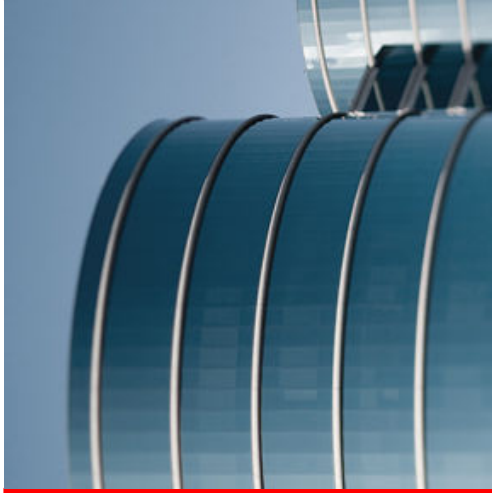


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Incident Management in Enterprise Manager 12.1

Pete Sharman
Principal Product Manager

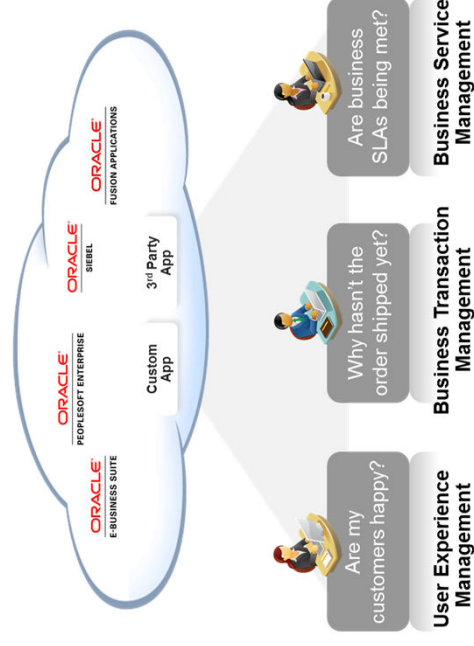
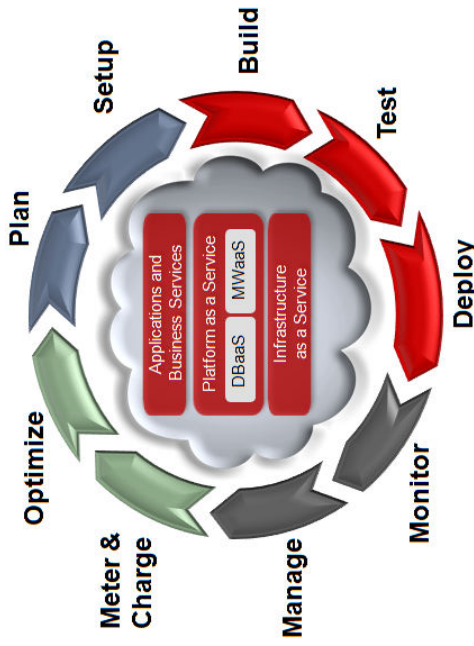
Agenda

- Introduction to EM 12c
- Overview of Incident Management
- Events, Incidents and Problems
- Incident Rule Sets
- Backward Compatibility / Migration
- Q&A





Total Cloud Control



Complete Lifecycle Management

Integrated Cloud Stack Management

Business-Driven Application Management

Self-Service IT | Simple and Automated | Business Driven



Enterprise Manager Cloud Control 12c

Major Themes

Applications
Management

Middleware
Management

Database
Management

Application Quality
Management

Enterprise Ready
Framework

Cloud Management

Chargeback and
Capacity Planning

Engineered Systems
Management

Configuration
Management

Provisioning and
Patching

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ENTERPRISE MANAGER **12^c**

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Incident Management

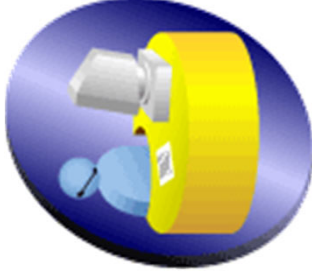
Overview

- Monitor and resolve service disruptions quickly and efficiently
- Instead of managing numerous discrete events, manage fewer, meaningful incidents:
 - By business priority
 - Across their lifecycle
- Centralized incident console for incident management
- Identify, resolve and eliminate root causes of disruptions

Incident Management

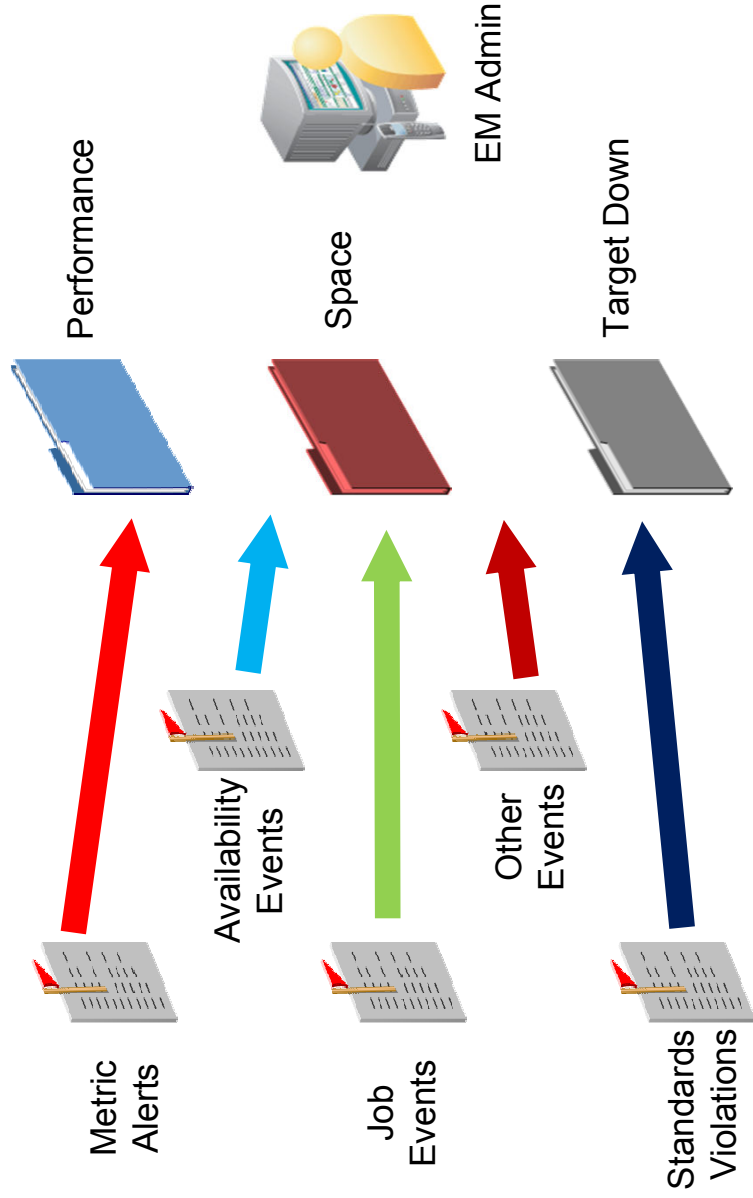
Overview

- Integrated Oracle expertise to accelerate incident and problem diagnosis and resolution
- Support for incident lifecycle operations
 - Assign, acknowledge, prioritize, track status, escalate, suppress



Incident Management

Events and Incidents



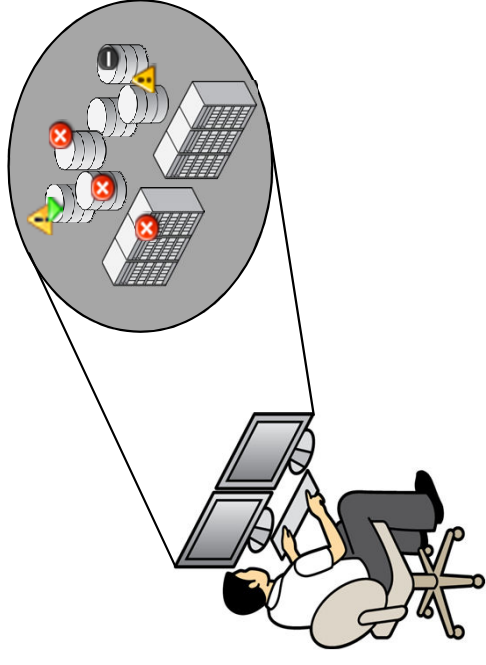
- Manage by incidents
 - Significant events
 - Combination of events related to the same issue (e.g., events raised from database, host, storage indicating lack of space)

Incident Management

Events

Significant occurrences in IT infrastructure detected and raised by Enterprise Manager. Events have:

- Entity on which the event is raised (target, job, etc.)
- Type
- Severity
- Message
- Timestamp
- Category



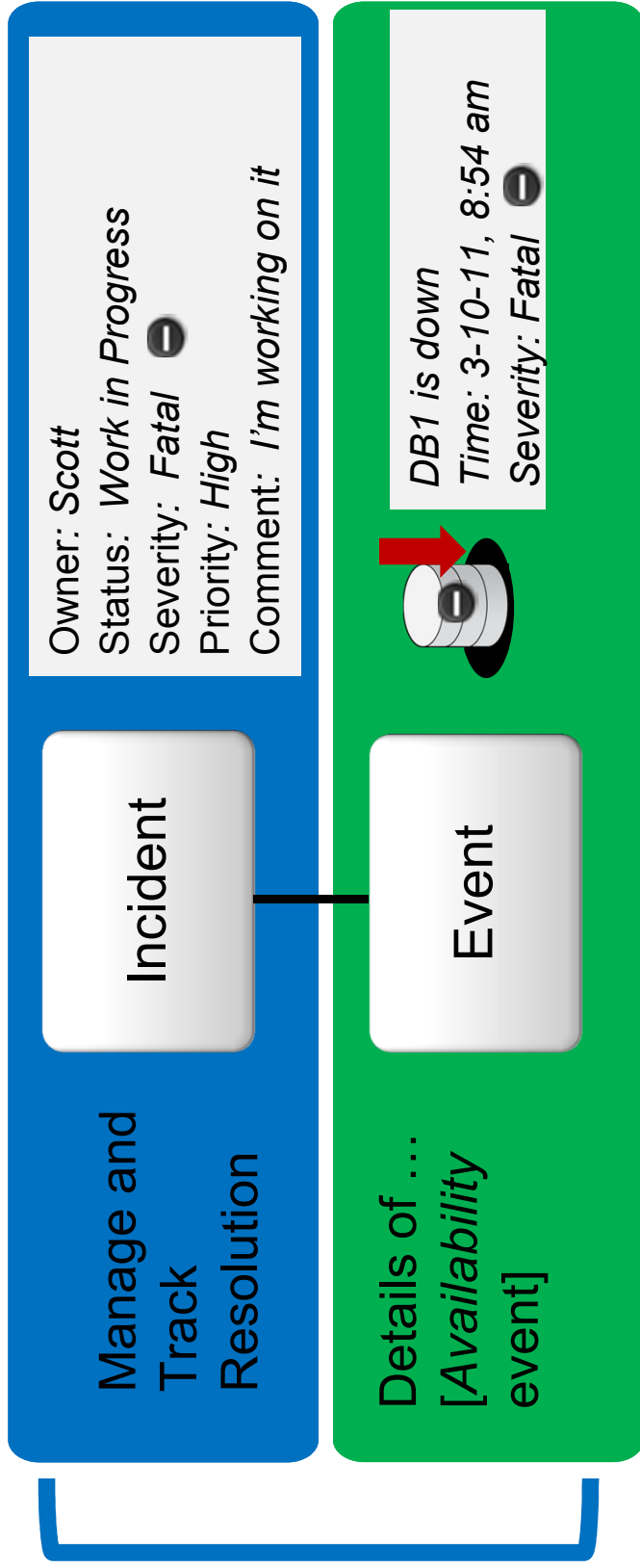
Incident Management

Events

- Event Types:
 - Target Availability
 - Metric Alert / Evaluation Error
 - Job Status Change
 - Compliance Standard Violation Event
 - High Availability
 - Connector External Class
 - User reported event
- Event Severities
 - Fatal 🚫
 - Critical 🚨
 - Warning ⚠️
 - Advisory ⚠️
 - Informational

Incident Management

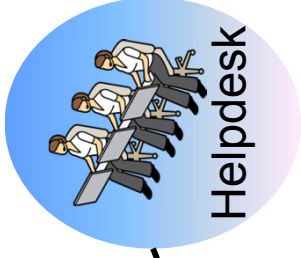
Incidents with One Event



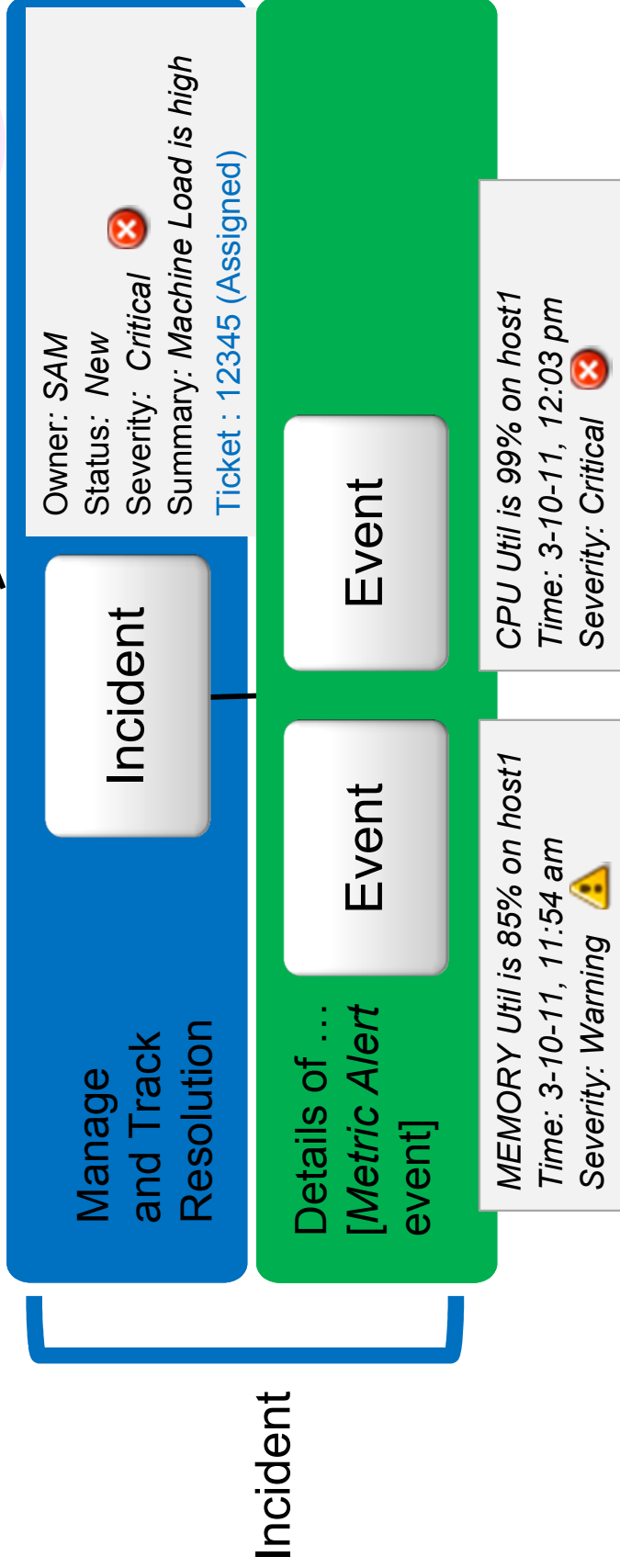
Incident

Incident Management

Incidents with Multiple Events



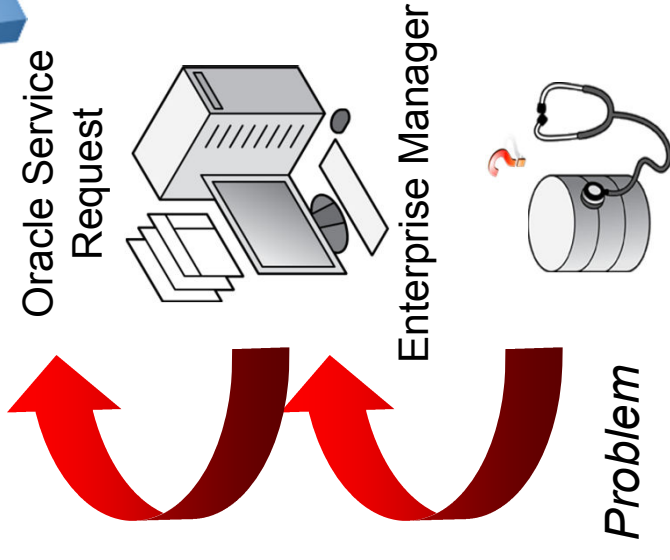
Ticket connector



Incident Management

Problems

- Underlying root cause of incidents
- Facilitate resolution of Oracle software 'problems'
 1. Auto-creation of problem based on ADR incidents
 2. Package diagnostic data
 3. Open Oracle SR



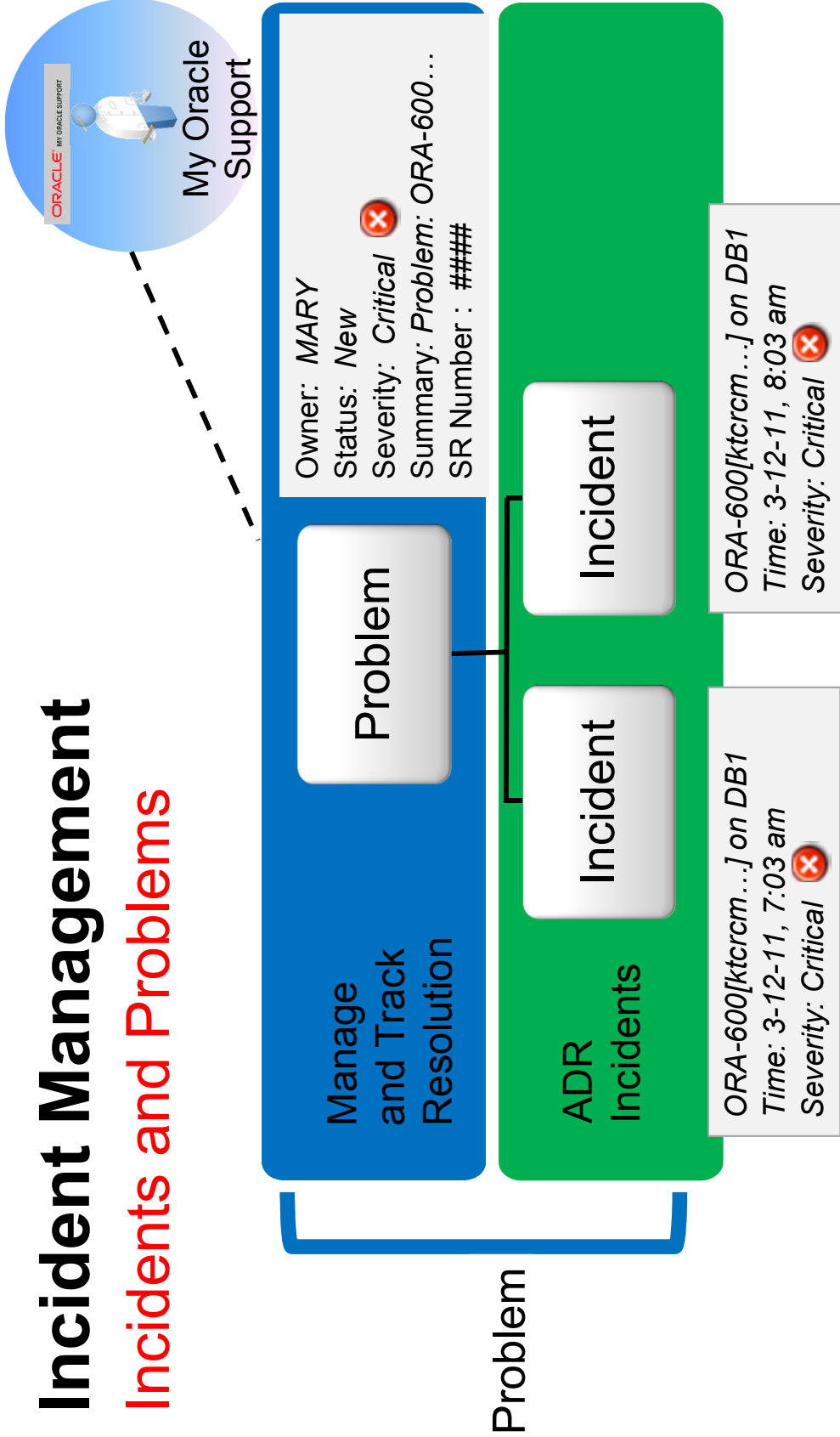
Incident Management

Problems

- ADR incident generates one Enterprise Manager incident per occurrence
 - Multiple ADR incidents with the same problem signature (e.g. same root cause) generate one problem object
- Manage Problem in Incident Manager
 - Track status (assign ownership, etc.)
 - View diagnostic information (via Support Workbench)
 - Open Oracle SR (via Support Workbench)
 - Status of diagnostic activity visible in UI: SR #, Bug # etc

Incident Management

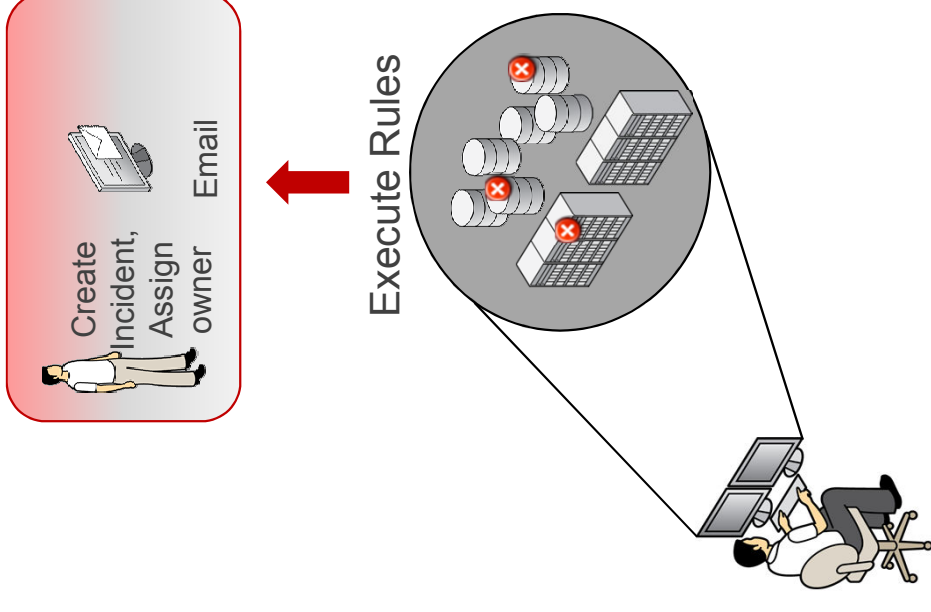
Incidents and Problems



Incident Management

Incident Rule Sets

- Replace notification rules
- Automate actions related to events, incidents, problems
 - Creation of incident based on an event
 - Notification actions (including ticketing)
 - Operations to manage incident workflow (assign owner, set priority, escalate, etc.)



Incident Management

Incident Rule Sets

- Rule set - Set of one or more rules that apply to a common set of objects: targets (e.g. groups), jobs, etc.
- Logically combine different rules relating to the same object into one manageable unit
- Rules within a rule set are executed in specified order
- Rule sets are also executed in specified order
- Out-of-box rule sets for incident creation, event deletion
 - Can't be edited, only disabled

Incident Management

Incident Rule Sets

- Rule – instructions within a rule set that automate actions on events or incidents or problems
 - Operates on *incoming* events or incidents or problems
- Rule consists of:
 1. Criteria: events/incidents/problems on which rule applies
 2. Action(s): ordered set of one or more operations on the specified events/ incidents/ problems. Each action can be executed based on additional conditions.

Incident Management

Incident Rule Sets

RULE CRITERIA	RULE CONDITION	RULE ACTION
CPU Util(%), Tablespace Used(%) metric alert events of warning or critical severity	--	Create Incident
Incidents of warning or critical severity	If severity = critical If severity = warning	Notify by page Notify by email
Incidents open for more than 7 days		Set escalation level to 1

Incident Management

Incident Rule Sets

Rule Set: *Rule Set for PROD-GROUP*
Applies to: *PROD-GROUP*
Type: *Enterprise*

RULE#1: Target down rule

Criteria: *DB and WLS down availability event*

Action: *Create incident, Set Priority = High*

RULE#2: Email and Pager rule

Criteria: *All Incidents with severity= Fatal, Critical or Warning*

Action #1: *If severity = Warning, email*

Action #2: *If severity = Fatal or Critical, page*

Incident Management

Rule Set Recommendations

- For rule sets that operate on targets, use groups as the target for the rule set
- Put together all rules that pertain to group members in the same rule set
- Leverage the execution order of rules within the rule set

Incident Management

Rule Set Recommendations

- Use rules on *events* to
 - Create incidents for the alerts/events you manage in Enterprise Manager
 - Create incidents and create tickets on the incidents if you use trouble ticketing systems integrated with Enterprise Manager
 - Send events to third party management systems
 - Only notify on events but not create incidents – adhoc usage

Incident Management

Rule Set Recommendations

- Use rules on *incidents*
 - Automate management of incident workflow (assign owner, set priority, escalation levels, etc.) and send notifications
 - Create tickets based on incident conditions e.g., create a ticket if incident is escalated to level 2
- Use rules on *problems*
 - Automate management of problem workflow (assign owner, set priority, escalation levels etc.) and send notifications

Incident Management

Prioritization of Rules and Notifications

- Under heavy load, more important events and incidents are processed ahead of others
- Processing priority based on:
 - Lifecycle Status of the target
 - 1. Mission Critical - highest priority
 - 2. Production
 - 3. Stage
 - 4. Test
 - 5. Development - lowest priority
 - Type of event/incident
 - Availability events/incidents – highest priority
 - All events/incidents (warning, critical severities)
 - All events (informational) – lowest priority

Incident Management

Backward Compatibility

- Existing notification methods (PL/SQL, OS scripts, SNMP traps) will continue to work in Enterprise Manager Cloud Control 12.1
- To leverage new features, create new versions of these notification methods
 - Use new event model
- Existing notification rules will be migrated to incident rule sets

Incident Management

Notification Rule - Incident Rule Set Mapping

11.1 Notification Rule

Notification Rule : *Rule for PROD-GROUP*
Applies to: *PROD-GROUP*
Target Type: *DB*

Availability tab

Criteria: *DB down*

Metrics tab

Criteria: *Selected metrics, severities*

Action: *email user1 and user2*

12.1 Incident Rule set

Rule Set: *Rule for PROD-GROUP*
Applies to: *PROD-GROUP*
Type: *Enterprise*

Event Rule#1: "Target Availability" rule

Criteria: *Event Type = Target Availability*
Target Type = "DB"
Target Status = "Down"

Action: *email user1 and user2 and*
Create Incident

Event Rule#2: "Metric Alert" rule

Criteria: *Event Type = Metric Alert*
Target Type = "DB"
Metric Alert specific criteria

Action: *email user1 and user2 and*
Create Incident

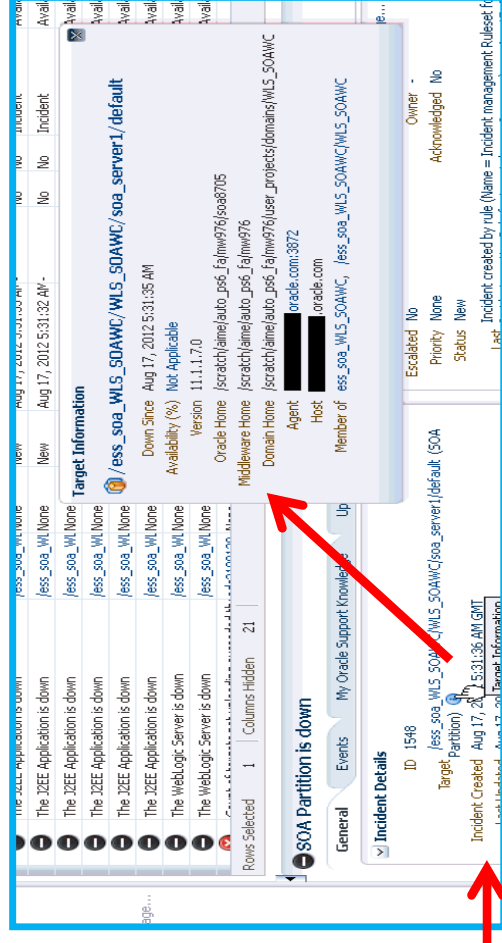
New Features in 12cR2

Incident Management Related

- Incident Rules
 - Support for Lifecycle Status as criteria for targets in rule set
- Incident Manager
 - Support for bulk operations: Acknowledge, Suppress, Clear, Comment, Set Status, Escalate, Prioritize, Assign
 - Quick access to target information



Target information available



Q&A

Hardware and Software



Engineered to Work Together

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