Lenovo XClarity

Thiago H Gomes – DCG Technical Sales Specialist
February - 2019

Lenovo

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XClarity Administrator

Foundational Software for Precision Execution and IT Productivity
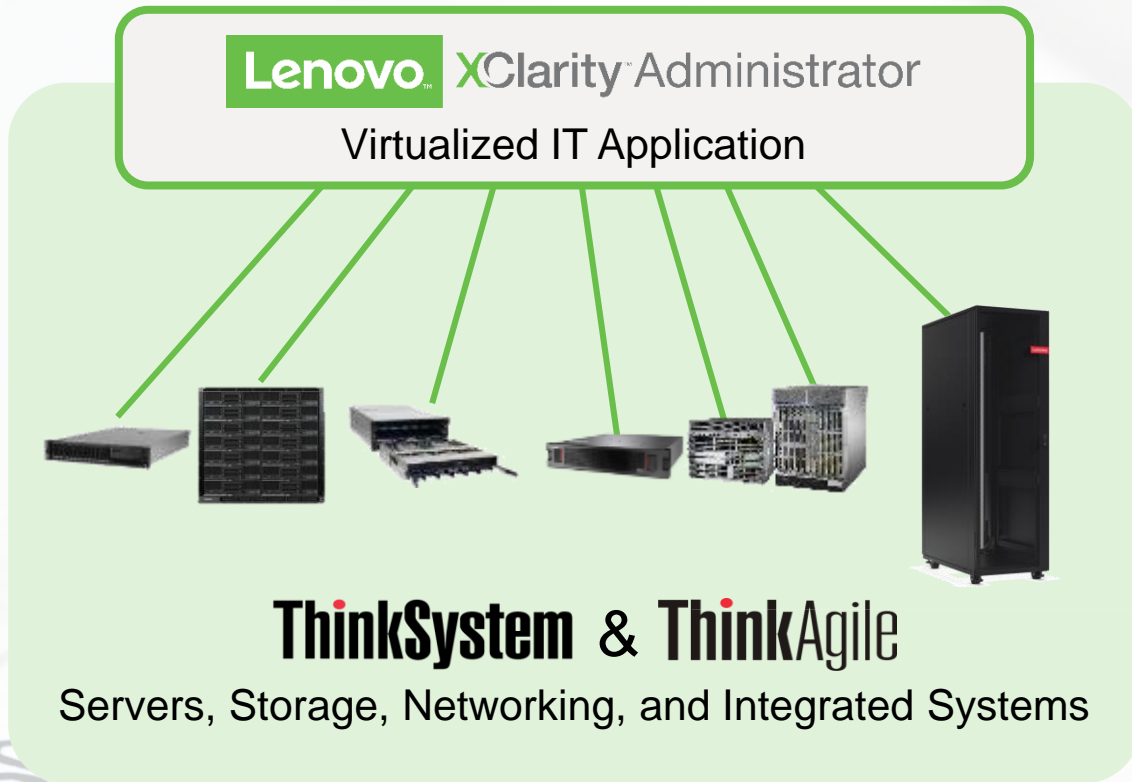
Key Data Center Management Challenges

- Hardware provisioning and maintenance

- Data-driven, connected view of data center operations

- Transforming infrastructure resources into services

Lenovo XClarity™ Administrator

Foundational Infrastructure Software for Precision Execution

Lenovo XClarity™ Administrator
Virtualized IT Application

ThinkSystem & ThinkAgile
Servers, Storage, Networking, and Integrated Systems

Faster Provisioning

**48%** Less time to deploy than competitor solutions[1,2]

Improved IT Productivity

72% Fewer steps to deploy than competitor solutions[1,2]

1. http://www.lenovo.com/images/products/system-x/pdfs/white-papers/xclarity_vs_cisco_ucs_manager_wp.pdf
2. http://www.lenovo.com/images/products/system-x/pdfs/white-papers/xclarity_vs_hp_oneview_wp.pdf

Simplify Infrastructure Management with XClarity

Download the XClarity Administrator virtual appliance
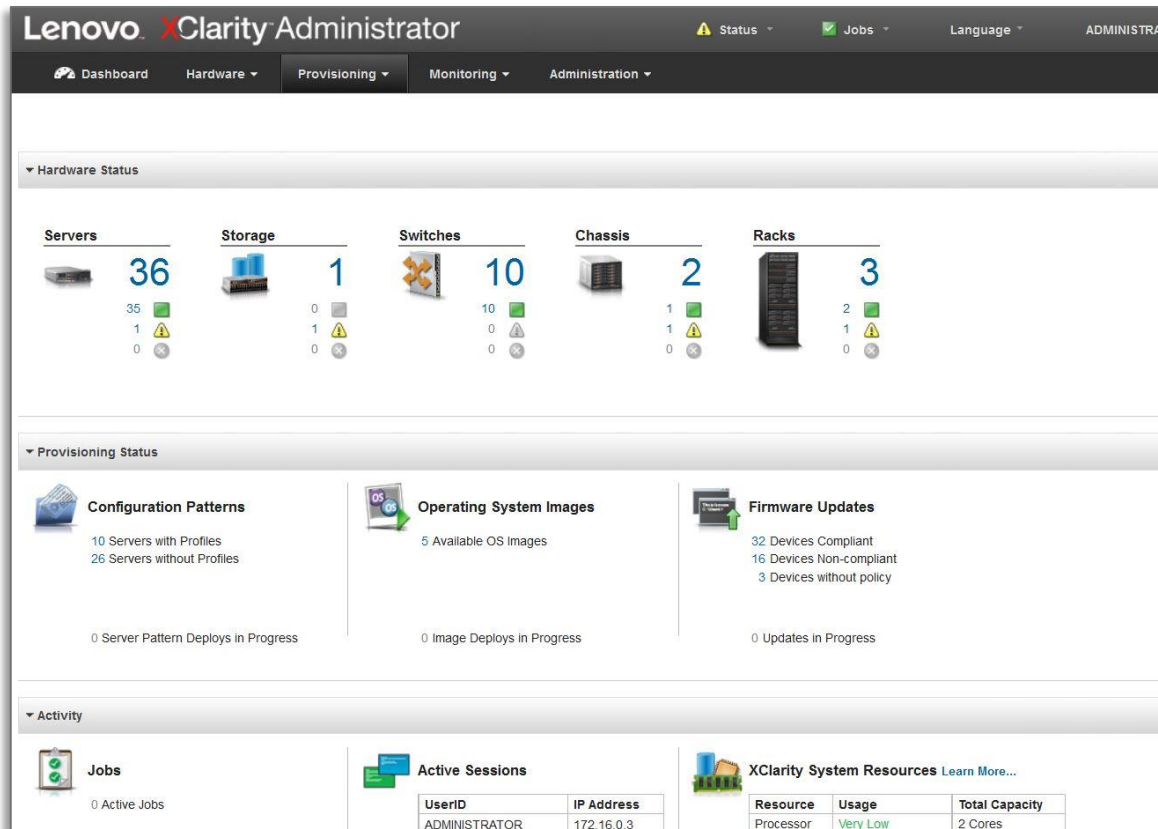
- Reusable Patterns and Policies
  - Configuration Patterns define the state of physical systems
  - Jump start provisioning with pre-defined UEFI settings optimized for specific workloads
  - Firmware level policy management streamlines ongoing maintenance
- Real-Time Monitoring
  - Forward alerts, emails, and events
  - Call Home to create service tickets
  - Centrally launch remote control sessions to manage endpoints as if you were at the local console
- Automated OS installation
  - Minimize manual steps with scalable installation of hypervisors and operating systems to multiple bare metal servers

Strengthen Infrastructure and End User Security with XClarity

- User validation, authentication, auditing
  - Authenticate users with external Active Directory (AD) Servers
  - Provide single sign-on and multi-factor authentication with external Active Directory Federation Services (AD FS)
  - Encapsulate managed endpoints to establish a single, tamper-proof system of record of user activity
- Secure connections and messages
  - Centrally manage endpoint SSL certificates
  - Perfect Forward Secrecy strengthens communication
  - Implement NIST SP 800-131A and FIPS 140-2 levels of encryption compliance
- Run only validated, trusted system software
  - Firmware and XClarity software updates will only execute if digitally signed by Lenovo

Your Active Directory Server or
Active Directory Federation Services

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XClarity Administrator

ThinkSystem & **Think**Agile

Flexible Programmatic Control of Lenovo Infrastructure

LENOVO XClarity Administrator APIs

PowerShell cmdlets	Python CLI	REST APIs

PowerShell cmdlets

- Command-line task automation and configuration management
- Consistent, reliable task execution
- Modular, re-usable code
- PowerShell help is available in the XClarity Administrator user [documentation](#)
- [Download the XClarity Administrator PowerShell Toolkit from the PowerShell Gallery](#)

Python CLI

- Clean object-oriented design and extensive support libraries simplify development of Web services
- Open source development and collaboration
- Run Python commands from an interactive shell, Python shell, or as a Python script
- Python CLI toolkit help is available in the XClarity Administrator user [documentation](#)

REST APIs

- Logical, efficient, and widespread API standard for Internet-based services
- Simplified, secure interface between systems using HTTPS to obtain data and execute operations
- REST API help is available in the XClarity Administrator user [documentation](#)

XClarity Administrator Install
Supported Host Systems

The Lenovo XClarity management appliance runs in a virtual machine on the host system.

- Nutanix Acropolis Hypervisor (AHV)
- Microsoft Windows Server 2016 with Hyper-V installed
- Microsoft Windows Server 2012 R2 with Hyper-V installed
- Microsoft Windows Server 2012 with Hyper-V installed
- Red Hat Enterprise Linux 7.x with Kernel-based Virtual Machine (KVM) v1.2.17 installed
- VMware ESXi 6.7
- VMware ESXi 6.5
- VMware ESXi 6.0 U1 and U2
- VMware ESXi 5.5 U1 and U2
- VMware ESXi 5.1 U1, U2, and U3

For VMware, the virtual machine is available as an OVF template. For Hyper-V and Nutanix AHV, the virtual machine is a virtual-disk image (VHD). For KVM, the virtual machine is available as qcow2 format.

The host system that is running the Lenovo XClarity virtual machine has the following minimum requirements:
- Two virtual microprocessors.
- 8 GB of memory
- A minimum of 192 GB of storage for use by Lenovo XClarity virtual appliance.

Lenovo XClarity™ Administrator

Discover, Track, and Monitor System Inventory in Real-Time

- Auto-discover local and remote inventory to manage
- Visualize managed system inventory
- Handle alerts and events in real-time
  - Subscribe to SNMPv3 events
  - Forward events to remote syslogs
  - Push notifications to XClarity Mobile app
  - Forward service data to your choice of SFTP server
  - Generate email notifications
  - Automatically call home to create service tickets
- Centrally launch remote control sessions to manage endpoints as if you were at the local console

XClarity Administrator - Manage Firmware Levels with Policies
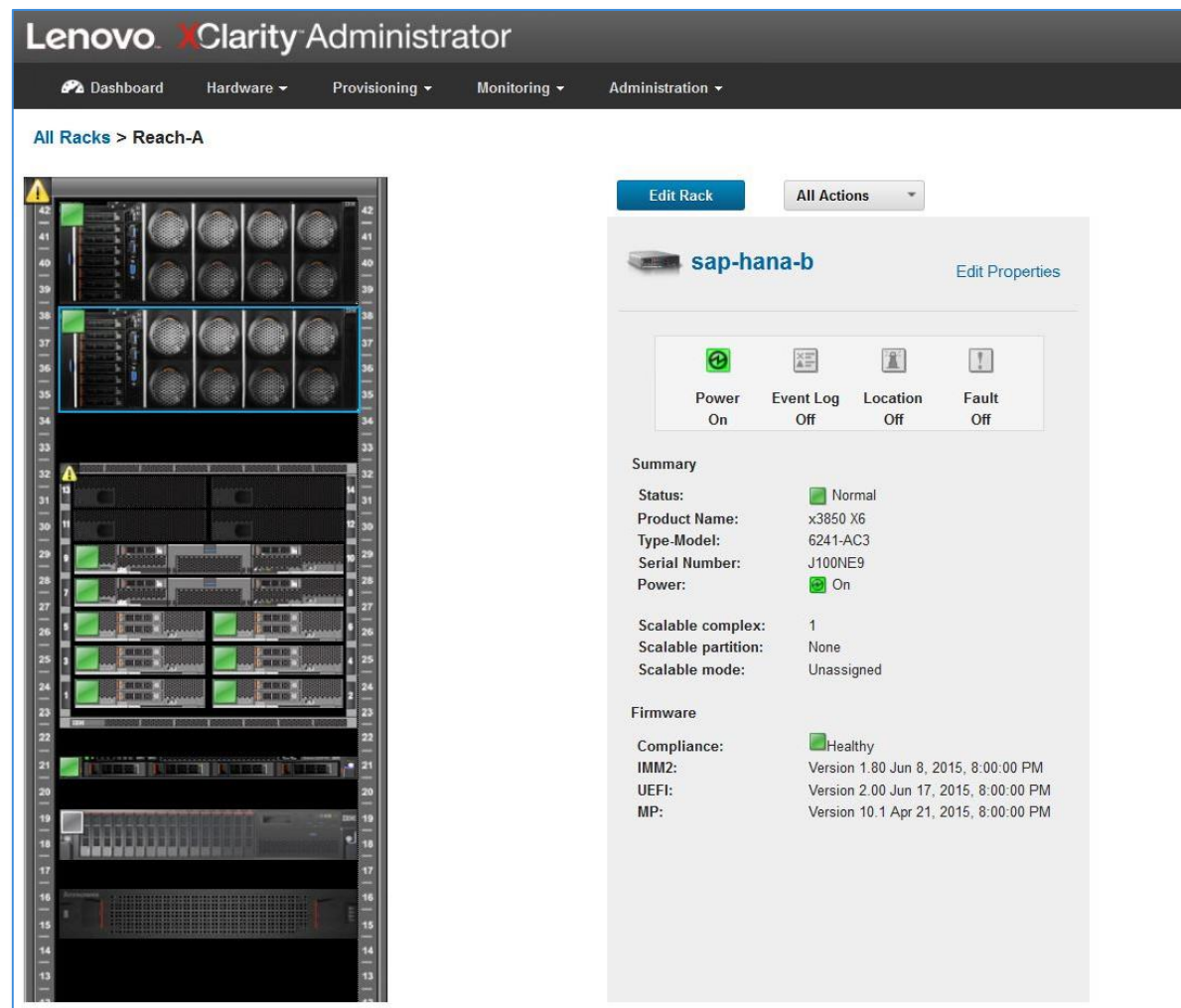
- Create and apply firmware compliance policies on target Compute, Storage, and Networking
- Quickly update firmware on target systems without creating a policy (**New**)
- Apply updates to one or more systems
- Eliminate maintenance windows for physical hosts in Hyper-V and vSphere clusters with advanced automation

XClarity Administrator - Define Physical Systems with Patterns

- Wizard-based, reusable configuration patterns streamline provisioning
- Each pattern can be used to define multiple target systems
- Ensure optimal system performance with pre-populated UEFI settings tuned for specific workloads
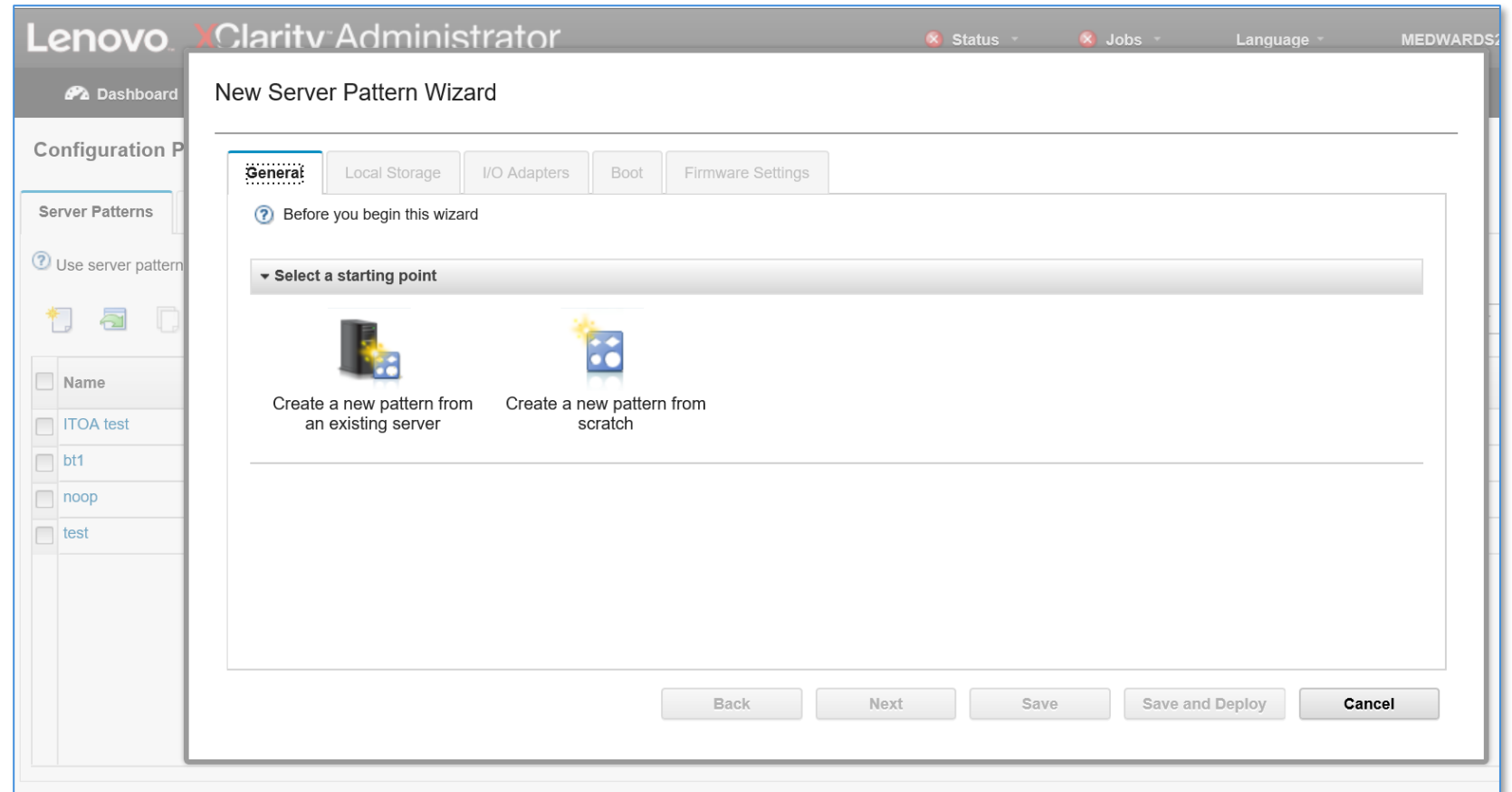
Centrally Deploy Hypervisors and Operating Systems to Bare Metal Systems to Further Streamline Provisioning

- Automate to accelerate and scale installation of hypervisors and operating systems to bare metal servers
- Software is installed utilizing pre-boot environment, eliminating need for PXE booting

Lenovo XClarity Administrator is Available in Two Editions

	XClarity Administrator	XClarity Pro
Cost structure	Free	Fee-Based
Service and Support		✓
REST APIs, Python CLI, and PowerShell	✓	✓
XClarity Mobile app	✓	✓
XClarity Integrator software plugins	✓	✓
Auto-discover and track inventory of managed hardware	✓	✓
Monitor and handle faults in real-time	✓	✓
Manage firmware levels with compliance policies	✓	✓
Define hardware with software-based configuration patterns	90 Day Trial	✓
Install hypervisors and operating systems to bare metal	90 Day Trial	✓

XClarity Mobile

Anywhere Systems Management

Lenovo XClarity™ - Mobile App

- **Anywhere management**
  - Securely monitor systems from Android and iOS devices
  - Get real-time newsfeeds on status, alerts, logs, and jobs
  - See detailed inventory and alert information
  - Filter and search through data
  - Take action on common system level tasks to minimize the risk of disruptions and downtime
  - Forward emails to share status, alerts, and events
- **New for ThinkSystem**
  - Perform initial configuration of new servers
  - Retrieve diagnostic information (Virtual LCD) and perform basic actions
 - Initiate XClarity Administrator from mobile device
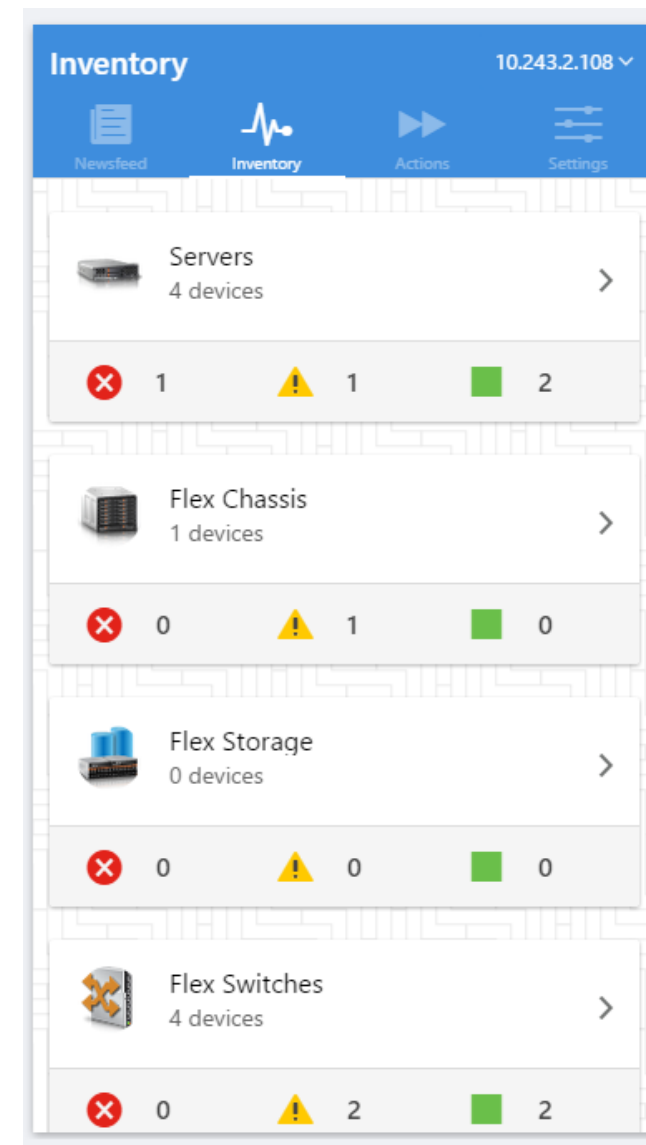
XClarity Integrators

Transform Infrastructure Resources into Services

XClarity Integrator for Microsoft System Center Virtual Machine Manager (VMM)

- Consolidate virtual and physical infrastructure management using your familiar console
  - Discovery
  - Monitoring
  - Firmware updates
  - Configurations
- Eliminate downtime in Hyper-V clusters
  - Automate rolling reboots & firmware updates
  - Automate evacuation of VMs from impacted hosts based on user-defined events
- Advisory PRO tips for existing and predictive hardware problems
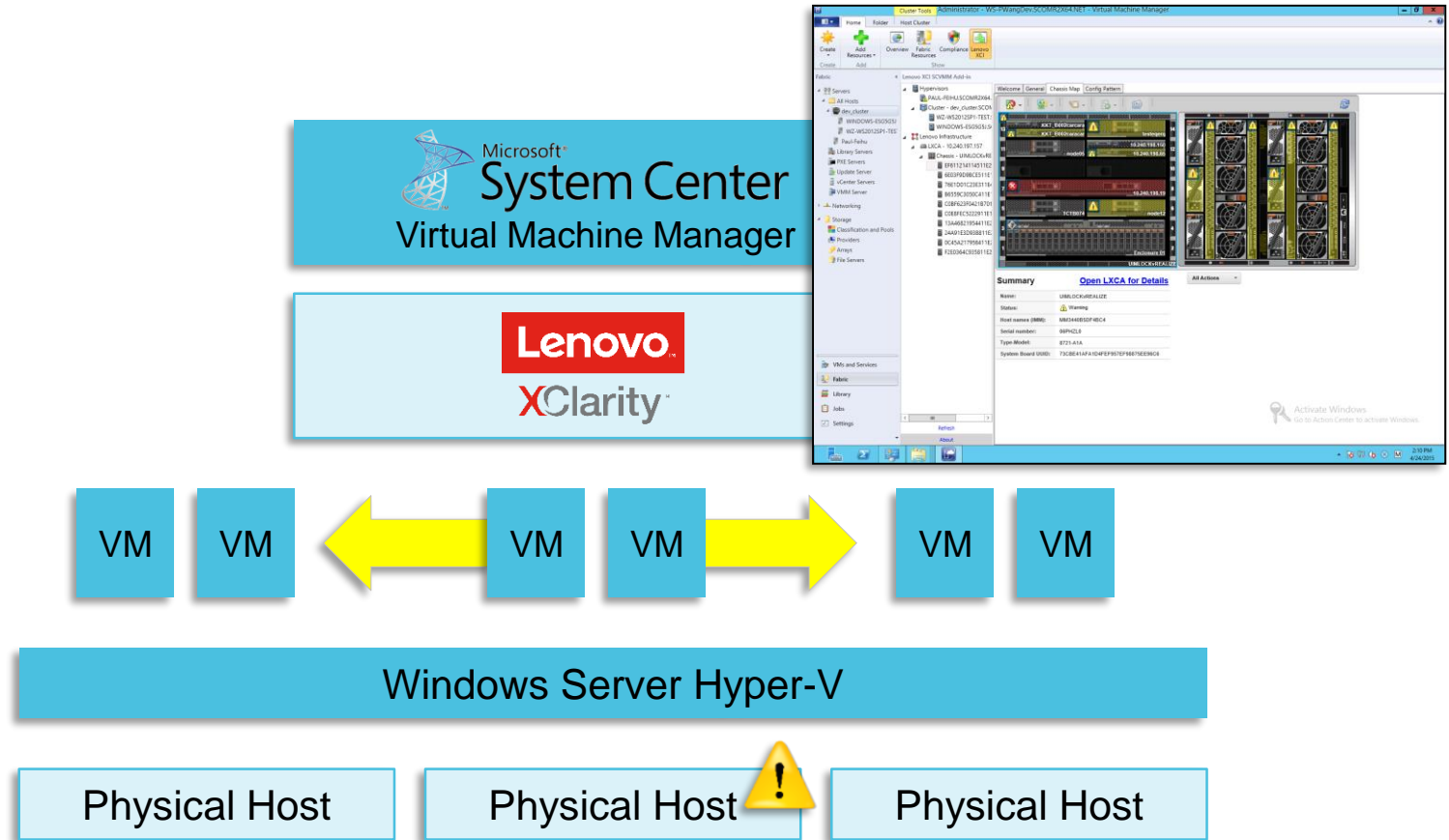
Download XClarity Integrator for Microsoft System Center

XClarity Integrator for Microsoft System Center Operations Manager (SCOM)

- Monitor physical system health and events
- Correlate events across domains
- Monitor power utilization of systems running Windows
- Monitor overall system power usage, and generate alerts when consumption rises above thresholds
- Enable Power Capping and set the maximum power consumption wattage
- Remote power on and off of systems
- Hardware Management Software Configuration Advisor detects the presence of hardware MP software dependencies and makes configuration recommendations
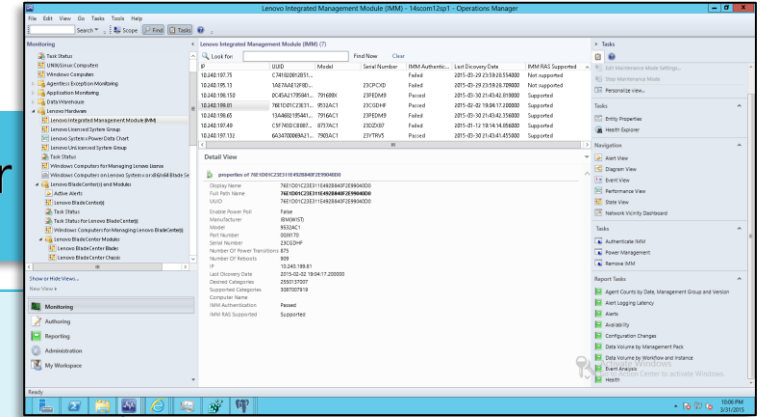
- Inventory and monitoring
- Event correlation
- Platform alert handling
- Power capping

Download XClarity Integrator for Microsoft System Center

XClarity Integrator for Microsoft System Center Configuration Manager (SCCM)

- Deployment Pack
  - Automate end-to-end server deployment including drivers
  - Scriptable server configuration for WinPE (Windows Pre-Installation Environment)
- System Updates
  - Acquire, view, and expire firmware updates and device drivers through Windows Server Update Services
  - Select individual firmware and driver updates from the website, or complete UpdateXpress System Packs (UXSPs)
  - Handle System Enablement Pack (SEP) to maintain server currency
- Configuration
  - Create user-defined configuration packs for physical servers
  - Capture existing physical server settings and generate related configuration pack
  - View compliance results

- End-to-end deployment including drivers
- Firmware level management
- Configure servers and check configuration compliance

[Download XClarity Integrator for Microsoft System Center](#)

SAP IT Operations Analytics (ITOA) and Lenovo XClarity **NEW**

Available from Lenovo DCG Services

- Single, integrated joint solution
- Clear visibility into Lenovo systems and SAP applications
- Proactive user-friendly analytics and predictive capabilities
- Deeper insights with pre-built visualizations and dashboards
- Expedite root cause analysis with powerful drill-down, filtering, and analytics
- Manage millions or billions of streaming IT signals across servers, operating systems, and applications
- Analyze data from other external monitoring tools to manage the entire data center landscape

IT Operations Analytics

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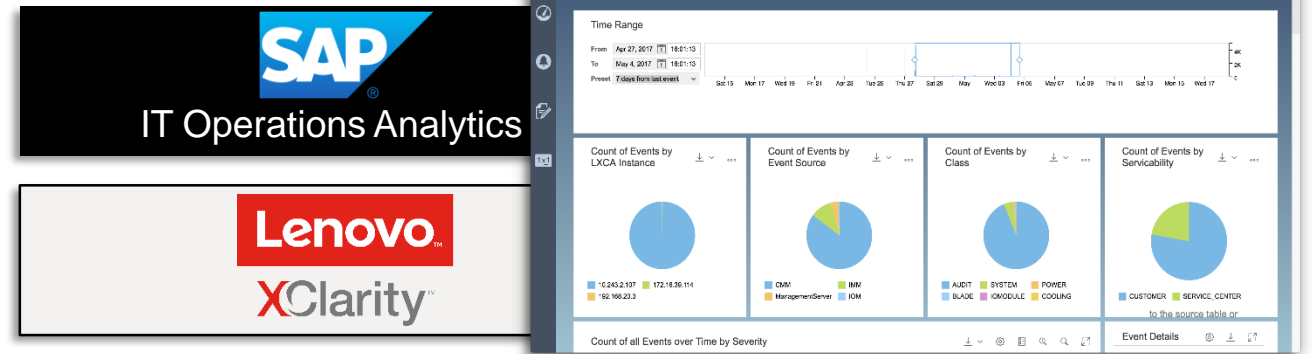
- Holistic monitoring of the entire data center
- Collect, process, and analyze massive volumes of streaming IT signals
- Resolve both system and application issues in real time
- Download the SAP ITOA and XClarity solution brief

XClarity Integrator for Splunk Enterprise

- Centralized platform for Operational Intelligence
- Generate insights from machine data to increase productivity and security
  - Collect, analyze, and act on the Big Data generated by your IT infrastructure
  - Centrally monitor events across workloads, virtual resources, and physical resources
- Quickly identify trends including thresholds, failures, and PFAs (Predicted Failure Analytics)
- Monitor and audit for security changes
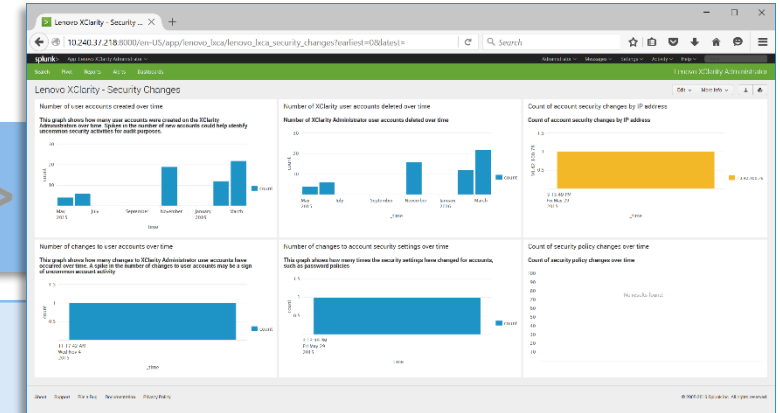
- Track and audit user logins and actions
- Track provisioning events
- Visualize power consumption and thermal property thresholds that are reached
- Visualize serviceable events

[Download XClarity Integrator for Splunk](#)

XClarity Integrator for VMware vCenter

- Consolidate virtual and physical infrastructure management using your familiar console
  - Discovery
  - Monitoring
  - Firmware updates
  - Configurations
- Eliminate downtime in vSphere clusters
  - Automate rolling reboots & firmware updates
  - Automate evacuation of VMs from impacted hosts based on user-defined events
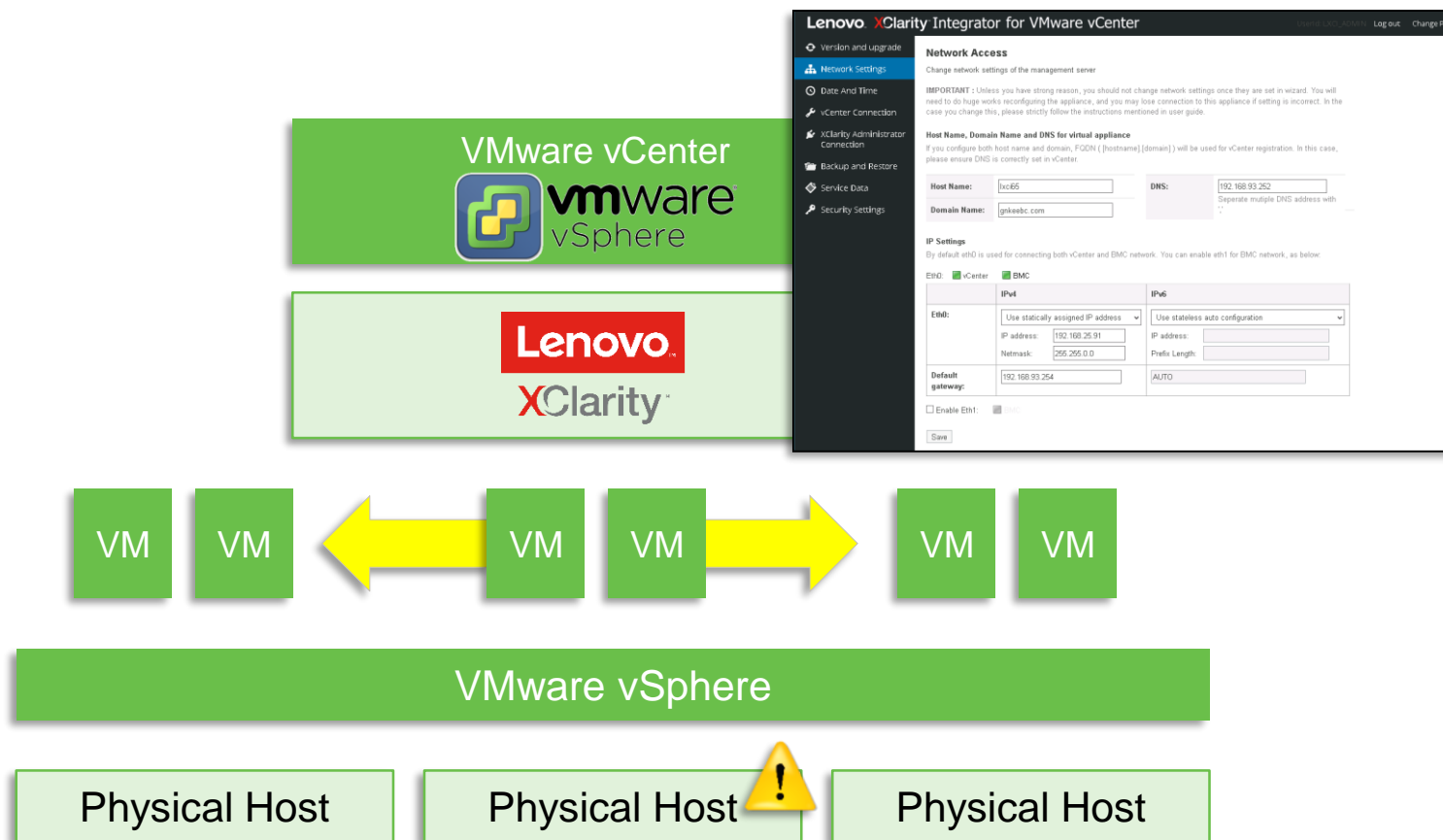
Download XClarity Integrator for VMware vCenter

XClarity Integrator for VMware vRealize Automation and vRealize Orchestrator

- Abstract infrastructure resources and transform them into services
- Deliver infrastructure faster through repeatable, scalable execution of tasks across software and hardware domains

vmware
vRealize Automation
Service Blueprints

vmware
vRealize Orchestrator
Workflows

vmware
vCenter
Virtualization Management

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XClarity

- Blueprints to help create and manage pools of resources, such as provisioning end-to-end hosts and clusters
- Download XClarity Integrator for VMware vRealize Automation

XClarity Integrator for VMware vRealize Log Insight

- Collect, trend, and analyze data center events to provide real-time answers to problems related to systems, services, and applications
- Graph and visualize hardware event data to generate insights
- Configure alerts when specific conditions occur
- Query event data to build reports
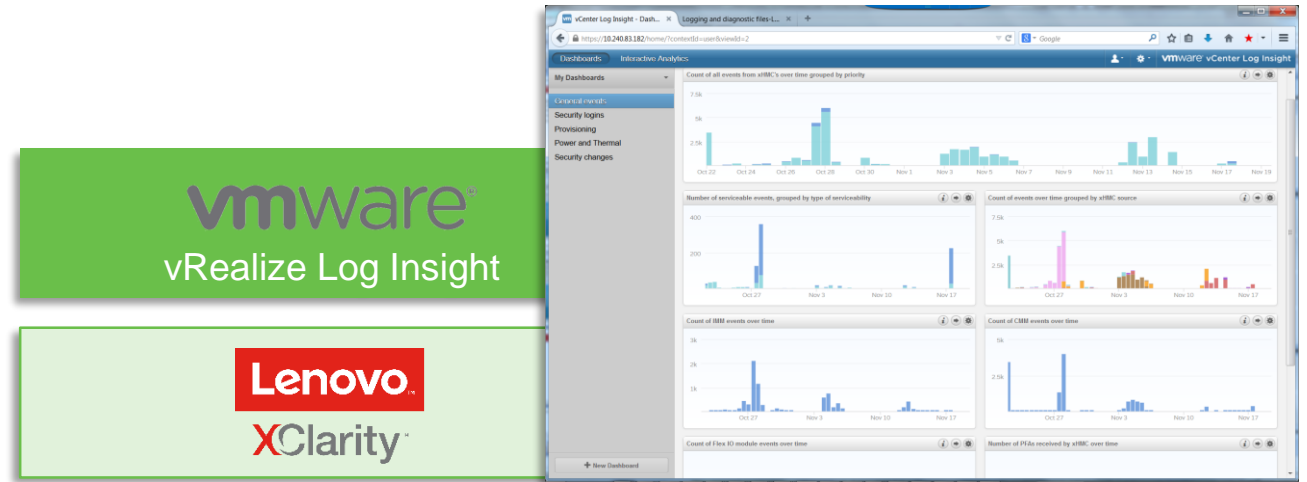
- Visualize event quantity and priority, and the number of hardware events requiring intervention
- Identify which systems surface the most events
- Find out who is accessing XClarity
- Discover unauthorized users trying to access XClarity
- [Download XClarity Integrator for VMware vRealize Log Insight](#)

XClarity Online Community

Provide Us with Feedback and Ask Questions

Lenovo XClarity™ - Online Forum

- Start and respond to topics
  - Ask and answer questions
  - Provide instructions and tips
  - See XClarity related announcements

- Link to Forums

Lenovo XClarity™ - Ideation Requirements Input

- **Provide input on product requirements**
  - Enter requirements
  - Vote and comment on requirements
  - View status of requirement requests

- **Link to Ideation Site**
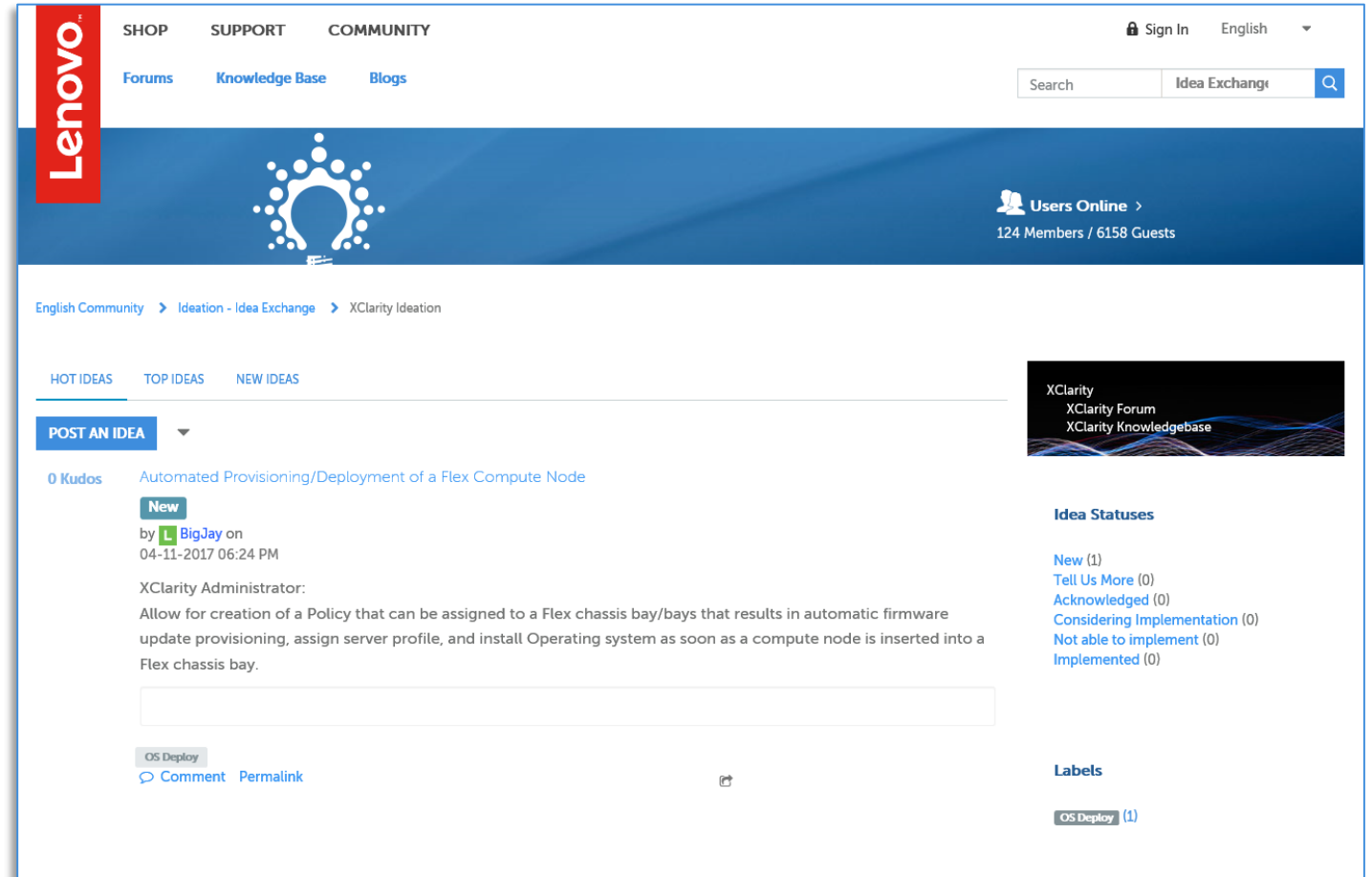
thanks.

Different is better

Thiago H Gomes - tgomes3@lenovo.com