

RED HAT
SUMMIT

Microsoft and Red Hat Partner and Deliver Integrated Support, a Unique Offering in the IT World

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Agenda

- Portfolio & Roadmap
- Integrated Support
- Single Sign-on (SSO)
- Ticket Exchange
- Support & Deployment workflow
- Technical Trends
- Troubleshooting Demo
- Best Practices
- Q&A

Red Hat on Azure - Portfolio

Cloud Access:

Red Hat Enterprise Linux® - Reliable Secure OS

Red Hat JBoss® Middleware portfolio, including Fuse and BRMS – Develop Apps faster

Red Hat Gluster Storage – Managed Data Storage with flexibility and scale

Red Hat® OpenShift Container Platform – Manage and scale Apps

On-Demand:

RHEL premium images

Connected to RHUI

.NET on
RHEL

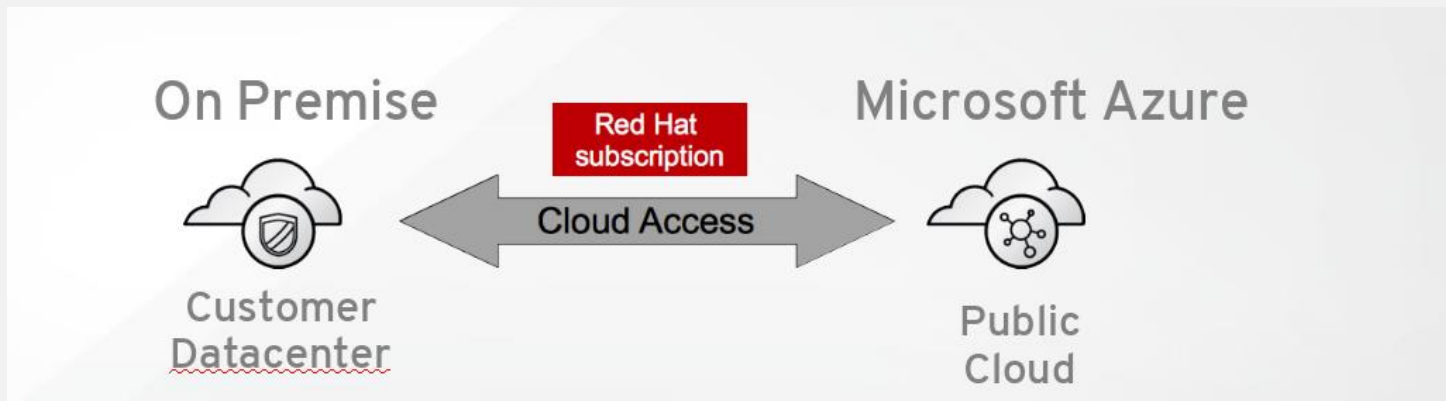
SAP HANA
on RHEL

SQL on
RHEL

Azure Stack

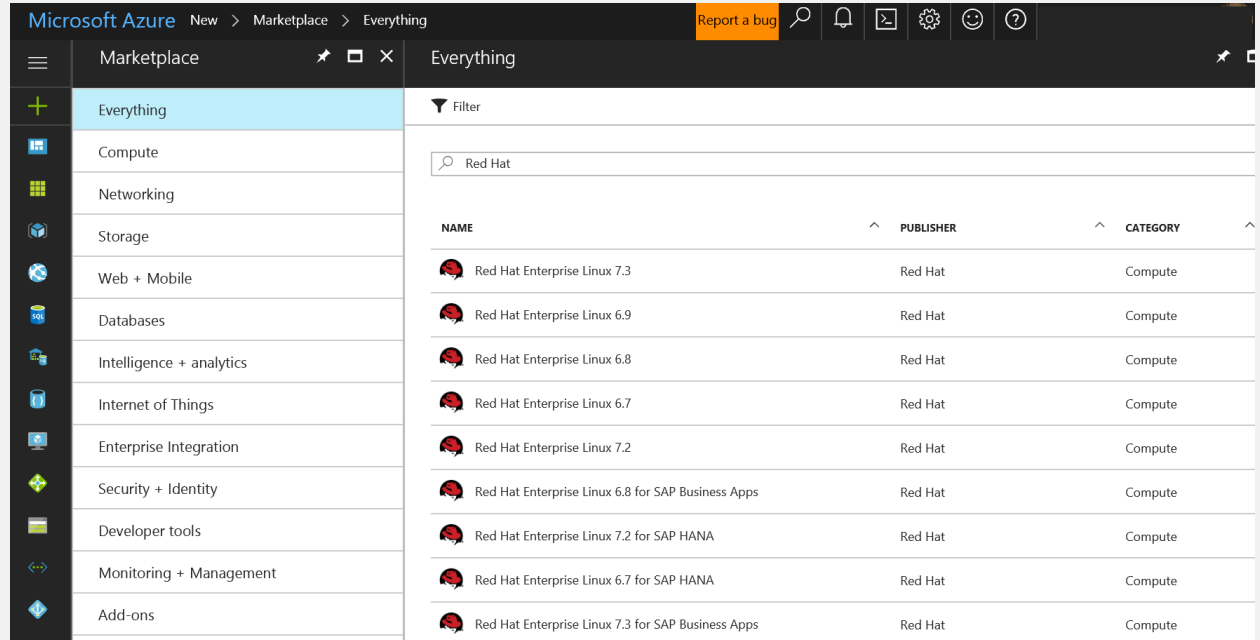
Cloud Access/Bring Your Own Subscription

- A portability feature of Red Hat subscriptions permits customers to use an eligible subscription either on premise or on an eligible Red Hat Certified Cloud Service Provider- Azure
- Customers are able to migrate their subscriptions into Microsoft Azure and maintain long term relationships with Red Hat



On Demand/Premium

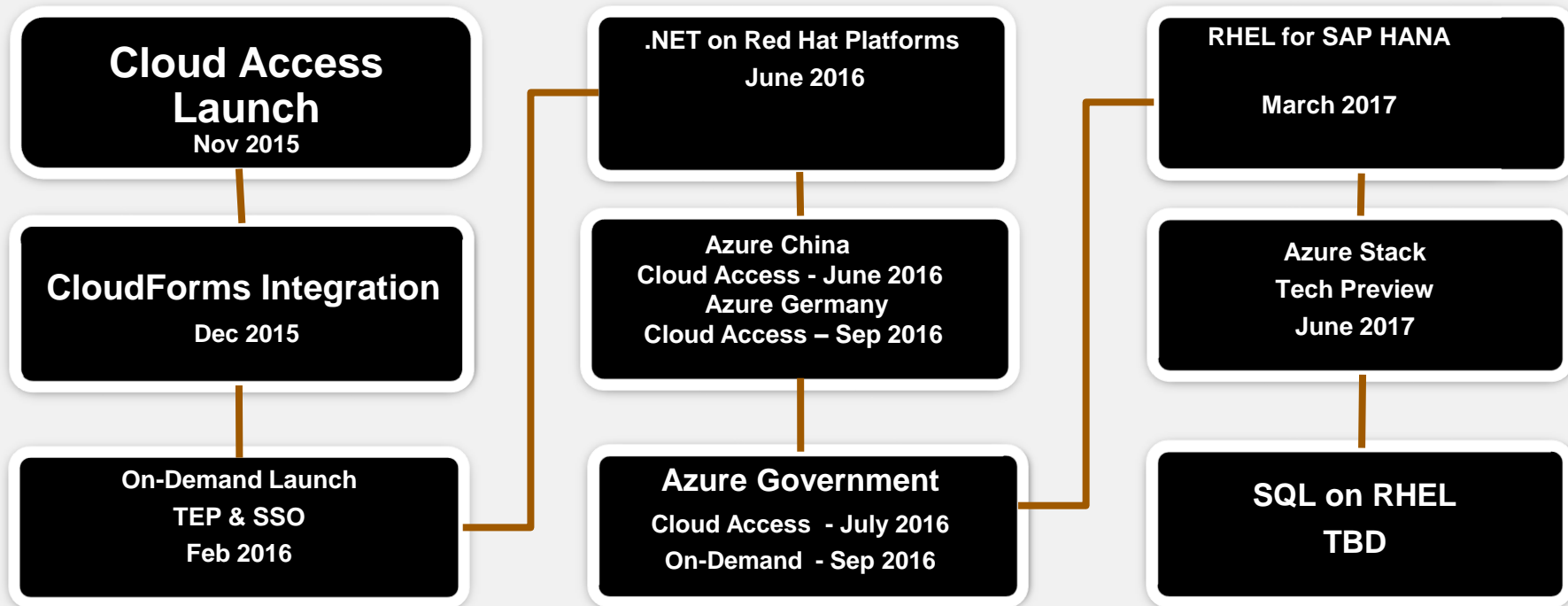
- Azure Market Place RHEL Images
- New Premium Red Hat Subscription
- Users get updates from RHUI
- SSO Integration with access.redhat.com
- Get support with Red Hat and Microsoft directly



The screenshot shows the Microsoft Azure Marketplace interface. The left sidebar lists various categories: Compute, Networking, Storage, Web + Mobile, Databases, Intelligence + analytics, Internet of Things, Enterprise Integration, Security + Identity, Developer tools, Monitoring + Management, and Add-ons. The main content area displays a search for "Red Hat" with a table of results.

NAME	PUBLISHER	CATEGORY
Red Hat Enterprise Linux 7.3	Red Hat	Compute
Red Hat Enterprise Linux 6.9	Red Hat	Compute
Red Hat Enterprise Linux 6.8	Red Hat	Compute
Red Hat Enterprise Linux 6.7	Red Hat	Compute
Red Hat Enterprise Linux 7.2	Red Hat	Compute
Red Hat Enterprise Linux 6.8 for SAP Business Apps	Red Hat	Compute
Red Hat Enterprise Linux 7.2 for SAP HANA	Red Hat	Compute
Red Hat Enterprise Linux 6.7 for SAP HANA	Red Hat	Compute
Red Hat Enterprise Linux 7.3 for SAP Business Apps	Red Hat	Compute

Initiatives Roadmap



Integrated Support

Ticket Exchange Platform

Federated Entitlement:

- SSO & Entitlement for TEP

Red Hat Engineers On-site at Microsoft

Dedicated support team at Red Hat to support Azure customers

RHUI Support

Governance Model

- Business Reviews, Joint Supportability, Training & Joint KPI's

Red Hat presence in Forums

Single Sign On (SSO)

- On-Demand/Premium images in Azure Marketplace comes with Red Hat software, subscription and support!
- As soon as your VM is running, SSO is enabled.
- Register for the first time to associate your Azure Account with Red Hat Account. If you already have a Red Hat account you can link your VM to your existing account.
- Access Red Hat documentation and file support tickets with Red Hat directly

<https://azure.microsoft.com/blog/red-hat-customer-portal-from-azure/>

Ticket Exchange Platform (TEP)

Highlights:

Customer consent process

Engineer to Engineer collaboration

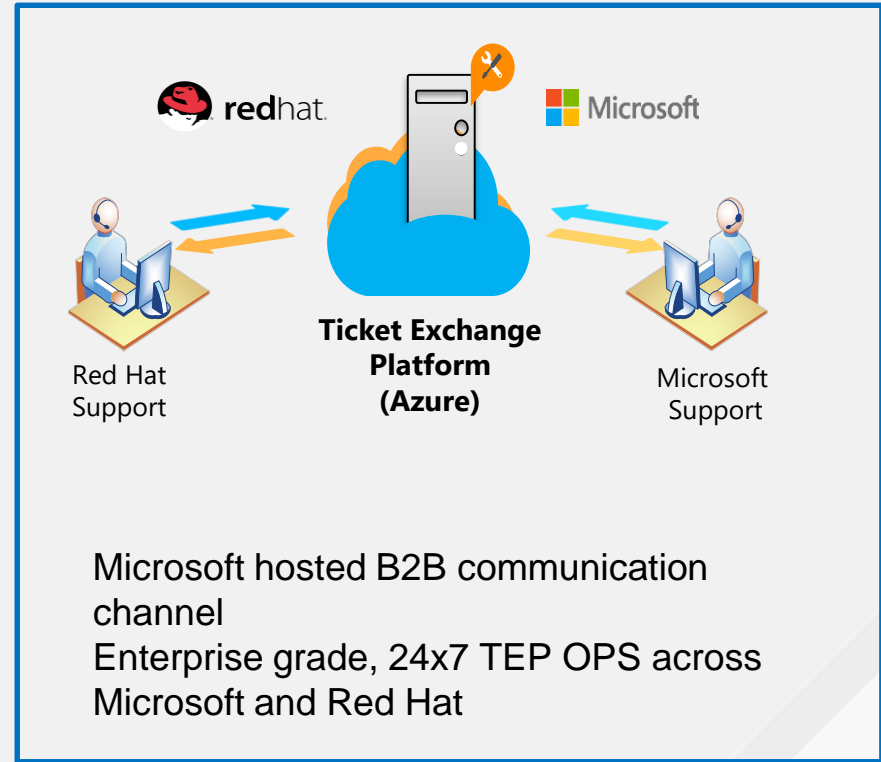
Notes exchanged available in Azure Portal & Red Hat customer portal

File transfer in a compliant way (ISO 27001)

Support Requirements:

Cloud Access: Valid Azure Support Plan, Registered Cloud Access Subscription

On-Demand: Valid Azure Support Plan, Azure Marketplace VM in running state



Customer Experience

- Microsoft and Red Hat meet monthly to jointly deliver a Support Review with a focus on Customer Satisfaction, Collaborations and Key Learnings from Customer Cases.
- Microsoft and Red Hat Support engineers not only interact on Customer Cases to resolve them, they also participate in Bi-Weekly Support Reviews and Deliver. Training Sessions to each other
- What are our customers saying?

“Red Hat really impressed us with its enterprise grade support. We were surprised that Red Hat open source and Azure support resided in the same office.”

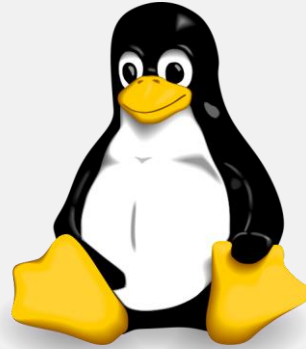
“I am very impressed with the way support engineer handled this ticket. They were knowledgeable about subject, assigned backup engineer even during holidays and get back to me quickly with solutions”

Trends/Challenges

When things go wrong



Integrated Support - We are here for you!



- VM connectivity issues
- Deploying a new VM – cloud access/On-Demand
- Azure Linux Agent – configuration, extension, backup
- Disk Management – Expanding OS disk, attaching data disks
- Disk encryption – Azure CLI
- Advisory – RHUI registration issues, configuration, DDNS

DEMO

Demo

- Creating On-Demand RHEL VMs
 - Registered with RHUI automatically and ready for updates.
 - Red Hat premium support for On-Demand VMs
- Troubleshooting SSH issues – Use the prod portal
 - Creation of recovery VM using Azure CLI
 - Boot diagnostics
 - Using custom script to fix issues

BEST PRACTICES

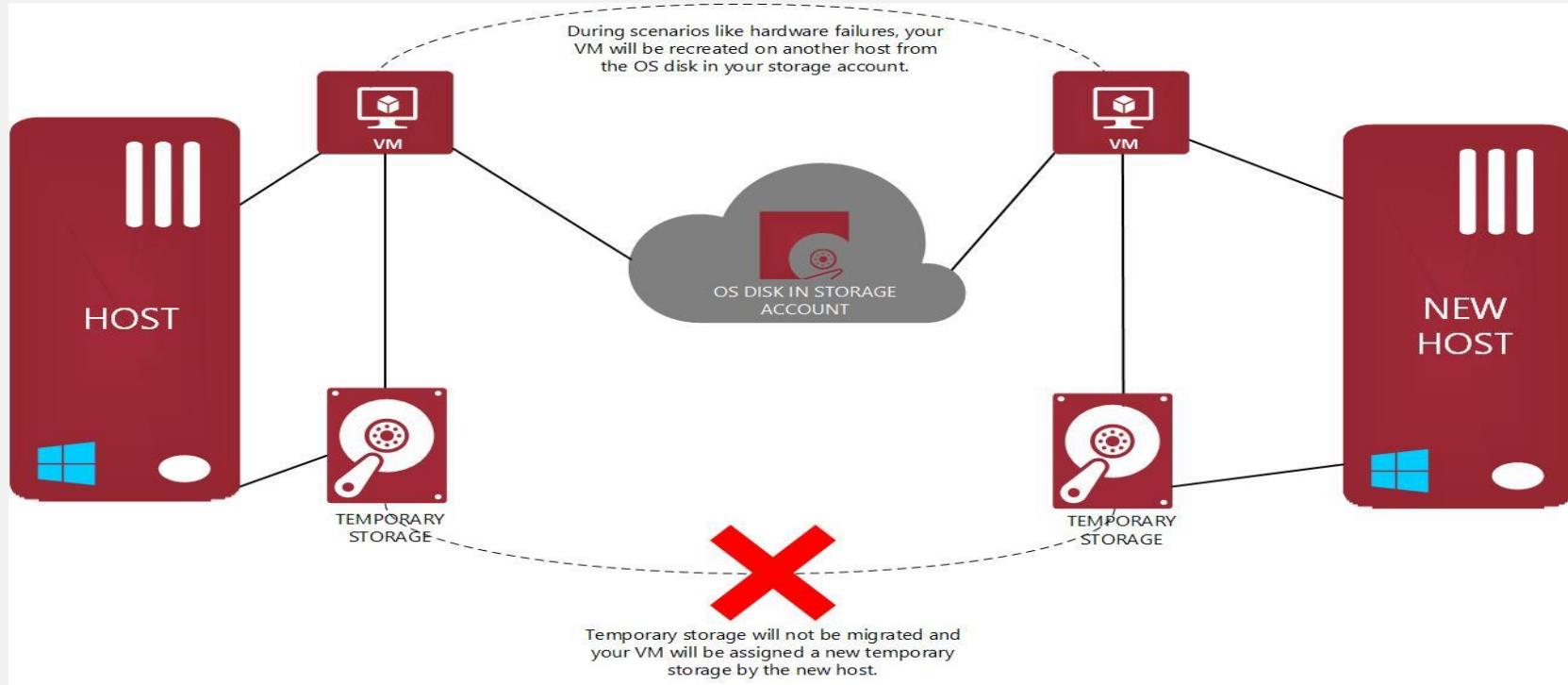
Configure Boot Diagnostics for the VM

- ✓ Console Output
- ✓ Console Screenshot
- ✓ Configurable at <https://portal.azure.com>
- ✓ Useful in no boot scenarios

Resource disk on a RHEL VM

- ✓ Local disk on the physical machine hosting the VM
- ✓ Higher IOPS and lower latency
- ✓ Data stored on this disk is not guaranteed to persist across reboots
- ✓ Use it for non persistent data
- ✓ Size of the resource disk depends on the class of the VM

Resource Disk Of A Linux VM



Configuring a Resource disk on a RHEL VM

Directives in `/etc/waagent.conf` governs the mounting of the resource disk on a Linux VM.

Format if unformatted. If 'n', resource disk will not be mounted.

ResourceDisk.Format=y

File system on the resource disk

Typically ext3 or ext4.

ResourceDisk.Filesystem=ext4

Mount point for the resource disk

ResourceDisk.MountPoint=/mnt/resource

Swap space configuration on a RHEL VM

Directives in `/etc/waagent.conf` governs the mounting of the resource disk on a Linux VM.

```
ResourceDisk.Format=y  
ResourceDisk.EnableSwap=y  
ResourceDisk.SwapSizeMB=5120
```

Use RAID0

- ✓ Configure software based RAID0
- ✓ Don't use just one disk for IO intensive applications
- ✓ Improved performance
- ✓ Improved throughput

Nofail Option in /etc/fstab

- ✓ Mention this option for data disks/RAID configurations
- ✓ VM will be accessible even if the disk is not available
- ✓ Prevents the VM from booting into maintenance mode

Sample /etc/fstab:

```
UUID="d6190a17-5dfd-4582-8ccc-  
0589e9b16640" /raidfs ext4 defaults,nofail 0 0  
UUID="ef7d771c-1586-4378-acb6-  
f29dbe5a713a" /singledisk ext4 defaults,nofail 0 0
```

UUIDS in /etc/fstab

- ✓ Device names are non-persistent
- ✓ Device name change during system reconfiguration, shutdown, reboot.
- ✓ Use UUIDs as it is persistent
- ✓ Prevents the VM from not being accessible after reboot
- ✓ Use “blkid” to retrieve the UUIDs

Premium Storage

✓ High performance, low latency disk

1) Check for kernel version.

2) Latest Linux Integration Services drivers.

3) Right barrier setting, cache setting for the disk.

Keep Softwares on the VM up-to-date

- RHEL `yum update`
- ✓ The patches might include important fixes for Azure platform
- ✓ Hypervisor drivers
- ✓ Errata
- ✓ waagent

Detaching Data Disks From VM

- ✓ Data disk LUN numbers while attaching : 0,1,2,3
- ✓ Detach the data disk in the reverse order : 3,2,1,0
- ✓ lsscsi to find out the LUN number from within the VM

Resources

Blog - <https://blogs.msdn.microsoft.com/linuxonazure/>

ALA - <https://azure.microsoft.com/en-us/documentation/articles/virtual-machines-linux-agent-user-guide/>

On-Demand - <https://access.redhat.com/ecosystem/partners/ccsp/microsoft-azure>

Boot diagnostics - <https://azure.microsoft.com/en-us/blog/boot-diagnostics-for-virtual-machines-v2/>

Resource disk sizes - <https://azure.microsoft.com/en-us/documentation/articles/virtual-machines-windows-sizes/>

Premium storage - <https://azure.microsoft.com/en-us/documentation/articles/storage-premium-storage/>

RAID0 - <https://azure.microsoft.com/en-us/documentation/articles/virtual-machines-linux-configure-raid/>

RHUI - <https://azure.microsoft.com/en-us/documentation/articles/virtual-machines-linux-update-infrastructure-redhat/>

Disk encryption - <https://azure.microsoft.com/en-us/documentation/articles/azure-security-disk-encryption/#prerequisites>

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twitter.com/RedHatNews



youtube.com/user/RedHatVideos

The logo consists of a red speech bubble shape pointing downwards, containing the text "RED HAT" in a smaller font above "SUMMIT" in a larger font, both in white.

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EXPERIENCE
OPEN SOURCE.**