OpenShift Dedicated + Google Cloud Platform
The Leading Enterprise Container Platform on the Container Optimized Cloud

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Red Hat

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Product Manager
Google Cloud Platform

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OpenShift Offerings

**ON-DEMAND PUBLIC CLOUD**
Quickly build, launch and host applications in a shared public cloud, operated and supported by Red Hat

**ENTERPRISE PUBLIC CLOUD**
The power and flexibility of your own OpenShift cluster, securely connected to your internal network and backed by the experience of Red Hat Engineering, Operations, and Support.

**ENTERPRISE PRIVATE CLOUD**
Manage and use OpenShift as a private application platform in your data center, private cloud or public cloud
Rapidly deploy and scale containerized apps and services

Premium support from Red Hat

An entire OpenShift cluster dedicated to your organization

Setup, maintenance, and monitoring provided by Red Hat

VPN connectivity back to the customer environment

Hosted in the Cloud Provider and Region of your choice

CONTAINER ORCHESTRATION

NETWORKING

STORAGE

REGISTRY

TELEMETRY

SECURITY

CONTAINER RUNTIME & PACKAGING

ATOMIC AUTOMATION

ATOMIC COCKPIT

CONTAINER ORCHESTRATION

CLUSTER SERVICES

MIDDLEWARE + DATA SERVICES

SERVICE CATALOG

BUILD AUTOMATION

DEPLOYMENT AUTOMATION

OPENSIGHT SELF-SERVICE

CONTAINER RUNTIME & PACKAGING

ATOMIC HOST

RED HAT ENTERPRISE LINUX

PHYSICAL INFRASTRUCTURE

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OpenShift enables a new model

Traditional Model
(On-premise)
- App Dev
- IT Admin Staff
- Support & Subscription
- Middleware & Database
- OS
- Virtualization
- Server, Storage, Networking Hardware

OpenShift Dedicated Model
(Cloud-based)
- App Dev
- Services (DB, Middleware)
- OpenShift Support & Subscription

Benefits
- Free up app dev resources
- Time to value
- Minimal IT staff required
- Scale out public cloud resources
- Reserved capacity

Includes:
OpenShift Dedicated managed & operated by Red Hat
ESTABLISHED ENTERPRISE CONTAINER TECHNOLOGY
Leverage the latest in enterprise container technology and open source standards.

ISOLATED PUBLIC PLATFORM
Your infrastructure and application servers will only contain your users, applications, and services.

PROFESSIONALLY MANAGED INFRASTRUCTURE
Our proven and experienced OpenShift Operations Team will manage infrastructure configuration, maintenance, and security.

AWARD-WINNING SUPPORT
Technical expertise, guidance, and knowledge are available 24x7, including collaboration with specialty teams by phone or chat.

FLEXIBLE APPLICATION ENVIRONMENT
Rapidly deploy and scale applications using a wide variety of supported languages and services, or provide your own.

CONNECT AND EXTEND LOCAL SERVICES
Extend your corporate network into the cloud by connecting to cloud services from within your datacenter or using an existing user authentication system.

REGIONAL AVAILABILITY
Host in regions supported by Cloud providers in their local regions. Available in all GCP Regions

BUILT ON OPEN STANDARDS
Built with proven and powerful open source technologies, enhancing application portability and enabling rapid change.
Customer Benefits

Sample benefits from a leading Teleco using OpenShift Dedicated for their Digital Store

- Release software every day instead of every two weeks
- 11 deployments on average a day each taking no more than 7 minutes to build, test and deploy to staging or production
- More productive and highly satisfied dev and ops teams
- Seamless upgrades to latest versions of OpenShift (moving from 3.3 to 3.4 now to 3.5)
- Migrated 121 applications to OpenShift
- Ability for IT to meet all of business changes and requirements
For the past 16 years, Google has been building out the world’s fastest, most powerful, highest quality cloud infrastructure on the planet.
1 Billion Users
Google runs **everything** containers:

- Gmail, Web Search, Maps, ...
- MapReduce, batch, ...
- GFS, Colossus, ...
- Even **Google’s Cloud Platform:**
  our VMs run in containers!

We launch over **2 billion**
containers *per week*
Why Google Cloud Platform

**Move & Improve with Confidence**
Build on Google to improve security, increase reliability, and reduce costs.

**Turn Data into Value**
Predict business outcomes using industry-leading Machine Learning and no-ops analytics for all data-types.

**Deliver New Apps**
Accelerate app delivery and modernize your application portfolio.

**Enterprise Partnership**
A different way to operate and do business with your cloud provider.
Why Google for OpenShift Dedicated

- Google + Red Hat Advantages
- Google Compute Engine Advantages
- Google Cloud Platform Advantages
Why Google for OpenShift Dedicated

Google + Red Hat Advantages

Google Compute Engine Advantages

Google Cloud Platform Advantages
Some Things Just Go Together
Some Things Just Go Together

**Google + Red Hat Advantages**

**Red Hat**
- Leader in Enterprise Open Source
- Deep Customer Relationships
- Trusted Technology Partner

**Google**
- Deep Experience with Containers
- Born in the Cloud
- Industry Leading Machine Learning and Data Analysis Services
Google + Red Hat = Majority of K8S

### Contribution by Companies

- **Google**: 26%
- **Independent**: 14%
- **Red Hat**: 4%
- **FathomDB**: 4%
- **ZTE Corporation**: 4%
- **CoreOS**: 4%
- **Huawei**: 4%
- **Fujitsu**: 4%
- **Zhejiang University**: 4%
- **Others**: 4%

### Commits by Company

<table>
<thead>
<tr>
<th>#</th>
<th>Company</th>
<th>Commits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Google</td>
<td>22143</td>
</tr>
<tr>
<td>2</td>
<td>independent</td>
<td>12929</td>
</tr>
<tr>
<td>3</td>
<td>Red Hat</td>
<td>7117</td>
</tr>
<tr>
<td>4</td>
<td>FathomDB</td>
<td>1755</td>
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<tr>
<td>5</td>
<td>ZTE Corporation</td>
<td>802</td>
</tr>
<tr>
<td>6</td>
<td>CoreOS</td>
<td>686</td>
</tr>
<tr>
<td>7</td>
<td>Huawei</td>
<td>611</td>
</tr>
<tr>
<td>8</td>
<td>Fujitsu</td>
<td>500</td>
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<td>9</td>
<td>Zhejiang University</td>
<td>461</td>
</tr>
<tr>
<td>10</td>
<td>Mirantis</td>
<td>390</td>
</tr>
</tbody>
</table>

*Showing 1 to 10 of 74 entries*
Why Google for OpenShift Dedicated

- Google + Red Hat Advantages
- Google Compute Engine Advantages
- Google Cloud Platform Advantages
  - Performance
  - Price
  - Other Cloud Workloads
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Fast VM Start Times


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Live Migration

Lower downtime

Lower operational overhead

Shows the power of Google’s infrastructure
Persistent Disks
(network attached block storage)

Attach up to 128 volumes
Up to 64TB per disk
Performance scales linearly
Dynamic sizing
Encrypted by default (using our keys or yours)
Why Google for OpenShift Dedicated

- Google + Red Hat Advantages
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- Google Cloud Platform Advantages

- Performance
- Price

Other Cloud Workloads
Custom Machine Types
Don’t pay for CPU or RAM you don’t need

Predefined Machine Type

<table>
<thead>
<tr>
<th>RAM</th>
<th>WASTE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Your Software</td>
</tr>
<tr>
<td></td>
<td>RAM</td>
</tr>
</tbody>
</table>

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<tbody>
<tr>
<td></td>
<td>CPU</td>
</tr>
</tbody>
</table>

Too much RAM

Predefined Machine Type

<table>
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<tr>
<th>CPU</th>
<th>WASTE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RAM</td>
</tr>
</tbody>
</table>

Predefined Machine Type

<table>
<thead>
<tr>
<th>CPU</th>
<th>RAM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CPU</td>
</tr>
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</table>

Too much CPU
Custom Machine Types
Don’t pay for CPU or RAM you don’t need

Custom Machine Type

<table>
<thead>
<tr>
<th>RAM</th>
<th>Your Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 GB</td>
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</table>

<table>
<thead>
<tr>
<th>CPU</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8 vCPU</td>
<td></td>
</tr>
</tbody>
</table>

JUST RIGHT...
Sustained Use Discounts:

Up to **40% discount**, no commitment

<table>
<thead>
<tr>
<th>Usage Level (% of month)</th>
<th>% at which incremental is charged</th>
<th>Example incremental rate (USD/hour) for an n1-standard-1 instance</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%-25%</td>
<td>100% of base rate</td>
<td>$0.0475</td>
</tr>
<tr>
<td>25%-50%</td>
<td>80% of base rate</td>
<td>$0.0380</td>
</tr>
<tr>
<td>50%-75%</td>
<td>60% of base rate</td>
<td>$0.0285</td>
</tr>
<tr>
<td>75%-100%</td>
<td>40% of base rate</td>
<td>$0.0190</td>
</tr>
</tbody>
</table>
Sustained Use Discounts:
Up to 40% discount, no commitment
Committed Use Discounts
Up to **57% discount**, 1- or 3-year commit

Custom Image Types

<table>
<thead>
<tr>
<th>Image Type</th>
<th>Full Price, 1 year commitment</th>
<th>Full Price, 3 year commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>n1-standard-16</td>
<td>$0.000200</td>
<td>$0.050000</td>
</tr>
<tr>
<td>n1-highcpu-16</td>
<td>$0.025000</td>
<td>$0.050000</td>
</tr>
<tr>
<td>n1-highmem-16</td>
<td>$0.075000</td>
<td>$0.150000</td>
</tr>
</tbody>
</table>

Predefined Image Types

<table>
<thead>
<tr>
<th>Resource</th>
<th>Full Price, 1 year commitment</th>
<th>Full Price, 3 year commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>vCPU</td>
<td>$0.000200</td>
<td>$0.050000</td>
</tr>
<tr>
<td>Memory</td>
<td>$0.000100</td>
<td>$0.010000</td>
</tr>
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</table>
Why Google for OpenShift Dedicated

Google + Red Hat Advantages

Google Compute Engine Advantages

Google Cloud Platform Advantages
Global Network

Global wholly owned fiber network

Edge locations in almost every country in the world
77 peering locations
Global Load Balancing

Scale to 1M QPS in 5 sec with no prewarming? **No problem...**
Global Infrastructure

Google Cloud Platform Advantages

* While some regions may launch with 2 zones, all regions are planned for a minimum of 3 zones.
Google Cloud Platform Advantages

Industry leading Data Analysis & Machine Learning Services
Open Service Broker API™

Google Cloud Platform

GCP Services ANYWHERE
THANK YOU

plus.google.com/+RedHat
linkedin.com/company/red-hat
youtube.com/user/RedHatVideos
facebook.com/redhatinc
twitter.com/RedHatNews

Google Cloud Platform
http://cloud.google.com
LEARN. NETWORK. EXPERIENCE OPEN SOURCE.