VM Workshop 2022 - Session Abstracts

Title	Synopsis	Presenter
Setting up a minimal RedHat OpenShift environment on Linux on z	If you've heard about RedHat Openshift Container Platform and are curious how to get it going on IBM Z, please attend this session. This sessions is not a "best practice" session, but lets you learn from someone who had to do it a bunch of times to get it right and repeatable. You should understand Linux concepts and basic IP network concepts/services.	Sam Cohen
Improving security with z/VM Directory Changes	If you don't want to implement an external security manager (ESM) (like RACF, CA-ACF2, CA-Top Secret), you can still improve system security and auditing by making some basic changes to the z/VM Directory. This session will cover some techniques for basic improved security, even if you want to later implement an ESM.	Sam Cohen
Running CICS applications on zLinux	OpenKicks implements the CICS API on Linux, zLinux and AIX. Although primarily developed to work with GnuCOBOL, it also works with Micro Focus COBOL, Fujitsu COBOL, IBM COBOL, and other proprietary COBOL compilers. This demonstration will be zLinux and GnuCOBOL showing BMS screens, web interface for configuration, Will also show editing source code using Visual Studio Code (on Linux). OpenKicks is licensed as source code to companies that desire complete control of their software stack.	Michael Potter
Automating MongoDB Deployments on Mainframes	IBM brought up an interesting challenge for the engineers at Sine Nomine Associates (SNA). Using the tools currently available, can MongoDB be deployed in an automated fashion to IBM's LinuxONE mainframes in 30 days? At the same time, can the data be backed up in a fashion that protects it from corruption along with ransomware attacks? Acknowledgement: Neale Ferguson, Elton De Souza, Aaron Balaster and the IBM garage team.	Kurt Acker
VM - If you don't know where you've been...	Sir Mark of SESfari will look back at some of the highs and lows of a 20-year career working with VM, both with and for IBM, mostly because he can't look forward to it. He'll cover both personal and IBM/VM milestones, talk about the importance of making epic mistakes, both his and IBM's. Did you ever see a 3033 multi-processor system? Mark will recall how a single CCW can lock up a system as big as half a football field. That was an IBM problem, 3-years later Mark made a similar mistake with a simple REXX exec, locking up a 3084MP. When debugging and source tracing the original OCO version of SES, over a 4-day weekend at the IBM IEC Education Center in Brussels, Mark locked himself out of his room. What happened next? Equally what happened when you are organizing the first major VM and Mainframe conference in Europe and the US and British Government decide to invade Iraq? Mark will talk about the dark mainframe days of the early 1980's, the years of enlightenment, as well as why IBM bought into Linux, and it wasn't for "free beer". These and many more questions about VM will be answered with humor and humility, and a large dose of VM history.	Mark Cathcart
z/VSE Business, Status and Strategy Update	Latest news about zVSE business, status and strategy. This includes everything about our partnership with 21st Century Software, hardware and a future outlook.	Rene Trumpp
Hybrid Cloud for IBM Z and LinuxONE building on IBM Cloud Infrastructure Center	All enterprises execute their Cloud strategy, but what does it really take to transform an IBM Z or LinuxONE system becoming Cloud-ready? And how does it integrate into an enterprise hybrid Cloud configuration? Can I leverage any of my existing z/VM, KVM and or PR/SM and DPM investment? What about storage? and tooling? or is it just more of the same? The session will discuss the transformation for IBM Z and LinuxONE delivering an elastic, private Cloud infrastructure building on Linux and Red Hat OpenShift, containers, virtual machines, software-defined storage and networks, and extends into ITops-transformation in support of Cloud.	Ingo Adlung, Stev Glodowski
Boosting TPC Networking Performance on IBM Z and LinuxONE with SMC-Dv2	SMC-Dv2 can transparently boost your TCP networking performance a great deal while saving CPU at the same time! This session will provide a to-the-point introduction on what SMC-Dv2 offers, how to deploy, and operate.	Stefan Raspl
Linux on IBM Z Networking with RoCE Express	RoCE Express adapters are growing to become more and more important as general purpose TCP/IP networking devices with Linux on IBM Z and LinuxONE. With their low latency, they can provide lots of value outside of their intended use with SMC-R. This session provides an overview on how to use RoCE Express adapters with Linux on IBM Z and Linux ONE as their sole networking interface, from installation to regular operation.	Stefan Raspl
Getting the Most Out of the Latest Features in Linux on IBM Z and LinuxONE	This session will start with a brief overview of all available Linux distributions on the IBM Z and LinuxONE platforms, before existing and upcoming features that are currently under development by IBM and the open source community are covered. The presentation will address both, IBM Z-specific features, as well as platform-independent developments which are relevant to Linux on IBM Z, and will end with the latest news on KVM on the platform.	Stefan Raspl

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OpenShift on Z - Try & Buy	How to start a PoC with OpenShift on Z and LinuxONE? In this session we will show how IBM and RH can help you get started with an OpenShift Trial. We will present the different options to acquire OpenShift for Trial or Production purposes and explain the differences and commonalities between various ordering and subscription options.	Stev Glodowski
Whats New in IBM Cloud Infrastructure Center 1.1.4 and 1.1.5	During this session we will provide an overview of the new capabilities introduced with the latest release of IBM Cloud Infrastructure Center. We will also show new use cases the product supports and provide the opportunity for you to share your idea's for future enhancements.	Stev Glodowski, Ingo Adlung
z/VM NVMe EDEVICE Sponsor User (Beta) Experience	The IBM Endicott z/VM Lab conducted a six-month Sponsor User (Beta) Program. During this program, Vicom Infinity evaluated and tested NVMe EDEVICE on its z15 T02 running under z/VM and KVM. Vicom Infinity will discuss their experience and the results from the evaluation and testing of NVMe SSD Disk directly attached to the backplane of their z15!!!	Len Santalucia, Romney White, Kerry Wilson
Why virtualization is still highly used in the era of containers and cloud	The session will illustrate how crucial virtualization is for environments hosting container workloads and clouds on IBM Z and LinuxONE. Based on customer implementations it will show the flexibility and advantages using z/VM virtualization and how you can get the most of it.	Wilhelm Mild
The mainframe in the era of clouds and hyperscalers	In this session we will discuss how we can take advantage with IBM Z and LinuxONE of the new trend towards clouds with multiple providers and and different hardware architectures. The traditional core environments will co-exist for a long time but the integration and the focus to expand to cloud services will be outlined in use cases from different industries that are using these hybrid solutions.	Wilhelm Mild
Red Hat OpenShift overview and new capabilities	The session will give an overview of Red Hat OpenShift Container Platform on IBM Z and IBM LinuxONE and covers the planning aspects for capacity, storage and networking with considerations for resiliency with High Availability and Disaster Recovery options. The new enhancements enable strong security and crypto and integration using automation components from cloud into native z/OS and other private or public clouds.	Wilhelm Mild
VM/370 to z/VM - 50 Years of Mainframe Virtualization	2022 marks the 55th anniversary of CP/40 going into production and the 50th anniversary of the announcement of VM/370. Sir Jim the Evangelist will provide an historical (and hopefully entertaining) view of the evolution of mainframe virtualization over the decades. Workload evolution will also be covered from early time- sharing on CP/67 to DOS/VS guests through to PROFS and now to Linux on IBM Z.	Jim Elliott
Rexx Language Coding Techniques - Part 1 of 2	If you are 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 versus instructions versus procedures, variable visibility, and parsing. Attend Part 2 for more topics.	Tracy Dean
Rexx Language Coding Techniques - Part 2 of 2	If you are a beginner or intermediate Rexx programmer who wants further insight on better Rexx programming techniques, this session is for you! In Part 2, we will review compound variables versus the data stack, troubleshooting, and programming styles for Rexx.	Tracy Dean
Customer Experiences Managing z/VM and Linux	Whether implementing hybrid cloud or supporting server consolidation projects, customers are implementing mission critical applications on Linux on IBM Z and LinuxONE. In this session, the speaker will focus on real customer problems and associated solutions with managing this new infrastructure, including monitoring messages, monitoring spool space, sending alerts, feeding data to analytics platforms, automatically fixing a problem, and backing up and recovering critical data.	Tracy Dean
Backup Strategies for z/VM and Linux	As the Linux on IBM Z environment continues to grow, the need for software and solutions to manage this environment also grows. In this session, the speaker will focus on the various approaches customers use to back up and restore data and disks for z/VM and Linux, including the advantages and disadvantages of each method. It will include a live demo of one method, including automation. If time allows, the presentation will also include considerations for a z/VM SSI cluster.	Tracy Dean
Monitoring z/VSE with zVPS	With the introduction of SNMP for z/VSE some time ago, Velocity Software has been able to monitor z/VSE systems with our performance suite that runs on z/VM. We are improving and enhancing that capability to add TCP/IP monitoring and CICS monitoring. Come to this session to hear what we are doing and to see our live systems via a demo. You will also be able to follow along either in the session or post-workshop to show interested parties in your company.	Rich Smrcina
Oracle with z/VM Customer Experiences	This session will provide an update of all the latest updates for customers using or considering to use Oracle running under z/VM. Customer use cases will be shared highlighting performance improvements, security setup and configuration with Oracle Transparent Data Encryption (TDE) and dm-crypt. Oracle network and I/O considerations that customers have implemented running under z/VM will be discussed as well.	David Simpson

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Modernizing the Great z/VM Platform	Many attempts have been made to modernize z/VM. We finally have something that is easy to use, lightweight, and provides significant function toward that goal. With zPRO we can accomplish many typical systems programming tasks. Managing spool, security, shared file systems, virtual networks; taking backups and task scheduling are among the many features that are implemented to make the system programmers job easier... in addition to zPROs traditional strengths in virtual server management. This session will provide you all the details behind what zPRO can do for you and be a fun and interactive free-for-all to get your feedback on ideas to make zPRO even better!	Rich Smrcina & James Vincent
IBM Z and LinuxONE Technology and Servers Products Update	2022 is shaping up as a big year for IBM Z and LinuxONE server updates. Attend this session to receive an overview of the server technology being released and the new capabilities and features making the servers unique in the marketplace.	Monte Bauman
LinuxONE Technology and Solutions Overview	LinuxONE (and Linux on Z) covers a lot of ground, from servers to virtualization to software to solutions. This presentation will overview the entire solution stack and will overview the ecosystem which makes LinuxONE tick.	Monte Bauman
Experience with a large-scale deployment using Dynamic Partition Manager	This session covers the end-to-end experience that we had in the IBM Washington Systems Center assisting a Tier 1 (very large) bank in migrating Linux workloads from distributed systems to LinuxONE. The CPC was in Dynamic Partition Manager (DPM) mode, all of the storage was FCP/SCSI, and most of the work was deployed under z/VM 7.2.0. There were numerous pitfalls and ways that we wound up having to re-work things after learning some lessons the hard way. This session covers the environment we had, decisions made, automation created, standards created, and more. There will be information in this session covering the entire range of skill levels; basic planning all the way through SME-level implementation.	Paul Novak
Bit talks with VM Legends	Bill Bitner sits down to chat with four VMers who are legends in the community: Mark Cathcart, Gabe Goldberg, Chuck Morse, and Romney White. All four are companions in the Knights of VM and have played significant roles in the history. If we imagined a dystopian world without them, VM would be very different. Few people would know about the product, even those that knew of the product probably could not use it, and the product line would have stopped at VM/ESA if not earlier. Join Bill for this fun and insightful discussion.	Bill Bitner
REXX/Sockets Updates	This session describes updates made to REXX/Sockets to support SSL/TLS and IPv6. These updates will be discussed in detail, along with relevant design decisions. Sample code to extend existing REXX/Sockets applications to leverage SSL/TLS and IPv6 will be provided.	Arty Ecock
z/VM Platform Update	Version 7 of z/VM started the era of a two-year release cadence. z/VM 7.2 is the second release in this era. This session starts with information on the latest release, z/VM 7.2; then reviews the current releases in service; and then begins a tour of five value areas and the recent enhancements in each of those areas. This presentation focuses on the business value of z/VM and its enhancements and other planning information.	Jacob Gagnon John Franciscovich
z/VM Virtualization Basics	This presentation is a perfect starting point for anyone interested in learning about the basics of IBM z/VM. The presentation delves into the history of z/VM that first began more than 45 years ago. The presentation explains the reasons for virtualizing, and goes over the concepts of IBM Z hardware and the z/VM Hypervisor	Lauren Maietti
Preparing for eight member SSI	4-member z/VM Single System Image (SSI) clusters were introduced to the industry in z/VM 6.2. Eight member SSI clusters are now on the horizon, but the key question is: "how do I get from here to there?". This session will cover some of the key details and considerations as you look to install and migrate to eight member SSI clusters.	John Franciscovich
Getting Started with IBM Z Crypto on z/VM	IBM Z provides cryptographic features to protect your data--and your clientsá→→ data. Intrigued by the possibilities inherent in IBM Z cryptographic features? Uncertain as to what all these acronyms mean? Confused about which features operate when running under z/VM? Wondering about the basics of guest crypto configuration? Unsure of what to do with all those keys? Scared by the word á→→ cryptographyá→→? This presentation aims to alleviate fear and uncertainty by explaining the IBM Z cryptographic á→→stacká→→: what the features do, how they help, how z/VM virtualizes them, and how a guest can capitalize upon them ... with as few security-related acronyms as possible.	Brian Hugenbruch
"So, come up to the lab..."	How do you design, implement, and manage a lab environment that enables R&D, QA, and training of a global engineering team that works with multiple z/VM products? How do you safely combine volatile ingredients like "limited experience," "extraordinary privilege," and "40-plus adjacent LPARs" without setting the entire company on fire? Let's discuss the finer points of how to manage, train, and support a globally-distributed product team while still keeping body, soul, and sanity together!	Daniel P. Martin

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Lessons for the Trainer: Building Next-Generation z/VM Engineering Talent	What's your approach to creating your replacement? How do you channel youth, intelligence, curiosity, and boundless energy into something productive? What if you feel like you're the last one left and have no interest in turning the lights out, but still selfishly want to continue to have a life away from work? What if you need a library's-worth of training materials, and you don't even have a library? Join this session to discuss the exciting answers to these questions, and others! In this discussion of lessons learned while onboarding and training next-generation z/VM Engineering Talent, we'll take a look at available resources, strategy, tactics, and outcomes to date.	Daniel P. Martin
The Junior Woodchuck's Guide to Using TLS on z/VM	Transport Layer Security (TLS, formerly SSL) is a vital part of a serverá→→s network security--even on z/VM. But itá→→s also a confusing and at times infuriating subject. This presentation will take a step back from the jargon to explain: what it is, when you use it, why it matters to you, and what youá→→re really doing when you set this up on the z/VM TCP/IP stack. The goal of this presentation is to provide enough wisdom that, the next time you read the IBM manual on this topic, it actually makes sense. Doná→→t be afraid to ask questions as we go!	Brian Hugenbruch
CMDB and More	As our environment was growing we knew we needed to maintain a good inventory of all servers running on s390. To accomplish this, a routine was included in the startup of each linux server to capture inventory data. Over the years, we found many uses for this information.	Ray Oriente
Disaster Strikes! GDPS to the rescue!	My presentation will cover: Overview of GDPS, Detailed functions of GDPS xDR solution, Synergy between GDPS and VM, How to debug your VM GDPS environment with advanced log retrieval and analysis, How to save LinuxONE systems from an outage, Red Hat OpenShift Container Platform (RHOCP) and GDPS.	Steven Cook
50 years of DR - From Paper Tape to Global Mirror to the Cloud	Two topics will be covered with the presentation. They are "Doing DR Better and Faster with zVM" and "How Recovery Point does DR using zVM". The presenter has 50 years of doing and designing several generations of DR solutions from Paper Tape backups to Physical tape backups to Virtual Tape replication to Global Mirror replication. You will learn how to do DR better with zVM. There will be a peek behind the curtain on how Recovery Point uses zVM automation and people to do DR better and faster.	Steve Finch
Addressing the Mainframe Skills Shortage	The Mainframe Skills Shortage has been well documented for nearly two decades now, however it wasná→→t until more recent years that organizations started to proactively address this issue. As more and more Baby Boomers retire, the issue only grows more dire and Covid has only made a bad situation worse. Hear from experts with over thirty years of mainframe training experience, stories about what organizations are doing to address the shortage and insight into what your company can do to address this looming issue.	Scott McFall
Spreading The Word, Mainframe Careers are Real!	In the United States, 59,000 computer science students graduate college every year while 10,000 baby boomers retire and leave the work force every day. There just aren't enough students to back-fill the roles that the baby boomer generation leaves behind. In 2020, there were more than 84,000 mainframe positions open and not enough practitioners to fill them. This presentation will arm you with an easy to give presentation to take out to local high schools or colleges to help build the mainframe workforce.	Marc Smith
z/VM and Virtualization Hands-on Lab - Choose your own Lab	In this three part hands-on lab you choose hands-on lab exercises from one of these options: z/VM 7.2 SSI Installation and Configuration, z/VM Upgrade In Place from 7.1 to 7.2, Implement z/VM 7.2 Centralized Service Managment. DPM and KVM (modify a dpm partition, install Ubuntu 20.04 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
Linux for IBM Z Installation Hands-on Workshop	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 a container runtime engine, create some basic images and run those images in containers. The choices for installation will be RedHat 8.4, SUSE SLES 15 SP3, and Ubuntu 20.04 LTS. This is a three part lab to provide enough time to work through the lab workbook.	Richard Lewis

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Let your Linux SysAdmins ride the WAVE Live Demo of Log-On WAVE for IBM Z	This session will highlight the capabilities of Log-On Wave, a graphical solution that simplifies the administration and management of z/VM-based Linux server farms. In this session we'll take a close look at how Wave empowers Linux Sysadmins (the Wave users) with z/VM capabilities in the areas of: - z/VM guest, storage, and network management, regardless of z/VM skill level; all within the Scope and Permissions assigned by the Wave site-level admin. - Enables Linux Sysadmins to perform cloning and Live Guest Relocation with a few clicks. - Configures Wave user permissions and authorizations at both resource and action-level granularity while protecting the system from unauthorized access. - Automatically discovers changes to z/VM entities regardless of the change origin (Wave or external to Wave). - Provides agentless management for Linux guests with dynamic activation of configuration changes both at the Linux and z/VM levels. - Visualizes network topology and storage resources from a graphical display making entity relationships easy to understand and manage. - Analyzes performance of multiple z/VM systems from a simple performance dashboard, with no limit on the number of z/VM instances or Linux guests that may be managed across any number of z Systems from a single Wave server. - Dynamically groups servers by Wave set attributes or site-defined custom-attributes for singleclick group actions across all Wave controlled resources.	Sharon Chen
.NET v6, AlmaLinux and a Redbook	.NET v6, AlmaLinux and a Redbook	Neale Ferguson / Kurt Acker
Reduce the risk and Make VSE Security Strategic	Complex infrastructures open new threat vectors and require a comprehensive, enterprise-wide security strategy, including the VSE platform, which is adaptable and proactive, rather than chaotic and response-driven. Furthermore, integration encompasses the entire infrastructure, and requires a security solution that adheres to corporate policies, standards and customer expectations. In this session, learn how Broadcom is expanding its approach to security and taking VSE to a brand new level.	Jay Zelnick
Enterprise Monitoring and Performance Management in 2022	Performance management includes performance analysis, capacity planning, operational support and chargeback capability. zVPS has been providing performance management for the z/VM (and predecessor) platform since 1988. And then networks, and Linux since about 2000. For enterprises wishing a consistent view into the many platforms and subsystems, zVPS has added the zVSE platform and recently z/OS. To help installations manage their Linux environments, support was added for management of Java applications, Oracle, MongoDB and recently PostGres. This presentation will show the evolution of zVPS, and how you can have one consistent view into almost all of your enterprise for a true single pane of glass.	Barton Robinson
Keeping It Fresh - Let's Talk Containers	Containers have become essential for deploying new applications throughout the enterprise. This discussion will touch on the various options for leveraging containers with the z ecosystem.	J Jeffrey Broderick
Moving on to 21C VSEn 6.3	After the announcement on June 1st, 2022 (source license agreement for VSE Stack), and the most recent one on March 25, 2022 (21st Century Sofware VSEn 6.3), I will share some questions and answers around VSEn 6.3 and options and benefits moving from IBM z/VSE.	Gonzalo Muelas Serrano
Fresh installation of 21C VSEn 6.3	In this session we will cover a fresh installation of 21C VSEn 6.3 with a walkthrough/demo and explaining the different steps, to show that it is quite similar to what you might be used to, and if you don't remember anymore, to show how simple it is.	Shahin Krishna
Fast Service Upgrade from IBM z/VSE to 21C VSEn 6.3	In this session we will cover a Fast Service Upgrade (FSU) installation of 21C VSEn 6.3 coming from IBM z/VSE 6.2 with a walkthrough/demo and explaining the different steps, to show that it is quite similar to what you might be used to, and if you don't remember anymore, to show how simple it is.	Shahin Krishna
Feilong: the open source API for z/VM automation	Feilong is an Open Mainframe project. Come learn about the project as well as be introduced to the technical components. A demonstration will show the API in action driving z/VM functionality.	Leonard Santalucia Stephanie Rivero
21C VSEn Connectors uses cases	We will review example of use cases where VSEn Connectors will help you be more efficient and/or to achieve in place modern solutions with 21C VSEn 6.3.	David Jamieson

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Delivering Usable Systems based on z/VM	Customers new to z/VM have different expectations when it comes to the installation experience compared to experienced z/VM customers. It takes time and effort to get a new z/VM environment set up, which unfortunately can result in z/VM being perceived as "difficult". What if a full system, based on z/VM, could be delivered at a new installation with only a few commands or interactions? What if that system contained not just z/VM but a Linux instance with pre-installed automation to drive installation of subsystems like Red Hat OpenShift Container Platform and IBM Cloud Infrastructure Center? How could such a z/VM-based system be built, and how would the process work? Come on an adventure into z/VM delivery that provides more than just the hypervisor!	Vic Cross
Simplified container management with SUSE Rancher	During this session, attendees will be introduced to SUSE Rancher and how it delivers Kubernetes-as-a-Service. Learn about Rancher components with a demo that shows the deployment and use of Rancher components running on IBM Z and LinuxONE.	Anthony Tortola
CSI International and IBM z/VSE: Powerful Partners for the Future	John Rankin will present an informative overview of what CSI has been designing and implementing for the last two years. CSI has spent over twenty-seven years working to support and enhance z/VSE. This presentation of indispensable new solutions, hardware optimizations, and educational advancements will provide our customers with clear ideas for immediate improvements; and give them a glimpse into the exciting future of our z/VSE environment.	John Rankin
Introduction to SAN and FB disk for ECKD Users	Defining ECKD disk in an IOCDS and an IODF seems pretty straightforward compared to a world of WWPNs and LUNs. Come hear an overview of how accessing Storage Area Networks and Fixed Block disk from zSystems is similar but different, with real life examples from the LRS demonstration environment.	Sam Cohen
21st Century Software: Introduction, Portfolio, Activities and News	We will provide an overview about 21st Century Software, our IBM zSystems related activities and how we can partner with customers, ISVs and IBM to provide business value. We want your feedback, so bring your comments and wishlist items!	Rebecca Levesque
Channels - how the mainframe ruled the I/O roost for 50 years	This session will present a brief overview of mainframe I/O architecture (with an emphasis on DASD devices) as well as a brief introduction to channel programming.	Perry Ruiter