

VM Workshop 2019 - Session Abstracts

| Title | Synopsis | Presenter | When / Room |
|---|--|-------------------------------|-----------------------------------|
| Welcome to VCU But That Is Not All subtitle: The VCU IBM Z Academic Initiative Project Strategy and Direction | Opening Session - Virginia Commonwealth University is the center where business, government, and academia intersect and collaborate for the State of Virginia and beyond. In turn, the Greater Richmond Area benefits greatly from the investment VCU makes in programs, projects, and people, and infrastructure. | John Leonard | Thursday 8:30/108 |
| Help Wanted: Replacing Retiring Mainframe Skills and Introducing Z to Students / How to divulge IT's best kept secret to students | This session will start with an update of IBM's Academic Initiative program for IBM Z with a focus on recruiting techniques. This will be followed by a review of a presentation that can be shared with high school and college students to make them aware of mainframe career opportunities. The "IT's Best Kept Secret" presentation covers; what is a mainframe, who uses today's mainframe, and what career opportunities will I see if I pursue an education around IBM's Z System | Christy Shroeder & Marc Smith | Thursday 10:45 / 108 |
| Accelerate Networking with Shared Memory Communications for Linux on IBM Z | Overview of SMC technology for Linux on Z. Includes technical concepts, current status in Linux distributions, considerations for deployment, interoperability with z/OS and an outlook on upcoming features. | Stefan Raspl | Friday 11:00 / 209 |
| Setting up a DB2 instance using IBM Cloud Private | Will cover how to setup and install DB2 using the IBM Cloud Private interface. I will access the DB2 instance using Linux | Michael Weiner | Thursday 15:30 / 209 |
| What's New in Linux on IBM Z | This session provides an overview of recently delivered as well as new features that are currently under development by IBM and the open source community. The presentation will address both IBM Z and LinuxONE specific features, as well as platform-independent developments which are relevant to Linux on Z. | Stefan Raspl | Thursday 14:15 / 209 |
| Choose Wisely - Linux on IBM Z Networking Card Options | RoCE Express cards are primarily intended for use with Shared Memory Communications Remote (SMC-R). But with Linux, there is also the possibility of using them as a general purpose Ethernet device. This presentation literally puts OSA and RoCE devices side by side to discuss their properties, features, and use cases on the IBM Z and LinuxONE platforms. Basic knowledge of networking technology recommended. | Stefan Raspl | Friday 13:15 / 209 |
| Welcome To The Jungle - Linux on IBM Z Networking Options | With the wealth of networking options available on IBM Z and LinuxONE, it is easy to get lost in the wilderness. This presentation provides an overview of all networking facilities and options offered by the machines' hardware, NICs, and hypervisors, as well as their respective support by Linux. Basic knowledge of networking technology recommended. | Stefan Raspl | Thursday 9:30 / 209 |
| z/VSE technical update | This session provides the latest news since the last VM Workshop. It addresses new hardware support security, crypto and networking enhancements in z/VSE 6.2. I will also talk about service news and announcements. | Ingolf Salm | Thursday 10:45 / 210 |
| Hints & Tips - z/VSE Release & Hardware upgrade | This session provides some general hints and tips. I will mainly address the upgrade to z/VSE 6.2 and to new IBM Z processors, such as the z14 ZR1. The tools z/VSE provides will also be covered. Please let me know, what aspects I should cover in addition. | Ingolf Salm | Thursday 15:30 / 210 |
| Why and how to containerize your applications in Linux on Z | Step by step containerization for Linux applications. If you know how to use a Linux system, come and get informed what is a Microservice and a container and then we'll go step by step over to containerize an application package. We'll discuss the options to build it and how it can then be used as Microservice. | Wilhelm Mild | Thursday 10:45 / 209 |
| z/VM and Virtualization Hands-on Lab - Choose your own Lab | In this three part hands-on lab you choose hands-on lab exercises for one of these options: z/VM SSI Installation and Configuration z/VM non-SSI to SSI Migration z/VM Upgrade In Place from one release to a newer one DPM and KVM (modify a dpm partition, install Ubuntu 18.04 as a KVM host, install virtual machines) Most of these choices will take the full 3 session slots, so it will not be possible to complete multiple labs. Each lab selection comes with a comprehensive lab workbook that provides step by step instructions and will be useful as a reference later. This session is intended for both beginners in z/VM and those who may have familiarity with z/VM but need a refresher | Richard Lewis | Thursday 9:30, 10:45, 13:00 / 107 |

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| Introduction to Docker and Kubernetes on Linux for IBM Z | <p>In this hands-on lab, attendees will gain experience installing the docker engine provided with SLES 15, and then have an opportunity to work with the SUSE provided pre-built SLES15 container application base image, customize that image, and build new images from that base. As images are built there will be an opportunity to explore docker containers running these images. The second part of this hands-on lab will involve installing and configuring Kubernetes using packages built using the SuSE OpenBuild system. Students will setup a Kubernetes Master Node and two Worker Nodes. Once the Kubernetes cluster is configured a simple application container image will be run in the cluster, and then a replicaset of this application image will be run and scaled up and down. Students will gain experience interacting with Kubernetes using the kubectl command line interface.</p> | Richard Lewis | Thursday 14:15, 15:30, 17:00 / 107 |
| Linux for IBM Z Installation Hands-on Workshop | <p>This hands-on lab will provide an opportunity to install Linux for IBM Z into a z/VM virtual machine, do some basic system administration and configure commonly used packages such as Apache. There will also be an opportunity to install the docker engine and create some basic images and run those images in containers. The choices for installation will be RedHat 7.5, SUSE SLES 15, and Ubuntu 18.04 LTS. This is a three part lab to provide enough time to work through the lab workbook.</p> | Richard Lewis | Friday 8:30, 9:45, 11:00 / 107 |
| End-to-end Encryption of Data at Rest for Linux on Z and LinuxONE | <p>End-to-end encryption is the method of choice to protect data stored on a disk. It ensures that the owner of the data also owns the encryption keys and thus controls the access to his or her data once it has left the operating system. Dm-crypt is the most popular method for encrypting Linux disks. Using IBM Z CPACF protected keys with dm-crypt the keys to protect dm-crypt volumes can be protected from being stolen and used outside of the system that generated the keys. This extra level of security is a key feature of Pervasive Encryption. This presentation shows how to use dm-crypt with protected keys, discusses different encryption formats, covers some best practices on using dm-crypt and describes key management using the zkey key repository.</p> | Ingo Franzki | Thursday 13:00 / 210 |
| Utilizing z/VSE's REST Engine for asynchronous messaging with IBM MQ | <p>This session provides a deep dive into RESTful web services and how it can be used to interface with IBM MQ to achieve asynchronous messaging. The presentation starts with some basics around REST and the HTTP protocol, as well as how to use or provide RESTful web services with z/VSE in general.</p> <p>After the end-of-service of IBM WebSphere MQ Server on z/VSE and the change of the support statement of the MQ Client on z/VSE to 'as-is', the REST interface provided by MQ version 9 can now be used together with the z/VSE REST engine to utilize asynchronous messaging using a supported software stack.</p> | Ingo Franzki | Friday 8:30 / 210 |
| z/VSE Connectors - Best practices and use cases | <p>z/VSE offers a huge set of connectors and tools that allow z/VSE to participate in a distributed application environment. The session gives a technical overview about the z/VSE Connectors and discusses typical use cases. It also discusses various best practices when utilizing the z/VSE Connectors to get the best out of them. This session covers connectors such as Java-based Connector, VSAM Redirector, VSE Script Server, Database Connector, but also connectors based on CICS Web Support, such as CICS Transaction Gateway, SOAP-Support, and RESTful Web Services.</p> | Ingo Franzki | Friday 14:30 / 210 |
| Secure your z/VSE network connections using OpenSSL | <p>This session will show how to exploit z/VSE Security and Crypto features and especially the new OpenSSL support to secure your network connections from and to z/VSE. In today's world it is essential that all the data that is sent over a network is encrypted, i.e. by using SSL/TLS. This session shows how you can achieve this on z/VSE. We will also discuss recent technology news such as Diffie-Hellman key exchange and Elliptic Curve cryptography and how it can be used with z/VSE. In addition, IBM mainframe cryptographic technology, including Crypto Express and CP Assist for Cryptographic Function (CPACF) are discussed and how it is used with OpenSSL.</p> | Ingo Franzki | Saturday 8:30 / 210 |

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| <p>Good Practices for Performance, Optimization, and Config Management for z/VM and Linux on Z and LinuxONE</p> | <p>This session will be of interest to anyone running Linux under z/VM, both new and experienced alike. Recommendations and good practices covering configuration management will help both the z/VM systems programmer and Linux system administrator on your process of iterative tuning to obtain the best possible optimized environment. Learn what to watch out for, common mistakes, problem determination, configuration considerations, what's changed, what's new, and more. Spend time optimizing and enhancing a stable and reliable LoZ cloud instead of being hoisted by your own petards and putting out fires!</p> | <p>Paul Novak</p> | <p>Friday 8:30 / 108</p> |
| <p>MongoDB at Marriott</p> | <p>Marriott did a POC designed to offload some of the traffic currently being handled by our reservation system. Shopping traffic has increased so dramatically over the past few years that an alternative had to be looked into. This story started at SHARE 2019 in Phoenix and continues here before being presented at SHARE 2019 in Pittsburgh PA</p> | <p>Kurt Acker</p> | <p>Friday 9:45/108</p> |
| <p>Leveraging the Newest Capability in z/VM</p> | <p>The z/VM Platform Update discussed the new enhancements that have shipped since the last VM Workshop and reviewed the value of those items. This session will review hints and tips on implementing those enhancements to get the most value out of them. We'll cover items such as Virtual Switch Priority Queuing, EAV Paging, TCP/IP Elliptic Curve Cryptography (ECC) Cipher Suite Support, and others.</p> | <p>Bill Bitner</p> | <p>Friday 11:00/108</p> |
| <p>z/VM Platform Update: Ever Onward</p> | <p>z/VM 7.1 is the first release in a new release cadence. This session starts with a high-level tour of the overall continuous delivery strategy and release cadence; and then begins a tour of five value areas and the recent enhancements in each of those areas. You will hear about things such as encrypted paging, greater scalability, and RAS enhancements. This presentation focuses on the business value of z/VM and its enhancements and other planning information. There is a companion presentation called "Leveraging the Newest Capability in z/VM" which goes into implementation details for the enhancements discussed here</p> | <p>Bill Bitner</p> | <p>Thursday 9:30/108</p> |
| <p>z/VSE Business, Strategy, News & Pricing</p> | <p>In this session I will cover a brief overview about Business & Strategy and the longer part will be what IBM and our customers are doing around z/VSE 6.2 and Pricing.</p> | <p>Gonzalo Muelas Serrano</p> | <p>Thursday 14:15 / 210</p> |
| <p>A Bit of a Talk with Customers</p> | <p>Join us in this session as Bill Bitner sits down with a few of our customers to hear their stories. Find out how they got into the z/VM space, what surprises they found, and learn how they run their z/VM systems. When we tell our stories and we listen to others tell their stories, we often learn that we're not alone. We're much better together</p> | <p>Bill Bitner</p> | <p>Thursday 17:00 / 108</p> |
| <p>Watch and Learn: Introduction to CMS Pipelines</p> | <p>I'm not a master plumber, but I play one at the VM Workshops. This session has three objectives: show you the power of pipelines, show you the usefulness of pipelines, and have fun. This session is for those new to the pipelines programming framework in z/VM. We'll explain a little background and then start off with working examples. You'll be welcome to play along if you'd like. We'll demonstrate the use with some real world examples</p> | <p>Bill Bitner</p> | <p>Friday 16:30 / 108</p> |
| <p>SCVA; Journey to IBM z14 ZR1 with z/VSE, z/VM, and LoZ</p> | <p>Hear how the Supreme Court of Virginia with the help from VicomInfinity migrated workloads from (2) – zBC12s to the z14 ZR1. Discussion on performance metrics, software provisioning and workload migrations will be discussed in this open forum session</p> | <p>Mike Riggs Len Santalucia</p> | <p>Friday 15:30 / 108</p> |
| <p>REXX Language Coding Techniques - Part 1</p> | <p>If you're a beginner or intermediate REXX programmer who wants further insight on better REXX programming techniques, this session is for you! In Part 1, we'll review available REXX products and related products (both free and priced), an introduction to functions vs instructions vs procedures, variable visibility, and parsing. Attend Part 2 for more topics.</p> | <p>Tracy Dean</p> | <p>Friday 13:15 / 108</p> |
| <p>REXX Language Coding Techniques - Part 2</p> | <p>If you're a beginner or intermediate REXX programmer who wants further insight on better REXX programming techniques, this session is for you! In Part 2, we'll review compound variables vs data stack, troubleshooting, and programming styles for REXX.</p> | <p>Tracy Dean</p> | <p>Friday 14:30 / 108</p> |

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| Customer Experiences Managing z/VM, Linux and LinuxONE | Whether implementing cloud or supporting server consolidation projects, customers are implementing mission critical applications on Linux on IBM Z and LinuxONE. In this session, the speaker focuses on real customer problems and associated solutions with managing this new infrastructure. Topics include monitoring messages, monitoring spool space, sending alerts, automatically fixing a problem, coordinating activities with z/OS and other z/VM systems, and backing up and recovering critical data. | Tracy Dean | Thursday 15:30 / 108 |
| A Journey with Linux on z/VM | Len Santalucia with Vicom Infinity, and a customer, discuss being one of the early adopters of Linux on z/VM with applications such as the customer's web site, Cognos and Oracle DB. As time progressed, the customer's Linux on z/VM environment has evolved and migrated through many generations of IBM Z systems, Linux, and z/VM. There will be a good discussion on lessons learned from a technical and business perspective. | Len Santalucia | Thursday 14:15 / 108 |
| Z/VSE and Network Performance - Its easier and harder than you think | Jeff Barnard of Barnard Software, Inc. will discuss the various considerations for Network Performance and Tuning with z/VSE in mind. Can you make VTape faster? What about FTP? Will moving to 10Gbe help me? These questions and much more will be discussed. | Jeff Barnard | Friday 9:30 / 210 |
| Using Your Performance Monitor to Watch z/VM and Linux on IBM Z | Sometimes bad things happen to good systems. Your environments run all day, every day, and trouble can creep up if they are not monitored. Systems Programmers and Linux Admins have a lot to do without watching system monitor screens all day. See how to proactively monitor your z/VM and Linux on Z environments with tools available in z/VPs. | Rich Smrcina | Saturday 8:30 / 108 |
| Cloud Enabling z/VM the Easy Way | Today, more than ever, we are all pressed for time to work on everything we have to get done. Building and managing Linux servers on z/VM is not only a great use of mainframe technology but very time consuming without the right tools to support you and your business. In this session hear about a powerful yet easy to use cloud management product for z/VM that will not only help free up precious time, but also help Linux on z/VM flourish. zPRO from Velocity Software has been developed for system admins and end-users alike to enable them to build and manage Linux on Z servers quickly and easily. You will hear how fast you can install and set up zPRO and how it can be used on any z/VM system, with or without a directory or security manager and how you can "plug it in" to other virtual server management systems with our RESTful APIs. | James Vincent | Thursday 13:00 / 108 |
| Migrating Live Linux and zVM systems to new DASD | This session will discuss why a non-disruptive migration of live Linux and z/VM systems is essential in achieving today's 24/7, 100% availability goals. It gives an overview of the FDRPASVM product from Innovation Data Processing, followed by a live demo swapping a live z/VM system to a new string of DASD. | Mehdi Fadaifard | Friday 14:30 / 209 |
| What's new in the zPDT Environment | Mainframe emulation is common today and heavily used for application development but what are the limitations and capabilities? Learn about the different packages and options from IBM and how to use them effectively to achieve mainframe quality application development. What are some of the roadbumps that you may experience with zPDT and zDT using zVSE, z/VM and zOS? How to avoid the pitfalls? What can it do and what it cannot! | Stan King | Friday 13:15 / 211 |
| Install and Use of the IBM Terminal Server for zLinux | This session will cover how to install, configure and use the IBM terminalserver for Linux on System z. The Terminal Server is part of the s390-tools package and permits normal access to other zLinuxguests running on the same z/VM system, even if they are not connected to a working TCP/IP network. This permits the use of common Linux tools like vi, Emacs, and nano, to be used even in the event of a network failure. Other uses for the terminal server, including centralizing access to large Linux on System z penguin farms and segregating administrative network traffic from user traffic to enhance security, will be discussed as well. | Dave Jones | Friday 8:30 / 209 |
| Securing RXSOCKET applications with TLS | z/VM 6.4 included support for securing IUCV based sockets with TLS. Sadly 6.4 did not enhance Rexx Sockets to exploit that support. Now that 7.1 has shipped (still) without TLS support in Rexx Sockets, customers are forced to take matters into their own hands. Join Dave and Perry for an overview of z/VM's SSL/TLS support, what was new in 6.4, the changes done to add TLS support to Rexx Sockets and finally, we review a popular Rexx Sockets application that has been secured with TLS. | Perry Ruitter/Dave Jones | Friday 16:30 / 209 |

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| <p>GDPS and the GDPS Virtual Appliance</p> | <p>This presentation will cover GDPS and its many aspects that interact with z/VM, Linux, and LinuxOne to provide disaster recovery (DR). This presentation will cover GDPS and its many aspects that interact with z/VM, Linux, and LinuxOne to provide disaster recovery (DR). -GDPS product family overview -GDPS xDR overview -Synergy with z/VM -2-site, 3-site, 4-site, red-site, blue-site by (DR) Sues -GDPS Virtual Appliance overview (AKA, How to bring DR to LinuxOne) -Design Thinking session where you can shape our roadmap to fit your business needs</p> | <p>Steven Cook</p> | <p>Friday 9:45 / 209</p> |
| <p>MongoDB and Linux on Z</p> | <p>MongoDB has quickly become the most popular modern database for application developers. This session will provide an introduction to MongoDB's unique capabilities, and discuss how IBM Z users can quickly expose mainframe data to new, innovative applications</p> | <p>David Koppe</p> | <p>Thursday 13:00 / 209</p> |
| <p>SSH Client Suite for CMS</p> | <p>In this era of secured communications one of the key lacking pieces from CMS has been the ability to transfer files or run commands on remote systems using TLS mechanisms. CMS does provide FTPS support but tools such as scp, sftp, and ssh are not present. SNA has provided a suite of clients that fills this gap. Anyone familiar with the Putty tools pscp, psftp, and plink will be comfortable in using this set of tools. Support for direct access to SFS is also supported.</p> | <p>Neale Ferguson</p> | <p>Friday 11:00 / 211</p> |
| <p>Managing and Orchestrating Docker Containers with OpenShift</p> | <p>If you have experimented with Docker or even put some containers into your DevOps environment, it quickly becomes clear that there is a need to simplify the build, deploy, and promote process. OpenShift Origin is the community version of the RedHat OpenShift commercial offerings. Built around a core of Docker container packaging and Kubernetes container cluster management, Origin is augmented by application lifecycle management functionality and DevOps tooling. Origin provides an open source application container platform.</p> | <p>Neale Ferguson</p> | <p>Friday 15:30 / 209</p> |