenses

BASIC – ADDITIONAL TECHNICAL CONFIGURATIONS DETAILS

Firewall

- Pair of Cisco ASA 5510 Firewall (High Availability), Quantity: 1
- RackConnect: None
- Cisco VPN Access - Site to Site, Quantity: 1

WAF

- Alert Logic Web Application Firewall (WAF), Quantity: 1

IDS/IPS

- Alert Logic Threat Manager
Version: Threat Manager Real-time Security Review (51Mbps - 100Mbps)
Quantity: 1

LOG MANAGEMENT

- Alert Logic Log Manager, Quantity: 1
- Log Management:
First Log Source Included, Quantity: 1
None - Per source, for Log Sources 2 - 25 (Tier 1), Quantity: 1
- Alert Logic Log Review
Quantity: 1

LOAD BALANCER

- F5 BIG-IP 1600 LTM - (redundant)
Quantity: 1
Module: Local Traffic Manager (LTM)
Additional Module: None
SSL: 500 Transactions per second
Compression: 50 Mbps
RackConnect: Configured for RackConnect

SHARED STORAGE

- Enhanced Shared SAN - Gold: 250
- Shared Fabric Ports: 4

BACKUP

- Unmetered Managed Backup, Quantity: 1

CAS (PRODUCTION ONLY)

- Web Scale Engineering Support, Quantity: 1
- Application Performance Monitoring, Quantity: 4
- Advanced Infrastructure Monitoring and Reporting, Quantity: 10
- Advanced URL Synthetic Monitoring, Quantity: 1
- Advanced URL Static Monitoring, Quantity: 1
- CAS - Infrastructure Hypervisor Server, Quantity: 1
- CAS - Infrastructure Virtual Machine, Quantity: 3
- CAS - Standard SLA - Quantity: 1

LICENSING AND SUPPORT

- Oracle Support - Quantity: 3
- Oracle Standard One 11g R2 - Quantity: 1
- Oracle Standard RAC 11g R2 - Quantity: 2

DEDICATED SERVERS

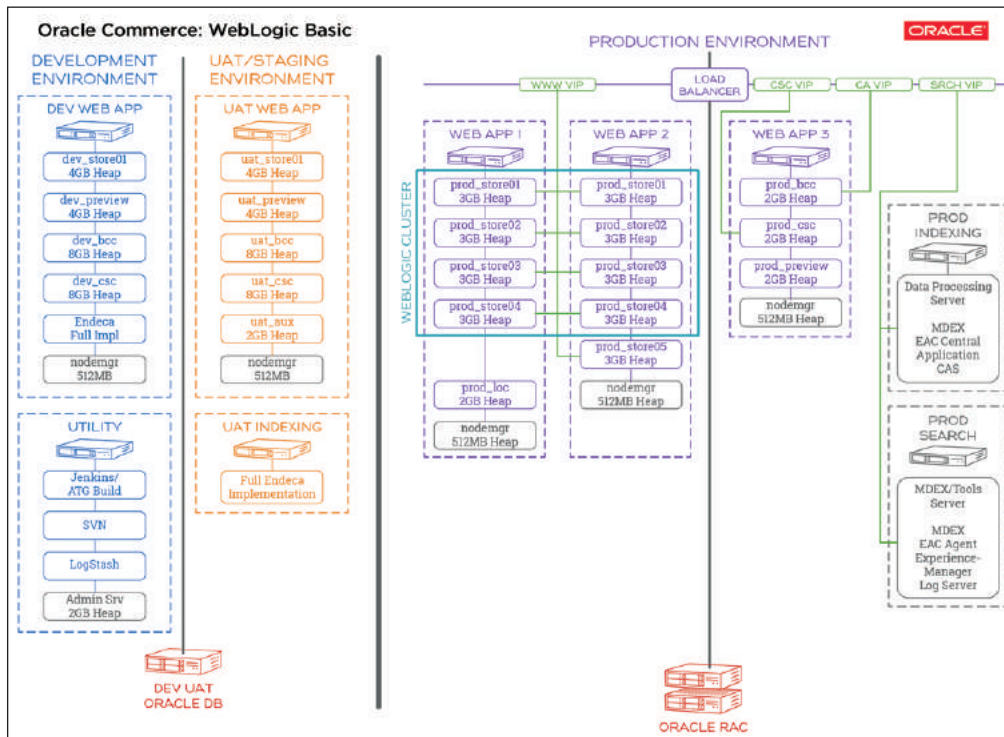
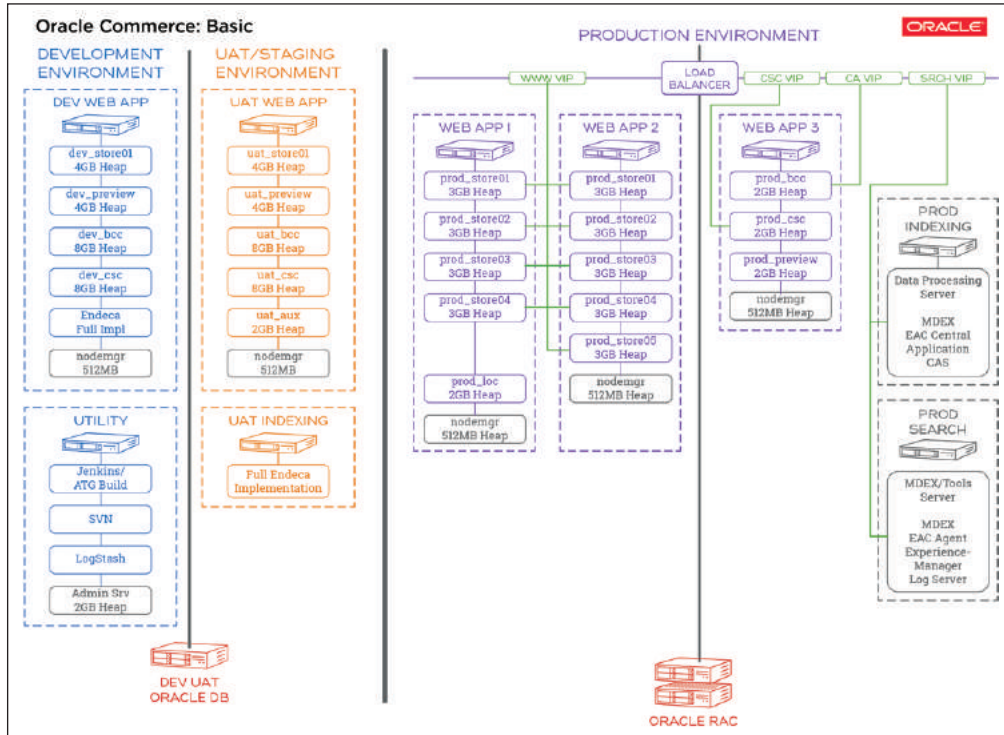
DEVAPP, UATAPP, UATSEARCH, DEVUATDB, PRODAPP1, PRODAPP2, PRODAPP3, PRODSEARCH, PRODINDEXING, UTILITY servers:

- Enhanced Two - Bronze
Quantity: 1
Operating System: Red Hat Enterprise Linux 6
Processor: Single Processor, Quad Core Intel 2.26GHz (Std.)
Memory: 32 GB (one-off)
Drive and RAID Configuration: 2 x 300 GB (15K SAS 3.5") in RAID 1 for OS and Data
Drive Partitioning: Default
Network: Default
Additional Network Connection(s): None
External Storage Connection(s): None
Backup Agent: Base Backup Agent
Managed Backup: Default

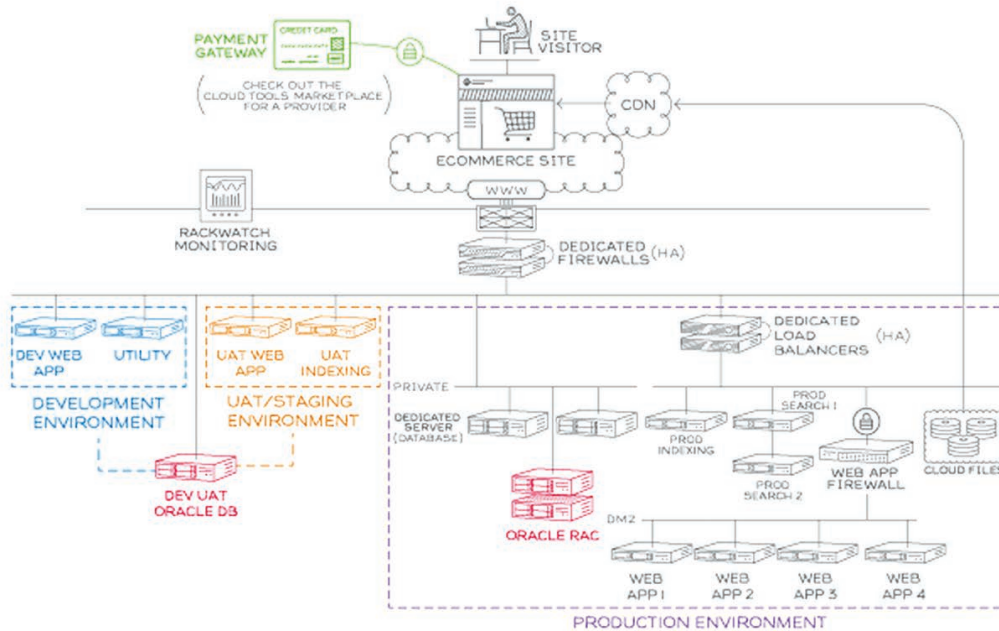
PRODORCL1, PRODORCL2 servers:

- Performance One - Bronze
Quantity: 1
Operating System: Red Hat Enterprise Linux 6
Processor: Single Processor, Hex Core Intel 2.50GHz (Std.)
Memory: 64 GB
Drive and RAID Configuration: 4 x 300 GB (15K SAS 3.5") in RAID 10 for OS
Drive Partitioning: Default
Network: Default
Additional Network Connection(s): 2 x Fabric Adapters each with 1 x Fibre Channel SFP (SAN Attachment), Quantity: 1
External Storage Connection(s): None
Backup Agent: Base and Oracle Databases Backup Agent
Managed Backup: Default

BASIC REFERENCE ARCHITECTURE PROCESS DETAILS



B. INTERMEDIATE REFERENCE ARCHITECTURE



CONFIGURATION NOTES:

- Ideal for sites with up to approximately 320 page views/sec
- Dual web and database servers segmented behind physical firewall
- Web tier containing product catalog logic built on dedicated servers
- Customer credit card information stored in third-party payment gateway

INCLUDED SERVICES:

- Critical Application Services with support for Oracle Commerce. Let Rackspace manage your hosting infrastructure and Oracle Commerce application.
- Work with our Advisory Services team to plan your journey to the cloud.

RECOMMENDED LICENSES (PURCHASED BY CUSTOMER):

- ATG Staging Commerce - 6 licenses
- ATG Prod Commerce - 16 licenses
- ATG Staging Search - 6 licenses
- ATG Prod Search - 12 licenses

INTERMEDIATE – ADDITIONAL TECHNICAL CONFIGURATIONS DETAIL

Firewall

- Pair of Cisco ASA 5510 Firewall (High Availability), Quantity: 1
- RackConnect: None
- Cisco VPN Access - Site to Site, Quantity: 1

WAF

- Alert Logic Web Application Firewall (WAF), Quantity: 1

IDS/IPS

- Alert Logic Threat Manager
Version: Threat Manager Real-time Security Review (51Mbps - 100Mbps)
Quantity: 1

LOG MANAGEMENT

- Alert Logic Log Manager, Quantity: 1
- First Log Source Included, Quantity: 1
- None - Per source, for Log Sources 2 - 25 (Tier 1), Quantity: 1
- Alert Logic Log Review, Quantity: 1

LOAD BALANCER

- F5 BIG-IP 1600 LTM - (redundant)
Quantity: 1
Module: Local Traffic Manager (LTM)
Additional Module: None
SSL: 500 Transactions per second
Compression: 50 Mbps
RackConnect: Configured for RackConnect

SHARED STORAGE

- Enhanced Shared SAN - Gold: 250
- Shared Fabric Ports: 4

BACKUP

- Unmetered Managed Backup, Quantity: 1

CAS (PRODUCTION ONLY)

- Web Scale Engineering Support, Quantity: 1
- Application Performance Monitoring, Quantity: 4
- Advanced Infrastructure Monitoring and Reporting, Quantity: 11
- Advanced URL Synthetic Monitoring, Quantity: 1
- Advanced URL Static Monitoring, Quantity: 1
- CAS - Infrastructure Hypervisor Server, Quantity: 1
- CAS - Infrastructure Virtual Machine, Quantity: 3
- CAS - Standard SLA, Quantity: 1

LICENSING AND SUPPORT

- Oracle Support - Quantity: 3
- Oracle Standard One 11g R2 - Quantity: 1
- Oracle Standard RAC 11g R2 - Quantity: 2

DEDICATED SERVERS

DEVAPP, UATAPP, UATSEARCH, DEVUATDB, PRODORCL1, PRODORCL2 servers:

- Performance One - Bronze
Quantity: 1
Operating System: Red Hat Enterprise Linux 6
Processor: Single Processor, Hex Core Intel 2.50GHz (Std.)
Memory: 32 GB (Std.)
Drive and RAID Configuration: 2x300 GB (15K SAS 3.5") in RAID 1 for OS & Data
Drive Partitioning: Default
Network: Default
Additional Network Connection(s): None
External Storage Connection(s): None
Backup Agent: Base Backup Agent
Managed Backup: Default

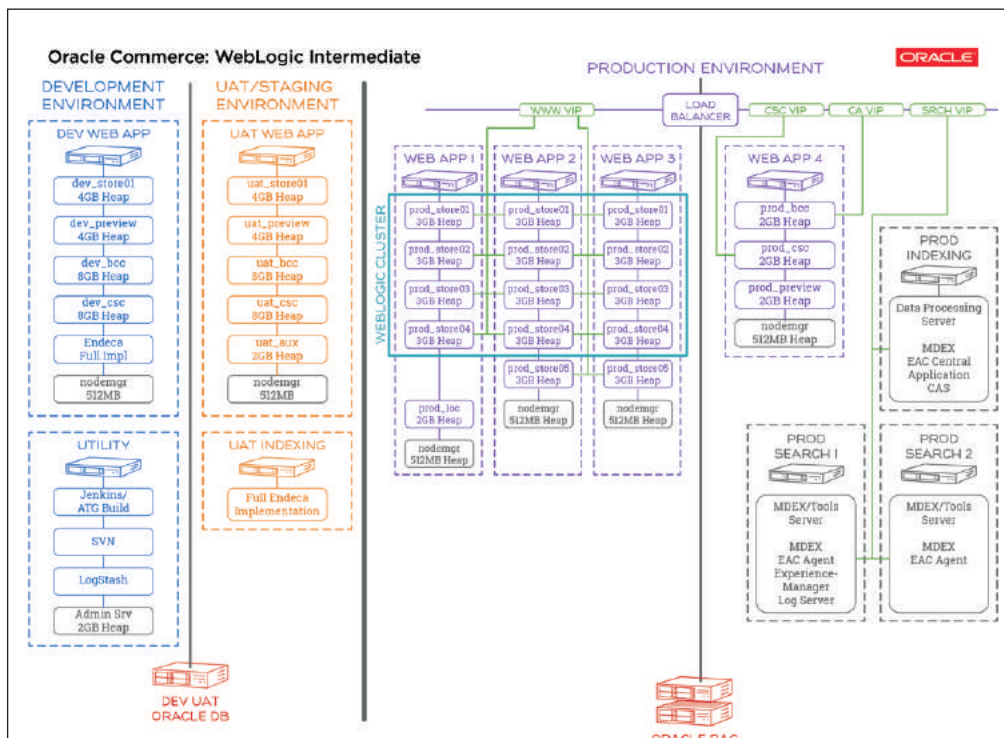
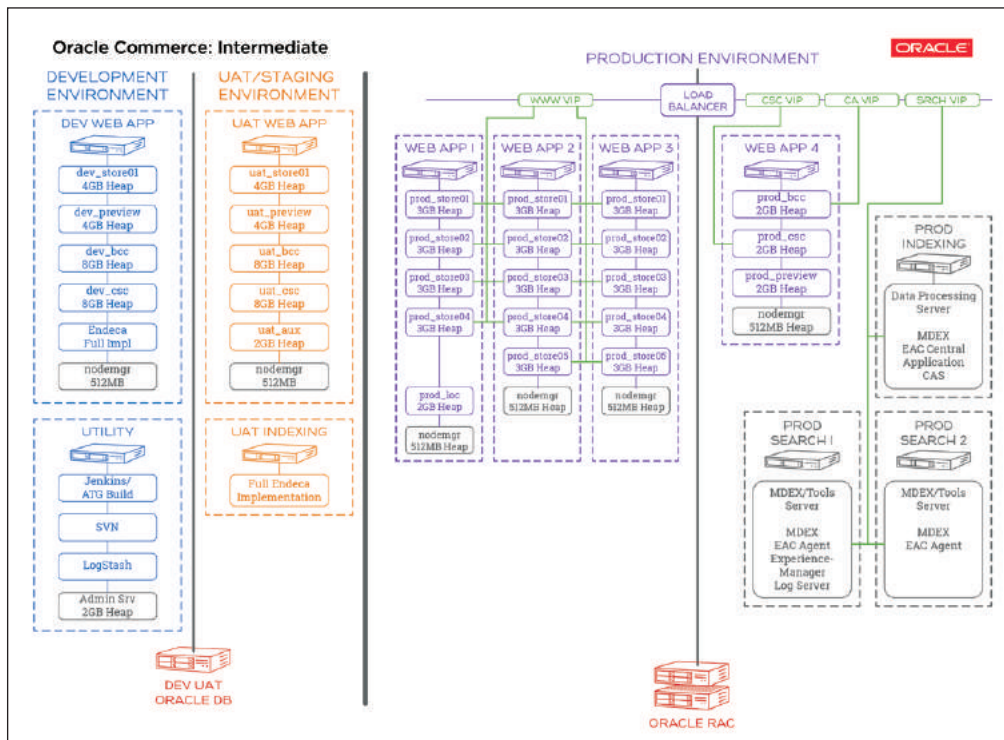
PRODAPP1, PRODAPP2, PRODAPP3 servers:

- Enhanced One - Gold
Quantity: 1
Operating System: Red Hat Enterprise Linux 6
Processor: Dual Processor, Quad Core Intel or AMD 1.9GHz (Std.)
Memory: 32 GB (Std.)
Drive and RAID Configuration: 2x300 GB (15K SAS 3.5") in RAID 1 for OS & Data
Drive Partitioning: Default
Network: Default
Additional Network Connection(s): Intel Pro 1000MT Quad Port, Quantity: 1
External Storage Connection(s): None
Backup Agent: Base Backup Agent
Managed Backup: Default

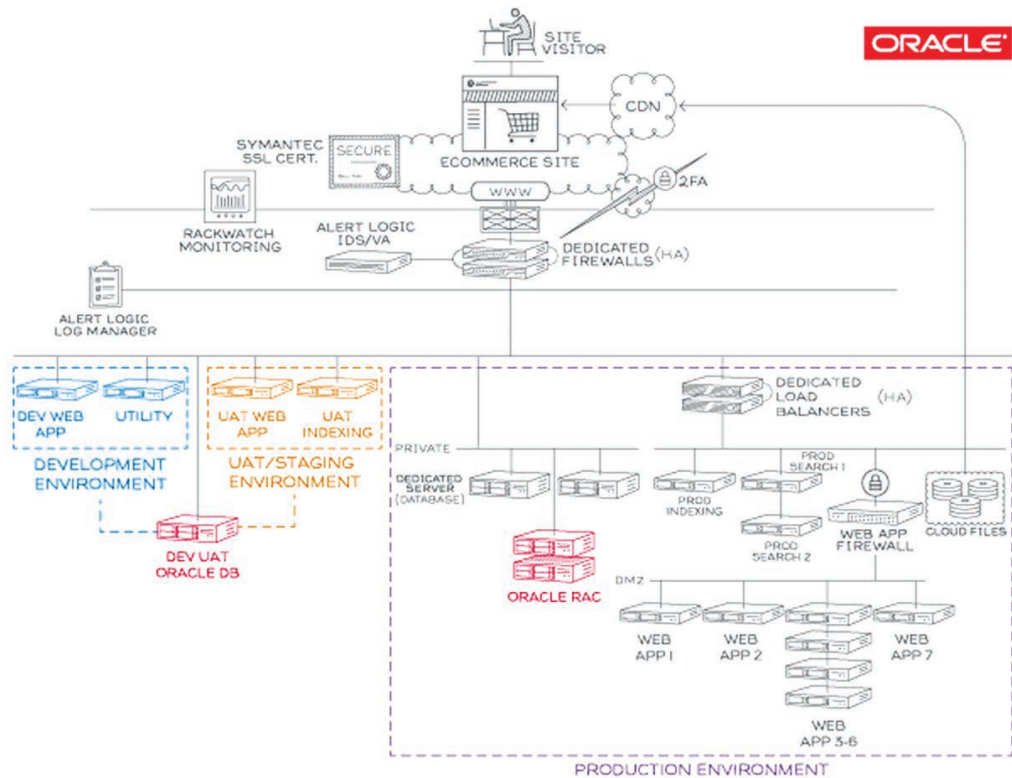
PRODSEARCH1, PRODSEARCH2, PRODINDEXING, UTILITY servers:

- Enhanced Two - Bronze
Quantity: 1
Operating System: Red Hat Enterprise Linux 5.9
Processor: Single Processor, Quad Core Intel 2.26GHz (Std.)
Memory: 32 GB (one-off)
Drive and RAID Configuration: 2x300 GB (15K SAS 3.5") in RAID 1 for OS & Data
Drive Partitioning: Default
Network: Default
Additional Network Connection(s): None
External Storage Connection(s): None
Backup Agent: Base Backup Agent
Managed Backup: Default

INTERMEDIATE REFERENCE ARCHITECTURE PROCESS DETAILS



C. ADVANCED REFERENCE ARCHITECTURE



CONFIGURATION NOTES:

- Ideal for sites with up to approximately 1,200 page views/sec
- Dual web and database servers segmented behind physical firewall
- Web tier containing product catalog logic built on dedicated servers
- Customer credit card information stored in dedicated servers
- Transactional data stored in dedicated servers for security

INCLUDED SERVICES:

- Critical Application Services with support for Oracle Commerce. Let Rackspace manage your hosting infrastructure and Oracle Commerce application.
- Work with our Advisory Services team to plan your journey to the cloud.

RECOMMENDED LICENSES (PURCHASED BY CUSTOMER):

- ATG Staging Commerce - 24 licenses
- ATG Prod Commerce - 72 licenses
- ATG Staging Search - 24 licenses
- ATG Prod Search - 24 licenses

ADVANCED – ADDITIONAL TECHNICAL CONFIGURATIONS DETAILS

FIREWALL

- Pair of Cisco ASA 5510 Firewall (High Availability), Quantity: 1
- RackConnect: None
- Cisco VPN Access - Site to Site, Quantity: 1

WAF

- Alert Logic Web Application Firewall (WAF), Quantity: 1

IDS/IPS

- Alert Logic Threat Manager
Version: Threat Manager Real-time Security Review (51Mbps - 100Mbps)
Quantity: 1

LOG MANAGEMENT

- Alert Logic Log Manager, Quantity: 1
- First Log Source Included, Quantity: 1
- None - Per source, for Log Sources 2 - 25 (Tier 1), Quantity: 1
- Alert Logic Log Review, Quantity: 1

LOAD BALANCER

- F5 BIG-IP 1600 LTM - (redundant)
Quantity: 1
Module: Local Traffic Manager (LTM)
Additional Module: None
SSL: 500 Transactions per second
Compression: 50 Mbps
RackConnect: Configured for RackConnect
Shared Storage
- Enhanced Shared SAN - Gold: 250
- Shared Fabric Ports: 4

BACKUP

- Unmetered Managed Backup - Quantity: 1
CAS (Production Only)
- Web Scale Engineering Support - Quantity: 1
- Application Performance Monitoring - Quantity: 5
- Advanced Infrastructure Monitoring and Reporting
Quantity: 12
- Advanced URL Synthetic Monitoring - Quantity: 1
- Advanced URL Static Monitoring - Quantity: 1
- CAS - Infrastructure Hypervisor Server - Quantity: 1
- CAS - Infrastructure Virtual Machine - Quantity: 3
- CAS - Standard SLA - Quantity: 1
Licensing and Support
- Oracle Support - Quantity: 3
- Oracle Standard One 11g R2 - Quantity: 1
- Oracle Standard RAC 11g R2 - Quantity: 2
- Oracle Support - Quantity: 3
- Oracle Standard One 11g R2 - Quantity: 1
- Oracle Standard RAC 11g R2 - Quantity: 2

DEDICATED SERVERS

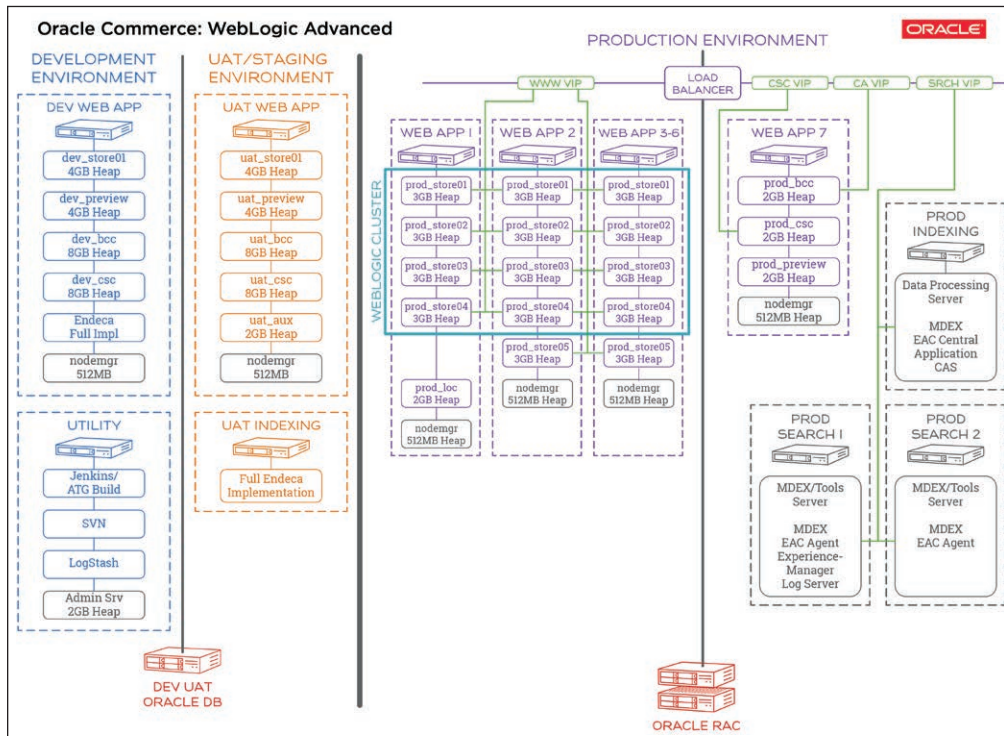
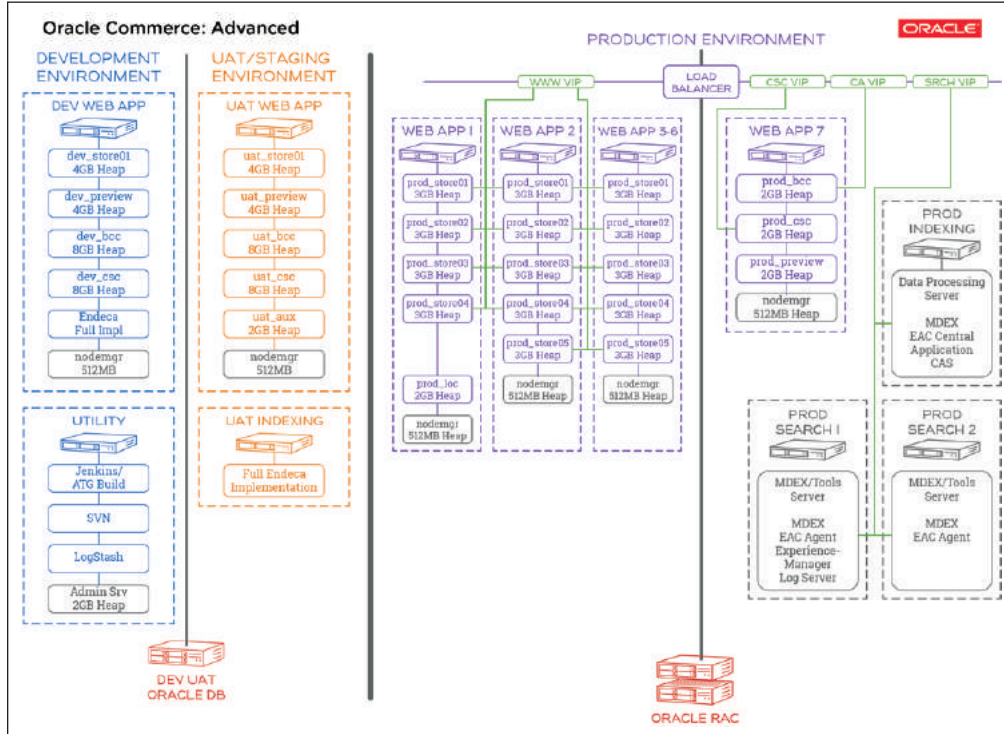
DEVAPP, DEVSEARCH, UATAPP, UATSEARCH, PRODSEARCH1, PRODSEARCH2, UTILITY servers:

- Performance One - Bronze
Quantity: 1
Operating System: Red Hat Enterprise Linux 6
Processor: Single Processor, Hex Core Intel 2.50GHz (Std.)
Memory: 32 GB (Std.)
Drive and RAID Configuration: 2 x 300 GB (15K SAS 3.5") in RAID 1 for OS and Data
Drive Partitioning: Default
Network: Default
Additional Network Connection(s): None
External Storage Connection(s): None
Backup Agent: Base Backup Agent
Managed Backup: Default

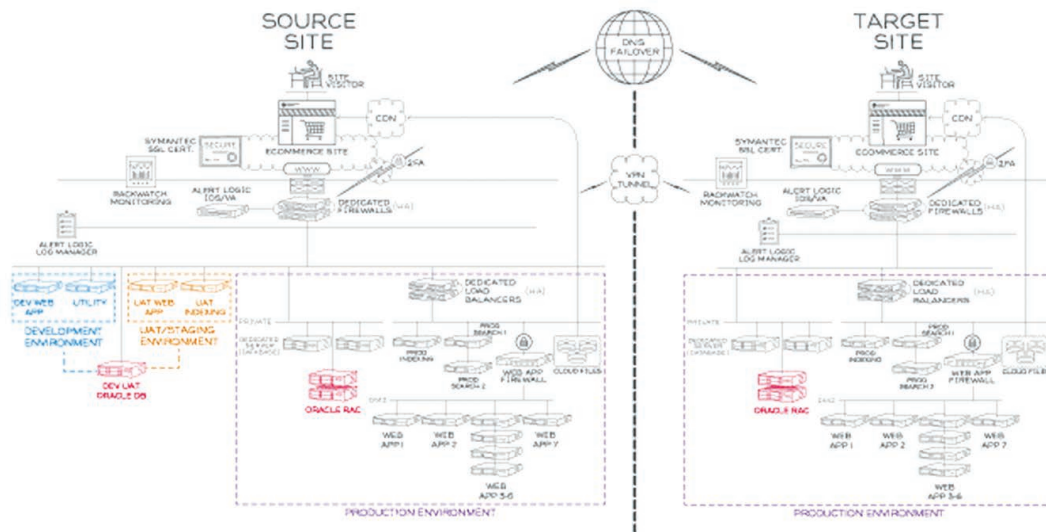
DEVUATDB, PRODAPP1, PRODAPP2, PRODAPP3, PRODAPP4, PRODINDEXING, PRODORCL1, PRODORCL2 servers:

- Performance One - Silver
Quantity: 1
Operating System: Red Hat Enterprise Linux 6
Processor: Dual Processor, Hex Core Intel 2.50GHz (Std.)
Memory: 32 GB (one-off)
Drive and RAID Configuration: 4 x 300 GB (15K SAS 3.5") in RAID 10 for OS and Data
Drive Partitioning: Default
Network: Default
Additional Network Connection(s): None
External Storage Connection(s): None
Backup Agent: Base and Oracle Databases Backup Agent
Managed Backup: Default

ADVANCED REFERENCE ARCHITECTURE PROCESS DETAILS



D. ENTERPRISE REFERENCE ARCHITECTURE WITH DISASTER RECOVERY



CONFIGURATION NOTES:

- 3-tier, self-contained, PCI-capable architecture
- High availability (HA) in the production environment at the source site
- Cost-effective, pared-down target site also suitable for dev/staging/QA
- Transactional data stored on RackSpace dedicated servers
- Web tier containing product catalog logic built on dedicated servers
- Customer credit card information stored in dedicated servers

ENTERPRISE WITH DISASTER RECOVER – ADDITIONAL TECHNICAL CONFIGURATIONS DETAILS

FIREWALL

- Pair of Cisco ASA 5525-X Firewall (High Availability), Quantity: 1
- RackConnect: None
- Cisco VPN Access - Site to Site, Quantity: 1

WAF

- Alert Logic Web Application Firewall (WAF), Quantity: 1

IDS/IPS

- Alert Logic Threat Manager
Quantity: 1
Version: Threat Manager Real-time Security Review (101Mbps - 1Gbps)

LOG MANAGEMENT

- Alert Logic Log Manager, Quantity: 1
- First Log Source Included, Quantity: 1
- None - Per source, for Log Sources 2 - 25 (Tier 1), Quantity: 1
- Alert Logic Log Review, Quantity: 1

LOAD BALANCER

- F5 BIG-IP 1600 LTM - (redundant)
Quantity: 1
Module: Local Traffic Manager (LTM)
Additional Module: None
SSL: 500 Transactions per second
Compression: 50 Mbps
RackConnect: Configured for RackConnect

SHARED STORAGE

- Enhanced Shared SAN - Gold: 250
- Shared Fabric Ports: 4

BACKUP

- Unmetered Managed Backup - Quantity: 1

CAS (PRODUCTION ONLY)

- Web Scale Engineering Support - Quantity: 1
- Application Performance Monitoring - Quantity: 8
- Advanced Infrastructure Monitoring and Reporting - Quantity: 15
- Advanced URL Synthetic Monitoring - Quantity: 1
- Advanced URL Static Monitoring - Quantity: 1
- CAS - Infrastructure Hypervisor Server - Quantity: 1
- CAS - Infrastructure Virtual Machine - Quantity: 3
- CAS - Standard SLA - Quantity: 1

LICENSING AND SUPPORT

- Oracle Support - Quantity: 3
- Oracle Standard One 11g R2 - Quantity: 1
- Oracle Standard RAC 11g R2 - Quantity: 2

DEDICATED SERVERS

DEVAPP, DEVSEARCH, UATAPP, UATSEARCH, UTILITY servers:

- Performance One - Bronze
Quantity: 1
Operating System: Red Hat Enterprise Linux 6
Processor: Single Processor, Hex Core Intel 2.50GHz (Std.)
Memory: 32 GB (Std.)
Drive and RAID Configuration: 2 x 300 GB (15K SAS 3.5") in RAID 1 for OS and Data
Drive Partitioning: Default
Network: Default
Additional Network Connection(s): None
External Storage Connection(s): None
Backup Agent: Base Backup Agent
Managed Backup: Default

DEVUATDB, PRODAPP1, PRODAPP2, PRODAPP3, PRODAPP4, PRODAPP5, PRODAPP6, PRODSEARCH1, PRODSEARCH2, PRODINDEXING, PRODORCL1, PRODORCL2 servers:

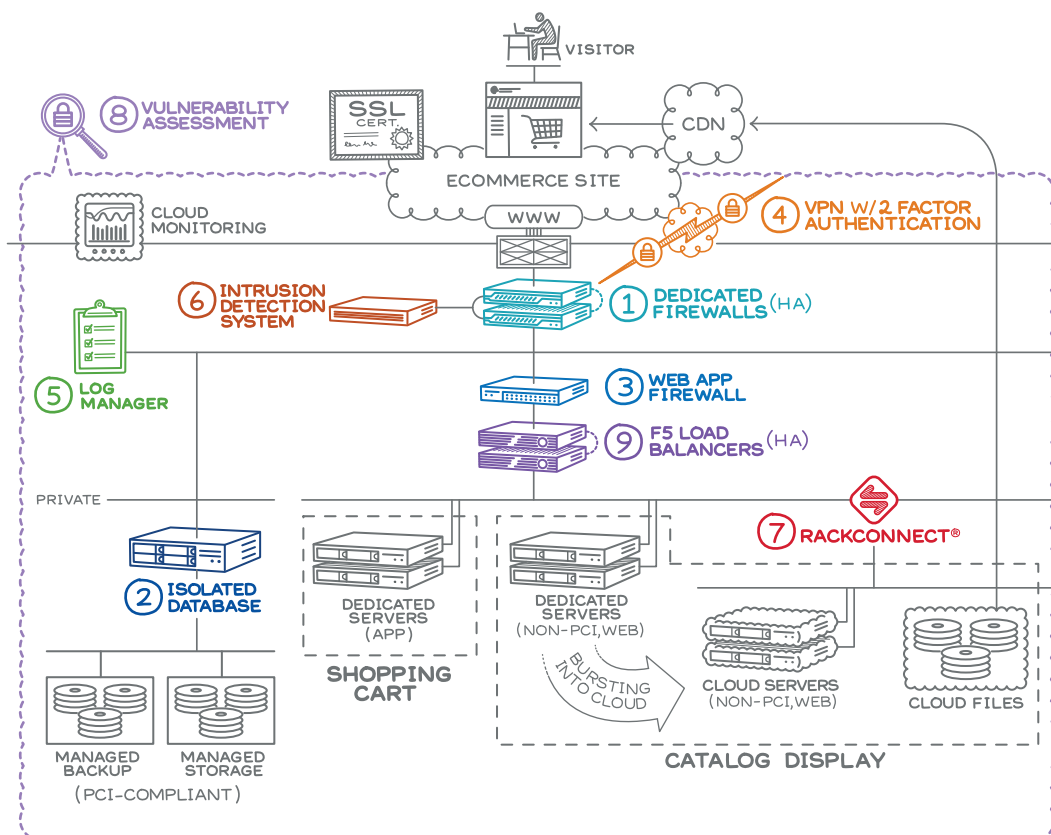
- Performance One - Silver
Quantity: 1
Operating System: Red Hat Enterprise Linux 6
Processor: Dual Processor, Hex Core Intel 2.50GHz (Std.)
Memory: 32 GB (one-off)
Drive and RAID Configuration: 4 x 300 GB (15K SAS 3.5") in RAID 10 for OS and Data
Drive Partitioning: Default
Network: Default
Additional Network Connection(s): None
External Storage Connection(s): None
Backup Agent: Base and Oracle Databases Backup Agent
Managed Backup: Default

7. PCI Compliance with Rackspace Oracle Commerce Hosting Solution

PCI comprises a set of policies and procedures aimed to protect personal cardholder information from misuse. PCI compliance can be a complex and costly exercise. PCI controls include building and maintaining a security network, protecting cardholder data, maintaining a vulnerability management program, implementing strong access control measures, regularly monitoring and testing networks and maintaining an information security policy. The cornerstone of PCI-DSS is data protection. Your company policies and credit card transaction volume, along with other business factors not discussed here, should guide where you decide to store this data and how you protect it. Rackspace offers following solutions to assist with your PCI compliance needs.

PCI-DSS COMPLIANT SOLUTION FOR RACKSPACE DEDICATED HOSTING

Example of PCI-DSS compliant reference architecture without a payment gateway:



Use this table to align your PCI-DSS compliance needs with Rackspace services:

PCI-DSS Requirements	Rackspace Product/Service
Install and maintain a firewall configuration to protect cardholder data.	<u>Managed Firewall</u> : Rackspace Managed Firewalls provide the highest level of security earning ICSA Firewall and IPsec certification and Common Criteria EAL4 evaluation status. Working with a Rackspace Security Engineer you establish and are the sole owner of the set of rules that defines unwanted traffic. Based on this set of rules, information that is sent to your server is inspected and then filtered.
Do not use vendor-supplied defaults for system passwords and other security parameters.	<u>Vulnerability Assessment Services</u> : Alert Logic's Threat Manger is cloud-powered vulnerability assessment and intrusion detection service to defend and protect systems against internal and external threats.
Protect stored cardholder data.	Not applicable
Encrypt transmission of cardholder data across open, public networks	<u>SSL Certificates</u> : Installation and renewal service for six certificates from the two leading and most trusted names in the industry, VeriSign® and thawte™. Extended Validation (EV), organization validated (OV) and domain validated (DV) SSL certificates available.
Use and regularly update anti-virus software or programs.	<u>Managed Anti-virus</u> : Fully managed anti-virus solution offers proactive, sustained protection against viruses, worms, Trojans, spyware and other malware for Windows or Linux servers. Features Behavioral Genotype Protection™ for zero-day protection by proactively identifying malicious code on file servers and deleting it before it executes or reaches endpoint computers on your network.
Develop and maintain secure systems and applications.	<u>Web Application Firewall (WAF)</u> : Leverages industry-leading SecureSphere® & ThreatRadar technology from Imperva, the leader in web application security. The Rackspace WAF Service is fully supported by our Professional Services Team who deploys, tunes, profiles, troubleshoots and manages your device. Service also includes re-tuning your web application firewall as you make changes to your application.
Restrict access to cardholder data by business need-to-know.	<u>Managed Active Directory</u> : Rackspace Managed Servers with Intensive® Proactive Support include customized Active Directory management services.
Assign a unique ID to each person with computer access	<u>Two-factor Authentication</u> : Backed by industry-leading RSA SecurID technology, with a 20-year history of outstanding performance and innovation and a team of Rackspace CCSP- and RSA-certified professionals to fully manage your dedicated RSA SecurID appliance and tokens. Each RSA Authenticator token automatically generates a unique password every 60 seconds. Two-factor authentication using a unique PIN and the authenticator token password offers a more reliable level of user authentication than reusable passwords alone.
Restrict physical access to cardholder data	<u>Data Center Security</u> : Rackspace data centers are PCI-DSS and Safe Harbor compliant in addition to having SSAE16 Type II, SOC1, SOC2 (Security and Availability Only), and SOC3 audits on file for all data center facilities. Specific policies exist to both prevent unauthorized physical access, damage, and interference to our organization's premises and information and to confirm that only approved users are granted access to appropriate systems and resources.
Track and monitor all access to network resources and cardholder data.	<u>Log Management</u> : The Alert Logic Log Manager™ automatically aggregates, normalizes, and stores log data from your environment to simplify log searches, forensic analysis, and report creation through real-time or scheduled analysis. LogReview, a service enhancement to Log Manager, provides daily event log monitoring and review by a team of Alert Logic security professionals.
Regularly test security systems and processes	<u>Threat Management</u> : The Alert Logic Threat Management™ system monitors your Rackspace environment, detecting external and internal threats. When it detects an incident, Alert Logic's ActiveWatch service provides expert guidance from its security operations center (SOC), staffed round the clock by Alert Logic security analysts. Integrated vulnerability scanning helps you identify possible points of entry and correct them, and assists you with meeting regulatory compliance requirements.
Maintain a policy that addresses information security for all personnel	Not applicable (Policy Management)

8. Conclusion

Aided by the capabilities of two Gartner Magic Quadrant leaders, Rackspace and Oracle Commerce, retailers can access affordable help in keeping the door to their online stores open by running it at peak performance.

Rackspace provides Oracle Commerce customers infrastructure and support normally out of reach for all but the largest enterprises. This relationship in turn allows retailers to return to planning and executing innovative projects for delivering a consistent, relevant and personalized customer experience.

Contact Us

Rackspace Oracle Commerce Hosting Solutions team is committed to developing technology relationships focused on retail needs and products that deliver a faster time to value. For more information, visit www.rackspace.com/oracle-retail

References:

- 1 <http://www.internetretailer.com/trends/sales/#>
- 2 <http://techcrunch.com/2012/11/07/comscore-q3-retail-e-commerce-up-15-percent-to-42b-predicts-a-very-healthy-holiday-shopping-season/>
- 3 http://www.comscore.com/Insights/Press_Releases/2013/12/Billion_Dollar_Hot_Streak_Strong_Week_for_Online_Retail_Spending_Headlined_by_FirstEver_Week_Featuring_Five_Billion_Dollar_Weekdays
- 4 <http://techcrunch.com/2012/11/07/comscore-q3-retail-e-commerce-up-15-percent-to-42b-predicts-a-very-healthy-holiday-shopping-season/>
- 5 <http://solutions.forrester.com/customer-experience/cxi-webinar-confirm-49RA-16373R.html>
- 6 http://www.nrf.com/modules.php?name=Pages&sp_id=1140

About Rackspace

Rackspace® Hosting (NYSE: RAX) is the global leader in hybrid cloud and founder of OpenStack(r), the open-source operating system for the cloud. Hundreds of thousands of customers look to Rackspace to deliver the best-fit infrastructure for their IT needs, leveraging a product portfolio that allows workloads to run where they perform best-whether on the public cloud, private cloud, dedicated servers, or a combination of platforms. The company's award-winning Fanatical Support(r) helps customers successfully architect, deploy and run their most critical applications. Headquartered in San Antonio, TX, Rackspace operates data centers on four continents. For more information, visit www.rackspace.com.

GLOBAL OFFICES

Headquarters Rackspace, Inc.

One Fanatical Place | City of Windcrest, San Antonio, Texas 78218 | 1-800-961-2888 | Intl: +1 210 312 4700
www.rackspace.com

UK Office

Rackspace Ltd.
5 Millington Road
Hyde Park Hayes
Middlesex, UB3 4AZ
Phone: 0800-988-0100
Intl: +44 (0)20 8734 2600
www.rackspace.co.uk

Benelux Office

Rackspace Benelux B.V.
Teleportboulevard 110
1043 EJ Amsterdam
Phone: 00800 8899 00 33
Intl: +31 (0)20 753 32 01
www.rackspace.nl

Hong Kong Office

9/F, Cambridge House, Taikoo Place
979 King's Road,
Quarry Bay, Hong Kong
Sales: +852 3752 6465
Support +852 3752 6464
www.rackspace.com.hk

Australia Office

Level 4, 210 George Street,
Sydney, NSW 2000
Phone: 1-800-722577
www.rackspace.com.au

© 2014 Rackspace US, Inc. All rights reserved.

This document is for informational purposes only and is provided "AS IS." The information set forth in this document is intended as a guide and not as a step-by-step process, and does not represent an assessment of any specific compliance with laws or regulations or constitute advice. We strongly recommend that you engage additional expertise in order to further evaluate applicable requirements for your specific environment.

RACKSPACE MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, AS TO THE ACCURACY OR COMPLETENESS OF THE CONTENTS OF THIS DOCUMENT AND RESERVES THE RIGHT TO MAKE CHANGES TO SPECIFICATIONS AND PRODUCT/SERVICES DESCRIPTION AT ANY TIME WITHOUT NOTICE. RACKSPACE RESERVES THE RIGHT TO DISCONTINUE OR MAKE CHANGES TO ITS SERVICES OFFERINGS AT ANY TIME WITHOUT NOTICE. USERS MUST TAKE FULL RESPONSIBILITY FOR APPLICATION OF ANY SERVICES AND/OR PROCESSES MENTIONED HEREIN. EXCEPT AS SET FORTH IN RACKSPACE GENERAL TERMS AND CONDITIONS, CLOUD TERMS OF SERVICE AND/OR OTHER AGREEMENT YOU SIGN WITH RACKSPACE, RACKSPACE ASSUMES NO LIABILITY WHATSOEVER, AND DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO ITS SERVICES INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NONINFRINGEMENT.

ALTHOUGH PART OF THE DOCUMENT EXPLAINS HOW RACKSPACE SERVICES MAY WORK WITH THIRD PARTY PRODUCTS, THE INFORMATION CONTAINED IN THE DOCUMENT IS NOT DESIGNED TO WORK WITH ALL SCENARIOS. ANY USE OR CHANGES TO THIRD PARTY PRODUCTS AND/OR CONFIGURATIONS SHOULD BE MADE AT THE DISCRETION OF YOUR ADMINISTRATORS AND SUBJECT TO THE APPLICABLE TERMS AND CONDITIONS OF SUCH THIRD PARTY. RACKSPACE DOES NOT PROVIDE TECHNICAL SUPPORT FOR THIRD PARTY PRODUCTS, OTHER THAN SPECIFIED IN YOUR HOSTING SERVICES OR OTHER AGREEMENT YOU HAVE WITH RACKSPACE AND RACKSPACE ACCEPTS NO RESPONSIBILITY FOR THIRD-PARTY PRODUCTS.

Except as expressly provided in any written license agreement from Rackspace, the furnishing of this document does not give you any license to patents, trademarks, copyrights, or other intellectual property.

Rackspace, Rackspace logo, Fanatical Support, RackConnect, and any other Rackspace product/service names used in this document are either registered service marks or service marks of Rackspace US, Inc. in the United States and other countries. OpenStack is either a registered trademark or trademark of OpenStack Foundation in the United States and/or other states. Third-party trademarks and tradenames appearing in this document are the property of their respective owners. Such third-party trademarks have been printed in caps or initial caps and are used for referential purposes only. We do not intend our use or display of other companies' tradenames, trademarks, or service marks to imply a relationship with, or endorsement or sponsorship of us by, these other companies.