

## Virtual Sysadmin Day— 2014

Now that you're familiar with the basics of Oracle Solaris, Oracle Linux, and Oracle VM, learn how to use these products to address real-world challenges including migration, Oracle Real Application Clusters deployments, and private clouds in our proctored hands-on labs.

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## Agenda and Abstracts for - Virtual Sysadmin Day: 2014

**Tuesday March 18th, 2014**

9:00:00 AM GMT UTC / 1:00:00 PM GST UTC+4 hours / 10:00:00 AM CET UTC+1

08:45 AM	Platform Opening		
9:00 am	Keynote: Make Your Sysadmin Life Easier with Oracle Operating Systems and Virtualization Solutions!		
	<b>Track 1 Oracle Solaris</b>	<b>Track 2 Oracle Linux</b>	<b>Track 3 Oracle VM</b>
9:15 AM	Oracle Solaris 11 and Sysadmin's Daily Life	Oracle Linux Overview	Rapid Deployment with Oracle VM
9:45 AM	Part 1. Software Lifecycle	Oracle Linux Package and Patch Management Solutions (2 hours)	Migrate to Oracle VM and Oracle Linux from VMware and Redhat with Oracle best practices
10:45 AM	Part 2. Data Management		Deploy 4 nodes Oracle RAC 12c in minutes from Oracle VM Templates
11:45 AM	Part 3. Virtualization	Getting Started with Linux Containers on Oracle Linux	Deploy and manage a private cloud with Oracle VM and Enterprise Manager 12c
1:00 PM	Event Close		
<p><b>* Homework – Please install and set up the HOL for whichever track you want to attend before hand so you get the most out of this event. Instructions can be found on the event wiki <a href="https://wikis.oracle.com/display/virtualseysadmin/day/Home">https://wikis.oracle.com/display/virtualseysadmin/day/Home</a></b></p>			

## Abstracts

### Keynote

**Make Your Sysadmin Life Easier with Oracle Operating Systems and Virtualization Solutions!** New products, new version, new requirements, new workloads... Sysadmin Life doesn't become easier with all those news. What all that means for you is that you have to manage more systems, more applications, more versions, more patches, more devices. Oracle engineers feel your pain and work very hard to create tools and best practices to help you manage that complexity. During this short keynote presentation we will give you an overview of recent Oracle's innovations in Operating Systems and Virtualization, show a couple of examples of what can be done using Oracle technologies and solutions. We will briefly describe the Sysadmin Day's agenda to help you decide which of the three available tracks to join.

### Track 1: Oracle Solaris

**Oracle Solaris 11 and Sysadmin's Daily Life** - This introductory session discusses typical tasks and challenges of sysadmin's everyday life. We all have to manage software packages, update our systems, manage users, monitor system performance and diagnose problems, assess, assign and redistribute system resources depending on workload patterns. We will show you how various Oracle Solaris 11 features make sysadmin's life easier. We will give you some examples and best practices you can use in your organization. The rest of the day will be full of exercises that model your everyday situations. You will be able to choose what fits best your needs and interests. We recommend some initial knowledge of Oracle Solaris 11 features and concepts. You can familiarize yourself with them using our previous Virtual Sysadmin Day recordings that are available on Oracle Solaris channel at YouTube.

#### Part 1. Software Lifecycle

In this session you will learn some useful tricks that help you to manage software packages installed on your systems. Most likely, in your organization you have separate environments for development, test, QA and production applications. How to make sure that right versions of software packages are installed in each of them and prevent inconsistencies? How to configure your production systems to avoid accidental update? How to use boot environments together with IPS? These and many other questions will be answered by using practical hands-on examples.

#### Part 2. Data Management

You know about ZFS and its wonderful features. But ZFS has so many new concepts that still some questions remain when you try to solve your daily problems with it. How to create a ZFS file system that will have a guaranteed amount of available space, instead of sharing it with other file systems in a pool? What are the best practices of backing up ZFS file systems? Is it possible to migrate a file system while using it? Can normal users create ZFS snapshots and restore files from them? These and many other questions will be answered by using practical hands-on examples.

#### Part 3. Virtualization

Our final session is all about virtualization. How to automate zone creation process? How to configure zones' services and make them available right after the first boot? How to monitor and manage system resources assigned to zones? How to migrate zones between hosts? These and many other questions will be answered by using practical hands-on examples.

### Track 2: Oracle Linux

#### Oracle Linux Overview

Oracle Linux brings the latest Linux innovations to market, delivering extreme performance, advanced scalability, and reliability for enterprise applications. These Virtual SysAdmin days labs will give you an opportunity to learn about patch and package management and Linux Containers in Oracle Linux firsthand from Oracle experts. You will work through specific scenarios with step-by-step instructions, and be able to chat with Oracle engineers to provide assistance if you get stuck. This introductory section will give provide an overview of Oracle Linux and how it relates to the rest of the Oracle portfolio, and to the enterprise market at large.

#### Oracle Linux Package and Patch Management Solutions

In this session, you will learn how to implement and work with various patch management features of Oracle Linux. This includes working with the yum package manager and getting hands-on experience in obtaining more information on security errata using the security plug-in. The yum snapshot plug-in and the Btrfs file system are used to demonstrate how you can roll back package updates to a previous state. The session also covers creating a local yum repository and how to connect this repository to Oracle Enterprise Manager. In addition, you will learn about the Ksplice service and have the opportunity to install and configure the Ksplice offline client for applying kernel updates to your system with zero downtime.

#### Getting Started with Linux Containers on Oracle Linux

Linux Containers (LXC) allow you to run multiple isolated Linux instances (containers) on the same host. A container is a way to isolate a group of processes from the others on a running Linux system that does not require you to set up a virtual machine on an emulation of physical hardware. This hands-on session gives you the basics of working with LXC on Oracle Linux; installing and configuring required software packages; setting up a Btrfs volume for the container storage; configuring, starting, and logging in to a container; changing a container's network configuration; limiting a container's resource usage (network/disk I/O); cloning an existing container; and monitoring and shutting down

containers.

### Track 3: Oracle VM

#### Rapid Deployment with Oracle VM

Oracle VM application-driven virtualization is designed top down to include rapid deployment of applications and ease of management for the entire stack in the virtualized environment. Using Oracle VM Templates, entire application stack such as the Oracle Database or Oracle RAC can be deployed in minutes rather than days or weeks. For IT administrators, the software is ready to deploy from point of download. Combined with tight integration with Oracle Enterprise Manager, management of the entire stack, physical server, virtual server, applications and cloud services can be orchestrated from a single console. In the following 3 labs, you will be able to experience the power of Oracle VM Templates in Oracle Database deployment, building a private cloud with a chargeback model and converting from a Redhat, VMware environment to Oracle Linux and Oracle VM stack.

#### Migrate to Oracle VM and Oracle Linux from VMware and Redhat with Oracle best practices

In this lab, you will learn from our field experts on best practices of migrating both your existing VMware guest VM and Redhat guest OS to an Oracle environment. You will experience hands on the simple migration process of moving an existing Oracle Database workload from VMware to Oracle VM. This lab also walks you through how to migrate your Red Hat Enterprise Linux (RHEL) guest to Oracle Linux. Simply connect to the Oracle Unbreakable Linux Network (ULN) to begin your migration journey. The implementation of this lab helps you deploy an enterprise-proven infrastructure software layer quickly and easily with zero license cost to your virtualization or Linux environment.

- Migrate existing ESX VM to Oracle VM
- Migrate from Redhat to Oracle Linux
- Deploy Oracle Database in Oracle VM environment using Oracle VM Template

#### Deploy 4 nodes Oracle RAC 12c in minutes from Oracle VM Templates

This Oracle VM step-by-step, self-guided lab is for application architects or system administrators who will need to deploy and manage Oracle Applications. You'll learn how Oracle VM Templates can turn you into a power user who can virtualize and deploy complex Oracle Applications in minutes. Longtime field-experienced engineers and product experts will show you, step by step, how to download and import templates and deploy the applications, using Oracle RAC as an example. (Flex Cluster / Flex ASM).

- Learn about Oracle VM Templates and how they work
- Plan your deployment to streamline on going updates and upgrades
- Deploy a 4 node Oracle RAC 12c using Oracle VM Templates

**Deploy and manage a private cloud with Oracle VM and Enterprise Manager 12c** - This self-guided, step-by-step lab was created from our field experts. You will walk through the planning and deployment of a private cloud environment with Oracle Enterprise Manager 12c and Oracle VM as the virtualization foundation. The fully integrated virtual servers and management console can help you to immediately perform practical lifecycle management tasks, from Oracle VM servers discovery to Virtual Machines deployment using Oracle VM Templates including application services management and chargeback.

- Learn about integrated management of virtual server farms from Enterprise Manager 12c
- Deploy and discover Oracle VM using Oracle VM Templates
- Manage virtualized applications and services from Enterprise Manager 12c