Belisama

January Newsletter

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I hope everyone is of to a good start for '21 and best wishes for a happy and auspicious (lunar) new year. Read on for a summary of some of the interesting things that have happened in the last month and some treats in store for us.

AIX will be 35 soon

AIX will soon be celebrating 35 years of innovation! Look out for announcements, events and customer stories as IBM demonstrates its continued commitment to AIX.

OpenShift on Power in the IBM Cloud (PowerVS)

For the last few months I have had the opportunity to test OpenShift on PowerVS, which was announced on 22nd December 2020. I started using the 4.5 branch with rhel-8.2-ppc64le and rhcos-4.5.4-ppc64le, testing the install and build process. I was then able to test OpenShift with some of Belisama's test applications as well as IBM Cloud Paks (CP4D and MCM).
In January I testing the new installation process using the 4.6 branch with rhel-8.3-ppc64le and rhcos-4.6-ppc64le, running the same tests, as well as testing the new High Availability option for the management (bastion) nodes.
Overall found that procedure is well documented, easy to follow and repeatable and OpenShift on Power is .. well.. just OpenShift! I am happy to share details if you are interested or arrange a demonstration / POC if required.

> For details see: https://www.ibm.com/support/pages/red-hat-openshift-ibm-power-systems-virtual-server
> For installation tutorial see: https://developer.ibm.com/series/deploy-ocp-cloud-paks-power-virtual-server/

Carbonize (**https://www.carbonizetech.com**)

For a while now I have been looking at options for companies that are moving down the path of "digital transformation" or "Modernisation" and addressing the concerns about what can be done with existing (often mission critical) applications. Can we manage the increasing complexity caused by adding new management tools and environments and apply similar improvements to our mission critical environment?
One option is to "containerise" these environments, but I had written this of as a complex and time consuming option. However last year I was introduced to Carbonize and their "Containerize Cloud Engine", which according to their website is "*an AI augmented containerization Tool as a Service, that allows businesses to begin their cloud transformation journey quickly by modernization* [sic] *their legacy and non-legacy VM applications in minutes*".
Could this work on Power? I gave it a test using an application that I had built in my PowerVS environment (RHEL 8.2 ppc64le). All I had to do was send them an OVA and within a day I had an image I could import into podman and use – just like the original VM. I was also provided with a

useful summary of the code/libraries in my image and what vulnerabilities existed – and yes, running on ppc64le!
Well worth exploring if you are thinking about going down this track. Feel free to contact me (or Carbonize) for further information.

Worth a read

Rob McNelly thinks about some ideas for expanding the Power Systems/AIX Universe, see link

Worth attending

ASEAN Power (AIX, IBM i, Linux) meeting. Join us on Friday, January 29, 2021 from 10:00 to 12:00 GMT+8 for 2 sessions covering :what's new for AI and HPC on IBM Power Systems:

- Data, AI and HPC at scale
  Clarisse Taaffe-Hedglin (IBM)
- Accelerating your HPC workloads with IBM BOA
  Lewski Mamada (IBM) & Daichi Tanaka (IBM)

Link: https://www.meetup.com/Singapore-AIX-IBM-i-Linux-on-Power-Meetup-Group/events/275898658/

IBM Champions

Congratulations to all the IBM Champions of 2021 – looking forward to working together for another year. For a list of this year's Champions see:
https://community.ibm.com/community/user/blogs/libby-ingrassia/2021/01/20/congratulations-2021-ibm-champions#ItemCommentPanel

IBM PowerVC V2 roundup

IBM Power Virtualisation Centre version 2.0, which was available in December 2020 introduced a new user interface that is based on Carbon framework. Carbon is IBM's open source design system for products, which with the IBM Design Language as its foundation, it consists of working code, design tools and resources, human interface guidelines, and a vibrant community of contributors.
Summary of changes:

- Install - support for RHEL 8.2 and SLES 15
  Support is available on RHEL 8.2, RHEL 8.3, SLES 15 SP1 and SLES 15 SP2.
  You can upgrade the existing 1.4.4.x PowerVC RHEL7 based installation to version 2.0.0, on the platform of your choice (RHEL8 or SLES15). For details see:
  https://www.ibm.com/support/knowledgecenter/SSXK2N_2.0.0/com.ibm.powervc.standard.help.doc/powervc_upgrading_hmc.html?view=kc
- Python3 support for PowerVC
  Starting with the V2 release, PowerVC is aligned with the Python and OpenStack community and only has support for only Python3 on management and NovaLink nodes.
- Backup or Restore support between RHEL8 and SLES15 management nodes.
  With PowerVC version 2.0.0, a backup taken from either RHEL8 based PowerVC instance or SLES15 based PowerVC instance can be restored to either RHEL8 or SLES15.
- Global mirror with IBM Storwize

Now the global mirror functionality of IBM Storwize is supported for volume replication and support DR configurations.

- Persistent memory virtualisation
  PowerVC now supports Persistent memory virtualisation, so when an LPAR is deployed with a persistent memory volume, boot time is reduced during restart as the persistent memory volume is retained.
- LPAR snapshot and restore
  Snapshots allow you to take a consistent snapshot of some or all volumes attached to an LPAR. You can list the available snapshots and chose one to restore to that given point in time.
- Clone LPAR
  Create an identical copy of an existing LPAR.
- Retype
  The current storage template of a volume can be change to target storage template. Some volume properties (QoS, Provisioning, etc) can be changed, also you can choose to migrate the volume to another Pool specified in the target template.
- Consistency groups
  The PowerVC consistency groups feature uses OpenStack generic volume group APIs.
- Clone Volumes
  A consistent copy of volumes (available or attached) can be created. You can also define a preferred prefix for the cloned volumes.
- Pure Storage now as an integrated driver.
- PowerMax updates to set masking view when attaching volumes.
- Storwize volumes can be configured with disable fast formatting and FlashCopy rate can be configured in storage template.
- Hitachi GAD now supported for live capture.
- Cisco switch timeout – The Cisco Fabric retry time can be set.
- Capture and deploy of LPARs has been enhanced with a quicker update of the health status (RMC improvement).
- A performance tuning CLI available to scale tuning parameters to management and NovaLink nodes.
- LPARs can now be deployed from either the VM list page or the Images list page.
- Support for TLS1.3 and HTTPv2 has been added to all PowerVC REST APIs.
- Improved scalability from 6,000 VMs to 10,000 VMs, and increased storage scalability from 10,000 volumes to 20,000 volumes.
- Multifactor authentication (MFA) support.
- Two new Dynamic Resource Optimiser (DRO) policies:
  - Combined CPU and memory utilisation.
  - Shared processor pool utilisation.

AIX Installation tips

The following aix installation tips have been updated:

- AIX 7.1: https://www.ibm.com/support/pages/node/883754
- AIX 7.2: https://www.ibm.com/support/pages/node/883116

PowerVM Virtual I/O Server (HIPER APAR IJ30090)

Details: Tape backup or restore may fail or be slow with VIOS 3.1.2 using NPIV. LPARs running applications with serialised I/O (typically tape jobs) using Virtual Fibre Channel adapters on VIOS 3.1.2 may experience slow I/O or I/O failures.
Primarily seen with IBMi tape backups over NPIV, causing them to take significantly longer or fail after updating the VIOS to 3.1.2.
Versions affected

VIOS 3.1.2.0 to VIOS 3.1.2.10

Fix level

VIOS 3.1.2.20 (IJ30090)

See: http://www14.software.ibm.com/webapp/set2/subscriptions/onvdq?mode=18&ID=6773&myns=swgother&mynp=OCSSPHKW&mync=E&cm_sp=swgother-_-OCSSPHKW-_-E

Vulnerability in gencore

A vulnerability has been found in gencore that affects AIX (CVE-2020-4887)
The following are affected:

- AIX 7.1 and 7.2
- VIOS 3.1

Versions of bos.mp64

- 7.1.5.0 to 7.1.5.40
- 7.2.3.0 to 7.2.3.19
- 7.2.4.0 to 7.2.4.6
- 7.2.5.0 to 7.2.5.1

See: https://www.ibm.com/support/pages/node/6406022

In case you missed ….

What's new in Red Hat Enterprise Linux (RHEL) 8.3 by Scott McBrien. See webinar: https://www.brighttalk.com/webcast/18106/450728?utm_source=Red+Hat+Partner+Connect&utm_medium=brighttalk&utm_campaign=450728

IBM Solutions Directory
The 2021 indispensable guide to IBM i, AIX, Linux on POWER and Storage solutions is now available. See: http://www.ibmsystemsmagpowersystemsdigital.com/mspcomm/ibmsystemsmag/ibmsystems_solutionsdirectory2021/index.php#/p/Intro

Streamline and automate AIX, IBM i or Linux tasks with Ansible certified on Power Systems. See https://www.ansible.com/integrations/infrastructure/ibm-power-systems

Redbooks and Redpapers

- IBM SAN Volume Controller Best Practices and Performance Guidelines - Draft Redbooks, last updated 27 Jan 2021
  http://www.redbooks.ibm.com/Redbooks.nsf/RedpieceAbstracts/sg248502.html?Open

- IBM Power Systems Private Cloud with Shared Utility Capacity featuring Power Enterprise Pools 2.0 - Draft Redbooks, last updated 27 Jan 2021
  http://www.redbooks.ibm.com/Redbooks.nsf/RedpieceAbstracts/sg248478.html?Open
- IBM FlashSystem Best Practices and Performance Guidelines - Draft Redbooks, last updated 26 Jan 2021
  http://www.redbooks.ibm.com/Redbooks.nsf/RedpieceAbstracts/sg248503.html?Open
- IBM Power Systems H922 and H924 Technical Overview and Introduction - Redpaper, published 8 Jan 2021, last updated 26 Jan 2021
  http://www.redbooks.ibm.com/Redbooks.nsf/RedbookAbstracts/redp5622.html?Open
- IBM Power Systems S922, S914, and S924 Technical Overview and Introduction Featuring PCIe Gen 4 Technology - Redpaper, published 16 Jul 2020, last updated 26 Jan 2021
  http://www.redbooks.ibm.com/Redbooks.nsf/RedbookAbstracts/redp5595.html?Open
- Introduction Guide to the IBM Elastic Storage System - Draft Redpaper, last updated 25 Jan 2021
  http://www.redbooks.ibm.com/Redbooks.nsf/RedpieceAbstracts/redp5253.html?Open
- Red Hat OpenShift V4.X and IBM Cloud Paks on IBM Power Systems Volume 2 -Draft Redbooks, last updated 13 Jan 2021
  http://www.redbooks.ibm.com/Redbooks.nsf/RedpieceAbstracts/sg248486.html?Open

Best wishes for the year of the Ox and keep safe,
Red, Belisama