Joe: Hi Everyone, thanks for joining the Red Hat Live Chat.
Joe: Today we have Chuck Dubuque & Andrew Cathrow with the Red Hat Virtualization team available LIVE to answer your questions.

Joe: Speaker Bios: Chuck Dubuque is the Senior Product Marketing Manager for Red Hat Enterprise Virtualization and is responsible for market analysis, program strategy, and channel support. Prior to joining Red Hat, he worked for three years at a mid-sized VAR (value-added reseller) where he experienced both the marketing and engineering of enterprise hardware and software, including Red Hat Enterprise Linux, VMware, Microsoft Windows Server, NetApp, IBM, Cisco, and Dell. Earlier in his career, Dubuque spent eight years in the biotechnology space in marketing and business development. He earned an MBA from Stanford Graduate School of Business and a bachelor's degree from Dartmouth College.

Andrew Cathrow serves as Product Manager at Red Hat, where he is responsible for Red Hat's virtualization products. He has also managed Red Hat's sales engineers. Prior to joining Red Hat in 2006, Cathrow worked in product management for a configuration company, and also for a software company that developed middleware and messaging mainframe and midrange systems. Earlier in his career, Cathrow held various positions at IBM Global Services.

Joe: Please feel free to start asking questions now

Chuck: Thanks Joe. First I'd like to remind everyone that Red Hat launched RHEV 3.0 on January 18, and our launch event is now available on-demand at http://bit.ly/rhev3event. I encourage you all to check it out for presentations from RHEV customers, partners, and our team going in depth into the product.

1. Chuck: Question: Do you have any experiences with organizations that have started off using another virtualization product like – VMware, for example, that have switched over to RHEV?
Chuck: Yes, many RHEV customers already have a virtualization solution like VMware in their environment.
Chuck: About 80% the last time we surveyed our install base.
Chuck: So, in most cases RHEV is being deployed as a second strategic virtualization vendor.
Chuck: From a logistical standpoint, we offer two solutions for folks who want to move virtual workloads from another platform to RHEV:
Chuck:1. We offer a free set of tools with RHEV called virt2v2v that will transfer VMs from ESX(i), RHEL Xen, or RHEV KVM to RHEV.
Chuck:2. We also work with the latest version of Acronis' Backup and Migration solutions, which provide an easy to use graphical interface, a broader list of supported hypervisors, and multiplexing options for more complex migrations.
Chuck:In a lot of cases, the RHEV install is used to grow the overall virtualization footprint within a customer organization, so it is standing side-by-side with a VMware or other hypervisor, but there is not necessarily migration from another hypervisor to RHEV.

2. **Chuck:Question:** are any of your biggest customers using 3.0 yet? anything public?
   **Answer:** Chuck:Answer: Yes, many of our large customers are starting to use RHEV 3. Because RHEV 3 was just released on January 18, most of these installs are in pilot phase. And nothing public yet, but stay tuned!
   Chuck:One of the questions we get asked the most is about how RHEV is sold.
   Chuck:First, RHEV pricing is based on physical socket count on the hypervisors.
   Chuck:We do not charge for vRAM, and we do not charge for the Management server.
   Chuck:Second, we have a single product with all the features...no editions, and no crippled SMB bundles

3. **Andy::: Question:** RHEV 3 does it have management application with provisioning of storage?
   **Answer:** With RHEV you present either an NFS share or a set of LUNS to the manager and it creates a pool of storage that is sliced up for the virtual machines, typically using Linux's native logical volume manager ::
   Chuck:Third, all Red Hat products are sold as a subscription. We do not charge a large upfront license fee + annual support. We charge the same subscription each year for the same infrastructure.
   Chuck:Cost is $499/socket/year for Standard (business hours) support or $749/socket/year for 24x7 support.
   Chuck:Includes all the features: Live migration, HA, power management, resource scheduler, image management, power user portal, reports manager
   Chuck:Cool new feature in RHEV3: the User Portal.
   Chuck:Included with the subscription is a user portal which integrates with AD or Red Hat Identity Management (LDAP) users and groups, and allows administrator to assign granular permissions to VM management.
   Chuck:You can give a single user access to a turn on or off a single VM, or an entire group of users full rights to a cluster or a datacenter, and everything in between with granular security on users and roles.
4. Chuck::: Question: hi --- Answer : Hello--do you have a question? ::
   Chuck:There's a lot of cool info on our website: http://www.redhat.com/promo/rhev3
   Andy:And from the website you can download a supported trial
   Chuck:But there are two RHEV product experts standing by here on the chat ready to
   answer your questions!
   Chuck:Another question we get a lot is whether RHEV supports Windows VMs. The
   answer is YES!
   Chuck:We are Microsoft SVVP certified. That means that we support Windows on
   RHEV, and Microsoft supports Windows on RHEV
   Chuck:Plus SVVP also covers many of Microsoft's server applications (SQL, Exchange,
   etc.)
   Chuck:We supply WHQL signed drivers for enhanced disk and NIC performance, and
   these drivers can be integrated into install media or installed at the F6 stage in Setup
   Chuck:We give Windows VMs the same support as Linux guests: 64 vCPU and 512GB
   RAM max per VM.

5. Andy::: Question: What about desktop virtualization/features/support? ---
   Answer : Yes RHEV includes Virtual Desktop support ::
   Andy:Virtual Desktops can be Windows XP, Windows 7 or even RHEL desktops
   Andy:Using the "Spice" protocol to access your desktop you get a rich user experience
   Andy:it supports high definition video, bidirectional audio, remote USB
   Andy:and feels like a "real desktop"

6. Chuck::: Question: Any enhancements that speak to or integrate better with
   RHEL?
   Answer : Yes.The latest versions of RHEL (5.8, 6.2) include enhanced support for
   RHEV. And these agents can be used in earlier versions as well. ::
   Chuck:RHEL guests now have enhanced agents for time keeping, reporting installed
   RPMs, and interface details.
   Andy:RHEL (and all Linux's) includes paravirtualized drivers by default intergrated into
   the kernel
   Andy:so the performance is great out of the box.

7. Andy::: Question: Do you have a lab manager or can you suggest one for our test
   & dev workloads?
   Answer : RHEV includes a self service protal ::
   Andy:The self service portal allows you to create your own virtual machines, snapshot,
   etc
   Andy:similar in scope to "Lab Manager"
   Chuck:And the self service portal is included in the base RHEV subscription.
8. Andy::: Question: Why should we choose you instead of Hyper-V?
Answer: Many reasons. In terms of security, if you want all your eggs in one basket, is that really the secure and stable solution. Support for RHEL is limited in hyper-v. Today it’s only certified for RHEL5 not RHEL3,4 or 6 and also with limited memory and CPU compared to Hyper-V's support for Windows VMs ::
Chuck: I would add that if you are looking for an alternative to VMware, my first choice would not be Microsoft. VMware is operating from the Microsoft playbook in terms of market expansion and pricing, by their CEO's admission. With RHEV, Red Hat is doing for virtualization what we did with Linux in the operating system space. We're providing a great product, with a disruptive economic model which doesn't just shave a point or two from datacenter costs but really changes the speed of deployment and the way virt is deployed. Phew!

9. Andy::: Question: What about tools for service providers? Are there tools that are optimized for service providers trying to manage a multi-tenant environment? --
Answer: We have many service providers using RHEV as the substrate for their clouds. Features like memory page sharing and templating increase your density and optimize your storage utilization. There's a rich API to allow you to script and automate anything in the system ::

10. Chuck::: Question: are any of the benchmarks in the takeaways published somewhere?
Answer: Yes. All of the raw results can be found at http://www.spec.org/virt_sc2010/results/specvirt_sc2010_perf.html ::
Chuck: SPECvirt is the only open virtualization benchmark where you can compare multiple hypervisors. It was developed in the open with VMware, Red Hat, Citrix, Microsoft and others.

11. Andy::: Question: What is the largest implementation in production?
Answer: I'm not sure of the largest public reference http://www.redhat.com/resourcelibrary/case-studies/ but I know we have 150+ host clusters in active deployments ::
Chuck: Probably the largest published case is Qualcomm, which is also one of VMware's largest customers. They have chosen RHEV as a strategic virtualization platform, and are using RHEV to grow their overall virtualization footprint faster and with less expense without sacrificing feature.

12. Andy::: Question: Is Exchange Virtualization supported?
Answer: Yes, exchange can be virtualized on RHEV. It's certified (covered by Microsoft's SVVP certification program). ::
Andy: there is a scaling guide for Exchange online, http://www.redhat.com/resourcelibrary/datasheets/rhev-performance-msexchange We plan to update this later in the year.
13. Chuck: Question: We’re looking at Oracle VM to manage some of those workloads. Is there any experience with RHEV on Oracle workloads?

Answer: Customers like Dreamworks are using RHEV today to run Oracle workloads (database and applications). Oracle is trying to nudge users into using Oracle VM by claiming that it is the only "certified virtualization platform" for Oracle workloads. Truth is Oracle certifies to operating systems, not to hardware platforms or virt platforms. Plenty of folks use other hypervisors for virtualizing Oracle workloads, in fact many more folks than use Oracle VM. ::


Chuck: Red Hat offers training on RHEV 3 through our RH318 in person class, available globally. You can get more info at:

14. Chuck: Question: We have I/O bottlenecks on some of our VMware servers, and we have to under-provision to make sure that we don’t run into performance problems. Is this something that I can expect with RHEV?

Answer: RHEV has a couple of architectural features that may help out. One is that our clusters (comparable to VMware resource pools) are not limited to 32 nodes. We support up to 200 nodes in a cluster, which means that bottlenecks that arise because of architecture may be less likely. ::

Chuck: RHEV is a great product, but there is no miraculous cure for IO bottlenecks. One thing that can help is capacity planning and management tools that help you provision and place your VMs correctly for best performance.

Chuck: We work with vKernel, ManageIQ, LiquidWare Labs, Acronis, and CiRBA who provide great solutions that work with RHEV and other virtualization platforms to help you manage your virtual infrastructure.

Chuck: We also have a reporting engine built into RHEV powered by a JasperSoft BI runtime that many customers use to identify bottlenecks.

15. Chuck: Question: is the new RHEV priced any differently than before?

Answer: Nope. The price is still the same as RHEV2.x: $499/socket/year for business hours support or $749/socket/year for 24x7. Subscribers get all the new features: user portal, reports engine, etc. ::

Chuck: That's the great thing about the subscription model.

Chuck: Just a reminder that Red Hat is offering globally a 60 day supported evaluation of RHEV. This includes the software you need to get started, an online community with forums, support articles, and full documentation, a special website with a guided evaluation plan including an eval guide and videos, and phone and web based support from our award winning Red Hat support team. Find out more at

16. Andy: How does KVM compare to Xen
Andy: In terms of performance KVM today out performs Xen - there's no need for paravirtualized guests for Linux with modern hardware and PV drivers. The tight integration of KVM inside Linux allows us to leverage the rich feature set and community of Linux - so we get new hardware support faster, new features (like memory pagesharing and numa) for "free".

Chuck: Sometimes I hear from customers who have heard Oracle and Citrix touting that Xen is now "integrated into Linux" and that negates KVM's advantages. That is patently false. In fact, I got so upset about it I wrote a blog entry to debunk this. See http://chucknology.com/2012/02/02/kvm-is-linux-xen-is-not/ for more info (maybe more than you ever wanted to know).

Chuck: One of the ways in which RHEV is a true alternative to VMware is that it is a fully open source product. RHEV hypervisor technology is based on the KVM (kernel-based virtual machine) hypervisor which leverages the Red Hat Enterprise Linux kernel to provide near-bare-metal performance for virtual machine workloads. The RHEV Manager engine is fully open sourced as the oVirt.org project.

Chuck: This is an important part of how we deliver a truly disruptive product in the virtualization space.

17. Chuck: How is what you do on the desktop compared to Citrix?
Answer: We provide the virtualization infrastructure, the connection broker, support for desktops, the SPICE protocol (similar to PCoIP and HDX/ICA), and certified thin clients and SPICE clients for PC operating systems (Windows and RHEL).

18. Chuck: Hyper-V is based on Windows and RHEV is based on RHEL. Why is RHEV any better?
Answer: Hyper-V is a lot like Xen in its architecture. The "bare metal" instance of Windows goes away and becomes a privileged VM called DOM0. DOM0 is where device drivers live, and all the other VMs on the server share this single DOM0. This wasn't so bad when servers were small, but now that even a two socket server can have 20 cores and 0.5TB of RAM, you could have 30 or more VMs all sharing a single DOM0 bottleneck. This is not the case with RHEV, where the device drivers live with the hypervisor layer and there is no DOM0 bottleneck.
19. Chuck::: Question: What about Citrix XenServer? Isn't that an open source platform too?

Answer: Good question. A couple of points (1) the Xen hypervisor in Citrix XenServer is based on the open source xen.org project, but the management systems are closed, so it is not a true open source solution; (2) Xen support is falling behind KVM in terms of hardware support, development, etc. Xen support for Nehalem, for example, lagged KVM because the community around Xen has shrunk; (3) Citrix has lost most of the XenSource brain trust (Simon Crosby et al.); (4) Citrix CEO mentioned on a recent analyst call that server virtualization is not a focus; (5) Citrix is mostly VDI and their software increasingly is used on HyperV. Just food for thought :-): 

Andy: Xen is open source but XenServer is not open source software
Andy: with RHEV both the hypervisor and the management system (based on the oVirt project) is open source

Joe: Hello everyone - we're getting down to the final minutes of our live chat. If you have any questions please submit them to us now.