Cisco Intersight™ Feature Overview

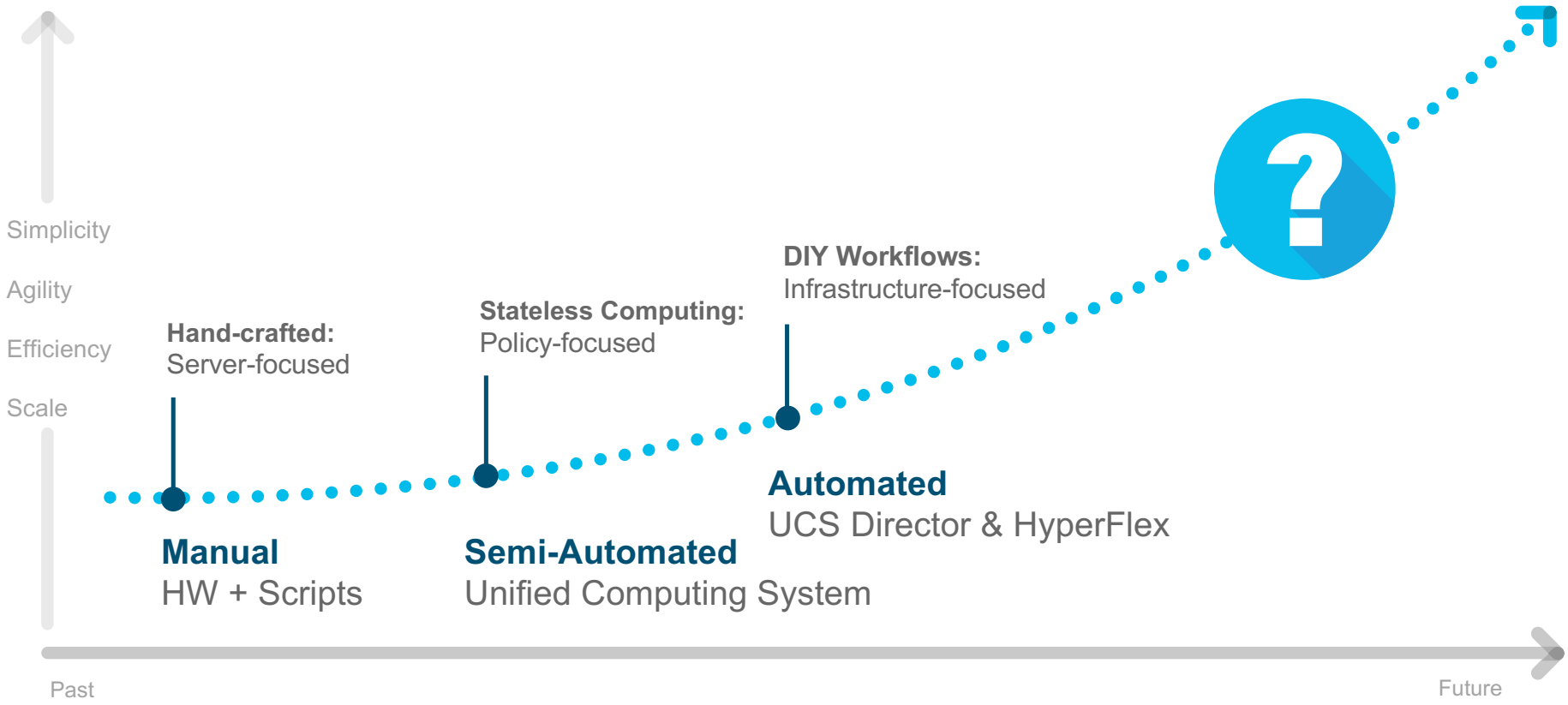
Standalone Management for UCS C-Series Servers

January 2018

Agenda

- Overview
- Monitoring/Fault Reporting
- Device Addition / Registration
- Polices and Profiles
- Firmware Upgrades

Operational Evolution



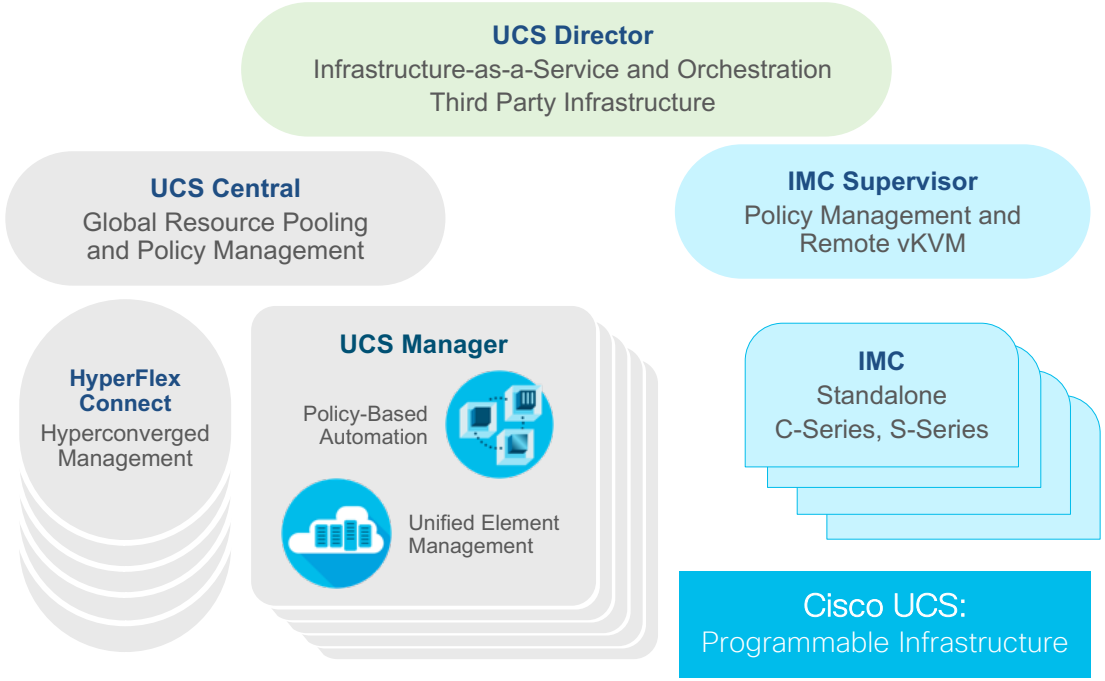
UCS Standalone Management Simplification

Cisco Intersight Core Features and Functionality

Familiar Capabilities from IMCS

- Platform Hardware Inventory
- Hardware Health Status
- vKVM Launcher (Incl. vMedia)
- Firmware Inventory + Management
- Call-Home (Email Alerting)
- Cisco Smart Call Home
- Policy/Profile Based Framework
- **C-Series + HX Standalone Only**

Cisco Intersight Enhanced Functionality



SaaS-Delivered

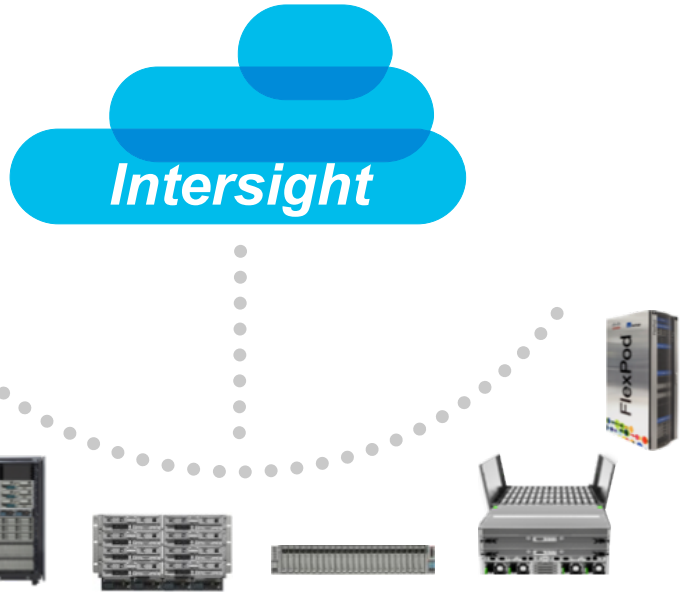
UCS Director
Infrastructure-as-a-Service and Orchestration
Third Party Infrastructure

UCS Central
Global Resource Pooling
and Policy Management

UCS Manager & IMC

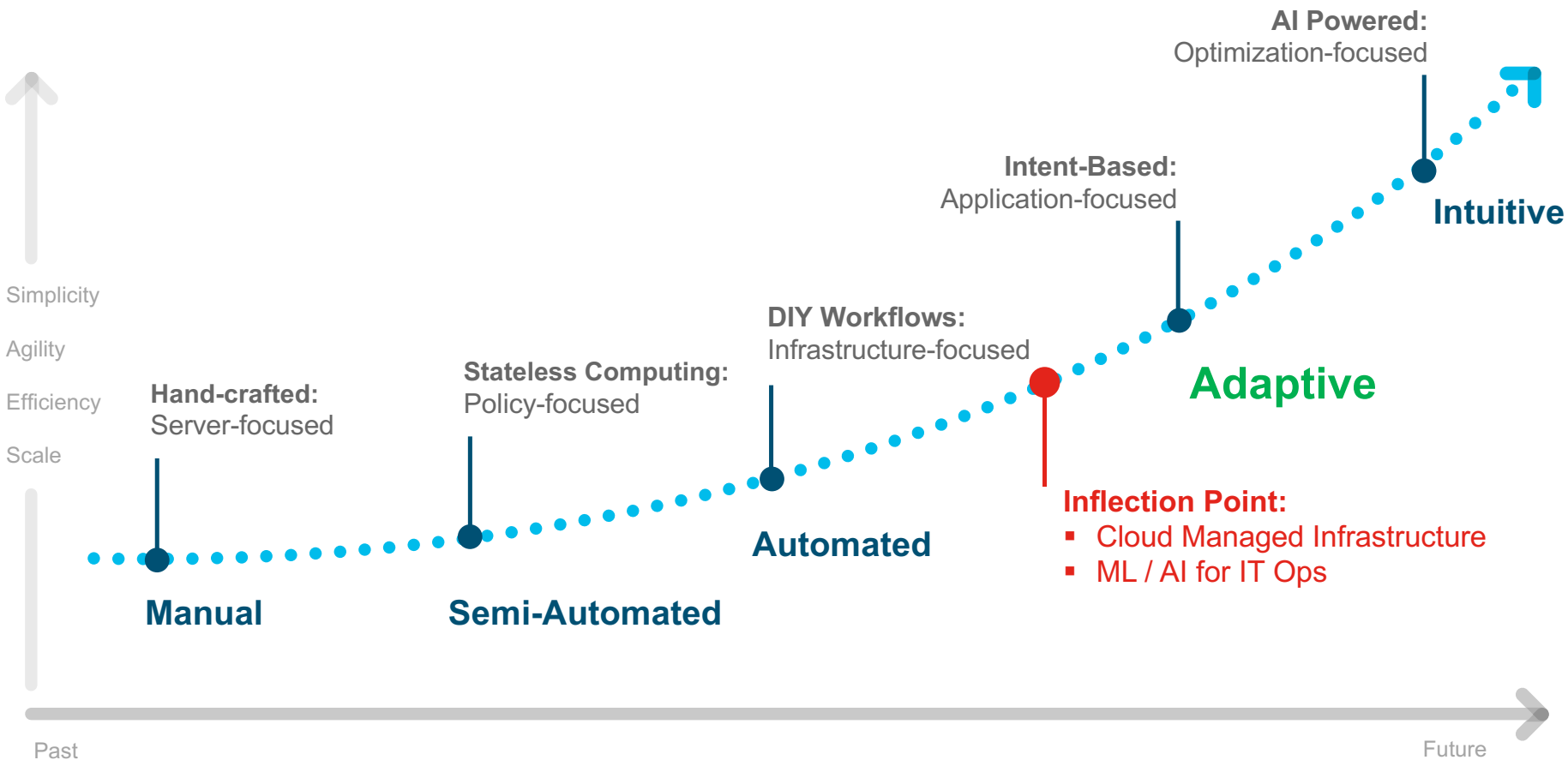
Policy-Based
Automation

Unified Element
Management



Consumption Models
Cisco hosted
Service provided, customer hosted

A New Era of Adaptive Systems Management



UCS Standalone Management Simplification

Core Differences – IMC Supervisor vs Intersight

Cisco IMC Supervisor

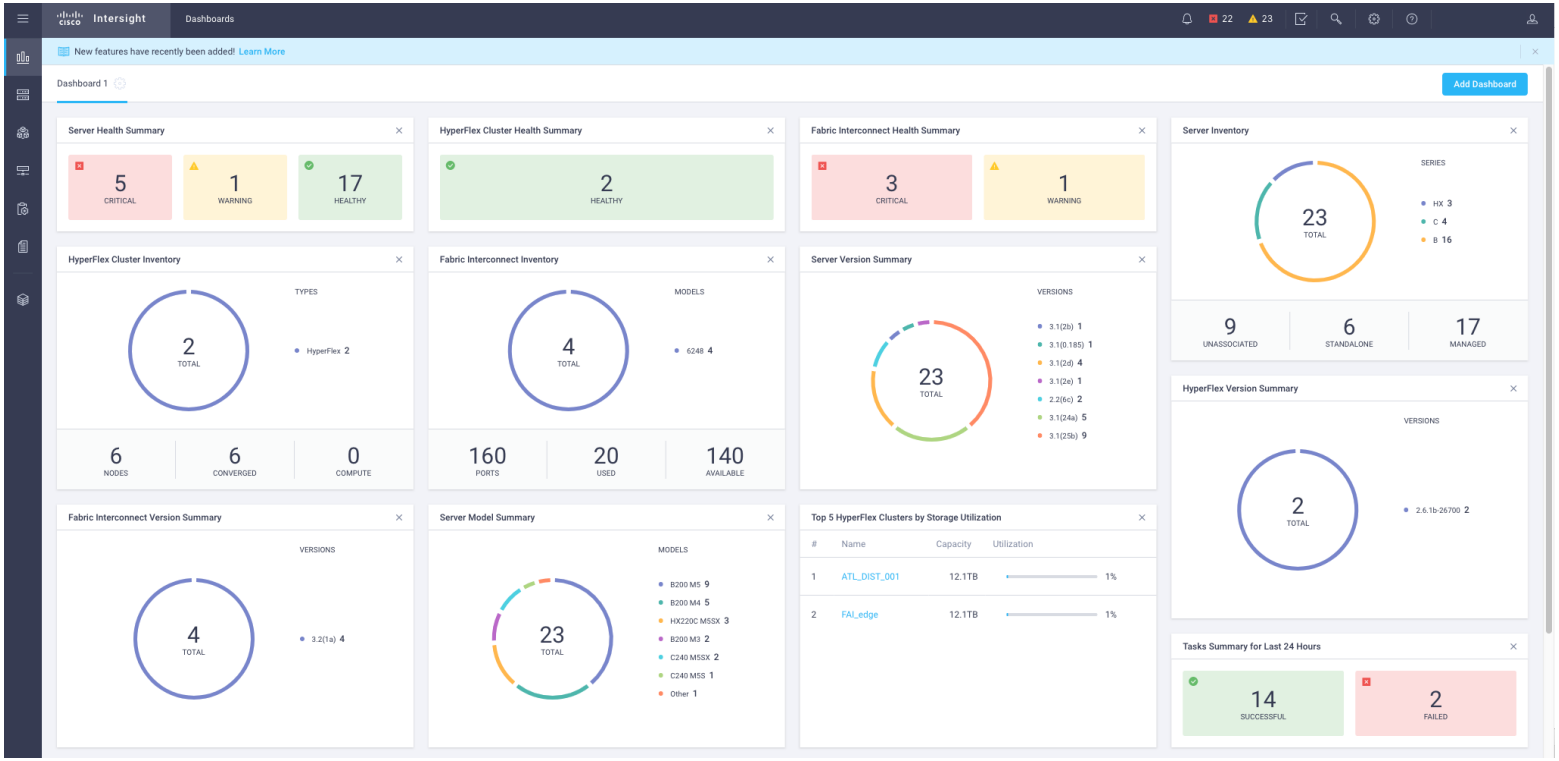
- On-Premise Virtual Appliance
- Feature / appliance upgrades require user intervention and downtime
- Fixed bundle licensing – 1000 servers max per appliance
- REST XML API
- Database backup / redundancy requires multiple appliances and manual intervention

Cisco Intersight

- Cloud-based centralized management
- Features and upgrades pushed through the cloud to streamline availability
- SaaS / Subscription based model licensing – Smart Licensing support
- RESTFUL JSON API (Odata)
- Cloud based redundancy - autonomously
- Cisco Hyperflex Installation
- Customizable dashboards
- Telemetry Data Collection / Recommendation Engine

Monitoring / Fault Reporting / Server Actions

Cisco Intersight Dashboard

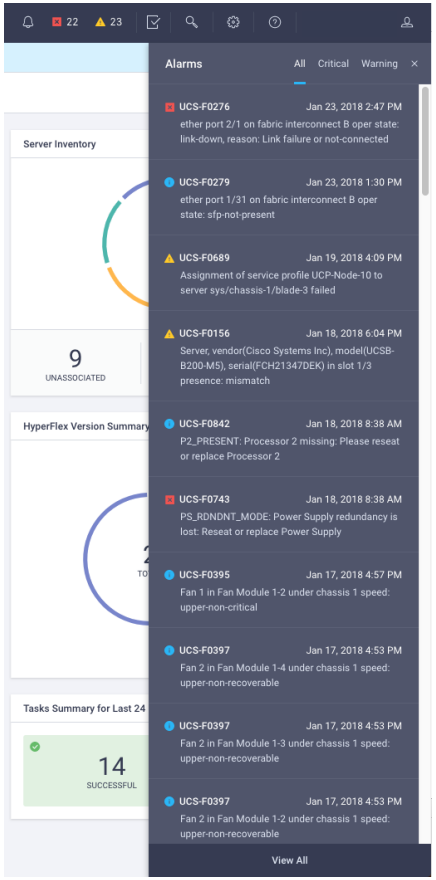


- Customizable dashboard to show overall faults / health / inventory for all managed infrastructure
- Can create unique dashboards for individual Intersight users
- Can add / remove widgets as desired
- Can click on various widgets for more detailed information

Cisco Intersight Fault List

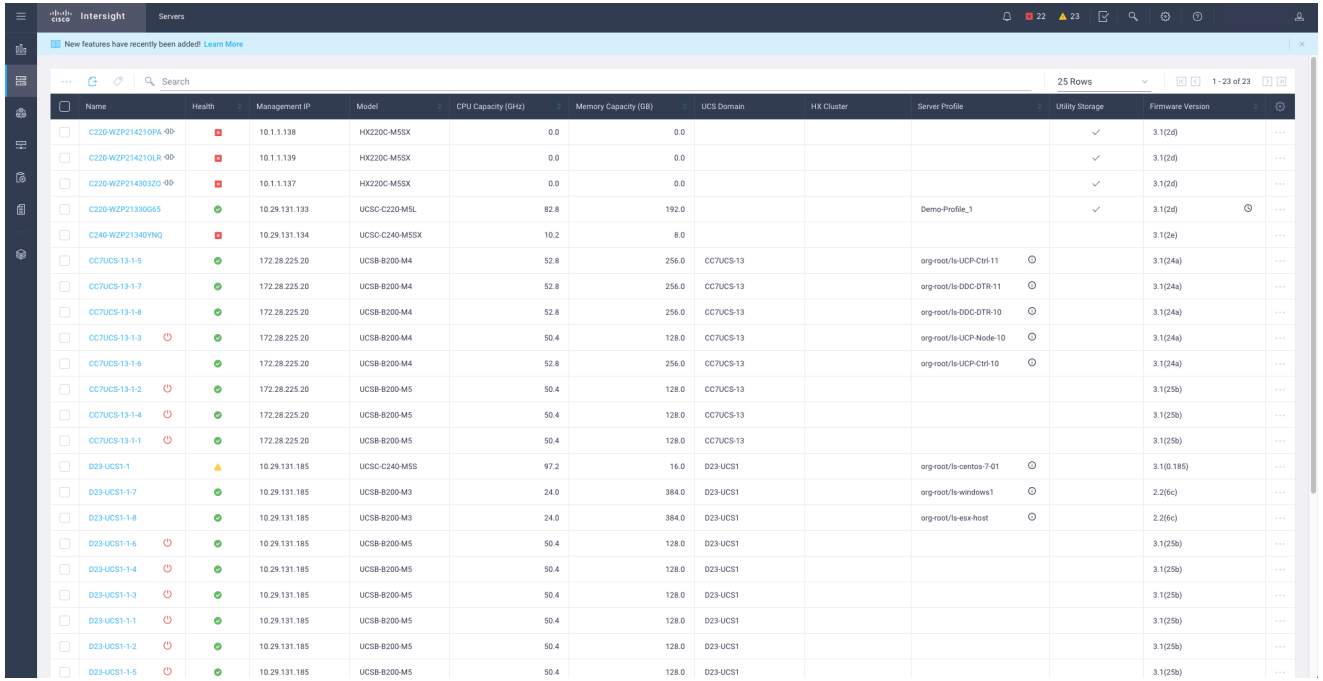
Severity	Date/Time	Code	Source Type	Source Name	Component	Message
	Jan 18, 2018 8:38 AM	UCS-F0743	Standalone Ser...	C240-WZP213...	sys/rack-unit-1	PS_RDNDNT_MODE: Power Supply redundancy is lost: Reseat or replace Power Supply

1 - 1 of 1



- All device faults can be accessed from any Intersight page (image to the right shows access from dashboard)
- Clicking on a particular fault provides additional fault details, remediation steps if available
- Tabs available for All / Critical / Warning fault levels
- Fault tab shows UCS fault code, timestamp, and fault details

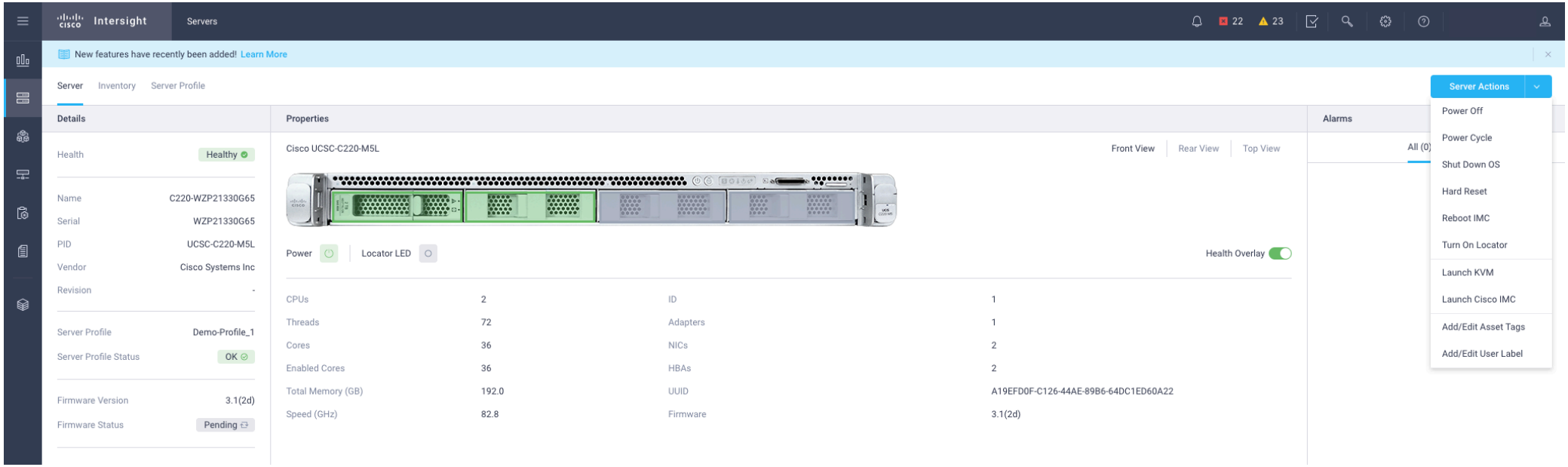
Cisco Intersight Servers Tab



Name	Health	Management IP	Model	CPU Capacity (GHz)	Memory Capacity (GB)	UCS Domain	HX Cluster	Server Profile	Utility Storage	Firmware Version
C220-WZP214210PA		10.1.1.138	HX220C-M5SX	0.0	0.0				✓	3.1(2d)
C220-WZP214210LR		10.1.1.139	HX220C-M5SX	0.0	0.0				✓	3.1(2d)
C220-WZP214303ZQ		10.1.1.137	HX220C-M5SX	0.0	0.0				✓	3.1(2d)
C220-WZP21330G65		10.29.131.133	UCSC-C220-M5L	82.8	192.0			Demo-Profile_1	✓	3.1(2d)
C240-WZP21340YNQ		10.29.131.134	UCSC-C240-M5SX	10.2	8.0					3.1(2e)
CC7UCS-13-1-5		172.28.225.20	UCSB-B200-M4	52.8	256.0	CC7UCS-13		org-root/ls-UCP-Ctrl-11		3.1(24a)
CC7UCS-13-1-7		172.28.225.20	UCSB-B200-M4	52.8	256.0	CC7UCS-13		org-root/ls-DDC-DTR-11		3.1(24a)
CC7UCS-13-1-8		172.28.225.20	UCSB-B200-M4	52.8	256.0	CC7UCS-13		org-root/ls-DDC-DTR-10		3.1(24a)
CC7UCS-13-1-3		172.28.225.20	UCSB-B200-M4	50.4	128.0	CC7UCS-13		org-root/ls-UCP-Node-10		3.1(24a)
CC7UCS-13-1-6		172.28.225.20	UCSB-B200-M4	52.8	256.0	CC7UCS-13		org-root/ls-UCP-Ctrl-10		3.1(24a)
CC7UCS-13-1-2		172.28.225.20	UCSB-B200-M5	50.4	128.0	CC7UCS-13				3.1(25b)
CC7UCS-13-1-4		172.28.225.20	UCSB-B200-M5	50.4	128.0	CC7UCS-13				3.1(25b)
CC7UCS-13-1-1		172.28.225.20	UCSB-B200-M5	50.4	128.0	CC7UCS-13				3.1(25b)
D23-UCS1-1		10.29.131.185	UCSC-C240-M5S	97.2	16.0	D23-UCS1		org-root/ls-centos-7-01		3.1(0.185)
D23-UCS1-1-7		10.29.131.185	UCSB-B200-M3	24.0	384.0	D23-UCS1		org-root/ls-windows1		2.2(6c)
D23-UCS1-1-8		10.29.131.185	UCSB-B200-M3	24.0	384.0	D23-UCS1		org-root/ls-esx-host		2.2(6c)
D23-UCS1-1-6		10.29.131.185	UCSB-B200-M5	50.4	128.0	D23-UCS1				3.1(25b)
D23-UCS1-1-4		10.29.131.185	UCSB-B200-M5	50.4	128.0	D23-UCS1				3.1(25b)
D23-UCS1-1-3		10.29.131.185	UCSB-B200-M5	50.4	128.0	D23-UCS1				3.1(25b)
D23-UCS1-1-1		10.29.131.185	UCSB-B200-M5	50.4	128.0	D23-UCS1				3.1(25b)
D23-UCS1-1-2		10.29.131.185	UCSB-B200-M5	50.4	128.0	D23-UCS1				3.1(25b)
D23-UCS1-1-5		10.29.131.185	UCSB-B200-M5	50.4	128.0	D23-UCS1				3.1(25b)

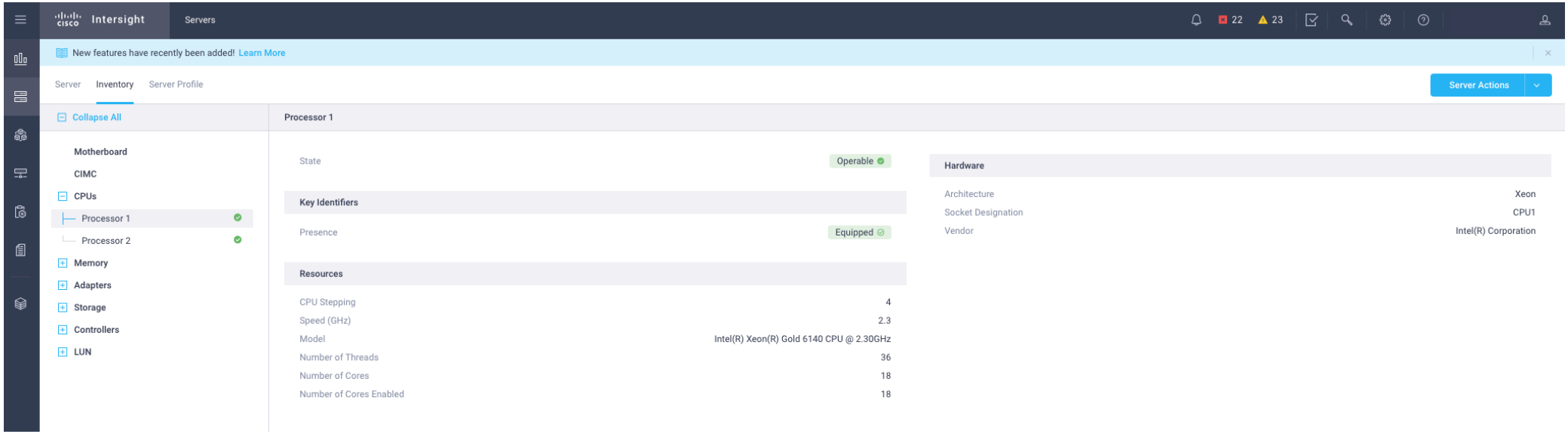
- Main server tab shows all servers managed by Cisco Intersight, and provides basic Health/Model/IP info
  - Desired column details can be added/removed as user sees fit
- Clicking on any server name dials in to that server – detailed server overview / inventory information (details on next few slides)

Cisco Intersight Server Overview



- Server name, model, serial number, and other basic properties are displayed
- Health overlay for front/back/top views can be turned on/off as needed
- Alarms/Faults visible on right hand side
- Server Actions available as well – IMC crosslaunch, vKVM (coming soon), power operations, tagging

Cisco Intersight Server Inventory



- Detailed information for all server peripherals – CPUs, memory, adapters, storage, etc
- Can dial in to specific peripheral for additional component information
- Server Actions tab available here as well

Cisco Intersight – Server Actions

- Available Server Actions
  - Launch IMC
  - Launch KVM (coming soon)
  - Power ON/OFF
  - Shutdown
  - Reboot
  - Power Cycle
  - Hard Reset Server

- Server actions can be accessed from main servers page by clicking the icon

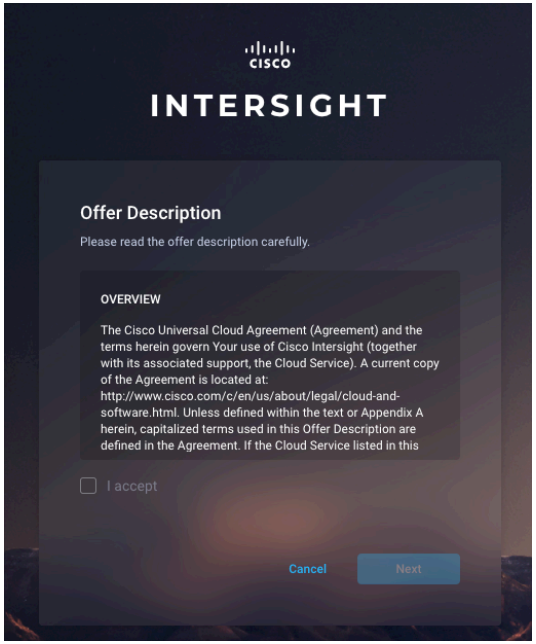
C220-WZP21330G65		10.29.131.133	UCSC-C220-M5L	82.8	192.0			Demo-Profile_1		3.1(2d)		
C240-WZP21340YNQ		10.29.131.134	UCSC-C240-M5SX	10.2	8.0					3.1(2e)		
CC7UCS-13-1-5		172.28.225.20	UCSB-B200-M4	52.8	256.0	CC7UCS-13		org-root/ls-UCP-Ctrl-11		3.1(24a)		
CC7UCS-13-1-7		172.28.225.20	UCSB-B200-M4	52.8	256.0	CC7UCS-13		org-root/ls-DDC-DTR-11		3.1(24a)		
CC7UCS-13-1-8		172.28.225.20	UCSB-B200-M4	52.8	256.0	CC7UCS-13		org-root/ls-DDC-DTR-10		3.1(24a)		
CC7UCS-13-1-3		172.28.225.20	UCSB-B200-M4	50.4	128.0	CC7UCS-13		org-root/ls-UCP-Node-10		3.1(24a)		
CC7UCS-13-1-6		172.28.225.20	UCSB-B200-M4	52.8	256.0	CC7UCS-13		org-root/ls-UCP-Ctrl-10		3.1(24a)		
CC7UCS-13-1-2		172.28.225.20	UCSB-B200-M5	50.4	128.0	CC7UCS-13				3.1(25b)		

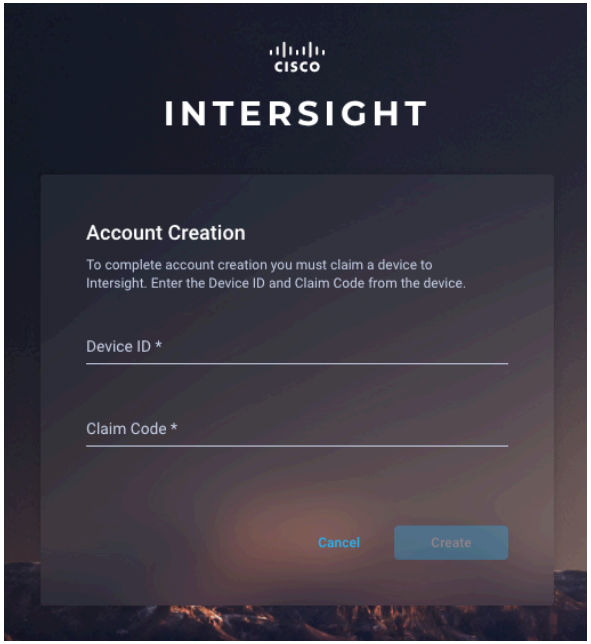
Power Off
Power Cycle
Shut Down OS
Hard Reset
Reboot IMC
Launch KVM
Launch Cisco IMC

- Server actions can also be access on server properties page for any given endpoint

Accounts Creation / Device Claim

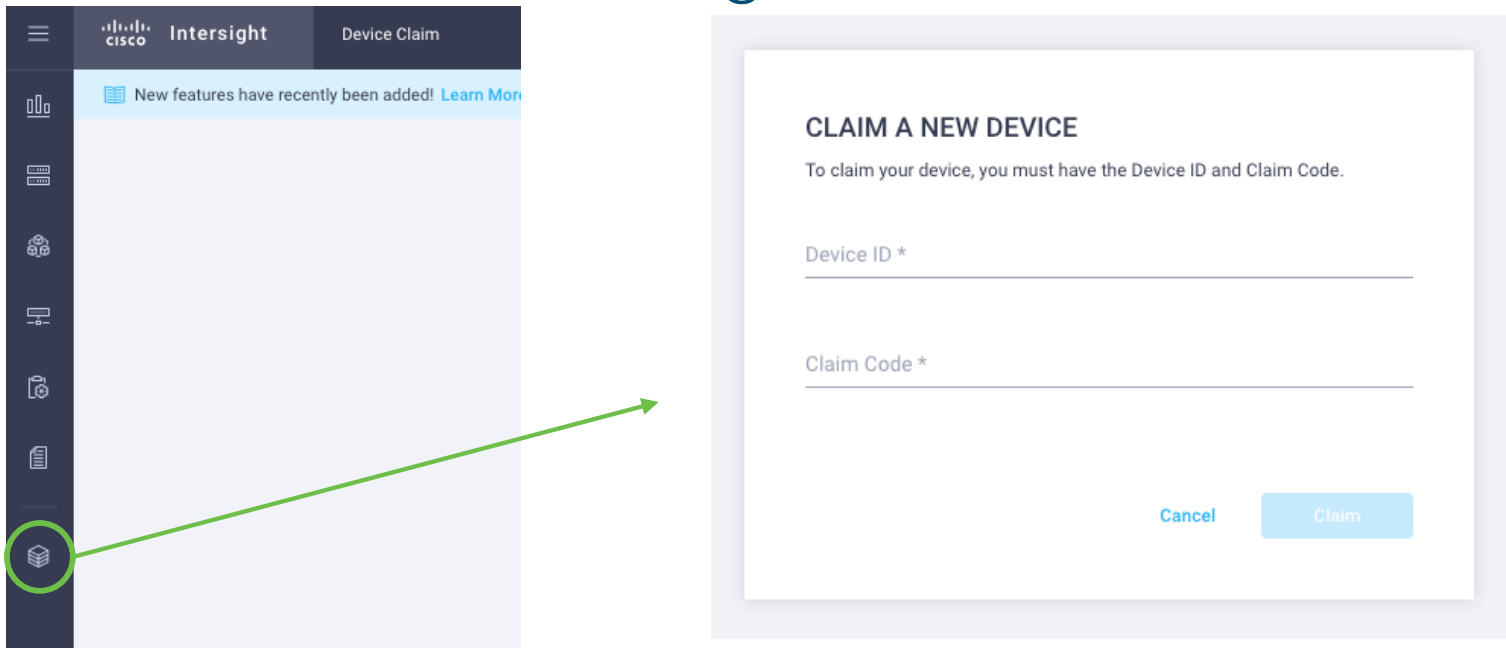
Cisco Intersight Account Creation





- Users navigate to https://www.intersight.com and sign into portal with cisco.com ID/password – required
- Can create new account or sign into existing account
- Existing account accessed with account number
- New accounts created with device ID / claim code (IMC/UCSM/HX Cluster) – must accept offer agreement first
- Must claim a single device to create account

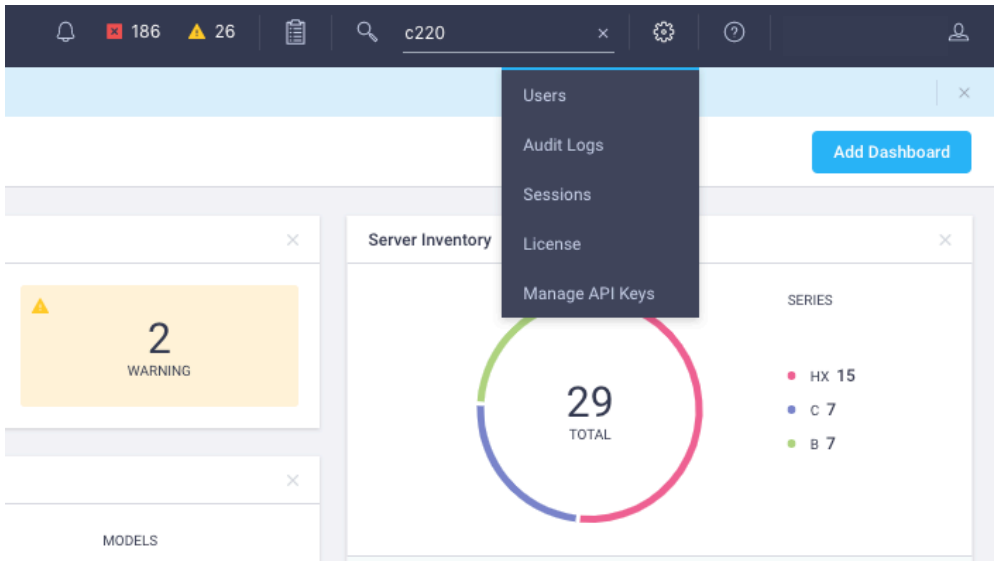
Cisco Intersight Device Claim



- Additional devices can be claimed from Devices tab – each device has a unique device ID and claim code
- Devices must be running supported firmware version that includes Intersight Device Connector
- **??? List of FW versions (think there is a slide for this)**
- Devices are claimed one at a time, bulk claim is a work in progress

Cisco Intersight Account Settings

Cisco Intersight Account Settings



- Actions available from account settings tab
  - User List / adding new users – admin/read-only
  - Audit logs across appliance
  - Active user sessions
  - Licensing
  - Manage API keys

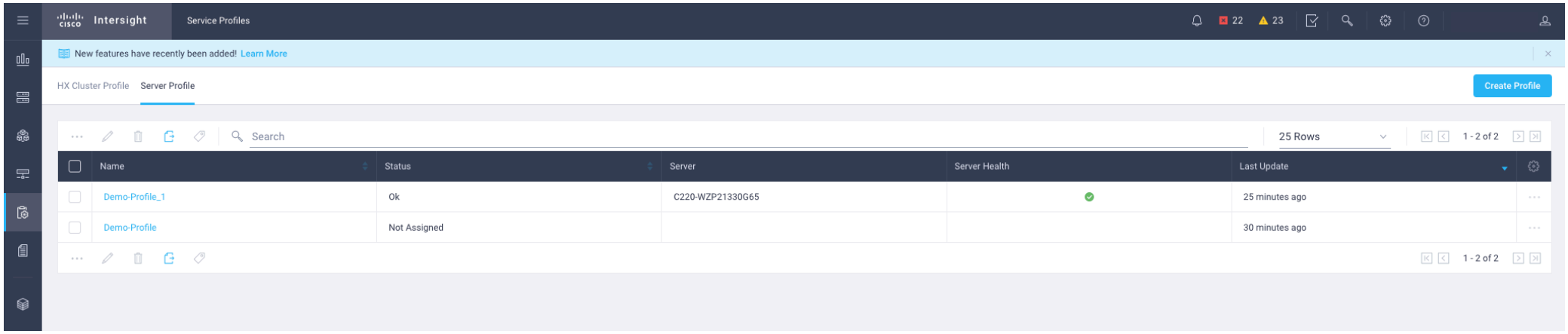
Server Policies and Profiles

Cisco Intersight Server Policies Overview

- Individual Server policies are created within the policies tab
- Policies can also be created on the fly when creating a Server Profile
- Available server policies
  - LDAP policy
  - Serial Over LAN Policy
  - NTP Policy
  - BIOS Policy
  - Disk Group Policy (coming soon)
  - Storage Policy (coming soon)
  - Network Connectivity Policy
  - Virtual KVM Policy
  - SMTP Policy
  - SNMP Policy (coming soon)
  - IPMI Over LAN Policy
  - SSH Policy
  - Local User Policy
  - Precision Boot Order Policy
- Server Policies must be assigned to Server Profile before they can be associated with a server and deployed

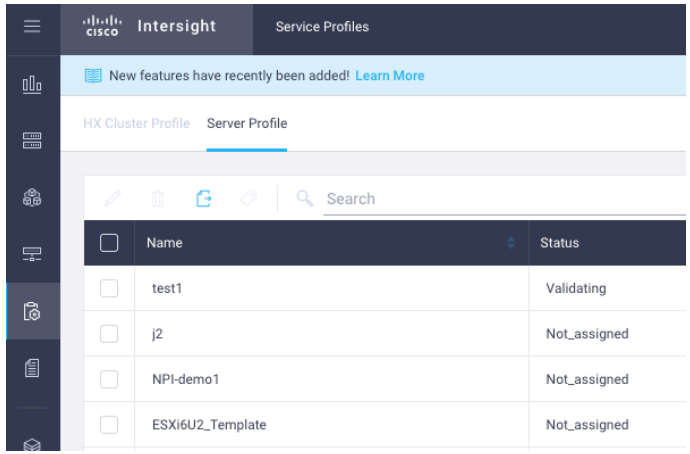
Cisco Intersight Server Profiles Overview

- Individual Server profiles are created within the Profiles tab
- Users select desired policies to include in profile
- Users can also create new policies within profile setup
- A profile can only be assigned to a single server
- Profiles can be cloned and assigned to additional endpoints
- Profiles can be exported to CSV file and tagged for better organization
- Profile summary page will show list of profiles, status and the endpoint they are associated with

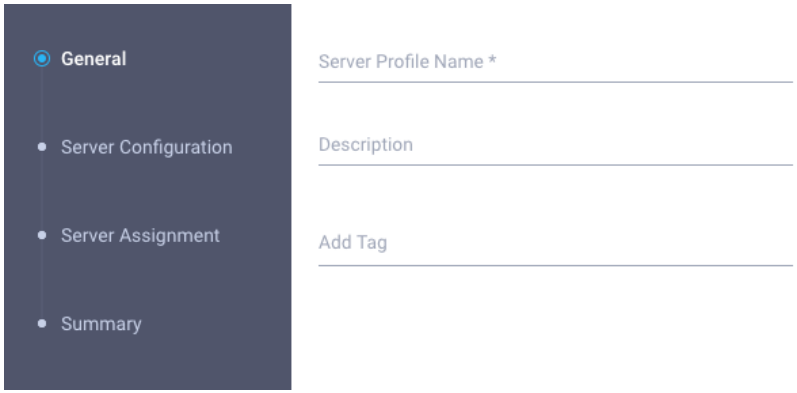


Cisco Intersight – Creating a Server Profile

- Navigate to Profiles tab, and select Server Profiles

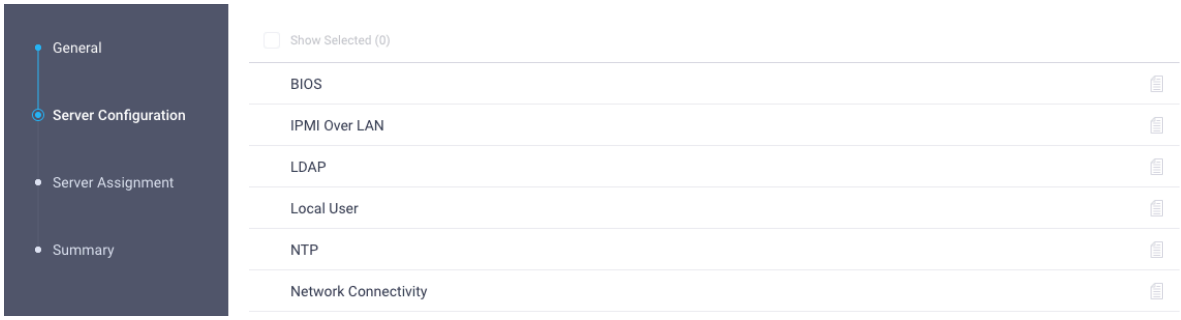


- Click “Create Profile” and provide profile name and description (if desired)



Cisco Intersight – Creating a Server Profile (cont'd)

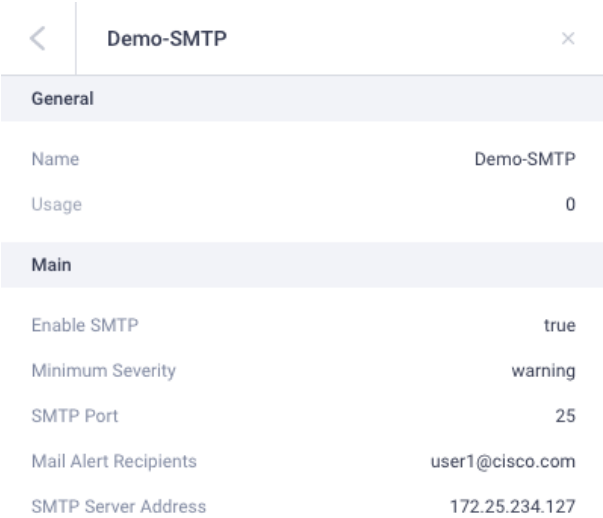
- Select desired policies to include in profile



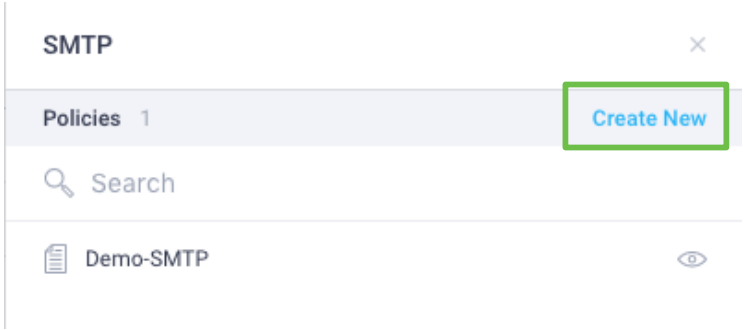
- Available Policies can be expanded

Cisco Intersight – Creating a Server Profile (cont'd)

- View properties for chosen policy by clicking on the iconn

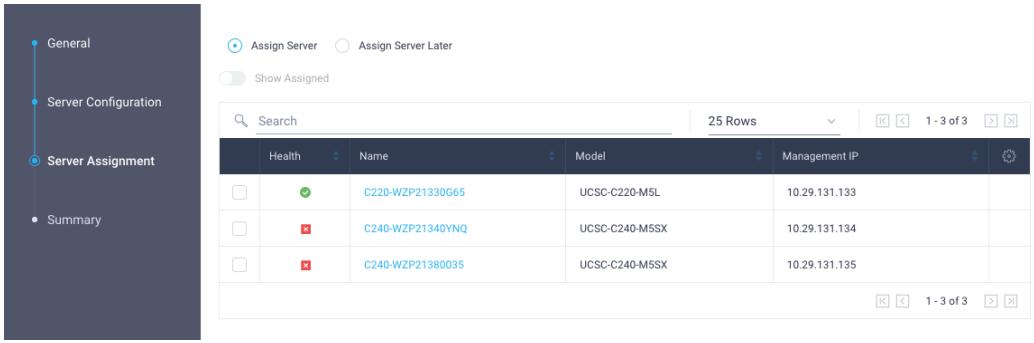


- Can also create new policy within profile setup

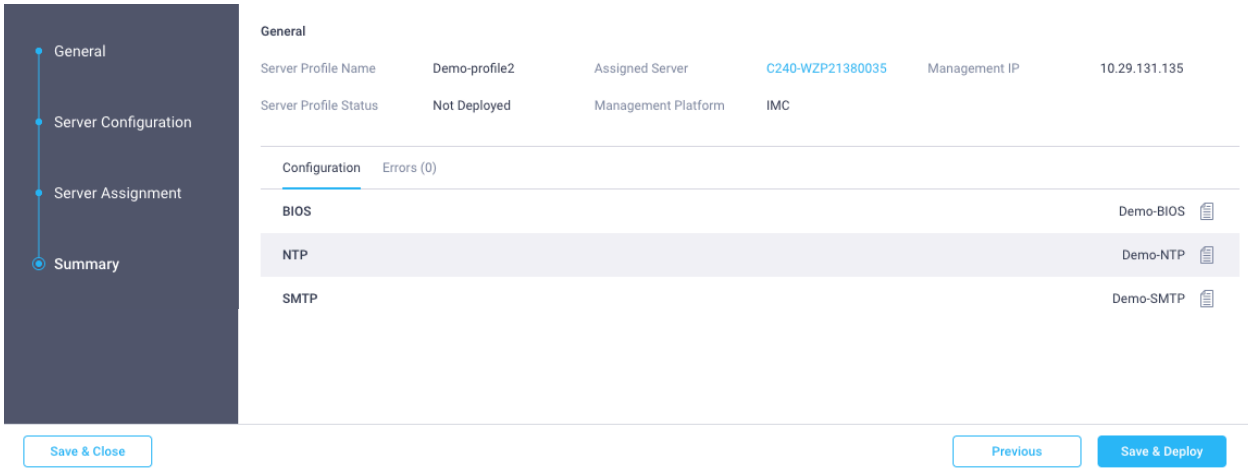


Cisco Intersight – Creating a Server Profile (cont'd)

- Assign Profile to Server (can assign later as well)

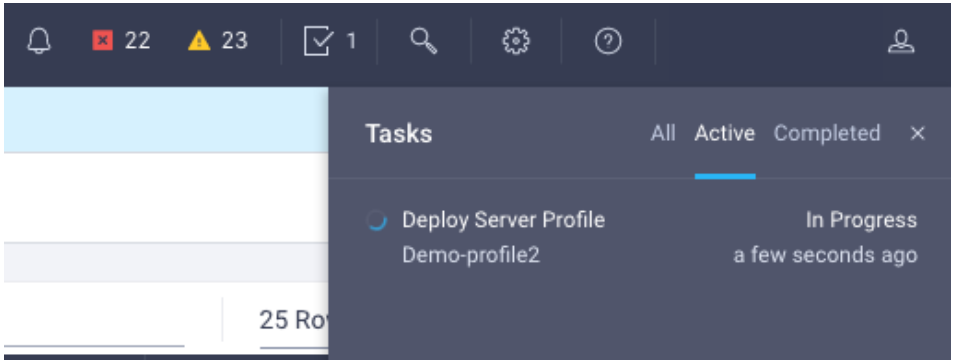


- Review then Save and Deploy Profile

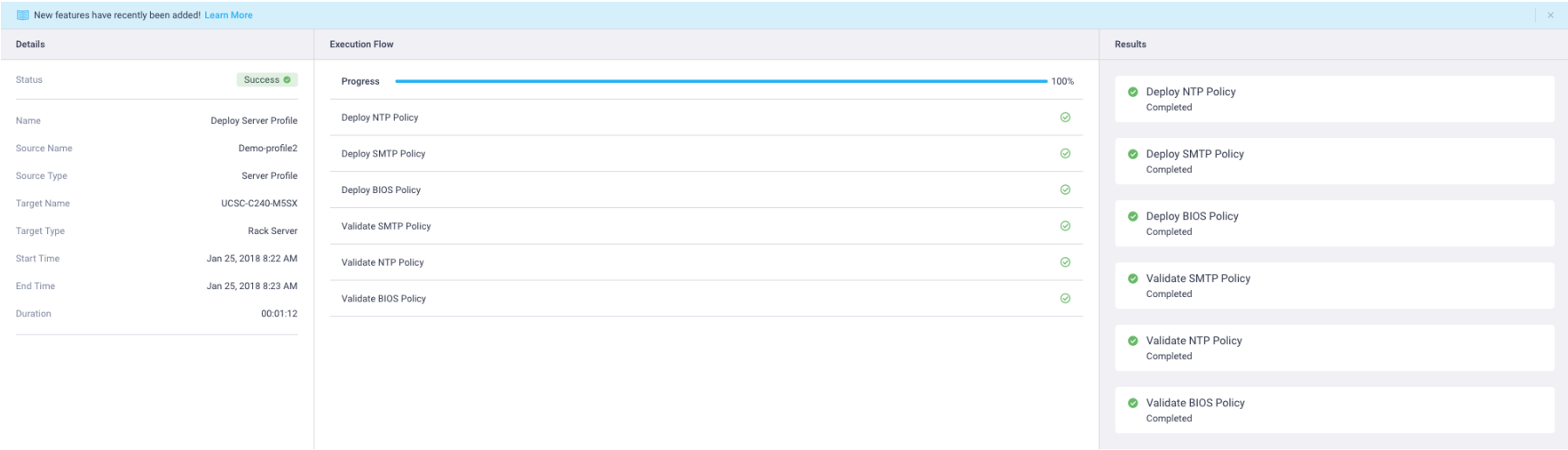


Cisco Intersight – Creating a Server Profile (cont'd)

- View running tasks in task list

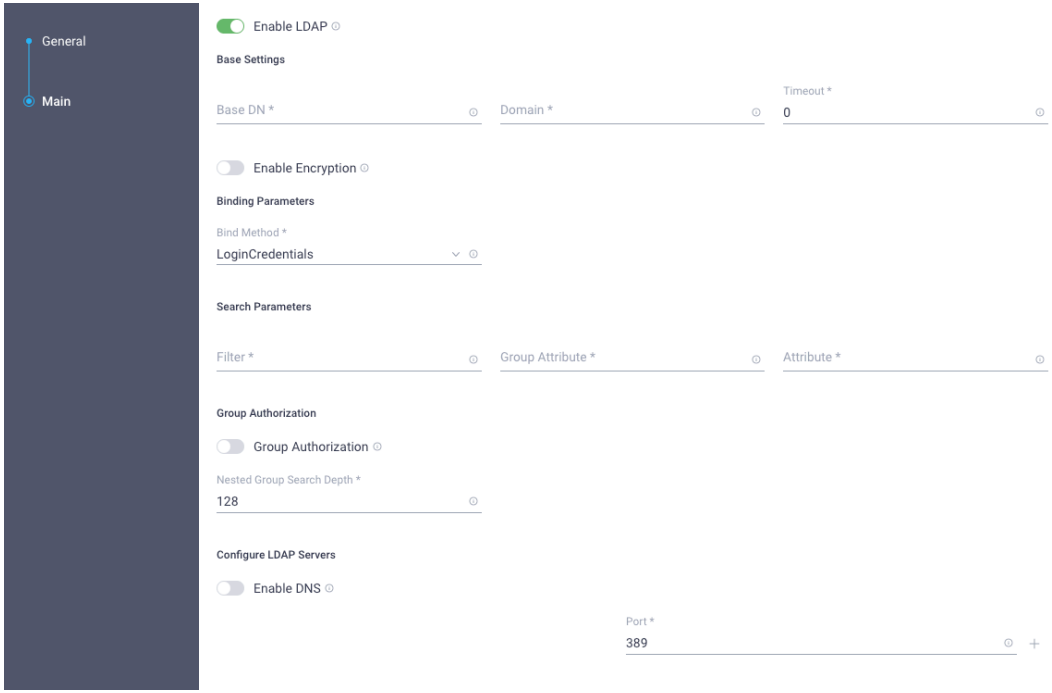


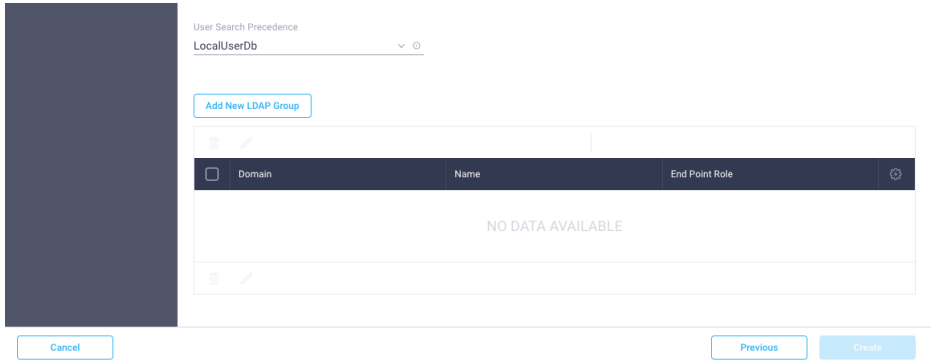
- Click on desired task for more details



Server Policies

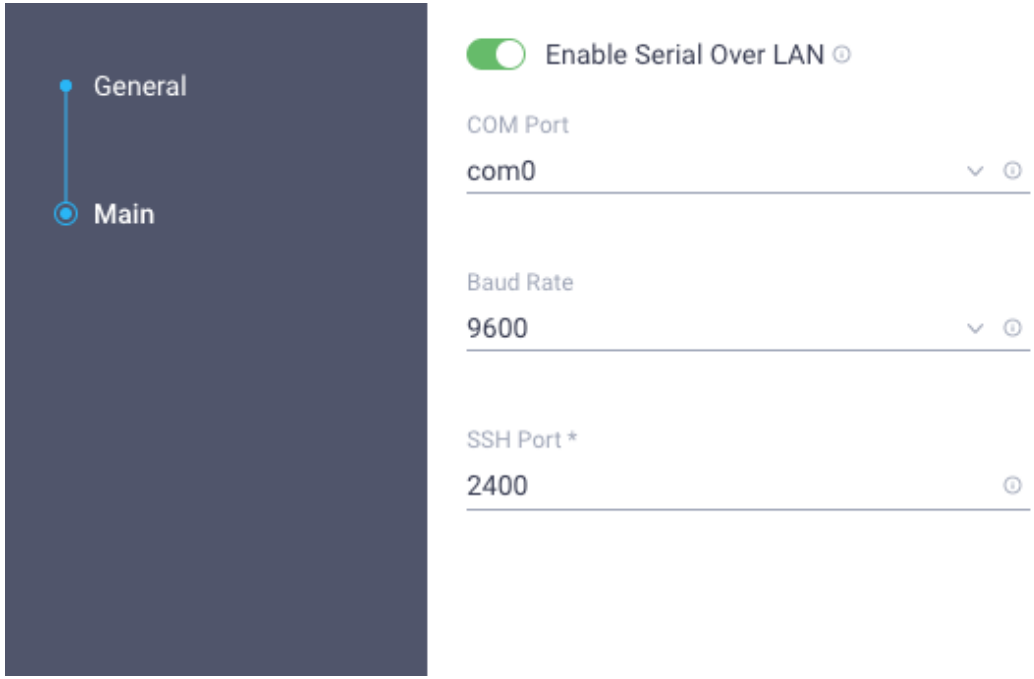
Intersight Server Policies – LDAP Policy





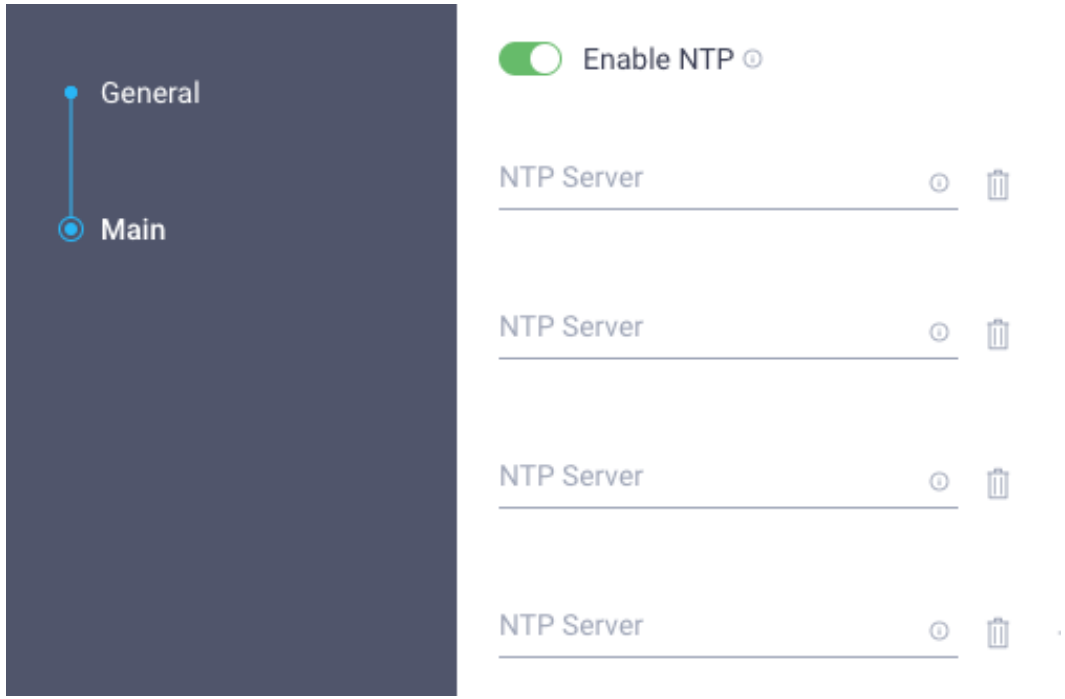
- LDAP Policy includes the following
  - Base Settings
  - Encryption settings (if desired)
  - Search parameters
  - Group Authorization and search depth
  - LDAP Server / DNS config
  - Ability to create LDAP Groups

Intersight Server Policies – Serial Over LAN Policy



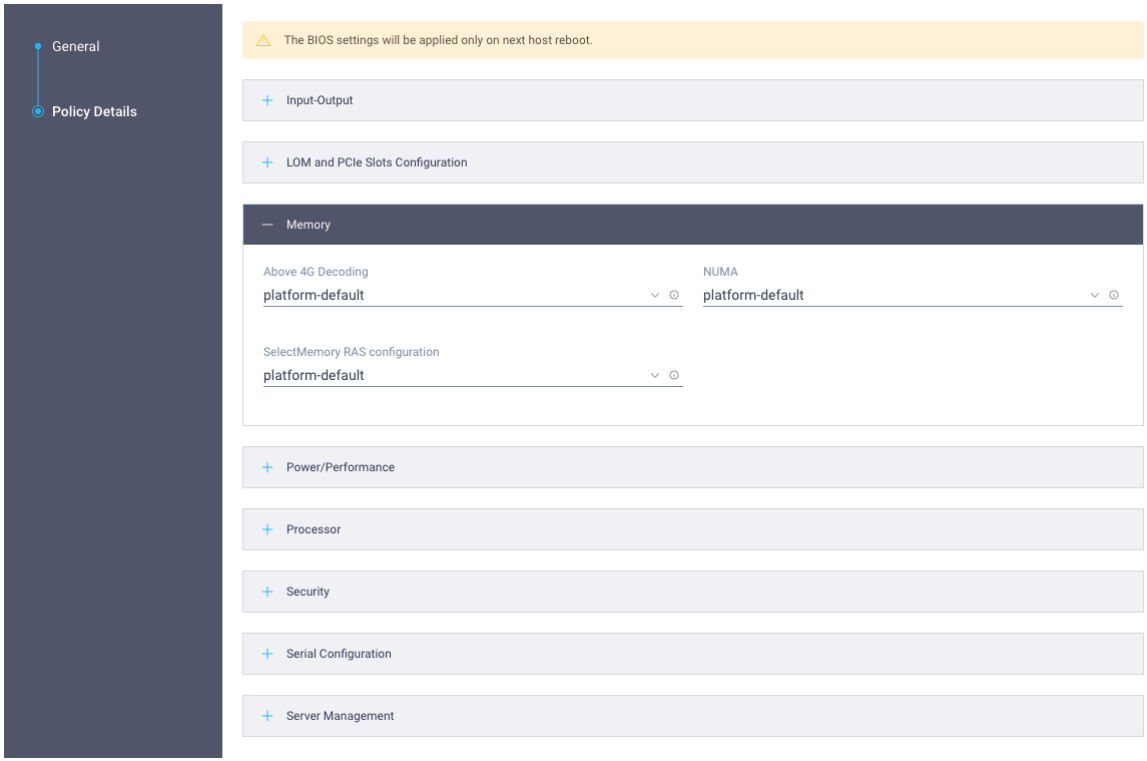
- Serial Over LAN enables input/output of serial port on managed endpoint to be redirected via an SSH session over IP
- Allows users to reach host console via CIMC

Intersight Server Policies – NTP Policy



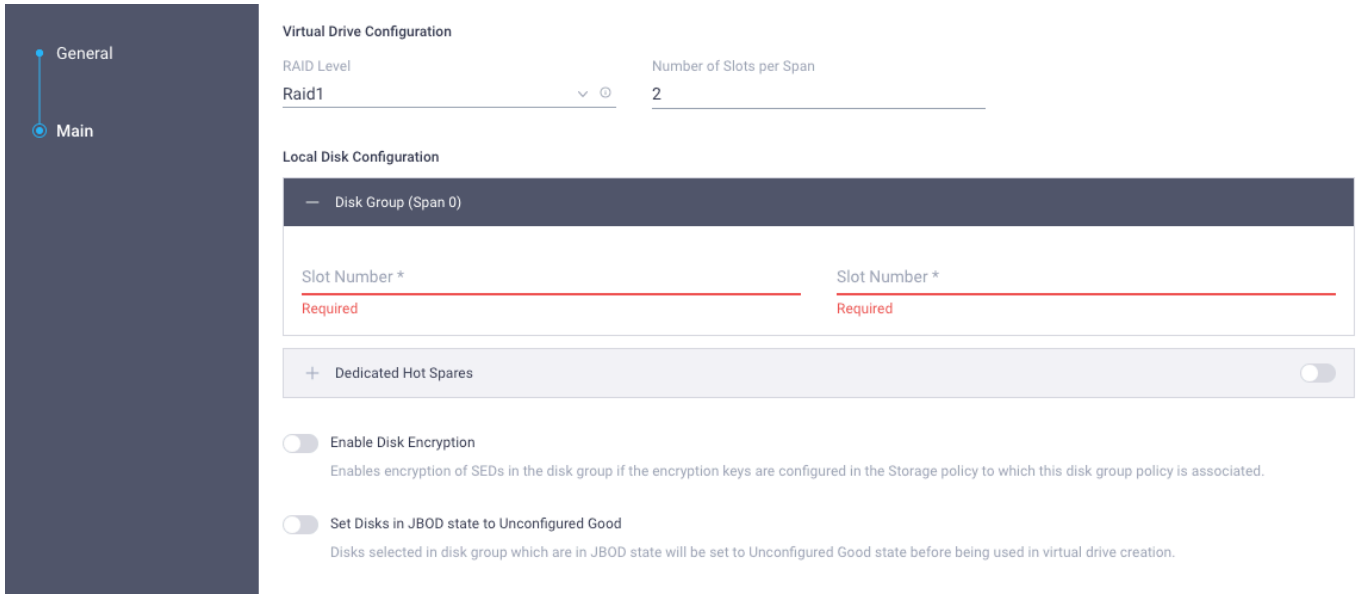
- Cisco IMC synchronizes time with the host by default
- Network Time Protocol (NTP) allows the Cisco IMC to sync the time with an NTP Server
- Must enable NTP and specify IP/DNS info for at least one NTP server (max of 4 servers allowed)

Intersight Server Policies – BIOS Policy



- BIOS policy allows users to set complete set of BIOS tokens across an endpoint
- All tokens use platform-defaults for desired endpoint unless otherwise specified
- BIOS Policy works in forgiveness mode – any tokens that are not found or applicable to chosen endpoint are ignored

Intersight Server Policies – Disk Group Policy

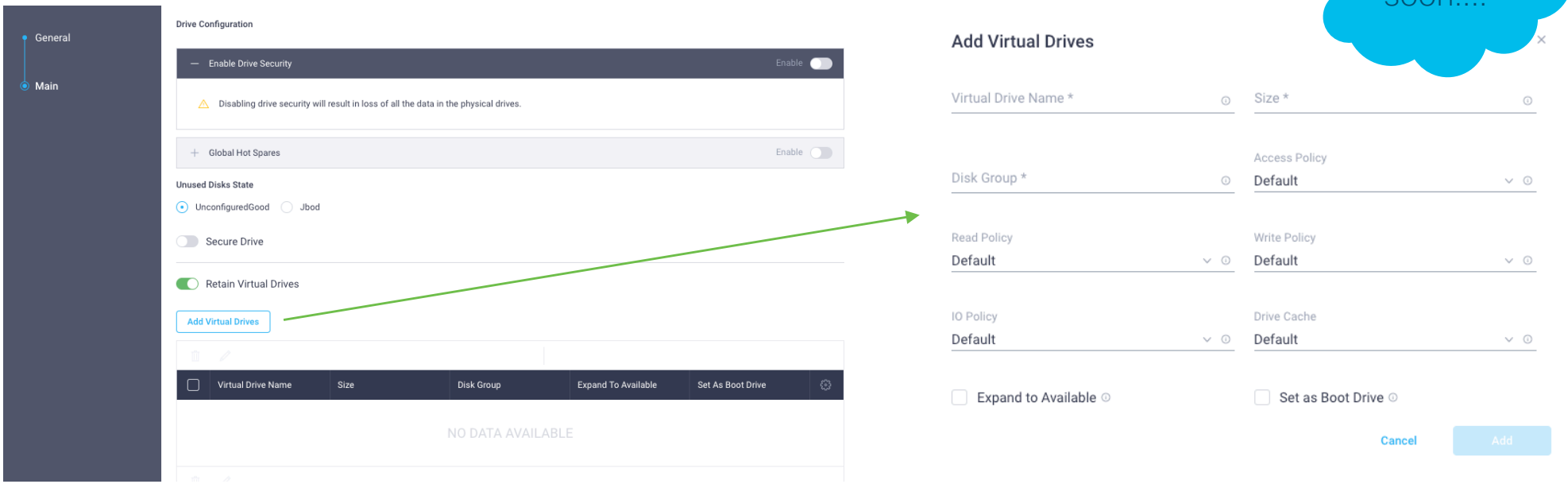


Coming soon!!!!

- Disk Group Policy allows users to carve out disk groups to be used with virtual drives
- Disk groups can be configured to use encryption when SEDs are used
- JBOD disks can be set to Unconfigured Good
- Disks can also be assigned as dedicated hot spares
- Selected RAID level will populate minimum number of disks required for group
- Disk Group policy cannot be deployed by itself, must be assigned to storage policy

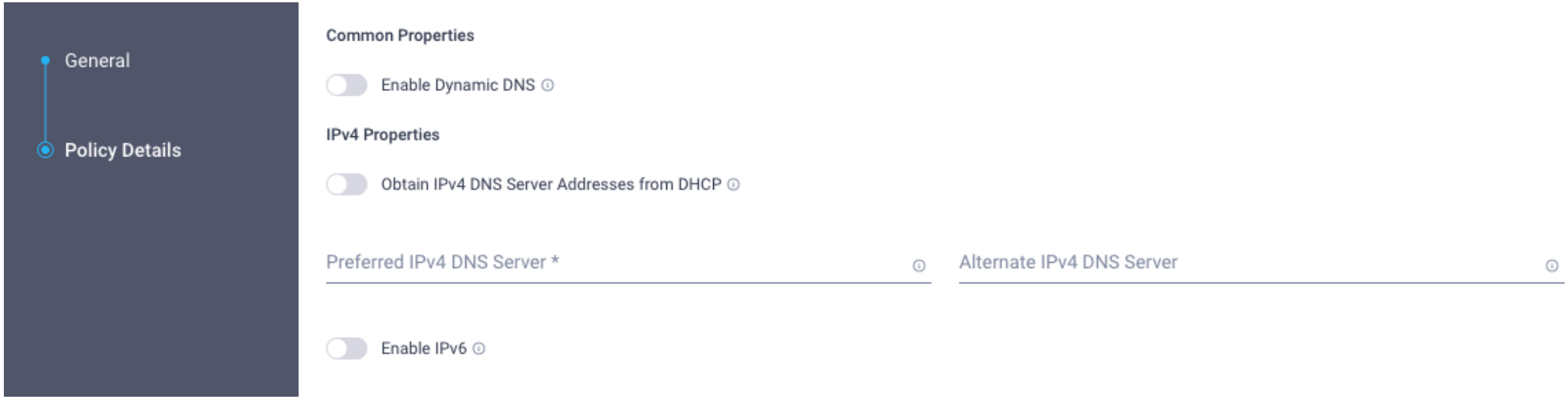
Intersight Server Policies – Storage Policy

Coming soon!!!!



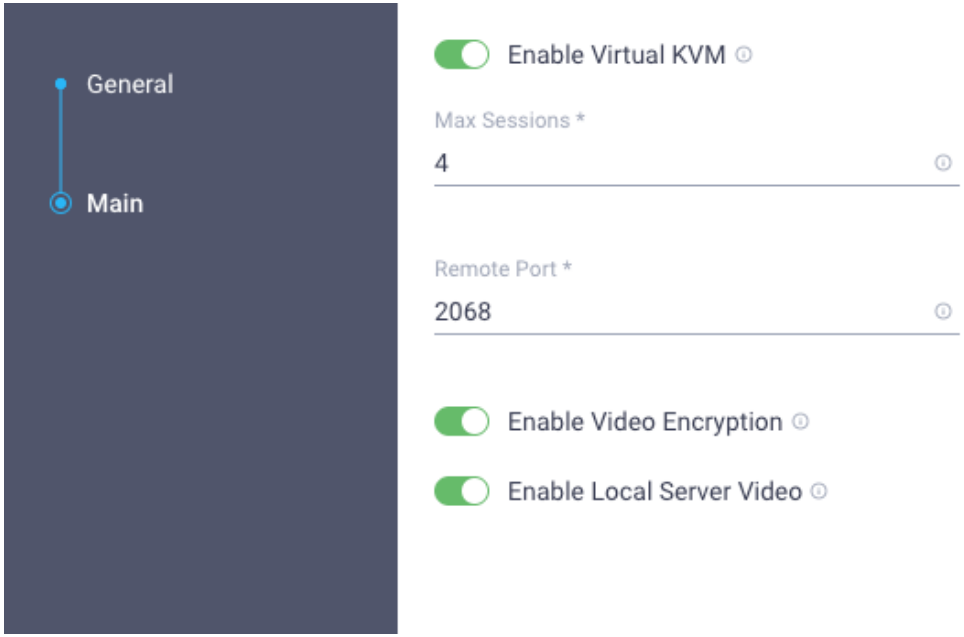
- Allows users enable drive security (disabled by default)
- Configure disks to be used as global hot spares (across RAID groups)
- Configure unused disks as UG/JBOD
- Create virtual drives with desired Disk Group(s)
- Can expand virtual drive to use all available space, and also set virtual drive as boot drive
- Retain existing virtual drives if desired

Intersight Server Policies – Network Connectivity Policy



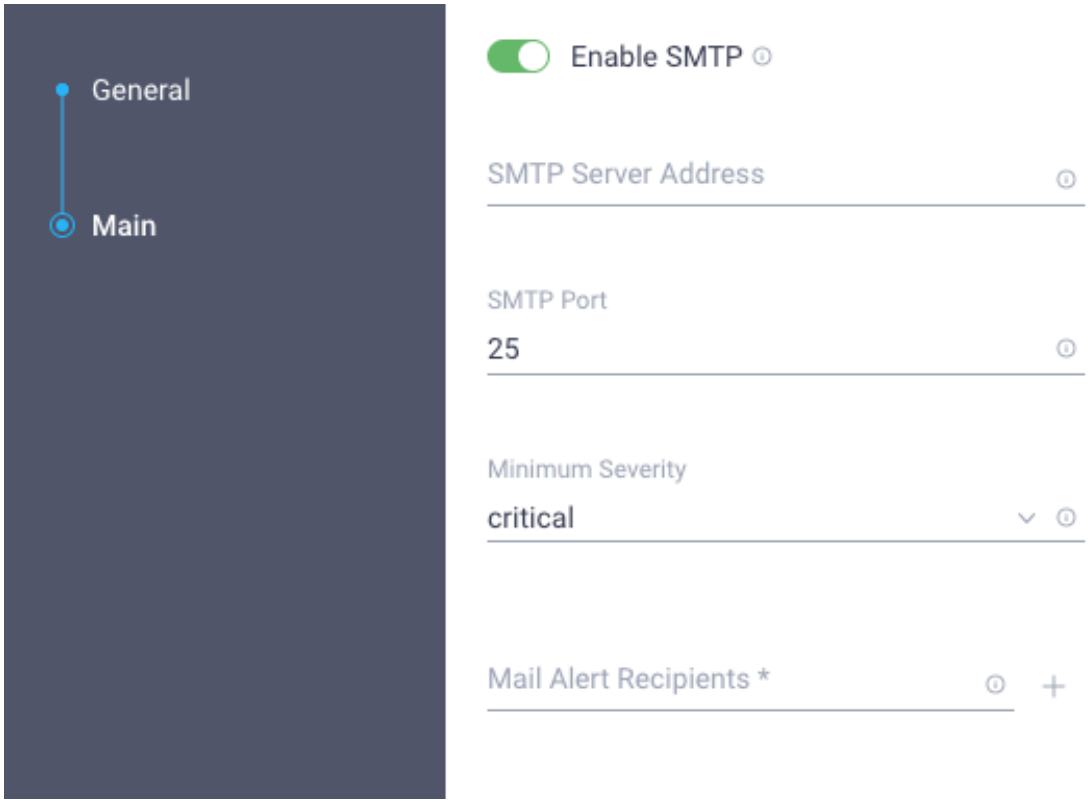
- Additional Cisco IMC connectivity options
  - Configure Dynamic DNS
  - Enable IPv6 (Static or DHCP)
  - Enable VLAN

Intersight Server Policies – Virtual KVM Policy



- Configure max # of vKVM sessions (4 is max allowed)
- Remote port (default is 2068)
- Video Encryption / Local Server Video (both enabled by default)

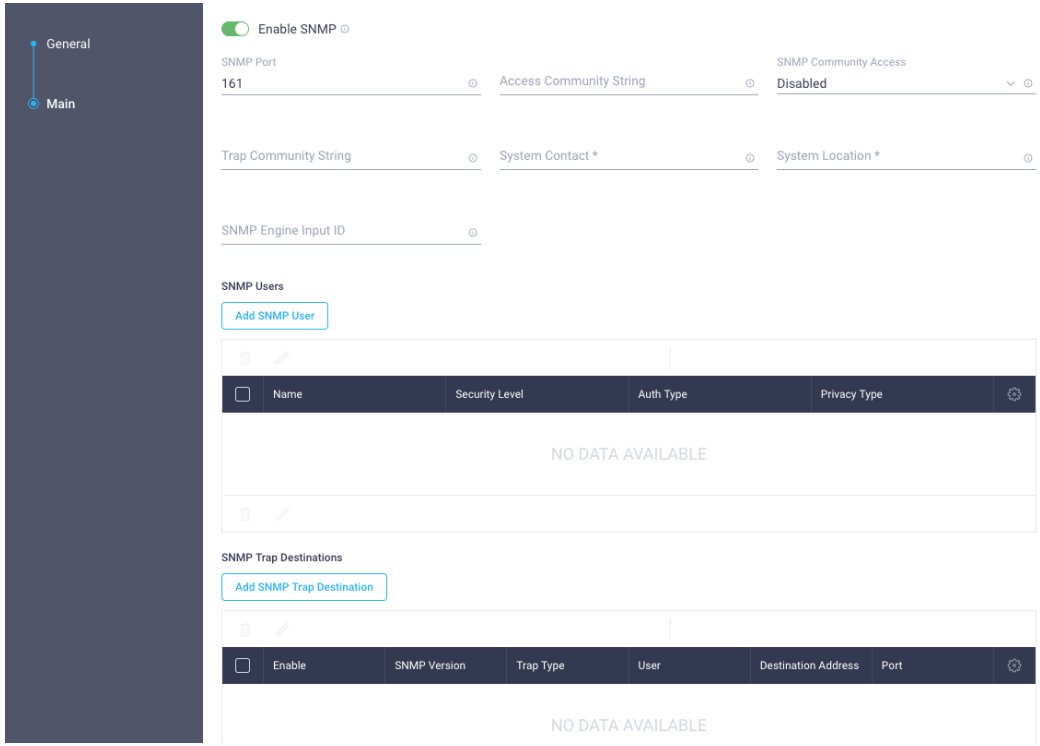
Intersight Server Policies – SMTP Policy



- Simple Mail Transfer Protocol (SMTP)
- Allows for email-based notification of server faults to recipients without depending on SNMP
- System uses SMTP to send server faults as email alerts for the configured SMTP server

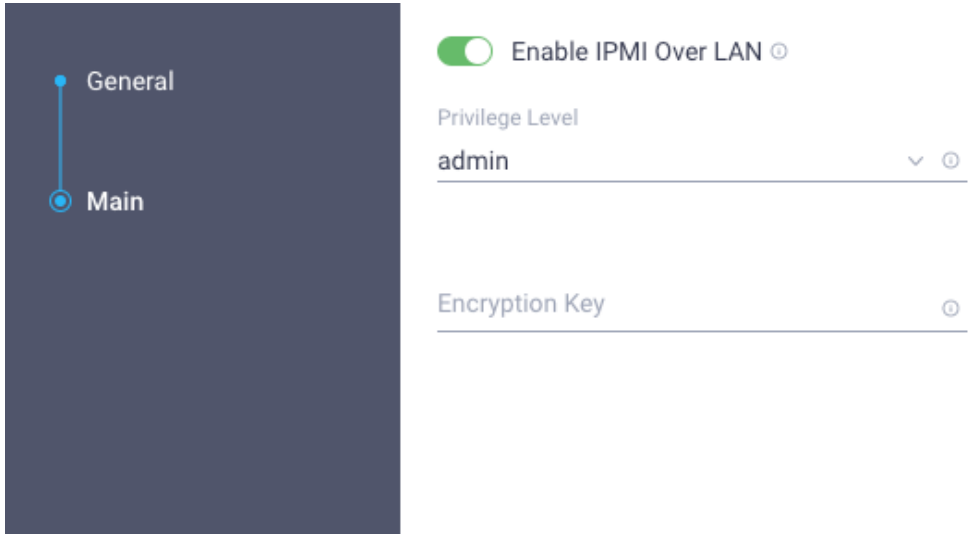
Intersight Server Policies – SNMP Policy

Coming soon!!!!



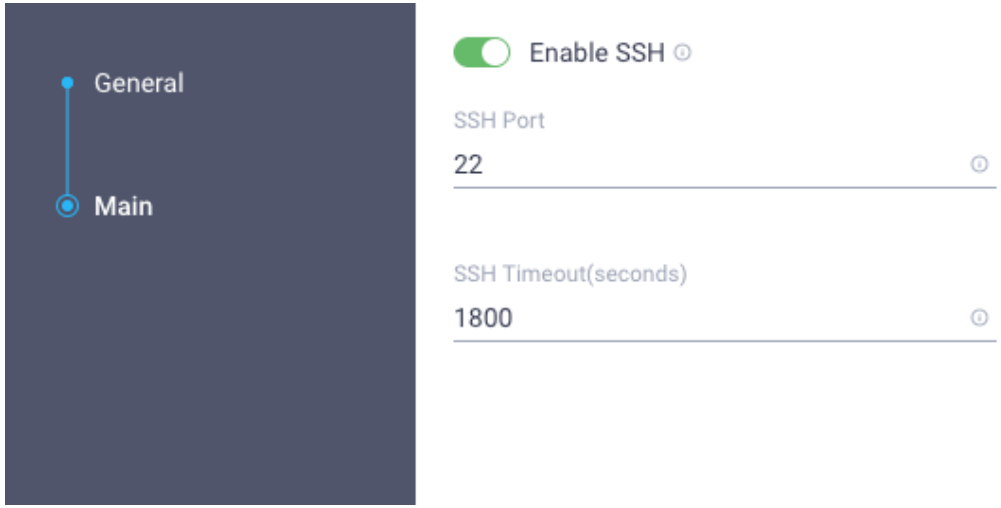
- Simple Network Management Protocol (SNMP)
- Allows users to view server configuration/status and sends fault/alert information in the form of SNMP traps
- Users can configure SNMP as desired – some parameters are optional
- Can add SNMP users with desired security level
- SNMP traps can be configured as SNMP v2/v3

Intersight Server Policies – IPMI over LAN Policy



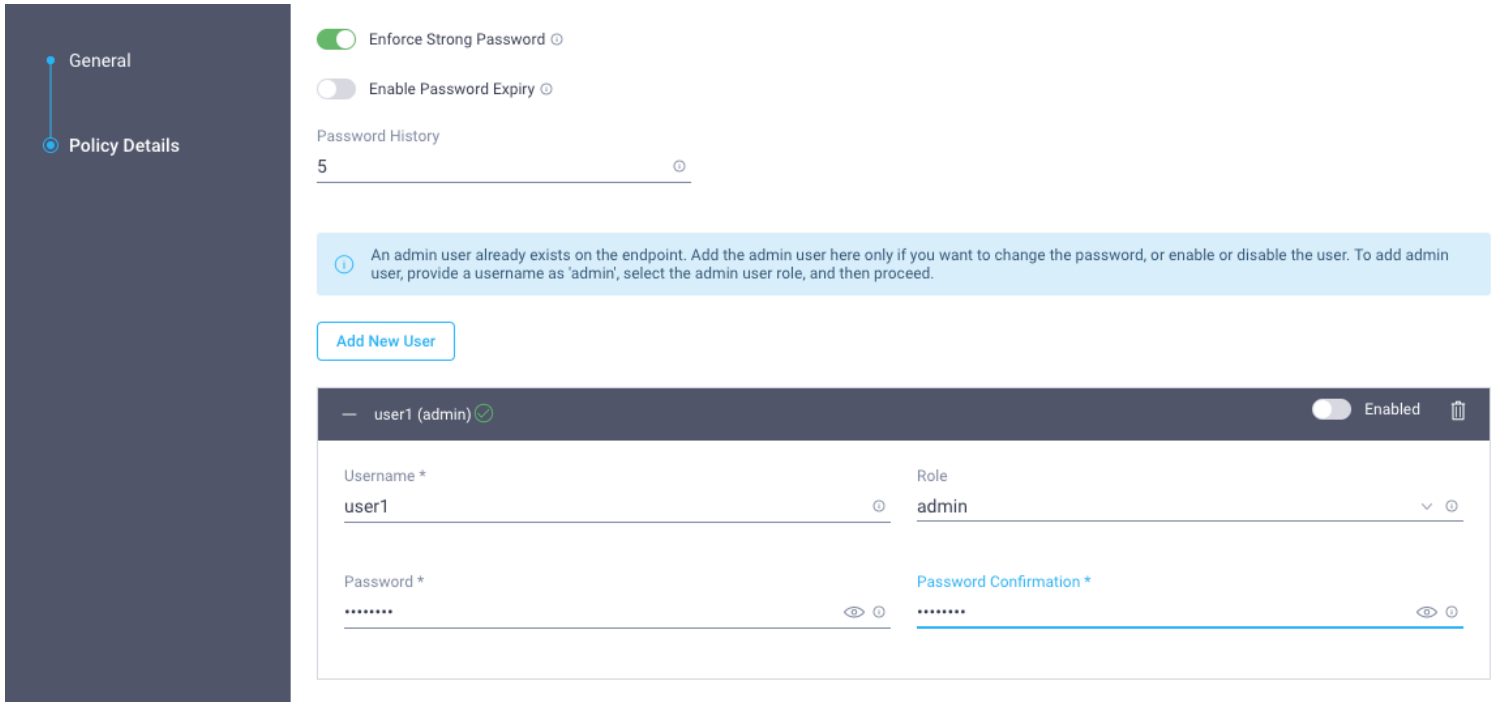
- Intelligent Platform Management Interface (IPMI)
- Allows server Operating System to access system details via Cisco IMC
- Users can query system for overall health/sensor data
- Power operations for system

Intersight Server Policies – SSH Policy



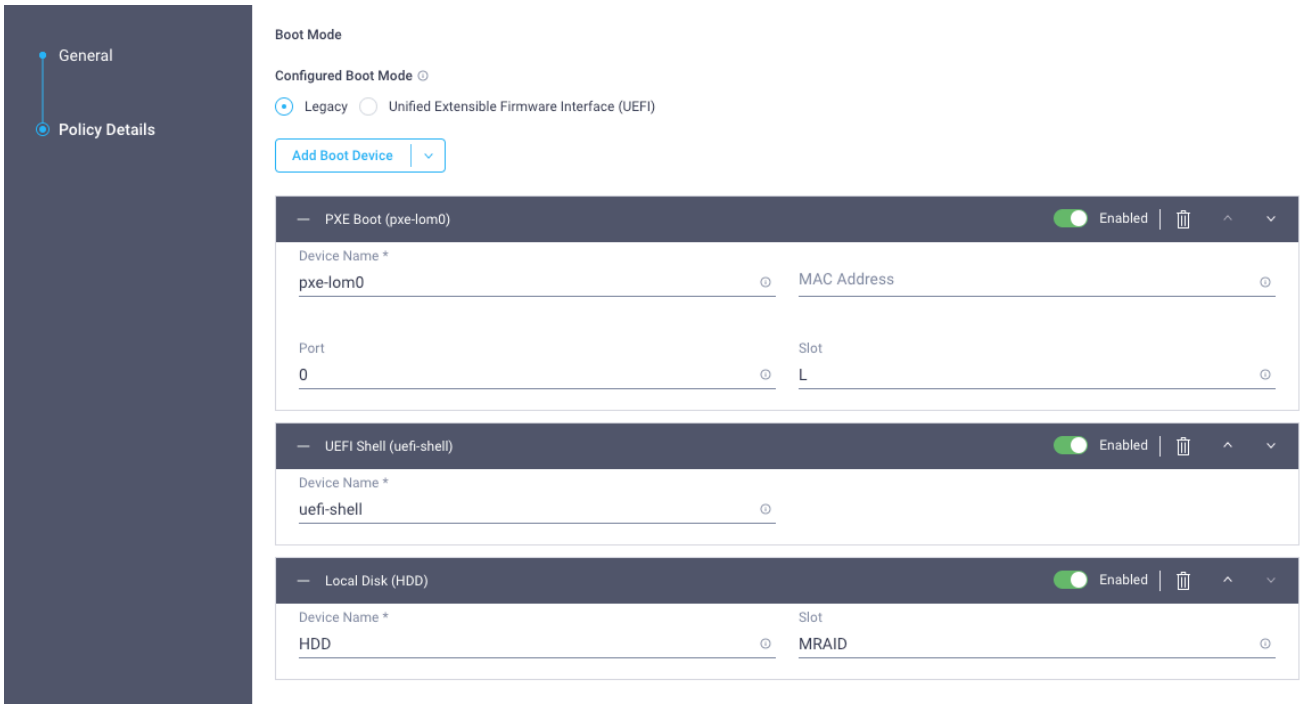
- Secure Socket Shell (SSH)
- Allows communication with the Cisco IMC over SSH port (CLI)

Intersight Server Policies – Local User Policy



- Local admin user hidden from user list by default – can add user “admin” again if wishing to disable user or change password
- User roles are admin, user, read-only
- Configure password expiry details if desired
- Configure password history

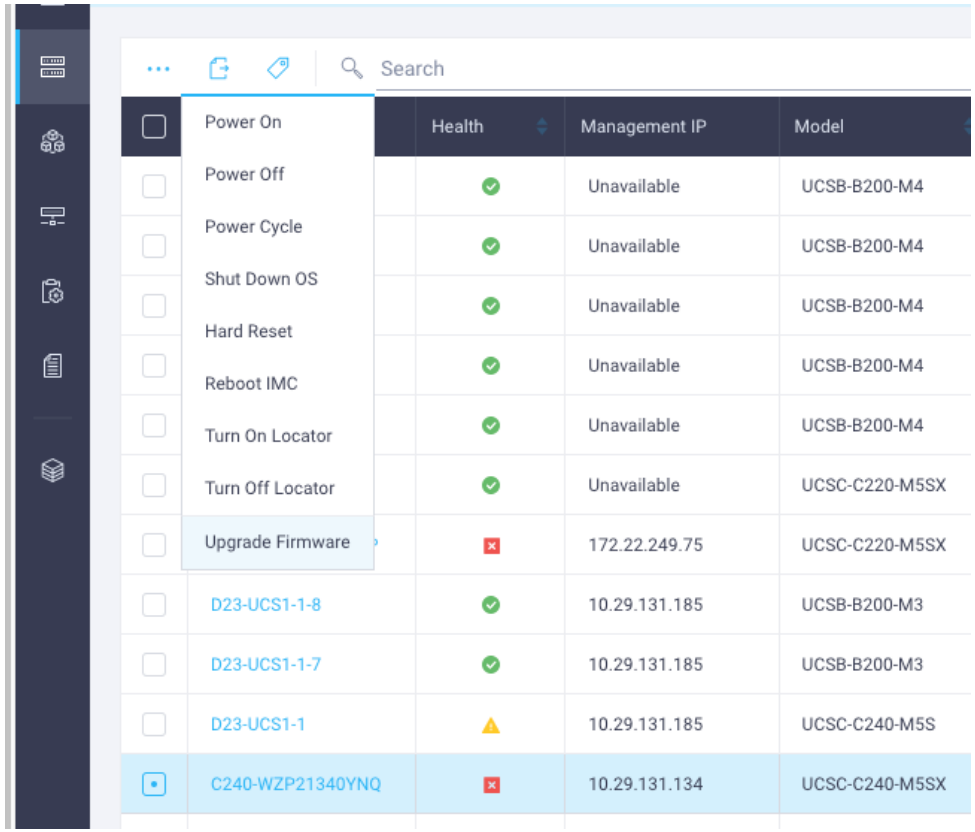
Intersight Server Policies – Precision Boot Order Policy

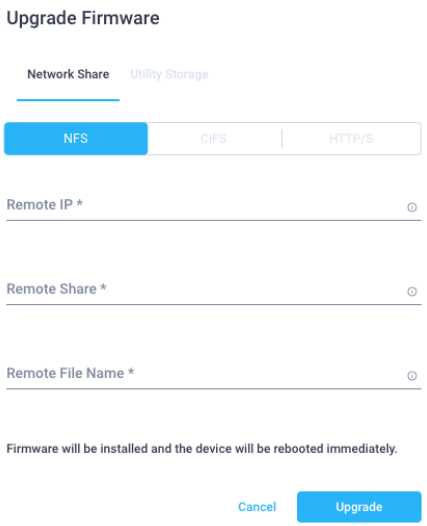


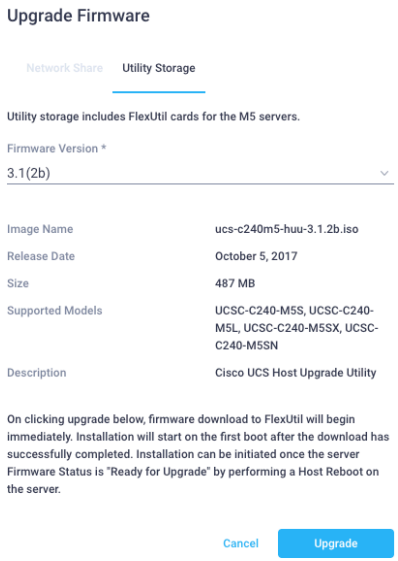
- Configure legacy vs UEFI boot mode (including UEFI secure boot)
- Add boot devices and configure boot order
- Enable / disable particular devices

Firmware Upgrades

Intersight – Firmware Upgrades







- Firmware upgrades available via Network Share or Utility Storage
- Network upgrades reboot host immediately and begin upgrade
- Utility Storage upgrades are staged – firmware is downloaded and then upgrades on next reboot

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