Hitachi Data Systems

HITACHI
Inspire the Next

NEW CAPABILITIES AND SIMPLIFIED OPERATIONS WITH HITACHI DEVICE MANAGER SINCE V7.0

HITACHI COMMAND SUITE V7.1

JOHN HARKER, SENIOR PRODUCT MARKETING MANAGER
JOHN YARBOROUGH, TECHNICAL ENGINEERING MANAGER

MAY 25, 2011

HITACHI
Inspire the Next

New Capabilities and Simplified Operations with Hitachi Device Manager since v7.0

This session will give you the latest on how to get the most from Hitachi Device Manager. We will start off with a review of what's new in Hitachi Device Manager since v7.0. We will give a quick demo of the highlights of the 7.1 and 7.1.1 releases. Focus will be on improvements in host management, Hitachi Dynamic Tiering support and the new and improved resource groups multitenancy administration feature. We'll end with a lively Q&A session ,where you can ask questions of the product manager and field technical specialists.

By attending this webcast, you will learn how to:

- Simplify host groupings and storage operations
- Set up and manage Hitachi Dynamic Provisioning and Hitachi Dynamic Tiering pools
- Partition your storage system for secure multitenancy administration

UPCOMING WEBTECH SESSIONS

HITACHI
Inspire the Next

June

- **Improve Performance with Mainframe Storage and 8GB FICON**, June 8, 2011 at 9am PT, 12pm ET
- **ESG presents: How to Buy Storage Virtualization**, June 22, 2011 at 9am PT, 12pm ET
- **Storage Service Level Management**, June 29, 2011 at 9am PT, 12pm ET

Please check www.hds.com/webtech for:

- Link to the recording, the presentation and Q&A (available next week)
- Schedule and registration for upcoming WebTech sessions

WHAT'S NEW IN DEVICE MANAGER 7.1

HITACHI
Inspire the Next

- Multitenant environment support
- Hitachi Data Ingestor support
- New Hitachi Virtual Storage Platform hardware features support
- Pool management enhancements
- Host data collector security enhancement
- Usability improvements
- Supported environments

MULTITENANT ENVIRONMENT SUPPORT

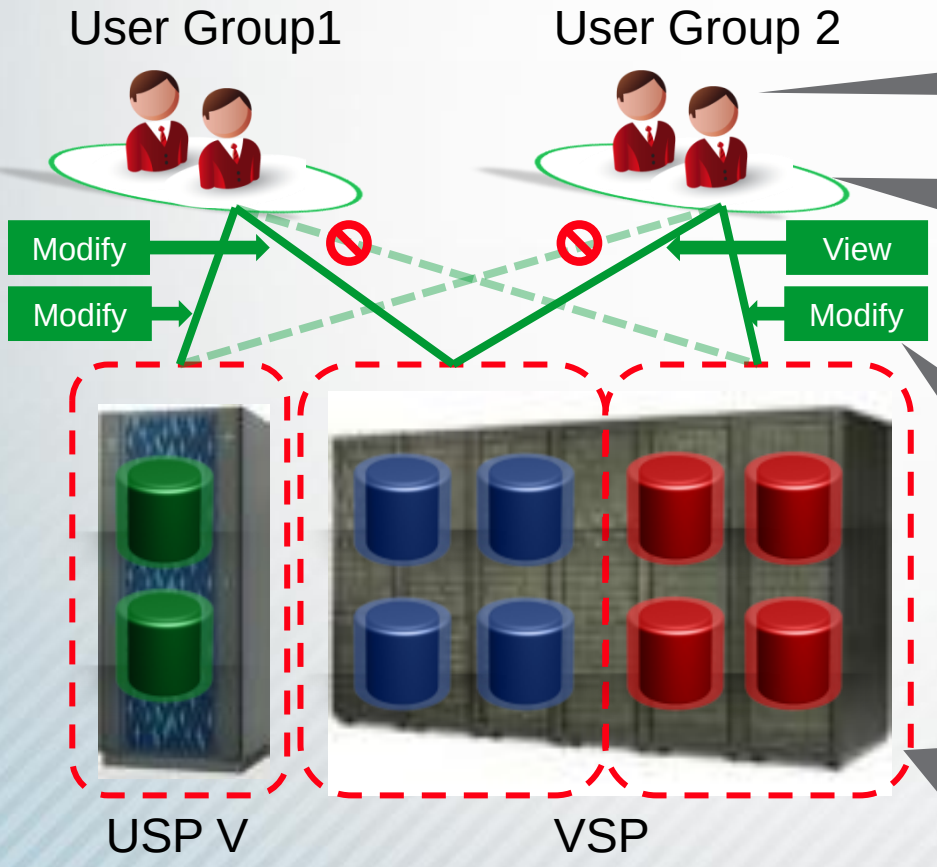
HITACHI
Inspire the Next

- Hitachi Device Manager (HDvM) v7.1 re-introduces administrative access control features (multitenancy) for security in multitenant administrative environments
  - Resource groups divide resources across data centers
    - A user can define a group of storage resources
  - Role-based access control
    - HDvM 7.1 uses existing Hitachi Command Suite role model (admin, modify, view)
  - Easy resource management with user group
    - Resources can be controlled for users in the user group

MULTITENANT ENVIRONMENT SUPPORT

HITACHI
Inspire the Next

- Overview of multitenancy feature
  - Users in a user group can access the resources that are assigned to the user group with assigned roles



User: A user for login to HCS

User Group: A group of users with the same roles

Role: A permission to the resource group, which is assigned to the user group

Resource Group (RG): A group of storage resources

Resources in resource group are mutually exclusive

MULTITENANT ENVIRONMENT SUPPORT

HITACHI
Inspire the Next

- Differences with the previous resource groups in HDvM

ITEM	VERSION 6	VERSION 7
Target resources	LDEV Host Logical group (dropped)	LDEV Parity group Port Host group (added)
Relationship between user and resource group	1:1	N:N
Permission to a resource group	Set to a user	Set to a user group (can be set to each RG)

- Notes on target resources
  - Listed elements are available on VSP only. Other than VSP, whole storage system can be set as a target resource.
  - HDvM resource group and VSP resource group support the same type of elements, but they are not synchronized.

MULTITENANT ENVIRONMENT SUPPORT

HITACHI
Inspire the Next

- How to set up multitenant environment

STEP 1: CREATE A USER

Add a user who manages storage resources

STEP 2: DEFINE A RESOURCE GROUP

Define resources to be controlled

STEP 3: DEFINE A USER GROUP

Assign users and resource groups with roles

MULTITENANT ENVIRONMENT SUPPORT

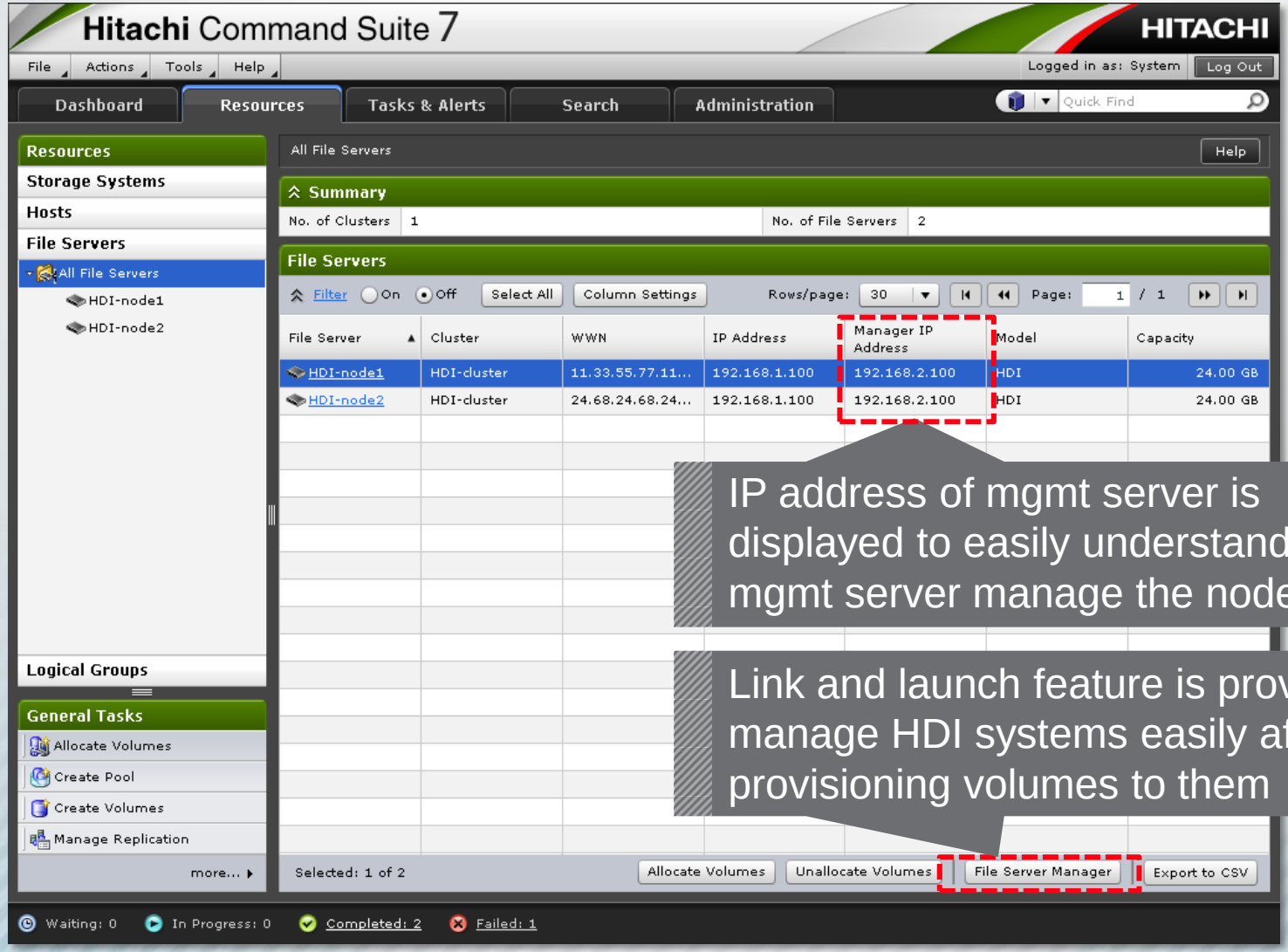
HITACHI
Inspire the Next

- The following groups are prepared by default
  - Resource group
    - **All resources** : Built-in resource group
    - **All resource groups** for a storage system (automatically created after discovery)
  - User group: A user group that ***all resources*** are assigned with each permission
    - Admin group
    - Modify group
    - View group
    - Peer group

HITACHI DATA INGESTOR SUPPORT

HITACHI
Inspire the Next

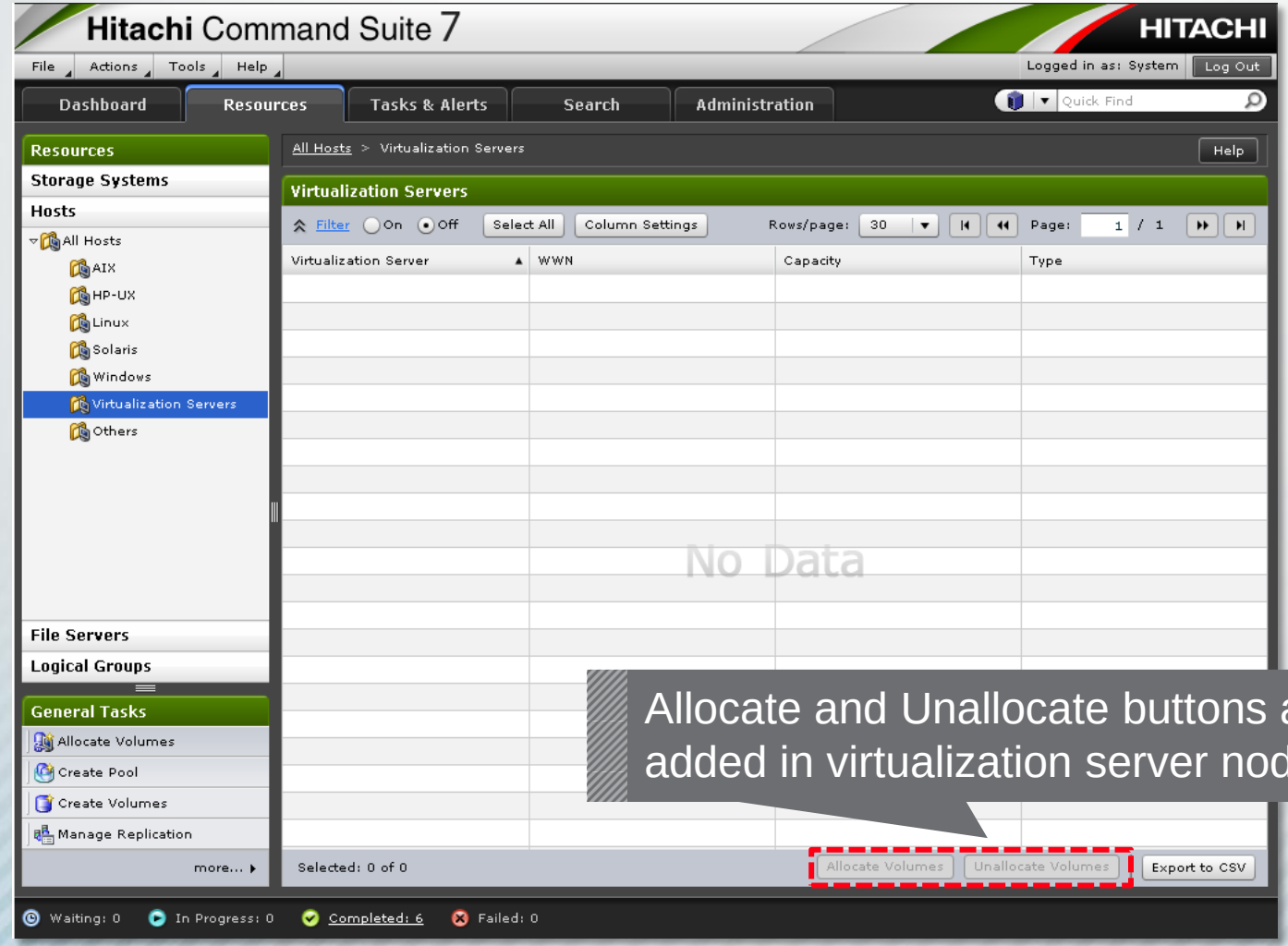
- HDvM provides easy management of HDI systems



PROVISION TO MULTIPLE VIRTUALIZATION SERVERS

HITACHI
Inspire the Next

- HDvM 7.1 can allocate volumes to multiple virtualization servers at a single operation



SUPPORTED ENVIRONMENT

HITACHI
Inspire the Next

- Added support for the following platforms:

OS	SERVER	GUI	CLI	HDC (SERVER)	HDC (TARGET)	AGENT
Windows 7 SP1	x	x	x			
Windows 2008 R2 SP1	x	x	x	x	x	x
RHEL 5.6	x	x	x			x
SUSE 11 SP1	x	x	x	x	x	GA
AIX 7.1			x		x	GA

- Linux platform support for management server
  - RHEL 5.5 and SUSE Linux 11 SP1 are now supported
- For HDvM agent, RHEL AS/ES 3 is no longer supported
- Modular storage is now supported on Solaris(x64)
- HDvM now supports IPv6 connection to storage systems

SUPPORTED ENVIRONMENT

HITACHI
Inspire the Next

- Java 6 is newly supported in Hitachi Command Suite
  - Currently, Hitachi Java (Java 5) is bundled and used in HCS
  - This is helpful for users who want to use Java 6 due to their policies or security concerns
  - Java 6, which is provided by Oracle, can be used
  - The following steps are needed to switch to Java 6
    - Download Java 6 from Oracle site
    - Install Java 6
    - Stop all HCS services
    - Run ***hcmdschgjdk*** command
    - Start all HCS services

DEMONSTRATION

QUESTIONS AND DISCUSSION

UPCOMING WEBTECH SESSIONS

HITACHI
Inspire the Next

JUNE

IMPROVE PERFORMANCE WITH MAINFRAME STORAGE AND 8GB FICON,
JUNE 8, 2011 AT 9AM PT, 12PM ET

ESG PRESENTS: HOW TO BUY STORAGE VIRTUALIZATION,
JUNE 22, 2011 AT 9AM PT, 12PM ET

STORAGE SERVICE LEVEL MANAGEMENT,
JUNE 29, 2011 AT 9AM PT, 12PM ET

PLEASE CHECK WWW.HDS.COM/WEBTECH FOR:

- **Link to the recording, the presentation and Q&A (available next week)**
- **Schedule and registration for upcoming WebTech sessions**

THANK YOU