

ORACLE ENTERPRISE MANAGER OPS CENTER 12C – WHAT'S NEW

LEVERAGE TOTAL CONTROL FOR SYSTEMS.

KEY FEATURES

- OVM SPARC, OVM x86, and Solaris Zone support
- Oracle Solaris 11 Core Technology
- Oracle SuperCluster and Oracle Exalogic Enhancements
- ASR Support

KEY BENEFITS

- Accelerated Cloud Deployments
- Unleash the Power of Solaris 11
- Engineered Systems Management
- Included with Support

Oracle Enterprise Manager Ops Center 12c accelerates the deployment of enterprise clouds by leveraging all Oracle server virtualization technologies on Oracle Systems. Ops Center marries its application to disk integration with Enterprise Manager Cloud Control to its performance analytics on Oracle Solaris 11 and Oracle Linux to offer the most complete coverage across the datacenter.

Introduction

Oracle Enterprise Manager Ops Center 12c is a foundational offering in the Oracle Enterprise Manager 12c solution. It introduces unique capabilities to strengthen Oracle Enterprise Manager 12c's ability to establish, manage, and support enterprise quality clouds delivered in an Infrastructure-as-a-Service model.

With the launch of Oracle Enterprise Manager Ops Center 12c, Oracle Systems' customers utilizing SPARC, X86, Oracle Solaris, Oracle Linux, Oracle ZFS Storage Appliance, Oracle Switches, and both Oracle VM technologies can accelerate private cloud adoption faster at a lower cost. Oracle Enterprise Manager Ops Center 12c provides a comprehensive solution for operating system, firmware and BIOS configuration, bare metal and virtual machine provisioning, hardware fault analysis, automatic My Oracle Support service request generation, performance management, all while leveraging integrated diagnostics with automatic server pool resource policies.

Software Entitlement

Included with Oracle Support

Oracle Enterprise Manager Ops Center 12c is included in the Oracle Premier Support for Systems, Oracle Premier Support for Operating Systems, and Oracle Premier and Basic support for Oracle Linux and Oracle VM. Through the ownership of at least one of these Oracle Support contracts, Oracle customers are allowed to use and receive support for Ops Center. Ops Center is available for download from the Oracle Technology Network or the Oracle Software Delivery Cloud.

Enhanced Framework

More Robust Core Components

Oracle Enterprise Manager Ops Center 12c supports the use of an Oracle Enterprise Edition Database as for its own persistent data storage. Ops Center can leverage an existing Oracle Database, a remote Oracle Database, or it can automatically install an Oracle Database. Ops

Center leverages a Oracle GlassFish web server in this release. By leveraging Oracle technologies at no additional cost to the Ops Center users, the overall solution becomes more robust and reliable

Highly Available Infrastructure

Oracle Enterprise Manager Ops Center 12c supports an active – passive highly available Ops Center Enterprise Controller layer through the use of Oracle Clusterware. This insures the monitoring, active server management, and infrastructure as a service solution Ops Center is providing can quickly be reached.

Proactive Self Monitoring

Oracle Enterprise Manager Ops Center 12c periodically runs OCdoctor and reports findings within the browser user interface.

Credential Management

Oracle Enterprise Manager Ops Center 12c offers a new administration view into the credentials that are being used to communication and manage agentless devices. Ops Center allows customers to change credentials and have them change within Ops Center so monitoring and management can continue.

Agent to Proxy Management

Oracle Enterprise Manager Ops Center 12c administration tasks now allow for customers to select agents and point them to new Proxy Controllers from the browser user interface.

Improved Command Line Interface

Oracle Enterprise Manager Ops Center 12c extends the traditional command line interface into Ops Center to cover server, Oracle Solaris Zone, and Oracle VM SPARC management.

Enhanced User and Role Management

Increase Roles and Duties

Oracle Enterprise Manager Ops Center 12c has added over ten new roles that can be assigned to users. These include Asset Admin, Role Management Admin, User Management Admin, Security Admin, Storage Admin, Read Only, Fault Admin, Plan/Profile Admin, Ops Center Admin, Report Admin, Cloud Admin, Update Admin, Virtualization Admin, Apply Deployment Plans, Network Admin, Cloud User, and Update Simulation Admin. Ops Center has increased the granularity of the objects those roles can be assigned to within the Ops Center user interface. Ops Center 12c will only display the object in the user interface that an end user has permission to see.

Customizable User Experience

Oracle Enterprise Manager Ops Center 12c offers a new ability to declare a start page or home view for a user or role. Administrators can control which sections or features of the product are visible based on user or role. Lastly, the login timeout and refresh intervals can be

customized to an end user or role's preference.

LDAP Integration

Oracle Enterprise Manager Ops Center 12c now integrates with industry standard LDAP repositories. Administrators can store the relationship between a user and an Ops Center role within the LDAP repository and Ops Center will enforce that association once the end user logs in to the solution.

Customizable User Interface

Customizable html manifest header. Personalize the Oracle Enterprise Manager Ops Center 12c user interface by adding custom text to the login challenge page as well as to the top of Ops Center's browser user interface.

Asset Management

Deployment Profiles

Oracle Enterprise Manager Ops Center 12c increases the type of deployment plans possible to further drive automation in the datacenter. ZFS Storage Appliance profiles, Alternate Boot Environment profiles, BIOS Configuration profiles, Oracle VM x86 virtual machine profiles, Oracle Solaris Zone profiles, and Discovery profiles have been added in this release. These additional profiles combine to form more impactful deployment plans.

Discovery

Asset discovery has been redesigned to allow for more parameter reuse and credential separation. We have streamlined the agent push deployment method into the discovery job to make assets appear in the topology faster.

Agentless Features

Oracle Enterprise Manager Ops Center has always been able to accomplish hardware monitoring and server management in an agentless way. New in Ops Center 12c is an ability to have some agentless features in the areas of operating systems management.

Virtualization Management

High Availability for Server Pools

A new policy for high availability has been introduced to server pools. Oracle Solaris Zones and Oracle VM x86 server pools can have an optional high availability policy that enable Ops Center to restart the guests from failed physical machines on other health members of the server pool.

Virtual Machine Guest Analytics

Oracle Enterprise Manager Ops Center 12c allows for greater observability of Oracle Solaris Zones and Oracle VM for SPARC or x86. New in this release is OS Analytics that allows you to dissect the operating system based on the physical host or the guest. There are added screens to allow for the comparison of virtual machine performance to each other and the physical host.

Oracle Virtual Manager

Oracle Enterprise Manager Ops Center 12c offers an excellent integration with Oracle Virtual Manager for x86 (OVMM). Ops Center allows for the discovery of Oracle Virtual Manager instances across the datacenter. Work directly from OVMM and discover and manage those results within the Ops Center user interface. After OVMM discovery, work directly from the Ops Center user interface and discover and manage those results within the OVMM interface. This work flow freedom allows for the end user to determine the best match for his datacenter experience. Control the deployment of Oracle VM Templates from Ops Center. Clone, Stop, pause, start, etc. Ops Center offers full control over Oracle VM for x86 virtual machines.

Server Pools

Oracle Enterprise Manager Ops Center has grown the concept of virtual pools into server pools. Ops Center 12c allows customers to create server pools based on Oracle VM SPARC, Oracle VM x86, and Oracle Solaris Zones. Users declare groupings of physical servers will share a common goal, they will be connected to the same shared storage, they will share the same networking characteristics, and they will be controlled by the same placement and auto balancing policies.

Pre-existing Oracle Solaris Zone Management

Oracle Enterprise Manager Ops Center 12c supports a larger variety of Oracle Solaris Zone configurations that were created outside of Ops Center. Ops Center 12c offers many of the same features for both Solaris Zones it created and those that existed before it was installed.

Pre-existing Oracle VM SPARC

Oracle Enterprise Manager Ops Center 12c better represents OVM SPARC control domains it did not deploy. Topological relationship drawing is improved. Customers can control the CPU, memory, and MTU configurations. They can stop and start virtual machines.

Oracle Solaris 11 Zones

Oracle Enterprise Manager Ops Center 12c adds the support of Oracle Solaris 11 zones. Build these Zones from new deployment plans. Build from a iso image or the image based packaging (IPS) master software repository.

Oracle VM x86 Hypervisor Deployment

Oracle Enterprise Manager Ops Center 12c provisions Oracle VM x86 hypervisors to bare metal and automates the connection of the hypervisor to the Oracle Virtual Manager and

server pools.

Cloud Management

Cloud Infrastructure Experience

Modeled after many of the popular public cloud implementations, Oracle Enterprise Manager Ops Center 12c has established a new command line interface and web services API to wrap around its virtual datacenter concept found in the browser user interface. Customers can leverage public access key to manipulate their private cloud infrastructure in a command line or programmed manner.

Self Service Management

Oracle Enterprise Manager Ops Center 12c allows for role segmentation between a resource users and a system administrator. The solution allows you to allocate CPU, memory, network, and storage resources to resource consumers. Ops Center will keep track of used resources and not allow end users to consume more than what they have been assigned. Ops Center leverages Oracle Solaris Zones and Oracle VM x86 to create virtual machines for these users.

Virtual Datacenters

Oracle Enterprise Manager Ops Center 12c allows systems administrators to create logical groupings of server pools, networking, and storage. Administrators can then create multiple accounts to be assigned to these virtual datacenters. Accounts will hold resource allocations. Multiple users can be assigned to accounts.

Policy Automation

Oracle Enterprise Manager Ops Center 12c exposes placement, auto balancing, and high availability policies at the server pool layer. Within the virtual datacenter level, it offers anti-affinity and cross server pool summations for policy logic execution.

Network Management

Fabric Management

Oracle Enterprise Manager 12c has added support for the active management of layer 2 and layer 3 network fabrics. Through integration with Oracle network switch equipment, Ops Center can control many aspects of both the physical and logical fabrics found in the datacenter. New features include port management, the life cycle control of vnets, private networks, IB partitions, subnet management, IP address allocation management, user to network isolation through segmentation, and many other task automations during the binding of these networks to physical and virtual machines.

Host Level Networking

Oracle Enterprise Manager Ops Center 12c offers more complete configuration control of host level networking configurations across Linux and Oracle Solaris such as link aggregations, MTU windows, vlan tagging, and attaching new networks to network card ports.

Oracle Solaris 11 Virtual Networking

Oracle Enterprise Manager Ops Center 12c leverages the Oracle Solaris 11 Zone integration with Oracle Solaris 11 virtual networking. Ops Center also allows you to control flow control maximum bandwidth and priority to the virtual NIC devices.

IPv6 Support

Oracle Enterprise Manager Ops Center 12c tolerates the existent of IPv6 devices in the environment. IPv6 does not break the Ops Center user interface.

Operating System and Software Management

Bare Metal Operating System Provisioning

Oracle Enterprise Manager Ops Center 12c has increased its coverage of remote operating system provisioning technologies by adding support for Oracle Solaris 11 automated installer. Users can select from default manifests and join these installation deployment plans with other Ops Center deployment plans for a more cohesive server provisioning experience. Ops Center also supports the diskless booting of Solaris 11 on iSCSI exposed SAN devices. Ops Center has added support for Linux logical volume manager partitions within OS Profiles.

Oracle Solaris Imaged Based Packaging

Oracle Enterprise Manager Ops Center 12c understands Oracle Solaris 11 imaged based packaging (IPS). Ops Center installs its components onto Oracle Solaris 11 via IPS packages. Ops Center will create a master IPS repository (MSR). It will allow for users to add multiple pkg publishers to this master repository and offer way to schedule sync functions between the MSR and the network repositories to assist in the automation of keeping the software library up to date. Ops Center will then leverage its proxy and agent layers to subscribe Oracle Solaris 11 hosts to this MSR. Ops Center allows for the agentless execution of its software management features on Oracle Solaris 11. Deploy IPS packages from the MSR across large populations of Oracle Solaris 11 hosts. Users can leverage Ops Center to compare Oracle Solaris 11 host to each other as well as run compliance reports based on IPS profiles.

Software Profile Manager

Oracle Enterprise Manager Ops Center 12c has streamlined the Oracle Linux, Oracle Solaris, Red Hat, and SuSE software library manager. This new browser based wizard allows customers more quickly search and construct unique patch profiles.

Oracle Solaris Service Management Facility

Oracle Enterprise Manager Ops Center 12c displays Oracle Solaris Service Management Facility services. Use Ops Center to display all the services running. Alarm when a service changes state. Within the browser user interface, dig into the service names, manifests, logs, and associated PIDs.

Process Performance Analytics

Oracle Enterprise Manager Ops Center 12c keeps track of all running processes on the operating system. Ops Center allows customer to display process history to assist in trend discovery. When the Enterprise Manager Cloud Control plug-in for Ops Center 12c is installed, Ops Center will display the name of the Oracle application associated with the PIDs displayed. Ops Center allows customers to click into PIDs and perform ad hoc analysis at the thread, handle, and memory heap size levels.

Operating Systems Analytics

Oracle Enterprise Manager Ops Center 12c has increased its awareness of operating system health. Besides the process performance analytics, the virtual machine analytics, and the service management facility monitoring, Ops Center also suggests alarm thresholds for monitored attributes based on past performance. It summarizes utilization into CPU, memory, network IO, and storage IO. Ops Center provides a long list of operating system key performance indexes and metrics.

Oracle Solaris Alternative Boot Environments

Oracle Enterprise Manager Ops Center 12c offer a new boot environment profile that can be appended to deployment plans to control if an alternate boot environment should be used before change is introduced into the environment. Ops Center 12c offers a new boot environment tab that displays the percent of zpools used on boot environment. It allows customers to turn ZFS snapshots into boot environments. Ops Center displays all boot environment and allows customers to make any of them active at any time.

Hardware Management

Automated Service Request

Oracle Enterprise Manager Ops Center 12c allows Oracle support customers to automatically open My Oracle Support requests for specific hardware faults. Thus insuring customers are getting the most out of their hardware service contracts.

Firmware Provisioning

Oracle Enterprise Manager Ops Center 12c increases the number of devices customers can manage. Ops Center 12c supports the firmware management of select Oracle switches, Oracle infiniband HBA cards, power distribution units found in the Sun Rack II, and the ZFS Storage Appliance.

Exadata Storage Cells

Oracle Enterprise Manager Ops Center 12c discovers Exadata Storage Cells as SAS storage servers. Ops Center will subscribe to outbound SNMP telemetry from the Storage Cell.

Oracle SPARC Supercluster and Oracle Exalogic

Oracle Enterprise Manager Ops Center 12c displays Oracle SPARC Supercluster and Oracle Exalogic devices with a new rack view. The rack view consolidates firmware information for devices, location in rack information, and fault information. Ops Center can be installed to become a console for these devices. Such Ops Center installations can be discovered as Oracle Engineered Systems devices and be leveraged as consolidation points for the racks within the datacenter topology.

Power Distribution Units

As mentioned earlier, Oracle Enterprise Manger Ops Center allows customers to upgrade the firmware on the Sun Rack II power distribution units. Ops Center 12c also displays the energy consumption of the entire rack through an integration with the PDUs.

Hardware Fault Management

Oracle Enterprise Manager Ops Center 12c supports a more comprehensive list of hardware faults. Increased coverage of fault from the XSCF and ILOM service processor. Increase faults from the RAID controller and disk firmware. Increased faults from the Operating System via the Oracle Solaris Fault Management Architecture. Support for the displaying of fault conditions that existed before the Ops Center agent was installed or active on the device.

Oracle x86 Server BIOS Configuration

Oracle Enterprise Manager Ops Center 12c allows customers to capture the BIOS configuration on supported Oracle x86 servers. This includes many of the configuration options displayed through the use of F-key and ALT-CNTRL combinations. Once a BIOS configuration is captured, it can be used to provision the BIOS on other similar servers across the datacenter.

Storage Management

iSCSI Support

Oracle Enterprise Manager Ops Center 12c offers new support for iSCSI SAN devices. Ops Center will discover iSCSI devices on the network and display exposed LUN devices to targets. Ops Center allows customers to run Oracle Solaris Zones on iSCSI devices as well as Oracle VM x86 and SPARC virtual machines. Diskless booting of Solaris 11 is possible from iSCSI devices. iSCSI SAN libraries are allowed as shared storage for server pools. They are maintained by Ops Center under the library management section of the product.

Storage Adoption/Move Storage

Oracle Enterprise Manager Ops Center 12c will assist in the migration of existing storage configurations for Oracle Solaris Zones that were created outside of Ops Center. This will allow more Zone configurations to be attached to Ops Center server pools and eventually Ops Center virtual datacenters.

Improved Storage Library Management

Oracle Enterprise Manager Ops Center 12c allows for more management of storage repositories used to store Ops Center software components, but also to house virtual machines. Ops Center supports the Oracle VM x86 StorageConnect API to discover storage libraries that can be used during OVM features. Ops Center 12c allows customers to leverage NFS repositories for Linux, Unix, Oracle firmware, Oracle VM Templates, and many other software components.

ZFS Storage Appliance Management

Oracle Enterprise Manager Ops Center 12c allows for the management of the ZFS Storage Appliance through the Oracle VM x86 StorageConnect API. Ops Center 12c also benefits from a direct connection to the device's management interface. Ops Center 12c can create volumes, LUNs, create/discover/destroy file systems, and expose the available resources in a dynamic manner when users are selecting storage during virtualization based features.

Contact Us

For more information about Oracle Enterprise Manager Ops Center 12c, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.



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