OpenVMS performance tools in SDA

Session Number: A101
Session Times: Wednesday PM, Friday AM
Instructor: Anders Johansson
Session Level: Advanced
Session Abstract:
Anders will discuss the tools available via SDA that can be used to narrow down CPU bottlenecks. These tools are built as extensions to SDA, and are shipped as part of the OpenVMS operating sytem.

You will learn how to understand where in the code CPU time is spent, where cache misses occur, etc. The focus of the session will be on understanding what the tools provide, and how you analyze the results.

A part of the session will be used to demonstrate some of the tools.

Finding and resolving OpenVMS performance problems using tools supplied with OpenVMS

Session Number: A102
Session Times: Wednesday PM, Thursday AM
Instructor: Bart Lederman
Session Level: Intermediate
Session Abstract:
The purpose of this hands-on lab is to provide the attendees with a mentored hands-on experience in finding performance problems using various OpenVMS-supplied performance tools and utilities, including $ MONITOR, $ ANALYZE/SYSTEM, Availability Manager and other related tools. Attendees will be given a working knowledge on how the various tools work, and will be guided in using the tools to analyze an OpenVMS cluster under loaded conditions. Tips and hints into improving an OpenVMS cluster's performance will also be given.

Introduction to Performance Management

Session Number: A103
Session Times: Sunday, Friday AM
Instructor: Bart Lederman
Session Level: Intermediate
Session Abstract:
There are many sources that cover system ?tuning?, but that is only a small part of successful Performance Management. This session gives an overview of Performance Management, touching on many aspects that are not in any manual or bo ok, and which have been collected over the years by the speaker and other members of the OpenVMS Performance Expertise Center. The basic principles and techniques shown are applicable to all computer systems. Examples of some of the tools that are used

to collect information will include OpenVMS, Unix / Linux, and Windows, with the emphasis on tools that are supplied with the operating system.

Storage EVA Hands on

Session Number: A104
Session Times: Monday PM, Tuesday PM, Wednesday PM,
Instructor: Tom Rogers
Session Level: Intermediate
Session Abstract:
The power of the EVA is in its management simplicity. Yet we all know a workload or administrator that pushed all the wrong buttons on a piece of technology yielding it simply powerless. Understanding "best pr actices" for configuration and operation of an EVA helps you avoid costly missteps that rob your environment of the performance or flexibility that you need. In this 3 hour hands-on workshop, you will gain practical experience in configuring the EVA acco rding to "best practices" so that the investment can be maximized. Areas of exploration will include:

1. Capacity planning basics: How do I know if my array is out of gas?
2. Performance 101: How can I squeeze another x% from the array?
3. Disk backups/copies: Making the best use of Point-in-time copies.
4. Managing a dynamic environment: Keeping IT simple.

VAX and Alpha to Integrity Case Study

Session Number: A106
Session Times: Sunday, Thursday PM
Instructor: Brad McCusker
Session Level: Intermediate
Session Abstract:
This case study evaluates the migration of two mission critical OpenVMS clusters (1 VAX, 1 Alpha) to 3 Integrity clusters. This study will focus more on the project level aspects, the planning, design, implementation and management of the migration. Problems we encountered, how we solved them, etc. This will not be 'yet-another-integrity-porting' session, but instead will be a real world description of actual migrations.

Alignment Faults: Concepts, Analysis, and Correction

Session Number: A108
Session Times: Wednesday AM, Friday AM
Instructor: Bruce Ellis
Session Level: Advanced
Session Abstract:
Alignment faults have been around since the inception of the Alpha. With the advent of Integrity Server Systems the impact of alignment faults is substantially mor significant. This session describes the concepts surrounding alignment faults and coding techniques that cause them. We will describe

how to monitor the occurrence of alignment faults and how to trace them back to a specific application and a specific piece of code.

Once you know from whence they come, you will want to correct them. There is no magic system parameter or system tuning option to correct them. Only two things will prevent or improve the impact of alignment issues: coding techniques and compiler options. This session will describe how to correct them and present examples from a variety of languages. Although there is no such thing as a "good" alignment fault, this session will describe the kind of numbers that may be acceptable and when they may be killing performance.

Java 5 on OpenVMS

Session Number: A109
Session Times: Wednesday PM, Thursday AM
Instructor: Guy Peleg
Session Level: Advanced
Session Abstract:
Can the words "Java" , "Performance" and "OpenVMS" appear in the same sentence without a "NO" in between? Yes ! The HotSpot Technology shipping with Java 5 on OpenVMS Itanium can make Java applications fly on OpenVMS. The session will provide an overview of the HotSpot Technology, the implementation on OpenVMS IA64 comparing to Alpha Fast VM. It will also provide an overview on writing performance oriented Java code, tuning the Java environment, and how to tune Java applications using various profiling tools focusing on JRat.

Outline

- Java on OpenVMS Characteristics
- System tuning
- Process Quotas
- Logical Names
- Garbage Collection & Heap Sizing
- Optimizing I/O
- Optimizing Java code
- Profiling
- Where NOT to use Java on OpenVMS

Java Native Mode Interface

This session describes the mechanisms for developing Java Native Interfaces (JNI) from C to provide OpenVMS System functionality for Java applications. The session describes how to write JNI interfaces in C, how to call them from Java, and how to build a pplications using JNI routines.

General Topics

- Writing JNI Functions in C
- Incorporation JNI functions in Java Applications

- Building Java Applications using JNI Routines

Designing OpenVMS systems for availability and performance

Session Number: A112
Session Times: Tuesday AM, Tuesday PM
Instructor: Colin Butcher
Session Level: Intermediate
Session Abstract:
OpenVMS systems and clusters can provide unmatched levels of performance and availability if the overall system is well designed.

We need to structure the design and implementation of the complete system (application, infrastructure, platform etc.) to provide a reliable service.

This session will discuss the underlying principles of availability and performance and how they can be applied in an OpenVMS environment.

The session will cover:

- Performance characteristics of systems
- Principles of high availability
- Network connectivity and protocols
- Configuring systems and storage
- Application design issues

The emphasis will be on using case studies and examples to illustrate the main points.

This block will discuss the design and deployment of OpenVMS based systems to meet real-world application requirements in a practical manner.

Please be prepared to contribute to the discussion.

Principles of performance:
Understanding throughput, response times and the underlying mechanisms that determine the overall performance characteristics of a system.

Principles of high availability:
An overview of availability analysis, state transitions and failure detection.

Network connectivity and protocols:
An overview of networking and connectivity to systems.

Designing for availability and performance:
This will use case studies and examples to bring the different strands together in a practical manner to solve real-world problems.

Blade and System Management Update

Session Number: A113
Session Times: Wednesday PM, Thursday PM
Instructor: Dave Holt
Session Level: Intermediate
Session Abstract:
OpenVMS will be available on the new c-Class Blade systems in Summer 2007. Blades offer operational and environmental efficiencies which require new levels of management. This presentation outlines the HP company-wide developments in Blade management that are targeted to ship on OpenVMS Integrity in the second half of 2007.

A general update of OpenVMS System Management products will also be given.

Reducing OpenVMS TCO with new Virtualization capabilities

Session Number: A114
Session Times: Monday PM,Tuesday PM
Instructor: Dave Holt
Session Level: Intermediate
Session Abstract:
OpenVMS Integrity 8.3 introduced new flexible Utility Pricing functionality that enables customers to pay for only the compute resources they need. With the use of costed examples, this presentation shows that significant life-time sa vings can be made for standalone, clustered and disaster-tolerant OpenVMS configurations.

Integrating with java technology - Hands on

Session Number: A115
Session Times: Tuesday AM, Wednesday PM, Thursday AM,
Instructor: David Sullivan
Session Level: Intermediate
Session Abstract:
Java technologies such as web services, JSP, Servlets, RMI and JMS have become very popular. Learn how OpenVMS application which were written decades ago, in different languages, can be integrated with these newer technologies.

This is a hands-on lab in which you will use the WSIT product to generate web services, JSPs and POJOs that call non-java applications. You will learn how you can easily deploy these appications within a web server or within detached processes.

A basic knowledge of DCL and java are assumed for this class.

OpenVMS Backup

Session Number: A118
Session Times: Monday AM, Thursday PM
Instructor: Guy Peleg
Session Level: Intermediate
Session Abstract:
The session provides an overview of OpenVMS BACKUP. It discusses the main algorithms used by OpenVMS BACKUP for save and restore operations. The session will discuss new features recently added to OpenVMS BACKUP and will provide tips on improving performance of SAVE/RESTORE operations.

OpenVMS Performance Concepts

Session Number: A119
Session Times: Monday PM, Thursday PM
Instructor: Bruce Ellis
Session Level: Intermediate
Session Abstract:
There are many sessions on performance tools available for OpenVMS from Availability Manager to T4. Using the information provided by these tools requires a fundamental understanding of the performance that they provide. This session describes what these metrics mean and how they impact performance on OpenVMS. In the discussion, additional emphasis will be placed on how to improve the metrics, i.e. what works and why.

General Topics:

- CPU Time
- Time spent in Modes, in particular Kernel Mode, Interrupt State Time, and MP Synchronization Time.
- Process Scheduling States
- Paging Metrics
- I/O Metrics

Coding and scripting in DCL, Perl and Macro

Session Number: A121
Session Times: Wednesday PM, Thursday PM
Instructor: Hein van den Heuvel
Session Level: Intermediate
Session Abstract:
In this block we'll review DCL, as a language, mostly because it is always there, always ready to be used. Similarly we'll take a look at Macro as a language for simple tools again because it is always there. The major portion of this block will be an introduction to Perl from a practical perspective. Seasoned OpenVMS administrators should at least take a look at Perl because it is an excellent alternative for many DCL tasks and as it can give an easy entry into 'the other operating systems'.

Every system manager has written DCL command file using the basic read and write DCL commands to process text files. This session will take this basic mechanism several levels deeper. How about using DCL to read and update RMS indexed file such as SYSUAF and VMSMAIL_PROFILE using KEYS. How about processing the Tag-Length-Value (TLV) datum's in VMSMAIL_PROFILE? Did you ever use READ/KEY on fixed length sequential files? With that we can uise DCL to manipulate the internal structure of an INDEXED file! This session will show how to patch a broken RMS indexed file back to life using DCL only.

For the piece-de-resistance the session will decompose a command file which reads the data from a locked file by reading its file header from INDEXF.SYS and decoding the mapping pointers to find the blocks with the data, all in DCL. Sprinkle that with some 'nice to know' and 'did you ever try' and the participants will learn some real magic to take home.

I like developing OpenVMS automation solutions with DCL. I even like to think I'm pretty good at it! There is nothing wrong with using DCL as a scripting language (certainly not when compared to one of those Unix shell doohickeys).

However, I must admit that certain style of problems are solved more elegantly, quicker and more robust with PERL scripts or a combination of Perl and DCL. Perl, through its powerful associative arrays and regular expression, can be a great tool to for text parsing and data manipulation. This session will introduce the audience to using Perl from a DCL script writing vantage point. The session assumes no knowledge of Perl, just an open mind. It will provide an introduction to the language and its powerful regular expressions and show some basic Perl coding practices. The session will compare DCL and Perl solutions for several example problems.

Do you know Macro? Are you a little bit curious as to how to use it? It appears that OpenVMS MACRO is somewhat of a forgotten language. Yet it is powerful, free, and available on every single OpenVMS system: VAX, Alpha or Itanium. This session will not advocate to use Macro as a main implementation language, but just provide a reminder that is there ready to be leveraged. The participants will learn some of its basic usages by examining a few relatively easy example programs.

RMS

Session Number: A122
Session Times: Sunday, Wednesday AM
Instructor: Hein van den Heuvel
Session Level: Intermediate
Session Abstract:
This session will show how to break, and fix, an RMS indexed file. In order to do so, we will start with an overview of the internal layout of an RMS indexed file. We will follow that overview hands on with an ANAL/RMS /INT session. As we dive into the file internals several performance implications will become also clear.

RMS global buffers are one of the more powerful tuning techniques for RMS (indexed) file yet curiously are still under utilized by applications. The presenter will show how now more than ever you may lobal buffers for you're applications. Four relatively new (less than) RMS developments may

well be of great benefit to your∂15 years application: Hashed Lookup, Address Space re-use, Concu o reminds the participant of other new(ish) RMS features such as: Key-Less-Than, Convert improvements, No-Query-Lock, Sequential file buffering.

This session will give some practical, real life, RMS performance tuning examples. These are cases where tuning a single file, improved the performance of the whole system. Rather then a day long session looking in detail at every possible knob and the mechanisms behind it, this session will highlight potentially high impact areas based on hands-on tuning experiences. The examples will show some good, bad, and downright ugly files and how they were fixed using for example: Global buffers, Convert, Index Depth, Duplicate Key Chains, Empty bucket scans, Deferred Write. You may have thought your application files are suffering some through neglect? Just look at some of these examples!

Using SDA Extensions to troubleshoot system hangs and performance issues.

Session Number: A123
Session Times: Tuesday AM, Wednesday PM
Instructor: James Mehlhop
Session Level: Advanced
Session Abstract:
Introduction to using the System Dump Analyzer Extensions and how they can be used to troubleshoot system performance issues as well as application performance issues and even hung systems.

SDA extensions CAN be loaded at system boot time in order to collect information leading up to a system hang or crash, to allow you to analyze the data later after the crash event.

They can also be used interactively to help identify many system performance problems. I have used them in the past to help create radical performance enhancements within applications.

CockpitMgr / Alpha Emulator Block

Session Number: A128
Session Times: Monday PM, Wednesday AM
Instructor: Johan Michiels,Arie de Groot
Session Level: Basic
Session Abstract:
This block introduces two products:

- CockpitMgr for OpenVMS
- The Alpha Emulator

A combined demonstration of both products will conclude the session.

Polycenter is back. It's better. It's called CockpitMgr now.
In the early nineties, Digital released a portfolio of system management production tools under the

Polycenter brand name. Maybe you're still using today one or more of those products which may now have another name.

In the mean time, technology evolved and those old products no longer fulfil all needs.

CockpitMgr bundles the functionality of several Polycenter products, but evolved in parallel with the newest technologies. It can be considered as the most complete OpenVMS system management toolkit in the industry, helping the system manager in his daily operations. It runs entirely on OpenVMS.

The current presentation makes an inventory of VMS system management needs anno 2007, and explains how CockpitMgr can provide a perfect solution for system and console monitoring, network, storage and configuration management.

Alpha Virtualization@work
Alpha Hardware Virtualization is a fairly new development that allows Alpha computer users to move from their old systems to a more current, industry standard platform without changing their Alpha software. It provides a perfect solution for those Alpha users that have problems to migrate their software to the Alpha successor product. This session will focus on operational aspects of Alpha Virtualization and include several customer cases where this product is implemented. Attendees will gain insight in where the actual benefits of such a solution reside and if/how it is an interesting subject for the organization they represent. A live demonstration of the product will be included, using the power or Alpha Virtualization to run an OpenVMS environment that is managed by CockpitMgr. The attendees can participate by using the Virtual Alpha installation on HP notebooks.

SAN Storage - Nuts & Bolts - Part 2

Session Number: A132
Session Times: Monday AM, Wednesday AM
Instructor: John Fisher
Session Level: Intermediate
Session Abstract:
This second session takes a deeper look at the performance management of SANs from an OpenVMS perspective. Many OpenVMS systems now support SANs. Other environments continue to move storage to Fibre Channel storage arrays. And they also are upgrading from HSG80 based storage arrays to more current Fibre Channel storage arrays. For those IT professionals who manage these environments, this seminar provides how-to and best practice information for performance management of a SAN for OpenVMS systems.

Performance Management - Theory and Process. This session deals with the general theory of performance management in a SAN environment. It also explores the general process to gather and manage performance management data.

Performance Management - Metrics and Tools. This session discusses the various performance metrics available and tools that can be used to help management storage performance.

Performance Management - Best Practices. Finally this session takes a few minutes to explore how you can move from theory into practice. This start of a set of Best Practices can help guide implementation of an OpenVMS SAN environment to improve performance and availability.

SAN Storage - Nuts & Bolts - Part 1

Session Number: A133
Session Times: Sunday, Tuesday PM
Instructor: John Fisher
Session Level: Intermediate
Session Abstract:
This session looks at SANs from an OpenVMS perspective. Many OpenVMS systems now support SANs. Other environments continue to move storage to Fibre Channel storage arrays. And they also are upgrading from HSG80 based storage arrays tomore current Fibre Channel storage arrays. For those IT professionals who manage these environments, this seminar provides how-to and best practice information on the set up, management and performance management of a SAN for OpenVMS systems.

OpenVMS SAN Storage Setup reviews:

- a brief overview of SAN design for high availability
- use of WWIDMGR to allow the AlphaServer SRM console to access disks
- identifiers and their connection types and setup issues
- connectivity for management of the controllers
- some setup tips to make troubleshooting easier
- overview of OpenVMS multipathing with a SAN
- presentation tips for adding, removing and reusing luns

OpenVMS SAN Storage Management reviews:

- a brief overview of SAN design for high availability
- use of WWIDMGR to allow the AlphaServer SRM console to access disks
- connectivity for management of the controllers
- overview of OpenVMS multipathing with a SAN
- presentation tips for adding, removing and reusing luns
- event logging and notification
- upgrade planning tips
- tips for some common issues

Using T4 to Define OpenVMS SAN Storage Needs explores:

- Building the current picture
- Using T4 COMP data
- Using T4 FCMON data
- Using VEVAMON data
- Using EVAperf data

- Using other sources
- Building the overall VMScluster picture

Long-Distance Disaster Recovery and Disaster Tolerance Using OpenVMS Clusters

Session Number: A139
Session Times: Thursday AM
Instructor: Keith Parris
Session Level: Advanced
Session Abstract:
Prior to 9/11, companies felt relatively safe with disaster recovery sites not far away or with disaster-tolerant cluster configurations with only a few miles between sites. Now we see the somber realization setting in that terroristsmight obtain a nuclear weapon and take out an entire metropolitan area, potentially wiping out both sites of a disaster-tolerant OpenVMS Cluster. This is causing many businesses to be under pressure to set up disaster recovery or disaster-tolerant configurations with 1,000 miles or more between sites. This session covers the various potential challenges typically encountered in developing a long-distance disaster-recovery or disaster-tolerant solution, the technologies and strategies which may be applied, and the pros and cons of various approaches, as well as methods which may be used to simulate and test a long-distance configuration prior to implementation.

Advanced Disaster Tolerance Using OpenVMS Clusters

Session Number: A140
Session Times: Thursday AM
Instructor: Keith Parris
Session Level: Advanced
Session Abstract:
This session describes in deeper detail how OpenVMS Clusters are used to provide disaster tolerance. It summarizes the foundational elements that must be in place to provide disaster tolerance, tells how to plan for disaster tolerance, and describes key technologies such as inter-site links, multi-site clusters, and data replication technologies. The presentation also includes real-world examples of Disaster Tolerance in action.

Achieving the Highest Possible Availability in Your OpenVMS Cluster

Session Number: A142
Session Times: Thursday AM
Instructor: Keith Parris
Session Level: Advanced
Session Abstract:
This session tells how to configure and manage an OpenVMS Cluster to provide the highest possible

level of availability. It provides detail on potential failure sources within an OpenVMS Cluster configuration and the available techniques, tools, configuration modifications, and operational procedures to eliminate or mitigate these risks. It also describes how to minimize the delays associated with cluster state transitions.

Continuous Access or Volume Shadowing: Which Should I Choose for My Data Replication and When?

Session Number: A143
Session Times: Monday AM, Tuesday PM
Instructor: Keith Parris
Session Level: Intermediate
Session Abstract:
Disk data replication (commonly known as mirroring or shadowing) is a common tool to protect against disk failures. When applied between geographically-dispersed sites it can protect data for purposes of disaster recovery or disaster tolerance. This session describes and compares the capabilities and technical aspects of Continuous Access (CA) on EVA and XP storage controllers and Host-Based Volume Shadowing software for OpenVMS, and discusses the relative merits of each solution in a variety of possible usage scenarios, and the set of needs or circumstances under which each is the most popular.

Automated Backup and Archive on OpenVMS - ABS

Session Number: A147-B
Session Times: Tuesday PM, Friday AM
Instructor: Akila Balasubramanian
Session Level: Intermediate
Session Abstract:
Session objective is to present the good new features in ABS/MDMS (Archive Backup System / Media Device Management System). Also the performance improvement made in the release V4.4 will be presented along with some test results.

V8.3-1 Cluster Interconnect Performance Update

Session Number: A147-C
Session Times: Tuesday PM, Friday AM
Instructor: Nilakantan Mahadevan, Akila Balasubramanian
Session Level: Advanced
Session Abstract:
Performance measurements of OpenVMS V8.3-1 Cluster Communications using CI, Gigabit & 10Gb Ethernet on Integrity and Alpha. Includes recommendations for FastPath IO tuning for maximum performance. Overview of multiple channel load distribution for NI.

LAN Update and Troubleshooting

Session Number: A148-B
Session Times: Tuesday AM, Thursday PM
Instructor: Richard Stockdale
Session Level: Advanced
Session Abstract:
LAN Update and Troubleshooting will cover a short review of the roadmaps followed by general troubleshooting information, then more specific data regarding VLANs and LAN Failover Sets, finally a description of performance troubleshooting, and performance analysis tools.

LAN Troubleshooting - General will cover general problem areas such as duplex mode mismatch, counters and error counters, buffering problems, and cluster-related issues.

LAN Troubleshooting - VLAN / LLAN will cover difficulties in setting up and using VLANs, and the interaction between LAN Failover Sets and VLANs.

LAN Troubleshooting - Performance will cover some performance characteristics of various LAN devices and describe some tools used to look at performance information.

LAN troubleshooting your problem

Session Number: A148-C
Session Times: Tuesday AM, Thursday PM
Instructor: Session Level: Intermediate
Session Abstract:
Are you having LAN trouble? Bring your laptop and your tunnel key and have the experts look at your network and offer suggestions.

Java on Openvms: Ugly Duckling or Racing Pigeon?

Session Number: A153-C
Session Times: Monday AM, Tuesday PM
Instructor: Powell Hazzard
Session Level: Basic
Session Abstract:
Do you run Java applications on OpenVMS? Do you wonder how to improve their performance? This talk will address some of the performance issues with Java on OpenVMS. Tuning techniques - both obvious and obscure - will be discussed, and amusing anecdotes will be shared.

building an on-the-fly Itanium compiler in Oracle Rdb

Session Number: A159
Session Times: Thursday PM
Instructor: Norman Lastovica
Session Level: Advanced
Session Abstract:

For high performance, Oracle Rdb on VAX and Alpha platforms generates query-specific callable subroutines of native instructions. On I64, however, these subroutines are executed by an interpretation engine.

This session describes the generation and evolution of a native I64 run-time on-the-fly compiler within Rdb that compiles subroutines from native Alpha and pseudo code "rich" instructions into native machine instructions that are called during request execution.

Topic areas include a review of the use of run-time generated code within Rdb, the components of the compiler, problems faced during development, interesting aspects of the I64 instruction set and performance results.

oracle rdb status and performance updates

Session Number: A160
Session Times: Monday PM
Instructor: Norman Lastovica
Session Level: Basic
Session Abstract:
Status update of Oracle Rdb On Itanium, Alpha and VAX systems. Topics include current strategy and direction for Rdb as well as performance topics including experiences with Rdb running on a 64 core Superdome environment.

T4 & Friends Introduction

Session Number: A161
Session Times: Monday AM, Tuesday AM
Instructor: Steve Lieman, Pat McConnell
Session Level: Basic
Session Abstract:
Duration: 60 Minutes
Over the past seven years, OpenVMS Engineering has developed a set of 21st century tools and methods that improve collaboration about system performance issues between all interested parties. These have collectively been referred to as "T4 & Friends". In fact, the VMS Engineering Support group uses these tools extensively in their work with customers and partners. This session is an introduction to T4 & Friends that will show you what tools are available, where to get them, how to begin to use them, and what benefits they bring compared to previous approaches.

This is a hands-on session. Though not a requirement, a laptop running a recent version of Microsoft Windows will allow participants to work with TLViz, the T4 data visualizer.

An advanced T4 session is also available during the boot camp for those who would like to advance further

Making the most out of a system crash

Session Number: A163
Session Times: Wednesday PM, Friday AM
Instructor: Richard Bishop
Session Level: Intermediate
Session Abstract:
We don't like system crashes, and on VMS they don't happen too often. But when they do happen, we want each one to count.

This session addresses system management approaches that can be used to maximize the usefulness of a crash dump, and discusses changes in recent versions of VMS that improve the performance of system dumps.

Hoff's Hints

Session Number: A170
Session Times: Sunday, Friday AM
Instructor: Stephen Hoffman
Session Level: Advanced
Session Abstract:
The nerd-level view of OpenVMS skills and survival.

OpenVMS Lifecycle: a quick tour from initial EFI and SRM console set-up, bootstrap, system configuration and common files and multi-architecture clustering, InfoServer loads, DECnet and IP aliases and cluster and application uptime,security and auditing, time and timekeeping, satellite bootstraps, backup and data archiving and XML data export, rolling upgrades. Downtime and recovery. Steady-state operational considerations, through initial planning for eventual system retirement and replacement.

OpenVMS Hints: tips for making better use of OpenVMS and its features, and maps of various idiosyncrasies lurking within. Information current for OpenVMS V8.3, and for VAX, Alpha and Integrity hardware.

OpenVMS on Integrity servers -- Revealed

Session Number: A171
Session Times: Monday AM
Instructor: Thomas Siebold
Session Level: Intermediate
Session Abstract:
This block is considered to cover Hp Integrity server basics, like the underlying processor architecture, the server systems themselves and connecting and setting up an OpenVMS system on these servers.

The Intel Itanium Architecture - An Overview
The goal of this session is to provide an introduction of the Intel. Itanium. architecture and explain functionality and benefits to participants. The session will introduce the Intel™ Itanium™ architecture;

explain how the architecture overcomes the limitations of today's CPU architectures. It covers the different and new aspects of the architecture, their implementation and what problems in today's architectures it is trying to solve. A specific focus is put on how this new architecture improves instruction level parallelism and branch handling, reduces memory cost and supports modular code. Additional topics planned for coverage in this session are: Intel Itanium. roadmap, chips and functionality implemented in the recent multi-core processors.

HP Integrity Servers -- An Introduction
In this session, participants will learn about the various HP Integrity server systems. All current systems will be covered in detail to enable participants to compare the systems on a technological level. Emphasis in this session will also be put on what is different from Alpha servers especially in the RAS (Reliability, Availability, Scalability) area. . At the end of this session participants will have learned which HP Integrity server systems are currently available and how to compare them. Some performance data will be provided, but benchmarks will not be covered in detail.

OpenVMS on HP Integrity Servers
In this session, participants will learn about the various HP Integrity server system consoles and how to setup OpenVMS on these systems. Participants will learn which consoles are provided by the systems and how to access and configure the console of an Integrity system. The presentation uses a combined hardware and software point of view. They will also learn what steps are necessary to install OpenVMS I64. Emphasis in this session will be put on what is different from setting up an Alpha system with OpenVMS. At the end of this session participants will have learned how to setup OpenVMS on HP Integrity server systems.

HP PERFDAT a new performance solution for OpenVMS

Session Number: A175
Session Times: Monday PM, Tuesday AM
Instructor: Wolfgang Burger
Session Level: Intermediate
Session Abstract:
The session will give an overview and hands-on experience on the OpenVMS performance and capacity planning solution HP PERFDAT. HP PERFDAT performance solution for OpenVMS provides an unprecedented level of insight into multi-system performance. A complete suite of highly automated collection, filtering, charting and trend analysis capabilities provide the user with accurate and complete performance information for effective performance lifecycle management. The user interface that you will be able to use was developed in close cooperation with customers in order to keep performance data analysis simple and intuitive and to enable the user to pinpoint performance problems and to identify their cause without OpenVMS internals knowledge.

In the first part of the session the main features and basic concepts of HP PERFDAT are presented. During the lab-part of the session the participants will have the opportunity to install the HP PERFDAT GUI on their notebooks configure the GUI such that it connects to the relevant collector nodes and then run and manage HP PERFDAT on the demo systems to do their own performance analysis.

Tomcat tuning lab

Session Number: A176
Session Times: Tuesday AM, Wednesday PM, Thursday PM
Instructor: Powell Hazzard
Session Level: Intermediate
Session Abstract:

Porting Real Applications to Itanium

Session Number: A178
Session Times: Sunday
Instructor: Guy Peleg
Session Level: Intermediate
Session Abstract:
The session provides an overview on the efforts required for porting applications to Itanium. It discusses various issues developers may encounter when porting applications. Examples in various programming languages (C, C++, Macro, Fortran and Pascal) are provided.

T4 and VMS Engineering Support and T4 Experiences from the Field

Session Number: A179
Session Times: Monday AM
Instructor: Kevin Jenkins, Tom Cafarella, Melanie Hubbard, and Bart Lederman
Session Level: Intermediate
Session Abstract:

Session Name: T4 and VMS Engineering Support
Level: Basic/Intermediate
Duration: 60 Minutes
Instructors: Kevin Jenkins, Tom Cafarella, and Melanie Hubbard

Abstract:
OpenVMS Engineering Support engages with VMS customers and partners to collaboratively resolve system performance problems.The T4 & Friends toolkit is key to the successful resolution of problems in the system performance domain, and this session walks participants through several real world VMS system performance problems solved with the T4 & Friends toolkit.

This is a hands-on session. Though not a requirement, a laptop running a recent version of Microsoft Windows will allow participants to work along with the presenters in order to directly experience the T4 & Friends problem solving process.

Session Name: T4 Experiences from the Field
Level: Basic/Intermediate/Advanced
Duration: 60 Minutes
Instructors: Bart Lederman

Abstract:
The deployment of the T4 & Friends tool set into the field has provided valuable feedback. This session presents operational solutions to the problems of system performance monitoring in real world heterogeneous system environments. Examples will be presented on monitoring in clustered environments that include both OpenVMS and UNIX, extending the tool set to monitor NFS, suggested changes to the procedures in the default T4 distribution, data collector design and implementation, and feedback on the TLViz data visualizer.

This is a hands-on session. Though not a requirement, a laptop running a recent version of Microsoft Windows will allow participants to work along with the presenters in order to directly experience the T4 & Friends problem solving process.

T4 & Friends Advanced Hands-on Workshop and Mastering T4 & Friends

Session Number: A180
Session Times: Tuesday AM
Instructor: Steve Lieman, Pat McConnell, Melanie Hubbard, and John Fisher
Session Level: Intermediate/Advanced
Session Abstract:

Session Name: T4 & Friends Advanced Hands-on Workshop
Session Level: Intermediate/Advanced
Duration: 75 Minutes
Instructor: Steve Lieman, Pat McConnell, and Melanie Hubbard

Abstract:
In the past year, there have been marked advances in the capabilities of the T4 & Friends tools set for VMS performance. This session will focus on these new features, on the most advanced and complex features, and on the ways that the different components of this tool set integrate with each other.

Topics will include:

TLViz v 2.0-x advanced features - Demonstrating the Power and Time-saving of Single Click

Moving average
Dual Y & dual chart
Y axis adjustments (min-max and zero-based)

Ratios - normalizing one factor with another
Stacked area charts
100% area charts - normalizing a group of factors
Bar charts - when they work best
Correlation and scatter plot charts - another way to look at a pair of factors
Handling very large files - how to cut your way through thousands of factors
CSVPNG advanced features for manipulating CSV files The goal of this segment is helping to grasp the full range of possibilities and providing a framework for learning more on your own
Visualizing data sets with large time gaps (e.g. 10-11 AM each day for a week)
Merging data from multiple sources
Summarizing data (rolling up multiple samples into a single sample)
Custom outputs - using CSVPNG to customize your output graphics
Handling non-standard input csv files
Finding the Top N items of a particular class of data (e.g. the N disks with the highest Write KBS)
Accessing the complete list of features
OTLT an Oracle Server monitoring solution for T4

The data sets we use in this segment and the latest versions of TLViz and CSVPNG will be available for attendees to download and use. This will permit the option for those who desire to make this a hands-on session.

Session Name: Mastering T4 & Friends
Session Level: Intermediate/Advanced
Duration: 60 Minutes
Instructor: John Fisher

Abstract:

In the past year, there have been marked advances in the capabilities of the T4 & Friends tools set for VMS performance. This session will focus on these new features, on the most advanced and complex features, and on the ways that the different components of this tool set integrate with each other.

System and SAN administrators will learn how to:

1. Concatenate data from different days
2. Extract out time ranges and specific set of metrics
3. Add new metrics for advanced correlation and analysis
4. Calculate and add new metrics via csvpng
5. Calculate and add new metrics via TLViz
6. Create automated reports

Intel Chip Designs

Session Number: G202
Instructor: Cameron McNairy

Session Level: General
Session Abstract:

Engineering Panel

Session Number: G206
Instructor: OpenVMS Engineering, Product Management and Marketing
Session Level: General
Session Abstract:

VMS Info Desk

Session Number: G207
Instructor: Guy Peleg
Session Level: General
Session Abstract: