

## High-Availability Topics at HP Discover 2011

May 2011

HP's major North American conference, Discover 2011, will be held this year in Las Vegas from June 6<sup>th</sup> through June 10<sup>th</sup>. In our article entitled [HP Discover 2011](#),<sup>1</sup> published in our March, 2011, issue, we summarized the various tracks, keynotes, and social events that will take place at the event as well as the event's registration fees.

There are over 800 sessions in the Discover 2011 schedule. In this issue, we highlight some of the sessions that deal with availability. Many are generic sessions, and we provide the abstracts.. Others are product-oriented, and the abstracts for these sessions follow the generic session abstracts.<sup>2</sup> Breakout sessions are one hour in length. Hands-on labs are scheduled for 90 minutes each.

Dr. Bill Highleyman, Managing Editor of the Availability Digest, will present two breakout sessions. His abstracts are given first in the following session listing.

### General Availability Sessions

#### **3888 - So you think your data center is safe?**

Dr. Bill Highleyman, Availability Digest

One of the first steps in a business continuity plan is risk assessment, in which all known risks to the business are detailed. However, experience has shown that many data centers are taken down by unforeseen events. In this session, participants will learn about unforeseen events that have put entire data centers out of commission for hours and even days. They include battery-room explosions to data-center overloads and even server confiscation by law enforcement. The lesson from these experiences is not to plan IT service recovery for predictable catastrophic events but rather to plan recovery for data-center outages no matter what the cause. Participants will learn innovative techniques for maintaining IT services regardless of the situation, with active/active systems as an example.

#### **3870 - Does data replication eliminate backups?**

Dr. Bill Highleyman, Availability Digest

Data replication maintains an independent, up-to-date copy of a primary database on a remote standby system. So is a backup copy also necessary? Yes! Data replication protects system

<sup>1</sup> [HP Discover 2011](#), *Availability Digest*; March 2011.  
[http://www.availabilitydigest.com/public\\_articles/0603/discover\\_2011.pdf](http://www.availabilitydigest.com/public_articles/0603/discover_2011.pdf)

<sup>2</sup> The breakout sessions were established long before Larry Ellison announced that Oracle would no longer be supported on Itanium servers. Many of the sessions at Discover 2011 deal with Oracle on HP systems. It will be interesting to see how these sessions are handled.

operations, not data. Replication provides rapid recovery to a standby system with a current application database that has been maintained in sync with the production database. However, if the production database gets corrupted, or if a file or table is lost, data replication provides no protection. The same is true if there is a simultaneous failure of both the production and standby databases. Therefore, the database must be backed up. Attendees will learn about many real-world storage failures. Some took down data centers for days and others were near misses. This session concludes with an overview of HP data replication, virtual-tape backup, and magnetic-tape backup products.

**4500 - Advances in high- and continuous-availability architectures for NonStop systems**

John Hoffmann and Paul Holenstein, Gravic

As businesses' needs have led to higher application availability requirements, architectures are evolving to meet those needs. This session will describe the recovery time and recovery point objectives model that businesses use to quantify their needs, discuss the factors (and trade-offs) that affect each objective, and present replication architectures to attain these stringent goals. It will also describe the technological advances in the development pipeline to show how the technology is moving toward continuous application availability with zero data loss in the event of a disaster. This session will define what is meant by high and continuous application availability, then focus on asynchronous and synchronous replication technologies that support disaster recovery (active/passive) architectures as well as the more sophisticated bi-directional active/active architectures. The session will include several case studies, highlighting the advantages and limitations of each implementation.

**3563 - Improve network performance, increase availability, simplify design and lower TCO with network virtualization**

Alton Omura, Joshua Reed, Kelly Small, and Louis Campanella, HP

Virtualization is growing rapidly throughout the IT infrastructure and is a priority for every CIO. HP networking uses network virtualization to create a high-performance, highly available network architecture that is easier to manage and lowers the total cost of ownership. In addition, it eliminates legacy technologies to create the ideal architecture model for all mission-critical data centers.

**3834 - The impact of cloud services on disaster recovery: opportunities and challenges**

Julien Furioli, PriceWaterhouseCoopers

This session is for IT professionals responsible for managing technology infrastructure and for planning, testing and implementing a disaster recovery plan, such as CTOs/CIOs, disaster recovery managers, application owners/architects, infrastructure owners, and distributed computing owners.

**3744 - Replication is not DR: enabling automated disaster recovery for HP environments**

Bobby Crouch, FalconStor Software

Remote replication is often considered a disaster recovery (DR) solution. However, replication is simply the transport of data, which you must still functionally arrange. Resuming business operations after a disaster involves the complex tasks of building servers, installing systems and applications, assigning storage volumes, and ensuring items start in the correct order. True disaster recovery is a complex task. At this session, attendees will learn the difference between DR and remote replication. They will also learn how to easily implement automated DR capabilities and effective business application resilience within their HP storage environments.

**3818 - Disaster recovery: how virtualization changes the game**

Matt Jacoby, HP

As organizations increase their investment in virtualization technologies, and consolidate their data centers to take advantage of storage, server and infrastructure flexibility, it is important for administrators and architects alike to recognize that disaster recovery strategies have also evolved within the virtualized space. In this session, we explore various disaster recovery methods used to protect virtualized environments thus ensuring the most optimum Restore Time Objective (RTO) and Restore Point Objective (RPO) can be achieved in the case of disaster.

**2680 - Surviving the enterprise data disaster**

Jim Gursha, Risk Masters

Although IT environments may be capable of surviving disastrous events, will critical data survive without transaction loss? Will the disaster cause business losses? Increases in information and more stringent data protection laws require extraordinary methods to protect the information and guarantee enterprise-wide data integrity. The session will cover solutions and sample configuration architectures to help with on-going data protection efforts: for example, tape backup/restore vs. virtual tape and replication. A discussion will trace the life of a data I/O from the application level through the server hardware, out through the fiber network to the Storage Area Network and the target disk. Attendees will learn the details involved in safe-guarding critical information.

**3750 - Using virtualization for high availability & disaster recovery lab**

Jeff Kight, HP  
Hands-On Lab

Today, companies are interested in incorporating high availability and disaster recovery solutions into their infrastructures. This lab will give you hands-on experience in building a data center in a box with single-site high availability and multi-site data recovery. Products used for implementation will include VMware vSphere 4.1, VMware Site Recovery Manager and HP StorageWorks P4000 Virtual SAN Appliance for ESX.

**4255 - Using the cloud for cost-effective disaster recovery and business resiliency**

Michael Delvecchio and George Ferguson, HP

Many companies look at cloud computing as a means to provide faster, more cost-effective disaster recovery. Discerning companies realize that the same cloud infrastructure can also improve business resiliency and availability-critical for today's Instant-On Enterprises. In this session, you will learn which cloud services and solutions are available and how to use them in your enterprise.

**3999 - Best practices for tuning and improving your data center operations**

Dixie Hedges, HP

Meeting business needs can be challenging. You may need to deliver services faster while maintaining operations efficiency. Or you may have to improve your infrastructure while reducing costs. Maybe you have to do it all at once-stretching your resources to the limit. However, you don't have to face your data center challenges alone. An HP Account Support Manager, whose job it is to work with mission critical environments, will facilitate this session. You will learn key tips and best practices to streamline project and transitional fulfillment, enhance operational continuity and drive continual improvement across the data center.

**3842 - Eliminating defects: reducing human error in the data center**

Richard Sawyer, HP

This session will explore proven methods for reducing human error in data center operations. Human error accounts for approximately 80 percent of data center downtime. Errors in facility infrastructure operations are the most costly, often producing catastrophic failures. This session will review different approaches for reducing human errors in the data center, including protocols used by the U.S. Navy, as well as virtual reality technology. This session will feature a demonstration of how virtual reality technology can be used simulate and test operational practices and responses. This session is ideal for facility infrastructure (FI) managers and IT operational managers with FI responsibilities.

**Product-Oriented Availability Sessions**

**7242 - Confidence in the Cloud with Symantec Information Protection and Availability**

Sean Doherty and Sean Derrington, Symantic

The shift from physical to virtual continues to alter the IT and threat landscape. As IT organizations undertake new and innovative ways to deliver elastic, dynamic, and highly available applications it requires an information-centric approach instead of just physical device or system centric. Security and availability have been considered as top inhibitors for the business to innovate by adopting virtualization in private, hybrid or public cloud realms. Attend this session to understand Symantec's information protection, archiving, storage management, and high availability solutions and strategic approach for managing information confidentiality, integrity and availability risks in virtual and cloud environments (including those built with HP and VMware).

**3907 - Achieving better availability and disaster tolerance with HP Serviceguard Solutions and Oracle on HP-UX 11i**

Jonathan Patrizio and Guhendran Devendran, HP

Oracle applications and databases are crucial to the smooth operation of many enterprises that provide 24x7 services to customers. Achieving these service level objectives while taking a standard approach to deploying and supporting a complex variety of applications can be challenging. HP Serviceguard extensions and toolkits integrate Oracle software on HP-UX, allowing the whole stack to be deployed in a highly-available and disaster-tolerant environment possible. This session will explain how architects can deploy Oracle RAC with Serviceguard Extension for RAC (SGeRAC), Serviceguard Extension for Oracle E-Business Suite and the Serviceguard Toolkit for Oracle Data Guard. Attendees will learn how to choose an architecture that matches an application's criticality with the appropriate level of disaster recovery. To illustrate this, this session will describe how HP's own internal IT organization deployed Oracle extensively in HP Metroclusters for HP's most mission-critical production applications.

**3930 - Deploying SAP applications in a high-availability environment with SUSE Linux and VMware ESX on HP ProLiant servers**

Vin Sharma, HP

Based on a recent workshop by technical experts from SAP, HP, Novell, and VMware, this session will provide a reference configuration and best practices for deploying SAP applications on both virtual and physical servers with high availability built into the entire stack.

**3984 - Enhancing SAP availability on HP-UX using HP Virtual Machines**

Peter Put, HP

Maximum application uptime is crucial in today's business environment. Lengthy outages can have serious financial repercussions. Attend this session to learn how to reduce the duration of planned and unplanned outages and improve uptime through the use of HP Virtual Machines.

**4843 - Enterprise high availability within your budget: How to eliminate downtime with HP P4000 SANs and VMware vSphere 4.1**

Brad Katz, HP

Learn how to leverage the features of HP's P4000 SAN solution and VMware vSphere 4.1 to eliminate downtime for your applications. This session will focus on the multi-site and network RAID features within SAN/iQ 9.0 and VMware's high-availability and fault-tolerance features.

**4567 - Workload-critical Linux: delivering improved reliability, availability, and serviceability capabilities on the ProLiant platform with SUSE Linux Enterprise**

Jose Betancourt, Novell

This session will focus on recent improvements in reliability, availability, and serviceability on SUSE Linux Enterprise Server 11 Service Pack 1 and ProLiant BIOS. Attendees will learn how these improvements enable workload-critical migrations from Solaris or AIX environments to SUSE Linux on HP ProLiant servers.

**4825 - Achieve availability and performance with RIM BlackBerry and HP**

Derek Peper, RIM, and Victor Garcia, HP

RIM and HP work together to provide their customers with best-in-class solutions. Join HP and RIM to hear how they are joining RIM's BlackBerry infrastructure with HP's best-of-breed enterprise solutions. HP and RIM will share a customer case study discussing real business challenges, the solution - (which relies on both parties' mobile collaboration and management), and the results. Learn, based on this experience, how RIM and HP help enterprise and public-sector customers determine an appropriate mobility solutions strategy and achieve robust, scalable and secure results.

**4666 - Protecting the security and availability of next-generation telecommunication services**

Ansh Patnaik, HP

Six key trends in telecommunications are driving a major transformation of the industry. These trends (migration to IP-based networks, SmartPhone adoption, industry consolidation, regulatory oversight, BPO, and managed services) enable new revenue sources but also introduce significant cybersecurity risk. Telecoms that can satisfy the demand for new consumer and business services while mitigating the associated risks stand to build a stronger brand and a bigger competitive advantage. However, effectively addressing the risks that accompany the trends and opportunities requires visibility into all network and business activity-which telecoms lack today. This session will review the trends, opportunities, and associated risks facing telecommunications firms and will highlight a comprehensive approach to delivering next-generation services through continuous and automated monitoring using the HP security product portfolio.

**4049 - Apollo Group: Using ITIL best practices to manage business applications**

April Strickler, Apollo Group

Apollo Group is a leader in providing higher-education programs by focusing on services that meet the needs of working adults. To ensure a high level of service, the IT organization has adopted ITIL best practices when implementing and using HP Application Performance Management (APM) and (HP Business Availability Center) to manage critical applications. By integrating APM with the HP IT Service Management (ITSM) suite, IT has successfully adopted ITIL service management processes that have allowed IT to use the tools more efficiently, communicate for effectively with the business, and improve the way Apollo is monitoring and providing services to its customers. In this session, we will discuss using ITIL to establish best practices for managing the goals of the business with service-level management, setting alerts, implementing incident-management processes, and establishing change processes by leveraging the application lifecycle.

**4701 - Monitoring Retail Kiosks at AT&T using HP SiteScope & Business Availability Center**

David Wicks, AT&T

Participants will understand how AT&T implemented critical monitoring of over 8000 retail kiosk devices across more than 2200 retail locations throughout the US within a few weeks using HP SiteScope. Presenters will explain how such an implementation allows AT&T to quickly alert, identify device issues which help to prevent and minimize downtime of critical retail kiosks using HP Sitescope along with HP Business Availability Center.

**3352 - Mondo Rescue: free disaster recovery and cloning solution**

Bruno Cornec, HP

First released in 2000, Mondo Rescue has matured to a global solution used both to restore systems in case of emergency and to deploy dozens of systems with similar configurations. Mondo Rescue can restore to bare metal from media as diverse as tapes, CDs, DVDs, USB keys, disks, and network images. Unlike most imaging tools, Mondo Rescue acts on a live system, minimizing interruption of service, and provides full flexibility in terms of changing the system layout during restoration. This session will provide an overview of Mondo Rescue and will also detail the collaboration between upstream and the Miracle distribution, and the services provided in Japan by Miracle around Mondo Rescue. The session is geared toward solution architects and systems administrators who have knowledge of Linux systems management.

**3567 - SCSI input/output packet flow with a focus on data replication performance over FCIP**

Greg Tinker, Chris Tinker, HP

Whether during a recession or a boom, your IT organization must manage financial performance against business objectives. Attend this session and learn how to achieve optimal performance on enterprise data replication (DR) designs, understand performance parameters, identify barriers and align your IT spending decisions with better performance indicators. Presenters will summarize several approaches with CWDM, DWDM, sonnet, Tenggabit Ethernet Ether, FCIP and Fibre Channel.

**3861 - Making the HP StorageWorks P9500 Disk Array replication technology work for you on your mainframes**

Ron Jonas, HP

This presentation is best suited for those interested in the HP StorageWorks P9500 Disk Array replication techniques in a mainframe environment. The HP StorageWorks P9500 Disk Array

supports many mainframe copy products. Get an overview of what is available, how it works, and its compatibility with IBM. This session will cover the various options, how they work, and their technical differences. Learn about P9000 Business Copy for mainframe, P9000 Continuous Access for mainframe (synchronous and journal), P9000 Compatible FlashCopy and P9000 Compatible XRC.

***3866 - Using HP StorageWorks P9000 for Business Continuity Manager Software to manage mainframe replication***

Ron Jonas, HP

This presentation is best suited for those who want to learn about how to control disk array-based copy functions in a z/OS environment while using HP StorageWorks for Business Continuity Manager Software. The session will describe how to define an environment, and demonstrate how easy it is to control copy functions using the ISPF based interface. Discussion and simple examples will also illustrate the use of REXX scripts to automate functions and generate reports.

***3822 - Surviving failure of a site or data center with zero downtime using HP and VMware fault tolerance***

Brad Katz and Joshua Powell, HP  
Hands-On Lab

Learn to set up and configure a multi-site P4000 cluster, and demonstrate a site failure using VMware Fault Tolerance. Participants will deploy VMware virtual machines in a fault tolerant configuration using P4000 storage. They will then demonstrate the ability of the P4000 Multi-Site cluster to survive a site failure by taking down half the P4000 nodes and using VMware High Availability and Fault Tolerance to keep virtual machines and applications on line during a failure. This hands-on lab provides an excellent opportunity to learn key concepts around P4000 multi-site clustering, including Network RAID, network configuration and failover managers. A focus on VMware FT provides further hands-on opportunities.

## **Summary**

HP Discover 2011 has over two dozen sessions touching on system availability, ranging from the nitty-gritty of network design to the management of data centers. If availability is of concern to you in the HP environment, plan to attend this important educational event.