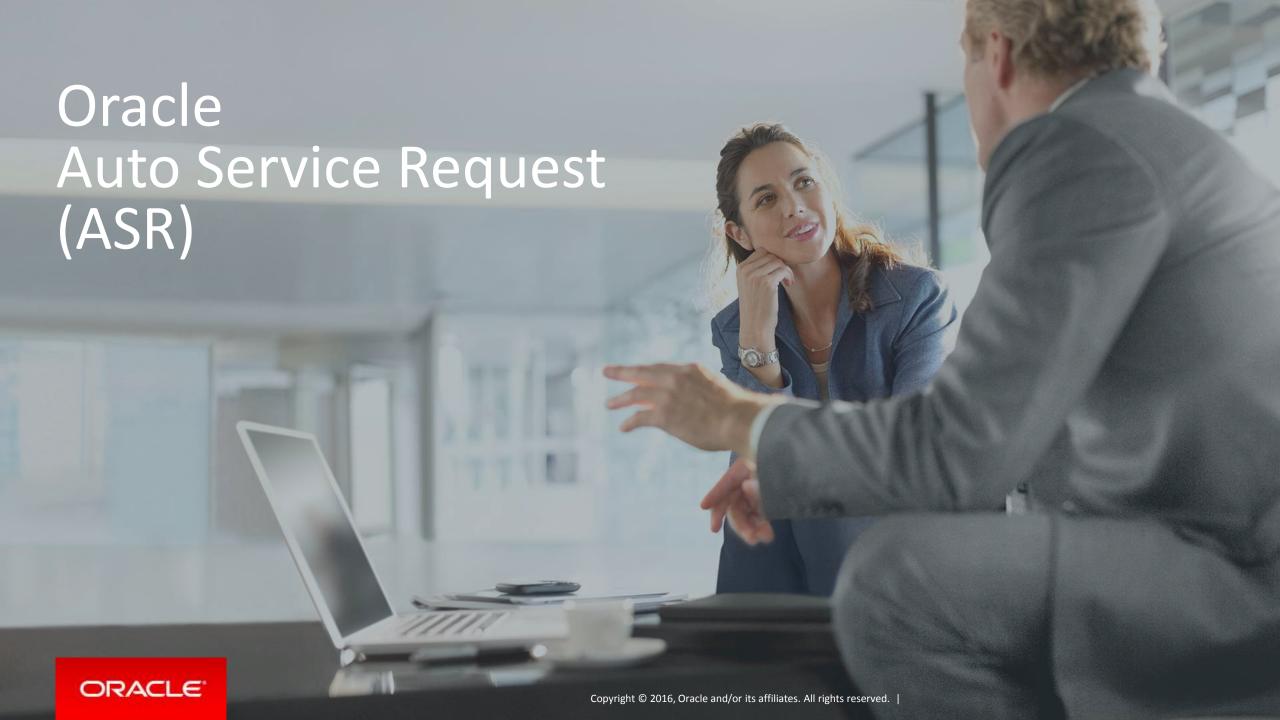
# ORACLE®



### Oracle Auto Service Request (ASR)

Faster Problem Resolution, Simplified Support Operations

- Resolves problems faster by automatically requesting priority service when specific faults occur
- Uses a secure, scalable, connection to deliver fault events and diagnostic information to Oracle
- ASR creates a service request in My Oracle Support, parts are dispatched, and you are notified that a service request is open
- ASR is included with Oracle hardware warranty, Oracle Premier Support for Systems, and <u>Oracle Platinum Services</u>



### Oracle Auto Service Request

#### A Proven Track Record

- Less time spent on the phone; fewer calls
  - No call to Oracle Support needed to report specific problems
- Diagnostic data sent electronically and securely
  - Improves availability, less downtime
  - Lowers operations costs
- Enables faster resolution through automatic service request generation and parts dispatch, as well as priority service request handling
- Oracle Support likely to be engaged in solving the issue before you know a problem exists

230,000+

assets are activated for ASR!





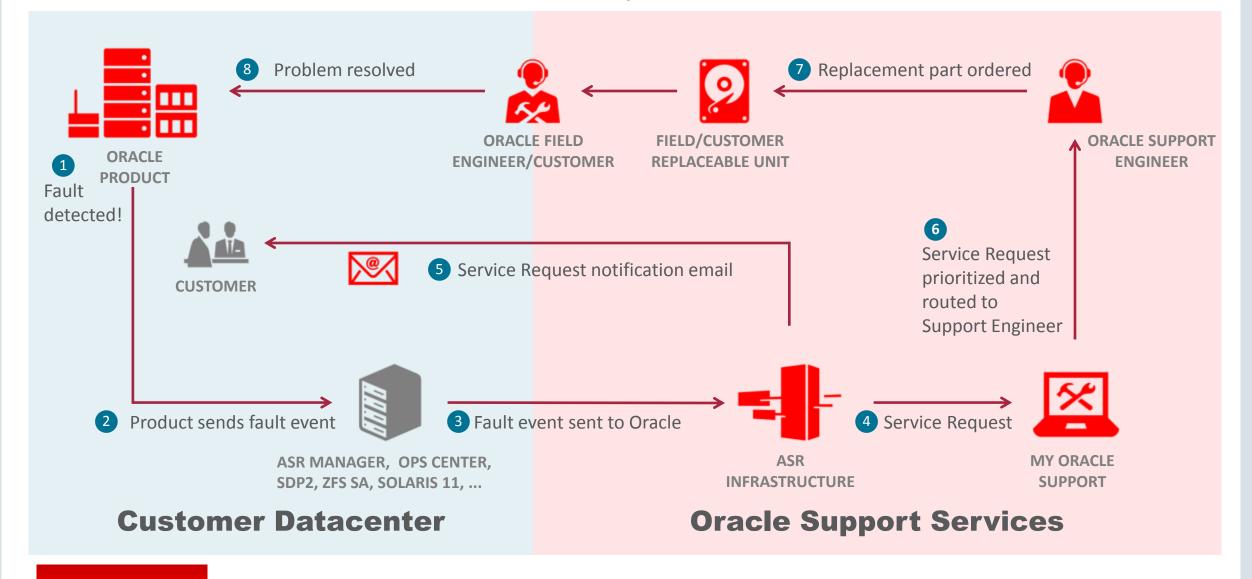
"We chose Oracle Auto Service Request because it offered automatic service-request generation for hardware failures and enabled us to ensure high availability and meet service-level agreements for our customers' 24/7 marine-terminal operations. With Oracle, we reduced our response time by three hours per fault and saved ten hours per month that IT staff spent on diagnosing problems—improving the speed of the resolution process."

Subramanian Kesavan, Lead – Systems
 Engineering, Navis India Technologies Pvt. Ltd.

Navis India Technologies Automates to Cut Three Hours from Service Responses and Meet Service-Level Agreements

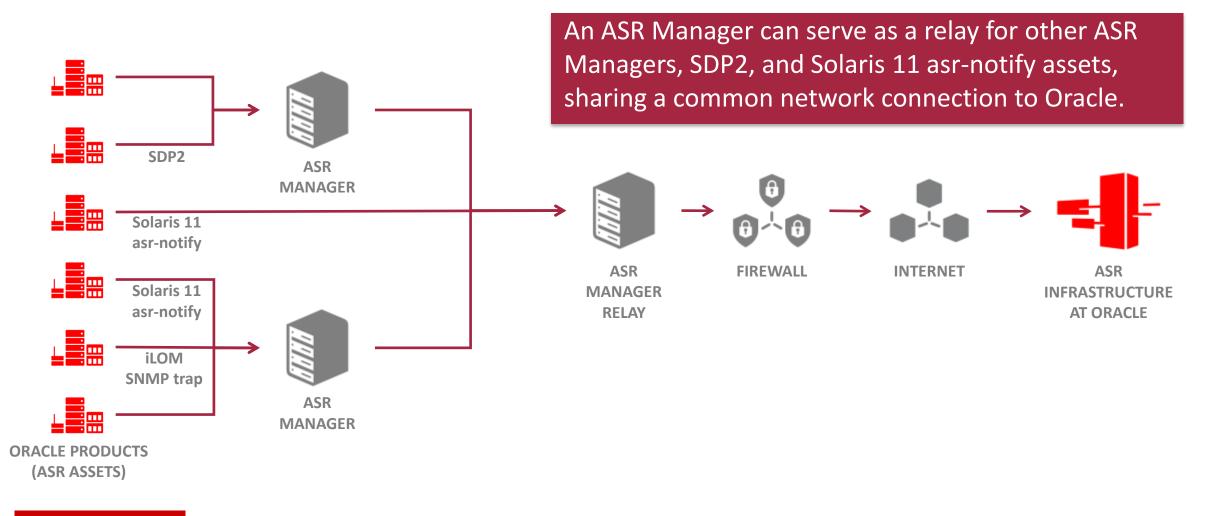


### How does Oracle Auto Service Request (ASR) work?





### ASR Manager Relay





## **ASR Fault Coverage**

Faults covered by Oracle Auto Service Request*	Faults not covered by Oracle Auto Service Request
Fault events that require support services action from Oracle:	Fault events that do not require Support Services action from Oracle:
<ul> <li>✓ System controller (SC) faults</li> <li>✓ CPU, memory, hard drives, power supplies, center plane, expander board, system boards, I/O boards, fan trays</li> <li>* Fault coverage is system-dependent</li> </ul>	<ul> <li>✓ CPU utilization, file system full, file system unmounted, proactive recommendations for firmware, patches</li> <li>✓ Fault events that don't have appropriate event telemetry</li> </ul>



### ASR Security and Privacy

- Minimal data collected
  - System identity serial number, hostname, platform
    - No IP addresses
  - Fault symptoms
  - Diagnostics
- You can review all ASR messages sent to Oracle
  - Refer to ASR Manager audit log documentation
- Secure, outbound only communications
  - Uses SSL for transport layer encryption
  - Message signing via public/private key algorithm



### ASR solutions for Oracle products

- Servers, Engineered Systems
  - ASR Manager software
  - ILOM ASR Client
  - Solaris 11 "asr-notify"
  - Enterprise Manager Ops Center 12c

#### Storage

- Tape Libraries and Datacenter disk products
  - —Service Delivery Platform (SDP2)
- ZFS Storage Appliances
  - ASR functionality embedded in product
- Network Attached Storage (NAS) and Virtual Library Extension (VLE) products
  - Common Array Manager (CAM) software implements ASR
- Pillar Axiom SAN products Call-Home feature integrated with ASR



### Ready to Connect?

- Go to oracle.com/asr
- Review Oracle Auto Service Request documentation, determine which systems are qualified, and download software
- Post questions in My Oracle Support Communities:
  - My Oracle Support Communities
    - Oracle Auto Service Request







### Additional Topics: (Click to go to section)

ASR Manager Integration with Monitoring Tools

Managing ASR Assets using My Oracle Support

**ASR Network Security** 

**Engineered Systems and ASR** 

**Enterprise Manager Ops Center and ASR** 

SDP2 - ASR for Oracle Tape Products

Oracle Support Provider Partners and ASR

ASR Customer References



### Questions?



Go to Additional Topics (click)



The preceding is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.





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### ASR Manager Integration with Monitoring Tools

Go to Additional Topics (click)

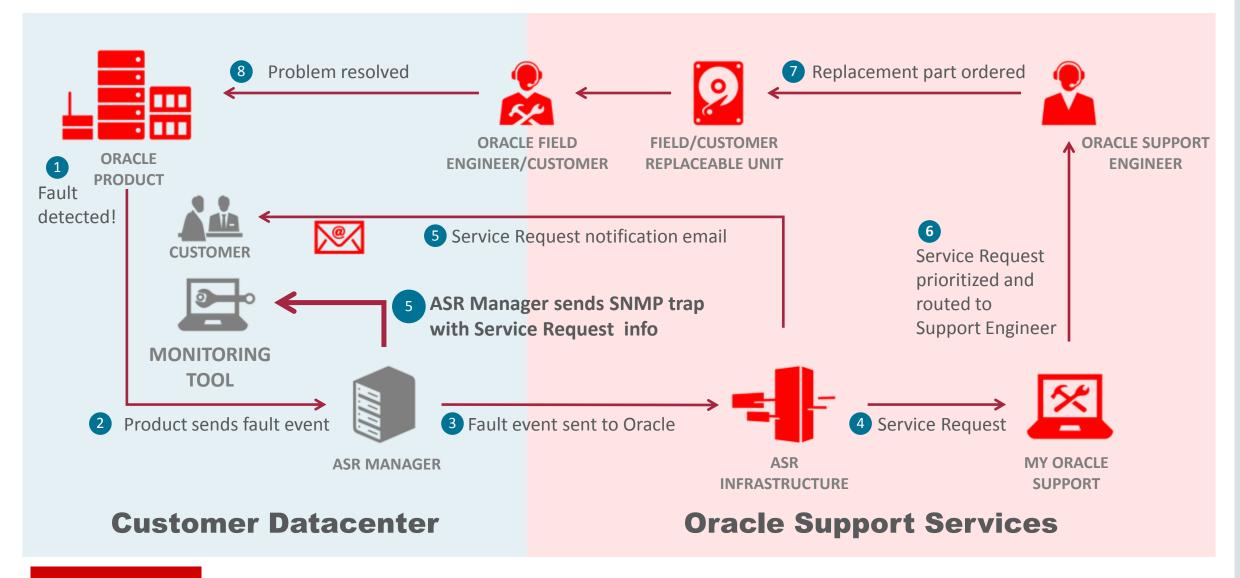


### ASR Manager Integration with Monitoring Tools

- ASR Manager software can be configured to send an SNMP trap to a monitoring tool when a Service Request (SR) is created.
- Enable customers to incorporate ASR into their monitoring tools (Tivoli, BMC, OpenView, etc.) and system management process
- SNMP trap contents:
  - Identity of the ASR asset where the fault was detected (Serial number, Hostname, IP address, product type)
  - Fault information (summary description, link to knowledge article, time)
  - Service Request information (SR number, link to My Oracle Support Service Request, severity, creation date, customer contact)



### ASR Manager Integration with Monitoring Tools



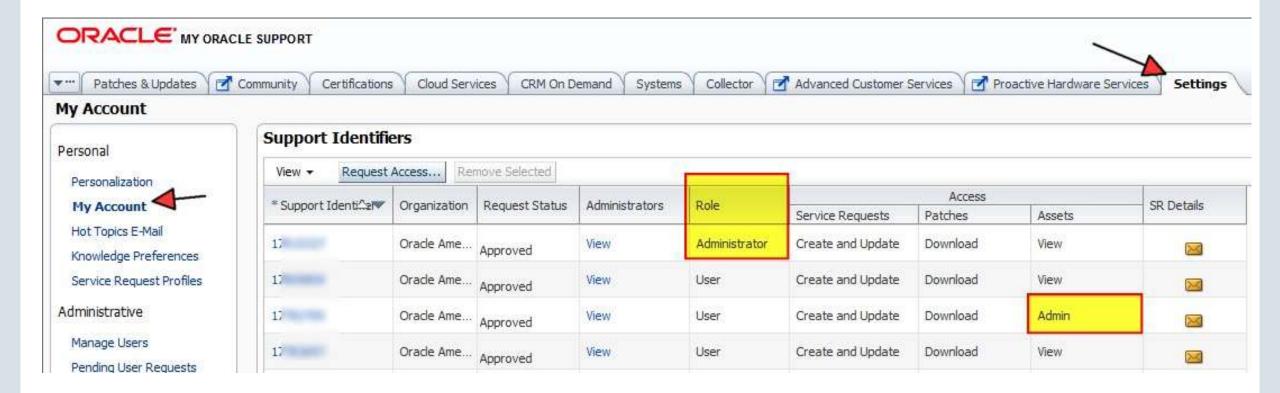


# Managing ASR Assets using My Oracle Support

Go to Additional Topics (click)

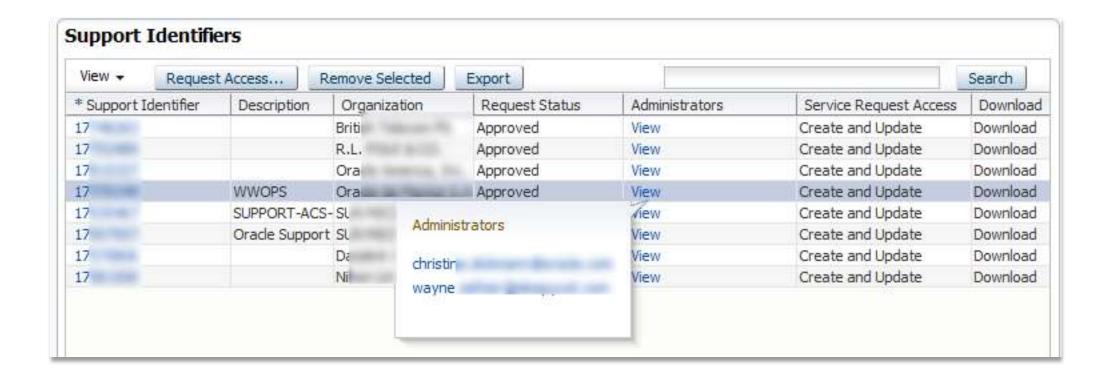


# Verifying Support Identifier access



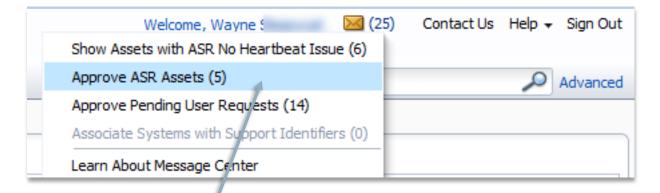


# Contacting the Administrator





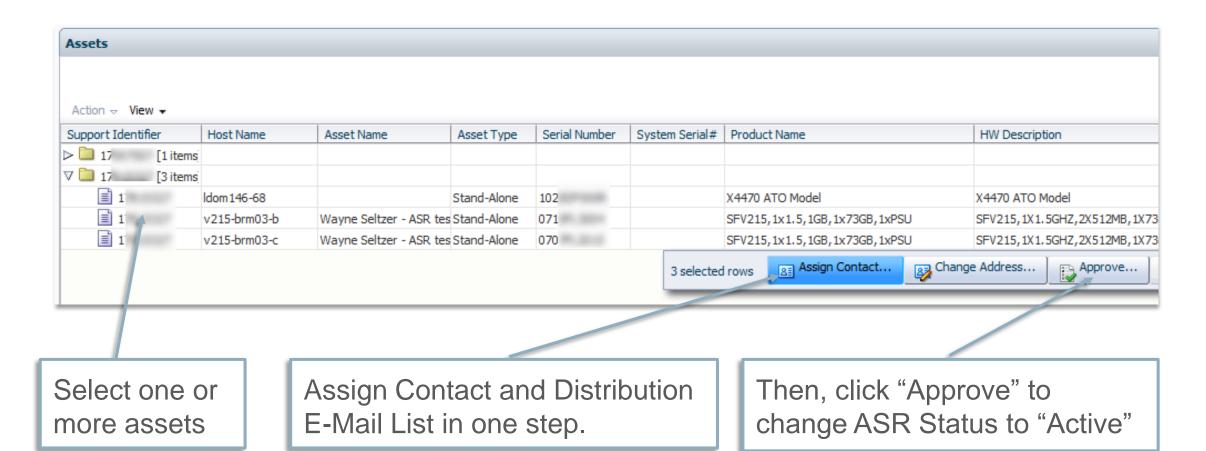
# **Approving ASR Activations**



Message Center indicates assets waiting for ASR activation approval

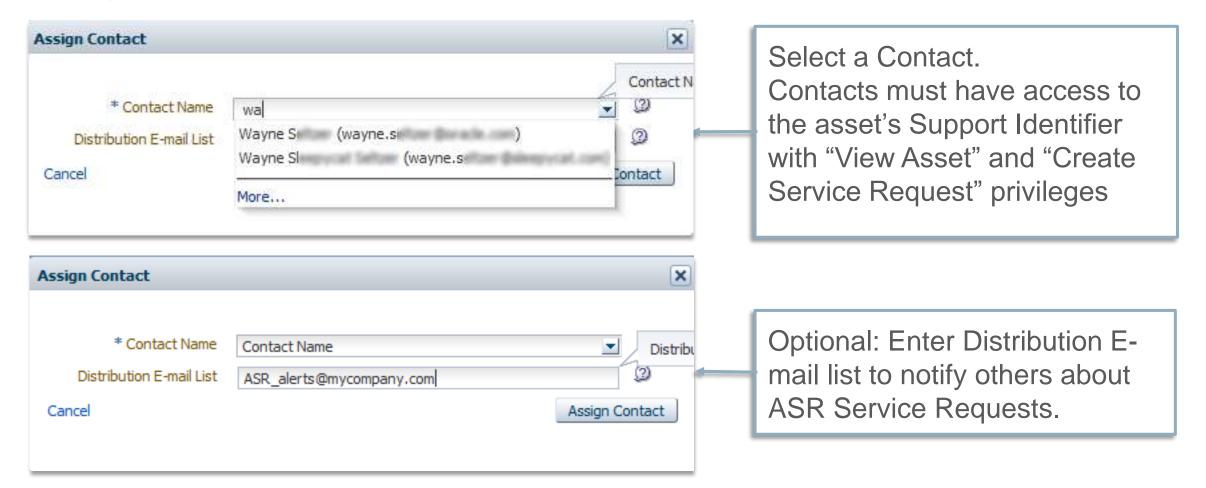


### Managing Multiple Assets



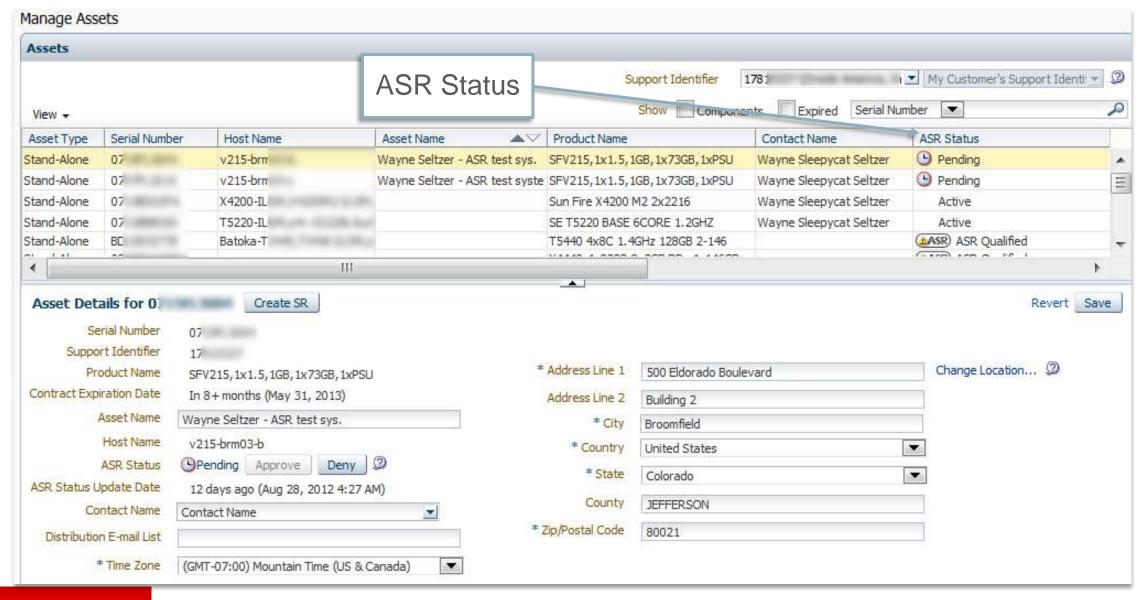


### Assign Contact and Distribution E-mail List





### Asset Details and ASR Status information

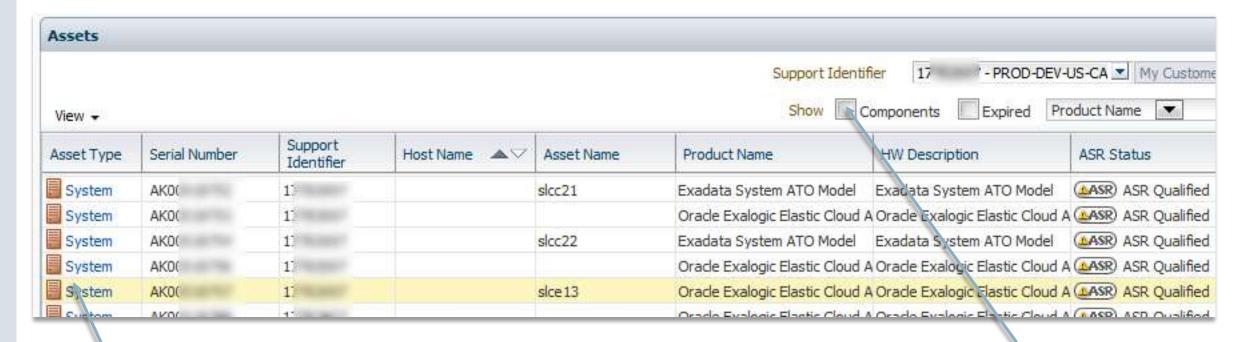


# **ASR Status and Action Required**

Status	Description	Action required
Active	Indicates the asset is sending in alerts and SRs are being created.	No additional action required
Pending	Awaiting Activation and additional action required.	Associate Contact to asset to activate.
Active – No Heartbeat	Oracle has not heard from the system for 50 hours	Validate connectivity to Oracle
Active – Contract Pending	The asset is active but requires a support contract to enable ASR.	Renew support contract
Inactive	Asset was ASR active but was turned off	Reactive if asset needs to report issues.



### Engineered Systems in My Oracle Support

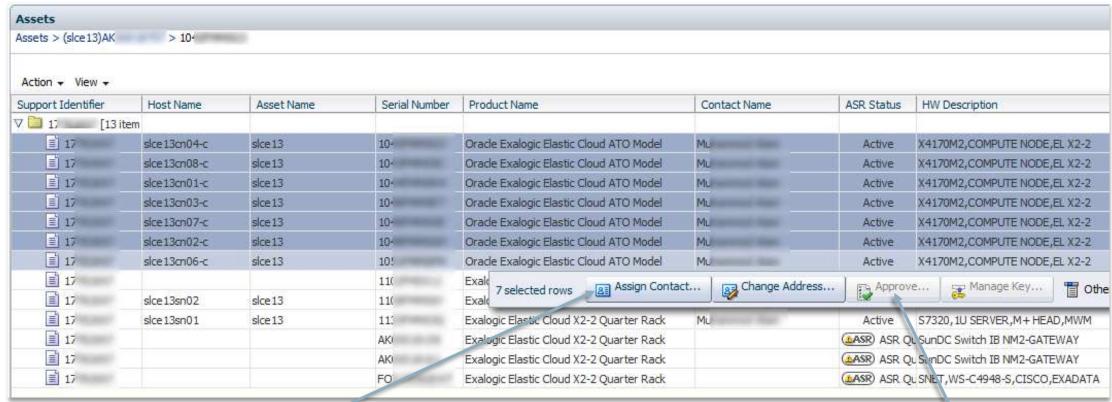


Engineered Systems display top-level assets only. Click "System" link to display all the component assets of the System on one screen

Check "Show Components" to show top-level **and** component assets.



### **Engineered Systems Asset Management**



Select multiple components of an Engineered System, and assign Contact and Distribution E-Mail List in one step.

Then, click "Approve" to change ASR Status to "Active"



## **ASR Network Security**

Go to Additional Topics (click)



### **ASR Network Security Questions**

- What ports and protocols does ASR use in the customer environment and in the connection to Oracle?
- What customer data is sent to Oracle?
- How is the data protected?

There are several ASR implementations for various Oracle product families.

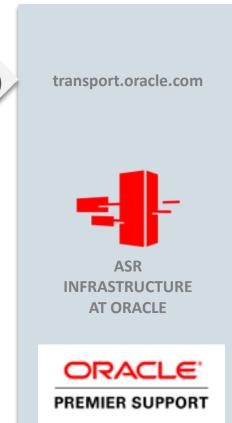


### ASR Manager → Oracle



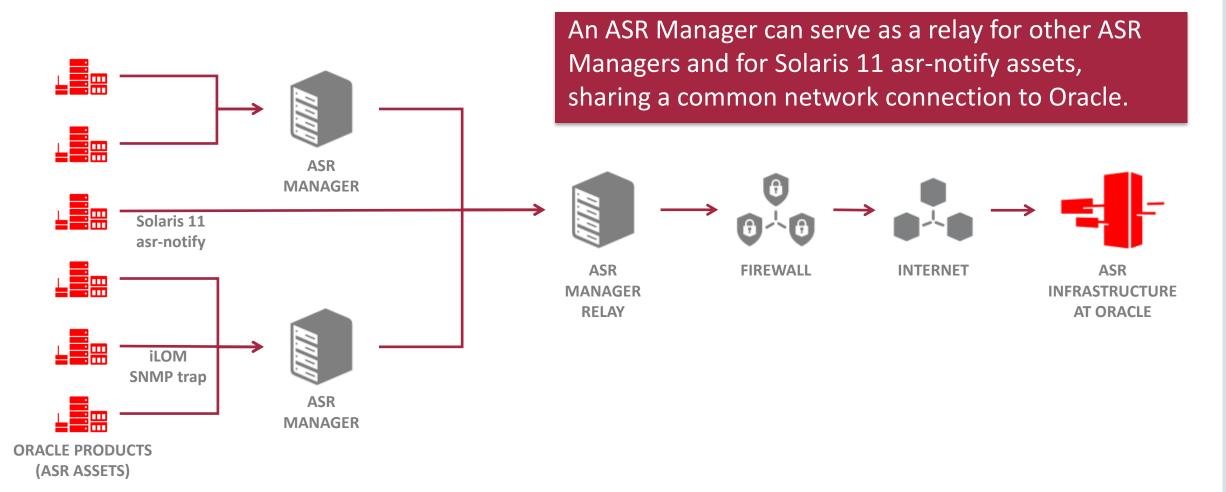
#### XML/SSL – port 443 (TCP)

- Secure one-way connection to Oracle
- Authenticated using My Oracle Support username and password ("asr register" command)
- Encrypted using SSL
- REpresentational State Transfer (REST) service
- Data:
  - Asset activation (serial number, product, hostname)
  - Fault event telemetry
    - Oracle Service Request number response
  - Heartbeat messages
  - ASR Manager fault rule and software updates
  - Diagnostic files (for some supported products)





### **ASR Manager Relay**





## ASR Manager – Ports and Protocols

Source	Destination	Protocol	Port	Description/Comment
ASR Asset	ASR Manager	SNMP	162	SNMP fault telemetry; configurable port
ASR Manager	ASR Infrastructure	HTTPS	443	ASR telemetry stream to Oracle ASR infrastructure
ASR Manager	ASR Relay Manager	HTTP	**	Configurable; specified at installation of Relay Manager
ASR Manager	ASR Asset	HTTP	6481	Service Tag listener
ASR Manager	ASR Asset	SNMP	161	FMA-based (S10 and later) telemetry enrichment



### Oracle Server ILOM → ASR Manager

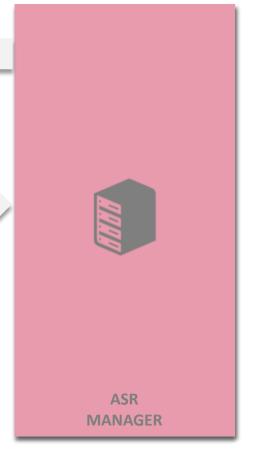


Service Tags – port 6481 (TCP)

- Serial number, product type, hostname
- Not encrypted, not authenticated

SNMP TRAP – port 162 (UDP)

- Fault event notification and details
- SNMP v1 or v2
- SNMP v3 on iLOM 3.0.16 and newer
  - Encryption
  - Authentication





### Oracle Server ILOM 3.2.5+ → Oracle



ASR fault events, activation, heartbeat - XML/SSL - port 443 (TCP)

- ILOM version 3.2.5+ on newer server products
- Same as ASR Manager → Oracle
- Secure one-way connections to Oracle
- Authenticated using My Oracle Support username and password
- Encrypted using SSL
- <u>REpresentational State Transfer (REST)</u> service

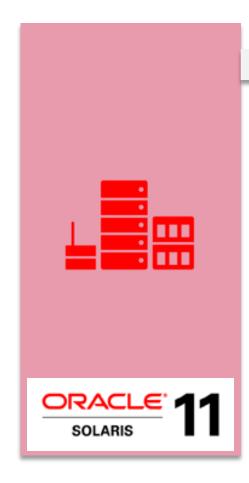
transport.oracle.com







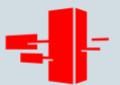
#### Solaris 11 Server → Oracle



ASR fault events, activation, heartbeat - XML/SSL - port 443 (TCP)

- Same as ASR Manager → Oracle
- Secure one-way connections to Oracle
- Authenticated using My Oracle Support username and password
- Encrypted using SSL
- REpresentational State Transfer (REST) service

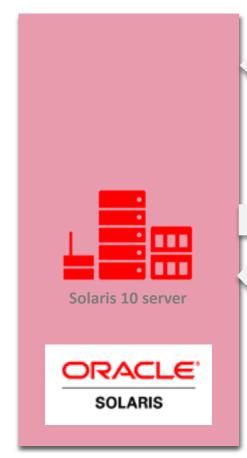
transport.oracle.com







# Solaris 10 Oracle Server → ASR Manager



Service Tags – port 6481 (TCP)

- Serial number, product type, hostname
- Not encrypted, not authenticated

SNMP TRAP – port 162 (UDP)

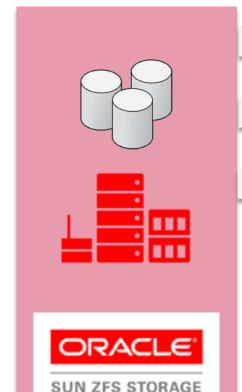
#### SNMP GET – port 161

- Fault event notification (SNMP TRAP)
- Fault information details (SNMP GET)
- SNMP v1 or v2
- Community string "public" or customized





## ZFS Storage Appliance → Oracle



Service Tag registration - XML/SSL - port 443 (TCP)

Support diagnostic bundles - XML/SSL - port 443 (TCP)

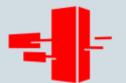
ASR fault events, activation, heartbeat - XML/SSL - port 443 (TCP)

- Secure one-way connections to Oracle
- Authenticated using My Oracle Support username and password
- Encrypted using SSL
- <u>REpresentational State Transfer (REST)</u> service
- A future ZFS SA release will use XML/XML to transport.oracle.com for all connections

inv-cs.oracle.com

transport.oracle.com

asr-services.oracle.com

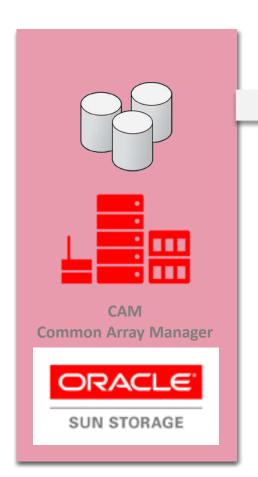






APPLIANCE

## CAM – Common Array Manager → Oracle

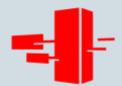


XML/SSL – port 443 (TCP)

- Secure one-way connection to Oracle
- Authenticated using My Oracle Support username and password
- Encrypted using SSL
- <u>REpresentational State Transfer (REST)</u> service
- Data:
  - Asset activation (serial number, product, hostname)
  - Fault event telemetry
  - Heartbeat messages
  - Diagnostic data

CAM version 6.9+ transport.oracle.com

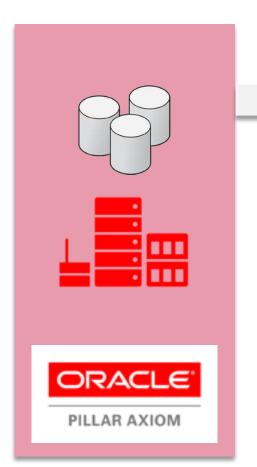
older CAM versions: asr-services.oracle.com





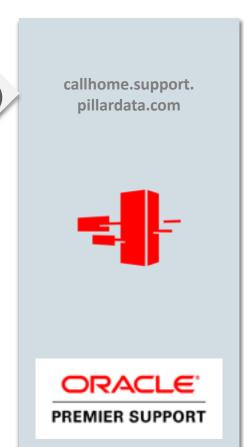


## Pillar Axiom → Oracle



#### XML/SSL – port 443 (TCP)

- Secure one-way connection to Oracle
- Authenticated using secure hash keyed to customer asset
- Encrypted using SSL
- Data:
  - Asset activation (serial number, product, hostname)
  - Fault event telemetry
  - Heartbeat messages
  - Diagnostic data





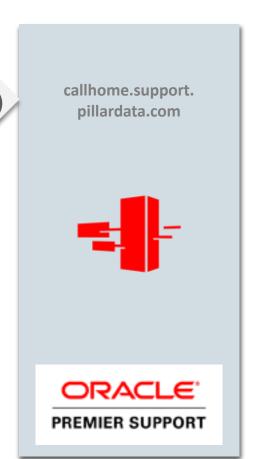
## Oracle FS1 Flash Storage System → Oracle





#### XML/SSL – port 443 (TCP)

- Secure one-way connection to Oracle
- Authenticated using secure hash keyed to customer asset
- Encrypted using SSL
- Data:
  - Asset activation (serial number, product, hostname)
  - Fault event telemetry
  - Heartbeat messages
  - Diagnostic data





## Enterprise Manager Ops Center→ Oracle

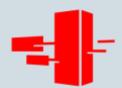


ASR fault events, activation, heartbeat - XML/SSL - port 443 (TCP)

- Secure one-way connection to Oracle
- Authenticated using My Oracle Support username and password
- Encrypted using SSL
- <u>REpresentational State Transfer (REST)</u> service
- OpsCenter has additional connections to Oracle for patching, updates, knowledge.
- For complete details, see OC documentation:
  - <a href="http://www.oracle.com/technetwork/oem/ops-center">http://www.oracle.com/technetwork/oem/ops-center</a>
  - http://docs.oracle.com/cd/E27363 01/doc.121/e27511/network mgmt.htm#OPCFG6679

inv-cs.oracle.com

hs-ws1.oracle.com









## Asset → Enterprise Manager Ops Center

Solaris FMA, iLOM **OC** agent **Oracle server asset** 

SNMP TRAP – port 162 (UDP)

SNMP TRAP – port 1162 (UDP)

ICMP ping, ssh, ftp, ...

- Ops Center (OC) and Asset have multiple connections and services for various supported products
- OC uses various services to discover assets
- For complete details, see OC documentation:
  - http://www.oracle.com/technetwork/oem/ops-center
  - http://docs.oracle.com/cd/E27363 01/doc.121/e27511/network mgmt.htm#OPCFG6679

**OC** proxy controller







## Agent Tier Technologies

- Integrated Lights Out Manager (iLOM), M-Series XSCF
  - Fault diagnosis built into the service processor
- Solaris Fault Management (Predictive Self-Healing)
  - Built into Solaris 10, Solaris 11, ZFS
  - Automates fault detection and root cause diagnostics
- Service Tags
  - Facilitates asset discovery, registration, and activation



# **Engineered Systems and ASR**

Go to Additional Topics (click)



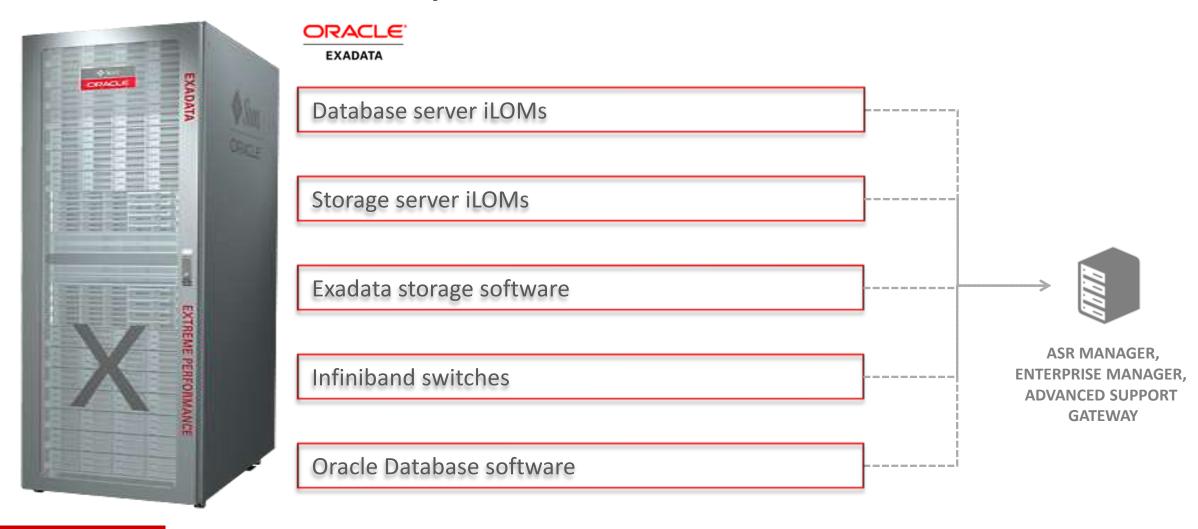
## Oracle Platinum Services and ASR



- ASR is an essential component of Oracle Platinum Services:
  - Helps you maximize the availability and performance of Oracle engineered systems with 24/7 remote fault monitoring, industry-leading response times, and patch deployment services—at no additional cost.
  - Special entitlement available to Oracle Premier Support customers running certified configurations of Oracle engineered systems.
- ASR Manager is part of the Oracle Advanced Support Gateway
- Details: http://oracle.com/us/support/premier/engineered-systems-solutions/platinum-services



## Exadata fault telemetry sources





## **ASR** and Platinum



## Platinum is a superset of ASR:

Feature	ASR Service	Platinum Service
Auto SR creation for Hardware fault events	Yes	Yes
Auto SR creation for Exadata Database fault events	-	Yes
Monitoring for Engineered Systems	-	Yes
Patching	-	Yes
Other Platinum features	-	Yes



## SDP2 - ASR for Oracle Tape Products

Go to Additional Topics (click)



## SDP2 - ASR for Oracle Tape Products

Connecting SDP2 to Oracle Tape products automates alerts to the TSC, accelerating break-fix and maintenance opportunities.

Increasing connected Tape devices accelerates issue resolution

#### Reducing risk of operation by:

- Automatic Oracle Service Requestion creation for specific fault events
- Sending diagnostics and logs to Oracle Support decreases time to resolve problems
- On-demand log collection minimizes customer work
- Health-check automation helps stabilize environments
- Onsite Tape tools and GUI monitoring features



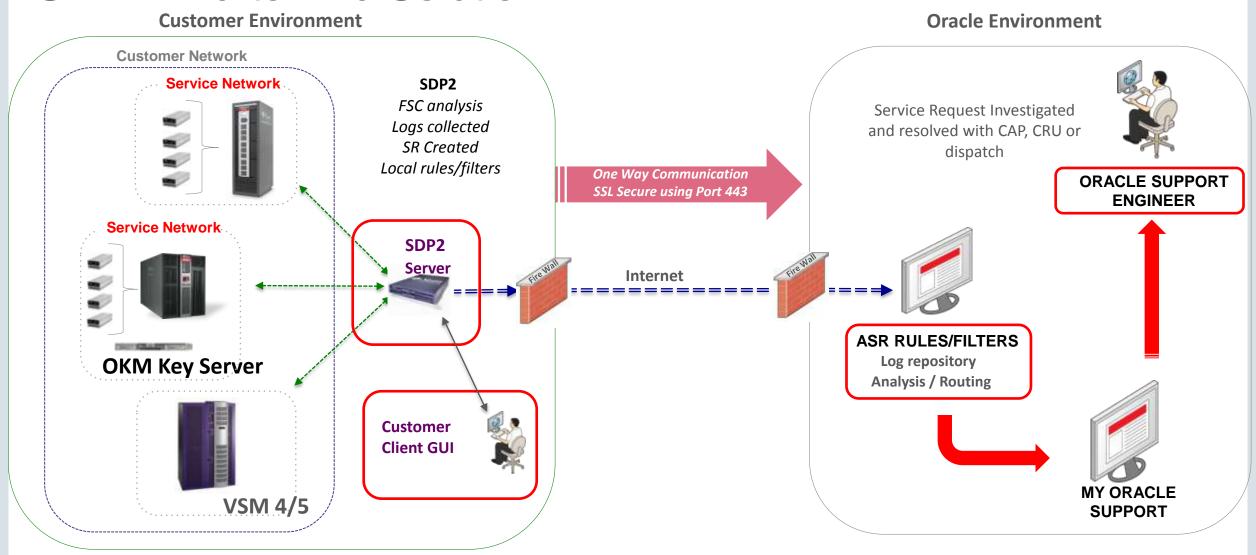
## SDP2 Key Features

#### **SDP2 Provides Advanced Security and Maintenance Options**

- Outbound One Direction Connections Using HTTPS/DTS protocol
- GUI Client Interface to Manage Tape Library and Drive Status
- Central Onsite SDP2 Server monitoring your environment
- Architecture to manage Tape Hardware and Software Products
- Built on the VOP (Virtual Operator Panel) tools technology
- Service Request (MOS SR) creation and critical logs collection
- Customer Installable solution
  - Oracle assisted installation and SDP2 application support
  - Download SDP2 / VOP 2.2 application: <a href="https://edelivery.oracle.com/">https://edelivery.oracle.com/</a>



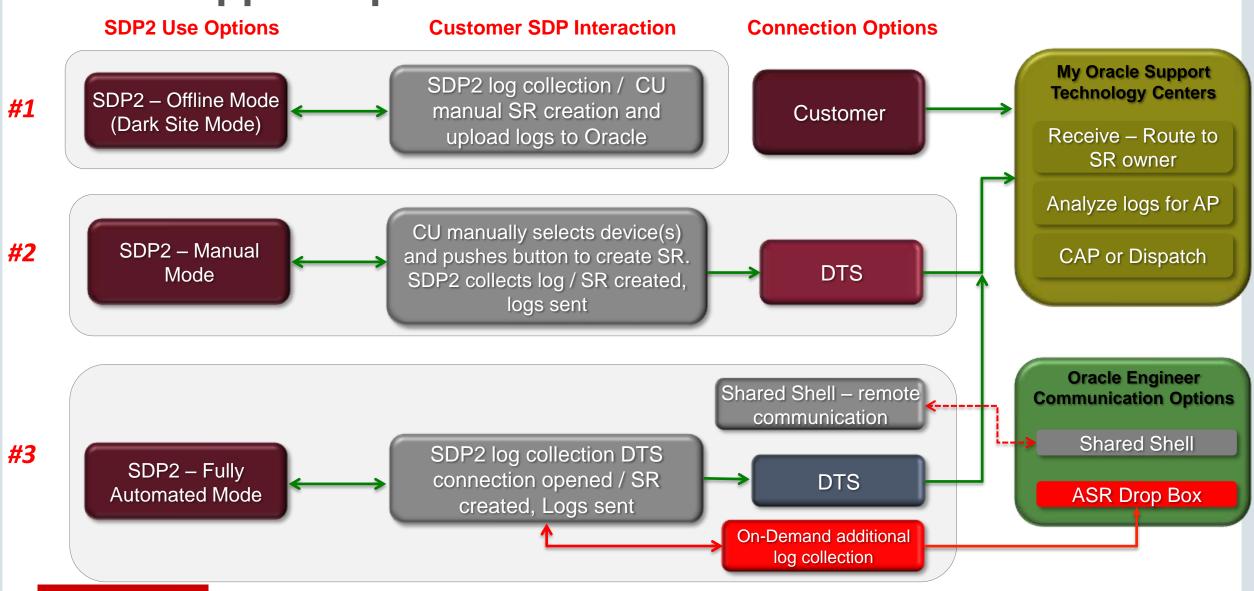
#### SDP2 End-to-End Solution



VOP monitors machine level data only through a secure service network.



## **SDP2 Support Options**



## Oracle Enterprise Manager Ops Center and ASR

Go to Additional Topics (click)



# Oracle Enterprise Manager Ops Center and ASR Manager



	Ops Center	ASR Manager
<ul> <li>Asset auto discovery</li> <li>Automated ASR telemetry configuration</li> <li>Automated My Oracle Support activation</li> </ul>	✓	
System management and monitoring	$\checkmark$	
Oracle Configuration Manager (OCM) integrated	✓	
ASR fault coverage ruleset	$\checkmark$	$\checkmark$
No additional cost	✓	<b>✓</b>

Ops Center info: <a href="http://www.oracle.com/technetwork/oem/ops-center">http://www.oracle.com/technetwork/oem/ops-center</a>



## Enterprise Manager Ops Center→ Oracle

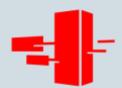


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inv-cs.oracle.com

hs-ws1.oracle.com









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**OC** proxy controller







## Oracle Support Provider Partners and ASR



Go to Additional Topics (click)



## Oracle Support Provider Partners and ASR



- Partner's Responsibilities for ASR Assets:
  - The Partner manages their Customers' ASR assets using My Oracle Support.
    - The Customer cannot directly manage ASR assets
- ASR Contact Assets
  - The Partner must designate a My Oracle Support account in the Partner's organization who will be the Contact for their Customer's ASR assets.
  - ASR email notifications are sent to the Contact.
- Support Identifiers (SIs)
  - The Partner's My Oracle Support account(s) must have administrator privileges on the Partner SIs associated with their Customers' SIs.



## ASR and Partner Service Requests



- When a fault event occurs on an indirect customer's asset, ASR creates a DRAFT Service Request.
- The Partner is notified that the draft Service Request has been created via email to the asset's Contact, and the optional distribution email list.
- The Customer is **not** directly notified about the fault event and the draft Service Request.
- It is the Partner's responsibility to determine the service response.
- If the Partner requires assistance from Oracle Support, they use My Oracle Support to promote the draft Service Request to a Technical Service Request.



## ASR Process for Support Provider Partners







## Example Partner SR notification email



Subject: Oracle ASR: Draft Service Request 3-6362663391

Service Request: 3-6362663391

Oracle Service Delivery Partner, Following customer's system has logged an Automatic Service Request with Oracle.

Hostname: v215-sca11-XXXXX Serial#: 1148FMWXXXXX

A draft Service Request has been created within My Oracle Support.

This draft will remain active for the next 30 days.

Your customer does not have access to the draft Service Request. It is your responsibility to determine a response to this event.

To view the draft Service Request

- 1. Log into My Oracle Support
- 2. Click on "Service Requests" in the menu area
- 3. In the "Draft Service Requests" section, click on Service Request Number 3-6356050601
- 4. In the "Select Product" section, review the Support Identifier and Product Name
- 5. In the "Describe Problem" section, review the "Detailed Description" for the fault details

If you determine that you need assistance from Oracle to resolve the problem, enter the required information in draft Service Request and submit.

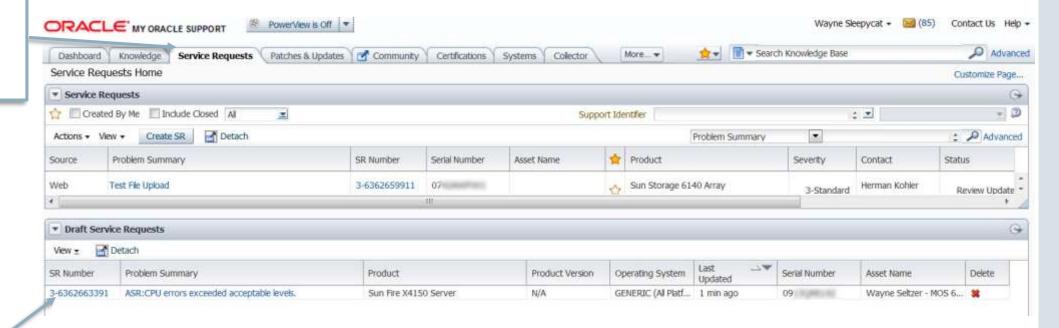
The Oracle Auto Service Request documentation can be accessed on <a href="http://oracle.com/asr">http://oracle.com/asr</a>. Please use My Oracle Support https://support.oracle.com for assistance.



# Viewing Draft SR in My Oracle Support



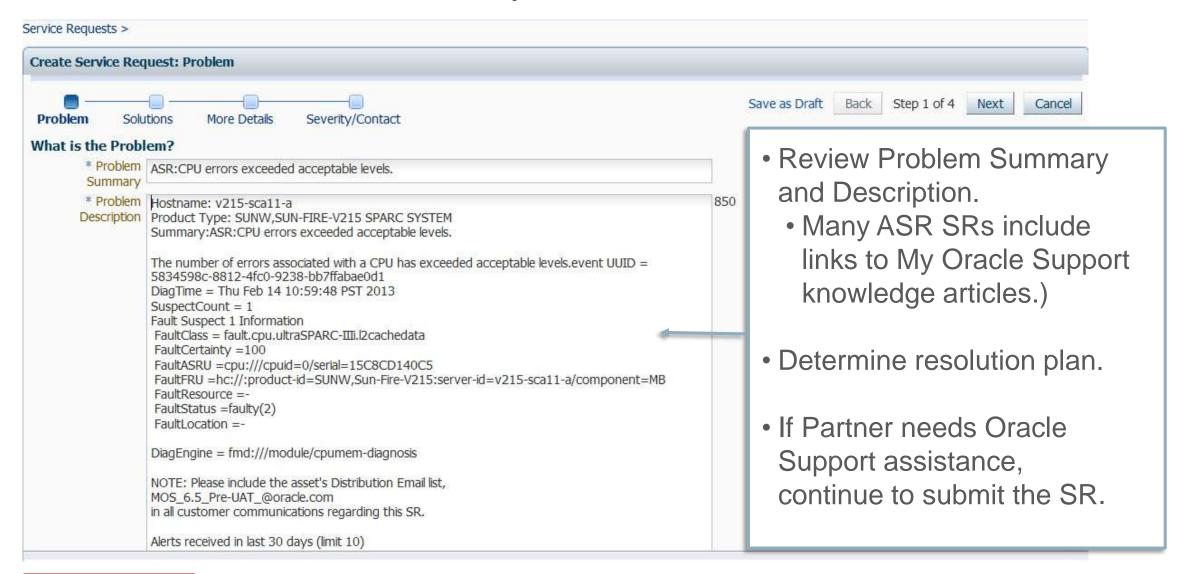
Click on "Service Request" tab:



Find SR number in "Draft Service Requests" section:

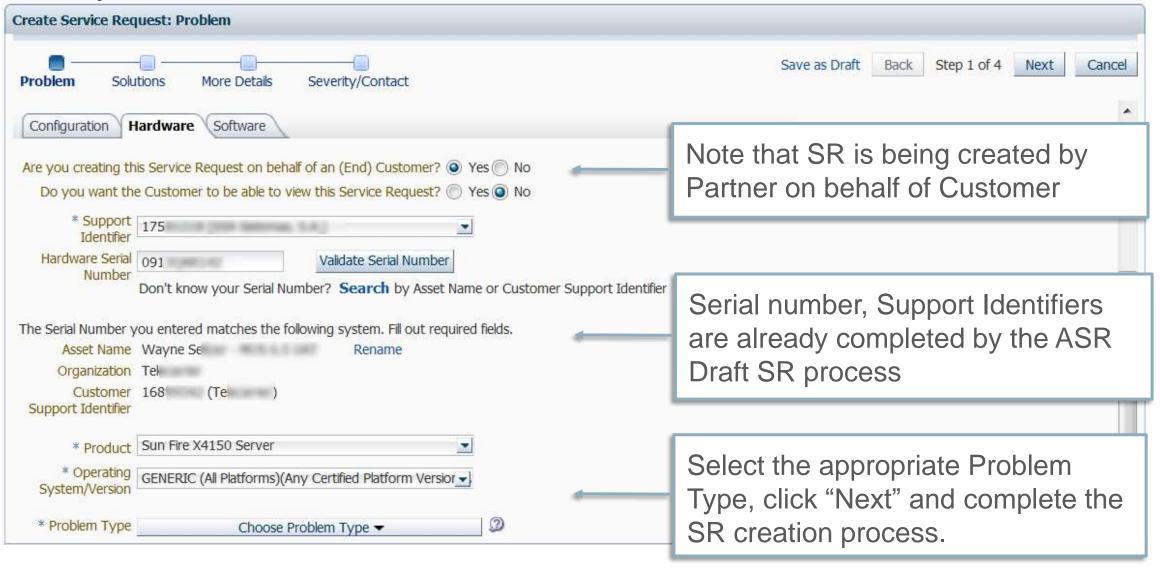


# Review Draft SR Description





# Steps to submit SR from Draft





## **ASR Customer References**

Go to Additional Topics (click)





"We chose Oracle Auto Service Request because it offered automatic service-request generation for hardware failures and enabled us to ensure high availability and meet service-level agreements for our customers' 24/7 marine-terminal operations. With Oracle, we reduced our response time by three hours per fault and saved ten hours per month that IT staff spent on diagnosing problems—improving the speed of the resolution process."

Subramanian Kesavan, Lead – Systems
 Engineering, Navis India Technologies Pvt. Ltd.

Navis India Technologies Automates to Cut Three Hours from Service Responses and Meet Service-Level Agreements





#### High Mark

High Mark Credit Information Services reduced turnaround time for hardware replacements by automatically logging service requests for specific hardware failures and sending the telemetry data required to diagnose faults to engineers, thanks to Oracle Auto Service Request

High Mark Credit Information Improves Customer-Credit Query Responses by 85%, Gains Competitive Advantage





"One of the best parts about the serviceability from Oracle Support is Oracle Auto Service Request. Auto Service Request has simplified and streamlined how we work in as much as we no longer have to self diagnose. A lot of specific hardware faults are now diagnosed for us at a much deeper level than we can necessarily look at ourselves."

 Jake Carroll , Information Technology Manager, The Queensland Brain Institute

Queensland Brain Institute Increases Archive Capacity, Supports Limitless Innovation and Increases Data Response Speeds by 66%



# Questions?



Go to Additional Topics (click)



#### Safe Harbor Statement

The preceding is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.



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