Red Hat OpenShift on IBM zSystems and LinuxONE

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TRY

&

BUY

VM Workshop 2022
Binghamton University in Binghamton, New York, June 16-18.

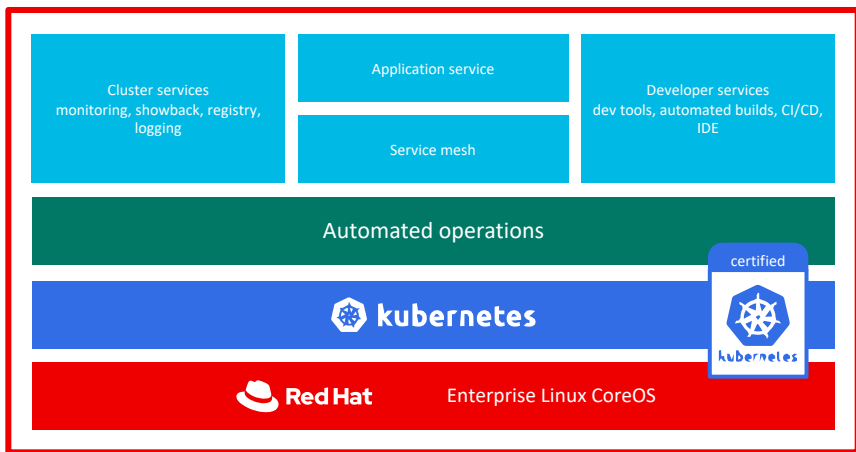# Red Hat® OpenShift® Container Platform

Best IT ops experience

Best developer experience

Cluster services
monitoring, showback, registry, logging

Application service

Developer services
dev tools, automated builds, CI/CD, IDE

Service mesh

Automated operations

kubernetes

certified

kubernetes

Red Hat   Enterprise Linux CoreOS
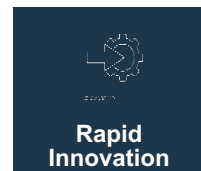
Physical   Virtual   Private   Public
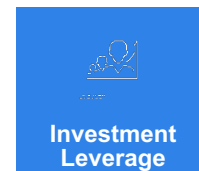
Any infrastructure

100% Open Source

– **Automated, full-stack installation** from the container host to application services

– **Seamless Kubernetes deployment** to any cloud or on-premises environment

– **Autoscaling** of cloud resources

– **One-click updates** for platform, services, and applications

Rapid Innovation

Differentiated Integration

Investment Leverage

Management and Compliance

TRY

Where to start your journey with OpenShift ?

try.openshift.com
cloud.redhat.com

Life Cycle Dates (Status: June, 2022)
Check https://access.redhat.com/support/policy/updates/openshift

Full support
– Red Hat OpenShift 4.10, released on 03/09/22
– Red Hat OpenShift 4.9, released on 10/18/21

Maintenance
– Red Hat OpenShift 4.8, released on 07/27/21 (EUS)
– Red Hat OpenShift 4.7, released on 02/24/21
– Red Hat OpenShift 4.6, released on 10/27/20 (EUS)

End of life
– Red Hat OpenShift 4.5 *and previous versions*

Try the LinuxONE Community Cloud

No access to IBM zSystems / LinuxONE ?

The IBM LinuxONE Community Cloud provides

– Free access for developers, students, and entrepreneurs

– Virtual machines and services for testing and piloting emerging applications for evaluation purposes

– [Fast Start Guides](#)

Try OpenShift Container Platform on the [LinuxONE Community Cloud](#)

Fast Start Guides for the LinuxONE Community Cloud

Guides, tutorials, and labs to start your learning path
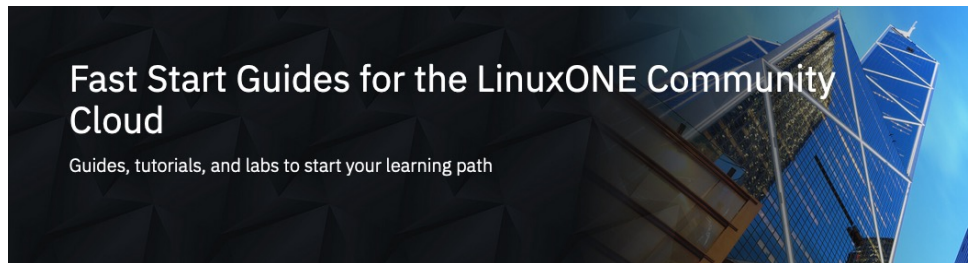
Try on-prem

Try & Buy program loans customers everything they need to run Red Hat OpenShift for 90 days, including:

– zAcceleration team to setup and configure the machine.

– Weekly calls with the clients during the 90 days period

– Provide high priority pro-bono support during the 90-day period over WebEx / email / Slack

– For customers looking to do a POC before buying additional IFLs or a machine

Try - special offer for OpenShift
for IBM z16, IBM z15, IBM z14*, LinuxONE III,
LinuxONE Emperor II*, and LinuxONE Rockhopper
II*

Up to 6 IFL cores and Red Hat OpenShift
free for 90 days

Every-thing needed to run Red Hat OpenShift for a
90 days trial:

– **1 to 6 IFLs** loaned *via microcode*

– **Activation of memory** that is already installed on
  the machine

– **Red Hat OpenShift**

– **IBM Cloud Infrastructure Center**
  (PIDs: OTC: 5635-017; S&S: 5635-018)

– *Hypervisor:* **IBM z/VM or Red Hat KVM**

Note: Red Hat KVM is included with the Red Hat OpenShift SKU for use with Red Hat OpenShift only

IBM zSystems Acceleration Team

QUICKSTART Pilot Adoption Program

Red Hat OpenShift & IBM Cloud Paks for IBM zSystems & LinuxONE

IBM Internal: [Submit your request here](#)

Phase I – Discover & Define

– Discovery of business and IT objectives
– Review current capabilities + desired capabilities
– Mapping of capabilities
– Assess planned workloads
– Review of pre-requisites
– Create and/or review deployment architecture
– Define the use case(s)
– Define success criteria

Phase II - Execute

– Client addresses pre-requisites
– IBM validates pre-requisites
– Pre-configuration work
– Base install begins
– Post installation configuration
– Implement the use case(s)
– Validate that success criteria are met
– Pre-delivery inspection

Phase III - Deliver

– Client tour
– Recap of the use cases
– Sign off on agreed-upon success criteria
– Final review with stakeholders
– Recommend client enablement

Take the next step

Learn more about **Red Hat OpenShift** on IBM zSystems and LinuxONE

– Check out the [Reference Architecture](#)

– Read Redbook: [Innovate at Scale and Deploy with Confidence in a Hybrid Cloud Environment](#) (Oct 2021)

– Read the [Red Hat OpenShift 4.10 release notes](#)

– Read [blogs](#)

– Visit the [Red Hat OpenShift](#) website

Contact

• **[IBM Acceleration Team](#)**

• **[Product Management Team](#)**
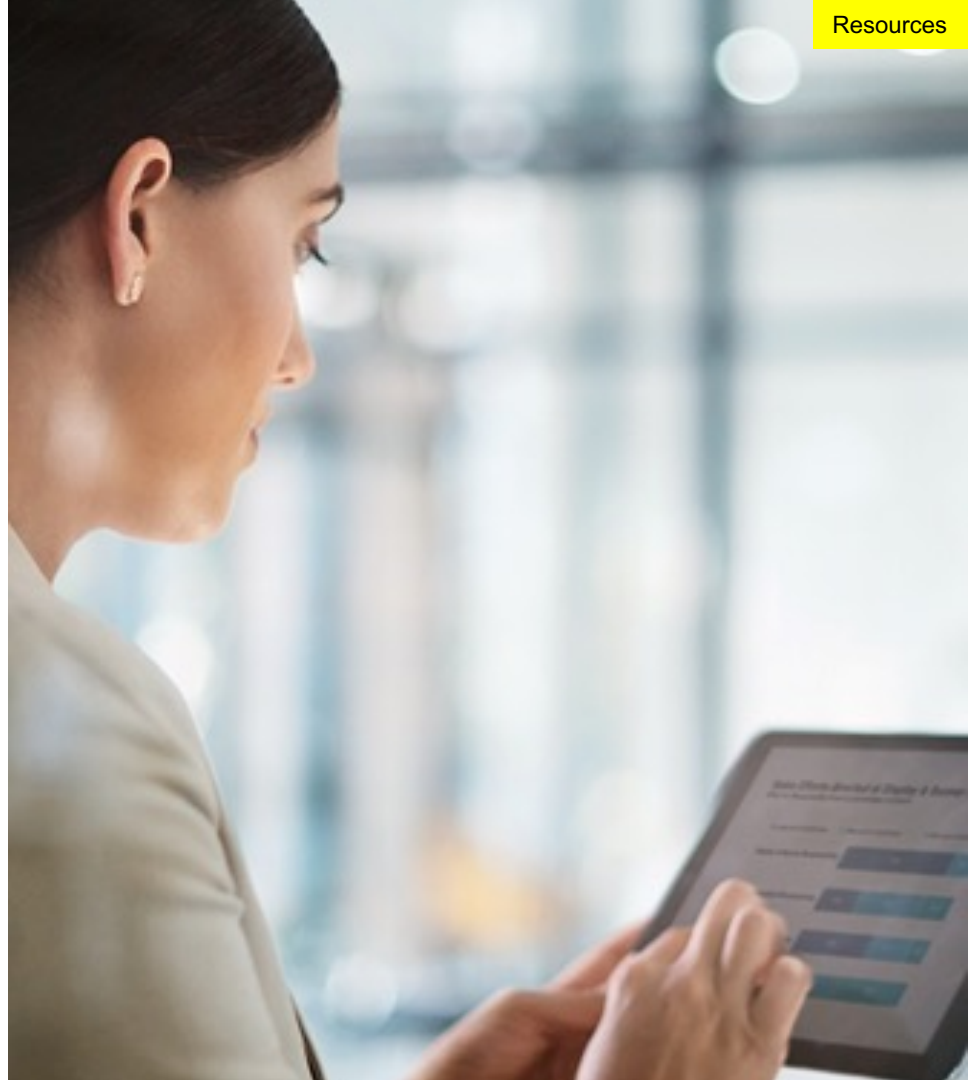
BUY

Ordering Options

Red Hat OpenShift may be ordered **directly from Red Hat** or via **IBM Shopz**

Unrestricted OPENSHIFT	**Unrestricted** OPENSHIFT	**Restricted** OPENSHIFT

Purchase OCP **from Red Hat**

Unrestricted OCP subscription

– running OCP with all workloads

RH T's & C's apply

Purchase OCP **via Shopz**

Unrestricted OCP subscription

– running OCP with all workloads

RH T's & C's apply

z/CX Foundation for OpenShift can **only** be obtained **via Shopz**

Purchase OCP via CPs

Contains a restricted OCP subscription

– running OCP with workloads included with a particular IBM Cloud Pak

– CP VPC to OCP subscription conversion

Note:

Former IBM Cloud Pak for Applications is no longer offered

– previous purchases are supported until 2030

Pricing for Red Hat OpenShift on IBM zSystems and LinuxONE

Red Hat OpenShift Container Platform (OCP)

– **per physical IFL(Linux) or ZIIP(zCX)**

– **Same price per core** on IBM zSystems / LinuxONE, zCX, Power and x86

Note:
The license for Red Hat OpenShift **includes the usage of Red Hat KVM for the deployment of Red Hat OpenShift;** but only for OpenShift-based workloads, not for other workloads!
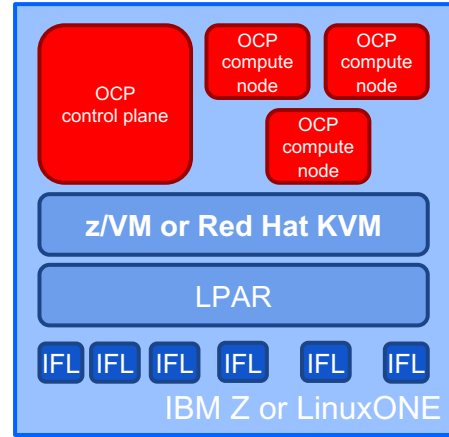
Red Hat OpenShift sizing and subscription guide for enterprise Kubernetes
Customers using only a subset of the available cores (compute capacity) on their IBM Z environment for OpenShift Container Platform only require subscriptions for the subset that is used for the compute nodes.
→ www.redhat.com/en/resources/openshift-subscription-sizing-guide

Ordering Red Hat OpenShift "**Unrestricted** " on IBM zSystems and LinuxONE

Subscriptions:

OCP compute node

- Charged OCP subscriptions:
  - required for each physical engine (IFL) running OCP compute node workload. This includes engines that partially run OCP compute aside of other workloads.

OCP control plane

- Non-charged subscriptions:
 - required for each physical engines (IFL) running OCP control plane workload

How to implement ?	
Option 1	3 OCP subscriptions **per cluster** for the control plane at no-charged, and the remaining subscriptions being charged running OCP compute node workload. (Shared Environment)
Option 2	Separate IFLs running control plane from IFLs running compute node workload
Option 3	All IFLs with charged OCP subscriptions (Full Capacity)

Red Hat OpenShift "**Subscription**" options on IBM zSystems and LinuxONE

Option 1 - 3 OCP subscriptions **per cluster** for the control plane at no-charged, and the remaining subscriptions being charged running OCP compute node workload. (Shared Environment)

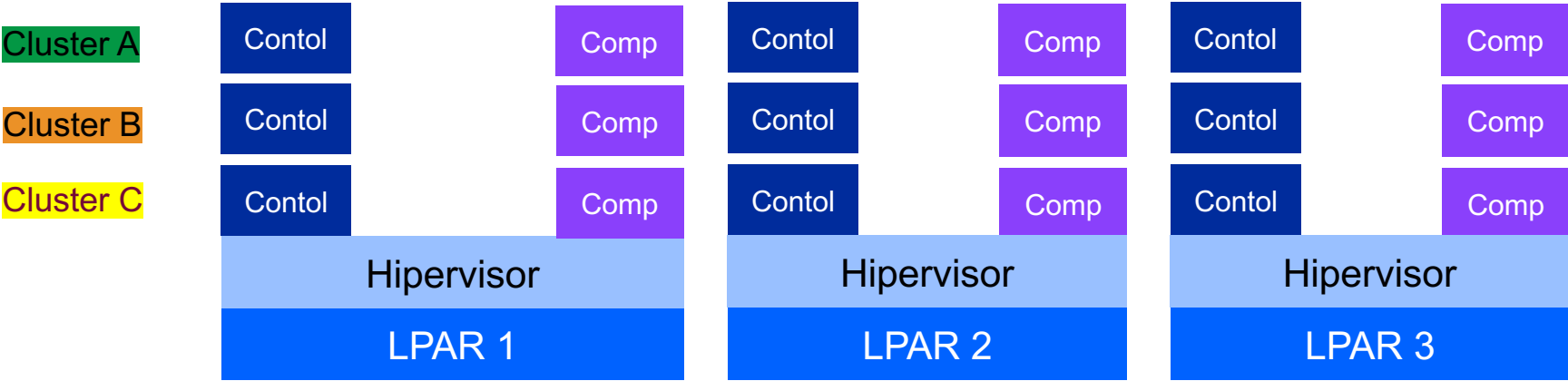| Contol	Control	Control	Comp	Comp	Comp
Hypervisor					
LPAR					

Shared   IFL IFL IFL IFL IFL IFL
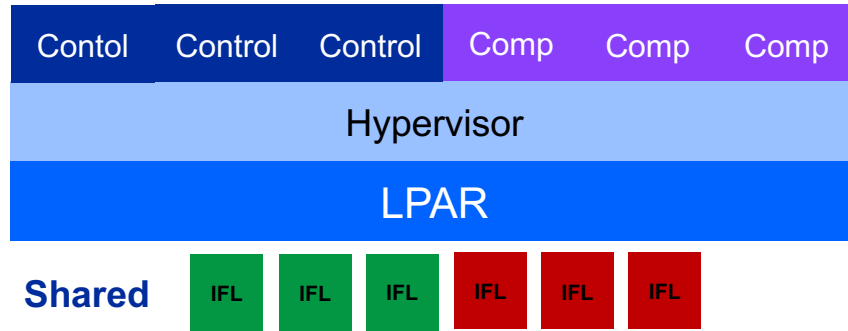
- Option with the best combination of architectural flexibility for OCP workload and cost effectiveness
- No need to separate control and compute and the clusters can span multiple LPARs or CECs
- Requires "**active OCP clusters**" running OCP workloads !
- Not applicable for 3-node clusters…

IFL Non charged – OCP Subscription   IFL Charged – OCP Subscription
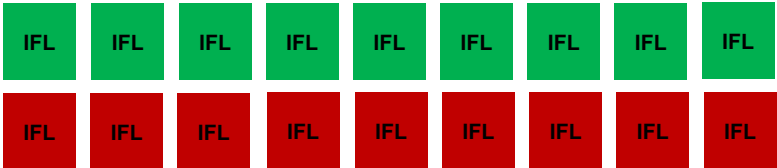
OCP compute node
OCP control plane

Red Hat OpenShift "**Subscription**" options on IBM zSystems and LinuxONE

Option 1 – sample with 3 clusters cross 3 LPARs

Cluster A

Cluster B

Cluster C

Contol	Comp	Contol	Comp	Contol	Comp
Contol	Comp	Contol	Comp	Contol	Comp
Contol	Comp	Contol	Comp	Contol	Comp

| Hipervisor | Hipervisor | Hipervisor |
| LPAR 1 | LPAR 2 | LPAR 3 |

Shared

IFL IFL IFL IFL IFL IFL IFL IFL IFL

IFL IFL IFL IFL IFL IFL IFL IFL IFL

- The IBM HW offering to receive 3 IFLs free of charge, requires the purchase of a min of 6 IFLs per OCP cluster which is fulfilled in this sample.

IFL Non charged – OCP Subscription

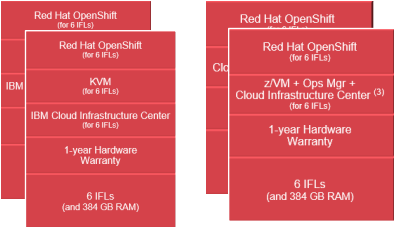IFL Charged – OCP Subscription

OCP compute node

OCP control plane

Buy - special offer for OpenShift

Buy

Purchase 6 or more IFL cores per cluster running
Red Hat OpenShift, and get the first 3 IFLs cores
at no charge and the remaining at market rates

4 bundles are available

Note: Red Hat KVM is included with the Red Hat OpenShift SKU for use with Red Hat OpenShift only

Buying the IFLs for running Red Hat OpenShift

for z16, z15, z14*, LinuxONE III, LinuxONE Emperor II, and LinuxONE Rockhopper II

If the customer is:

- **adding incremental IFLs** to existing z14* or higher, LinuxONE II* or higher, **or**

- **purchasing a new z15 or LinuxONE III** build with Max21 or higher

and both of the following are true:

- buying a **minimum of 6 IFLs** per OCP cluster

- The **3 OpenShift control plane IFLs** are **ONLY running OpenShift** (enforced with T's & C's)

Then:
3 IFLs per cluster running Red Hat OpenShift are **free** of charge.

The other IFLs cores running in the same cluster are sold at market value.

* only part of the offer until EoM

Red Hat OpenShift soft bundle for IBM zSystems and LinuxONE

	KVM	z/VM
New build	🟩	
Add to existing		

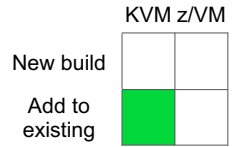|	
Red Hat OpenShift (for 6 IFLs)	No charge for Red Hat OpenShift control plane nodes. Bastion node included with Red Hat OpenShift Stock Keeping Unit (SKU) for use with Red Hat OpenShift only. Minimum of 3 Red Hat OpenShift compute nodes
KVM (for 6 IFLs)	**Included** with Red Hat OpenShift SKU, and for use with Red Hat OpenShift only.
IBM Cloud Infrastructure Center (for 6 IFLs)	Can be added at approved IBM zSystems or LinuxONE prices.
1-year Hardware Warranty	**Included** for the first year. Maintenance for years 2-3 is incremental cost at approved IBM zSystems or LinuxONE prices.
IBM z16, IBM z15, or LinuxONE III with 6 IFLs and 384 GB RAM	**Buy 6 IFLs, Pay for 3** [2] A special price is available when buying an IBM z16, z15 T01, z15 T02 Max21 or higher, LinuxONE III T01 or LinuxONE III LT2 Max21 or higher when purchased with Red Hat OpenShift. The system is configured to run 1 Red Hat OpenShift cluster with 6 active IFLs. Additional IFLs and memory may be purchased at market rates.

Optional features include:
- IBM WebSphere® Hybrid Edition
- Red Hat Enterprise Linux
- Red Hat Runtimes (including JBoss® App Server, Quarkus)

[1] Red Hat OpenShift may be ordered directly from Red Hat (use this Red Hat seller lookup tool or contact your geo Synergy office) or via ESW / CFSW / ShopZ which does not require engaging Red Hat sellers
[2] The 3 IFLs running the control plane nodes are free of charge.

Red Hat OpenShift soft bundle for IBM zSystems and LinuxONE

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New build		
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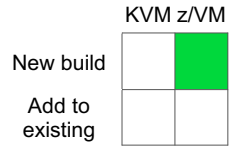|	
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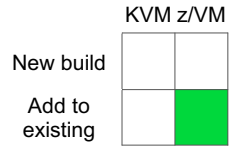|	
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Red Hat OpenShift soft bundle for IBM zSystems and LinuxONE

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Questions

Thank you

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