ServiceNow Problem Process

Training April-May

Agenda

- What you will learn
- What is Problem Management
- Process Overview
- Using the Problem Form
- Working on a Problem
- Closing a Problem
- Known Problems
- Problem Reports
- Alignment Practice Cases

What you will learn

How to

- Work with the Problem Form
- Determine Problem Priority
- Work with Problem Tasks
- Create a Known Error
- Communicate Workarounds
- Post Knowledge
- Work with Problem related lists
- Close a Problem

What is Problem Management?

- To prevent problems and resulting incidents from happening
- 2. To eliminate recurring incidents
- To minimize the impact of incidents that cannot be prevented

Why is Problem Management Important?

- 1. Stability!
- Increase end-user satisfaction
- 3. More efficient usage of resources
- 4. Better prioritized workloads
- Increased accountability,
- Decreased turnaround time for Root Cause Analysis (RCA) Requests
- 7. Increased Knowledge Management
- 8. Increased transparency and awareness

Problem Management Key Concepts

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Problem	 A Problem is the unknown cause of one or more (potential or occurring) incidents.
Known Error	 A problem that has a documented root cause. Optimally, determination of the root cause includes the identification of a workaround.
Root Cause Analysis	 A Problem which we investigate and document the Root Cause of and provide this information to the requestor.
Workaround	 A temporary solution to a problem. Provides the ability to restore service for the customer, potentially through alternative delivery means (e.g. print on a different printer).

Reactive vs. Proactive Problem Management Yale

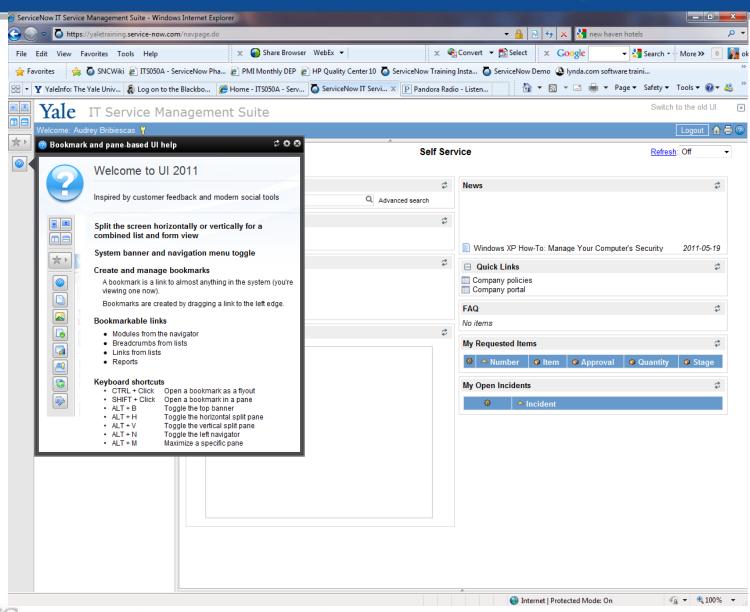
Reactive Problem Management	 Executed as part of regular operations and triggered through day-to-day operational support Primarily driven by incidents, where trends are identified or where major incidents prompt a root cause analysis (RCA) review to minimize future impacts Goal is to remove recurring incidents and to provide service interruption workarounds prior to problem resolution
Proactive Problem Management	 Executed as part of Continual Service Improvement (through proactive data analysis activities) or Service Transition activities (through the identification of acceptable known errors prior to production release of a new or changed service) Primarily driven by events or activities that have yet to cause a service impact (i.e. Incident) Typically introduced as the problem management or other processes mature/evolve (e.g. Release and Deployment Management)

Assumptions & Observations

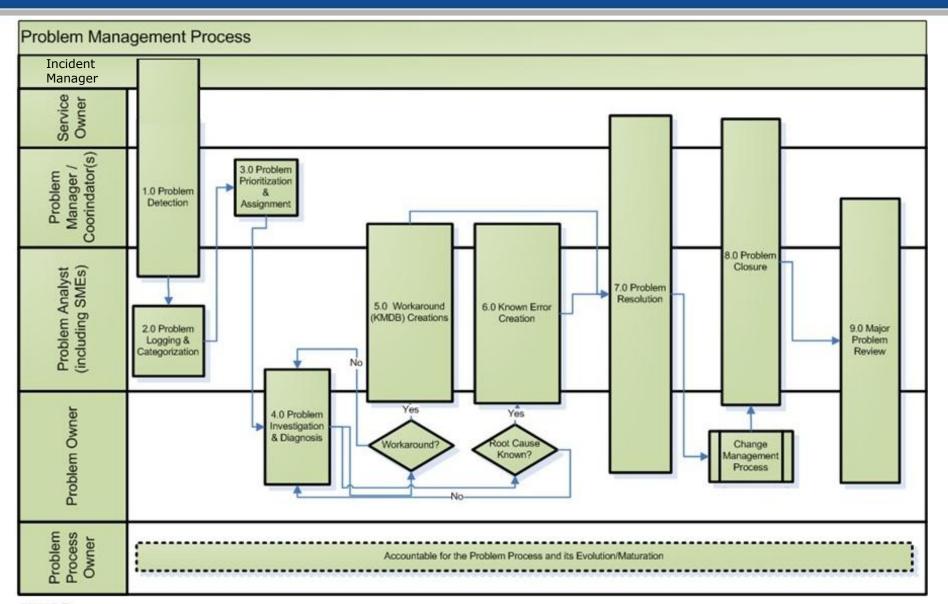
- Incidents can exist without problems.
- Problems primarily exist with Incident associations (reactive problem management).
- Incidents do not become problems incidents are symptoms of a problem.
- Problems do not become changes. A request for change is an output of problem management as a result of solution identification.
- A workaround can be identified prior to a root cause being determined and hence, a known error.
- Workarounds can be identified by the problem resolution team, or others (e.g. customer, help desk etc.)

ServiceNow Overview Screen Navigation









Problem Management Roles



Role	Description
Problem Management Process Owner	 Ensures that all aspects of the problem management process are being executed effectively. The Problem Manager takes a quality assurance rule over problem resolution teams and is responsible for assembling teams effectively.
Problem Owner	 Assigned a problem and uses the Problem Analysts, Subject Matter Experts and others to help assess and resolve the assigned problem. In some cases, the Problem Owner will also be the Service Owner. The problem record will be assigned to the Problem Owner.
Problem Manager / Coordinator(s)	 Manages execution of the Problem Management process and coordinates all activities required to respond to problems in compliance with SLAs and SLO's. Receives problem candidates, assesses against criteria and initiates the problem activities and eligible problems.
Service Owner	 Ensures the service is managed with a business focus, the definition of a single point of accountability is absolutely essential to provide the level of attention and focus required for its delivery. The Service Owner is accountable for Continual improvement and the authorization of changes and improvements to the service and has financial accountability.
Problem Analyst (including SMEs)	 As part of the resolution team, these resources come from stakeholders of a service and include but are not limited to the business analysts, technical analysts and Users of a service. Their responsibilities include assessing problems, investigating the root cause and evaluating workaround for effectiveness. The analyst is also responsible for producing the essential documentation. Subject matter experts may be called upon to provide specific guidance on a problem root cause or work around without actually be a member of the problem resolution team.

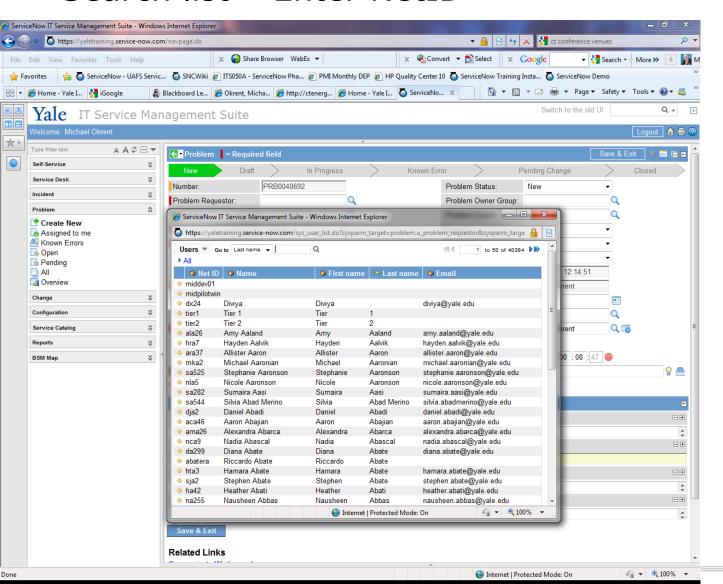
Using the Problem Form

I Required Fields

- Problem Requestor
- Source
- Type Level 1(s)
- IT Provider Service
- IT Component Category 1(s)
- Owner versus Assignment
- Short Description -> Knowledge Connection
- Impact
- Priority
- Assignment Group

Problem Requestor

Search list – Enter NetID



Problem Sources

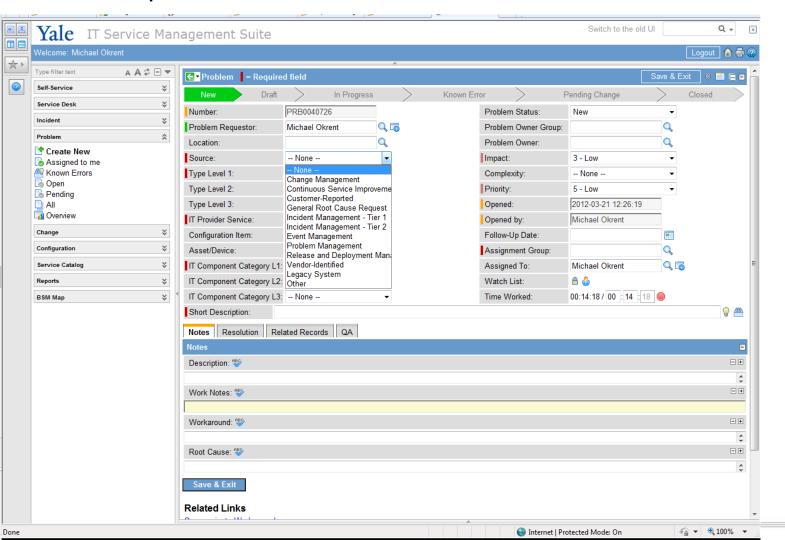


Problem Sources

Incident Management - Tier 1	•Identified by the service desk.
Incident Management - Tier 2+	•Identified by Tier 2+ resources.
Continuous Service Improvement	Determined through service improvement activities.
Release and Deployment Management	Acceptable known errors captured during release review.
Change Management	•The problem is likely related to an unsuccessful change.
Customer-Reported	•A functional enhancement request.
Vendor-Identified	•The problem is being managed or was reported by a vendor.
General Root Cause Request	Typical problem manager trend analysis activities.
Problem Management	•The problem is related to a previous or inter-related problem.
Event Management	 The problem was identified through a non-impacting (i.e. no incident generated) event.
Other	•The problem was identified through some other means.

Source Field

- Pull Down List
 - Step 1 Problem Detection

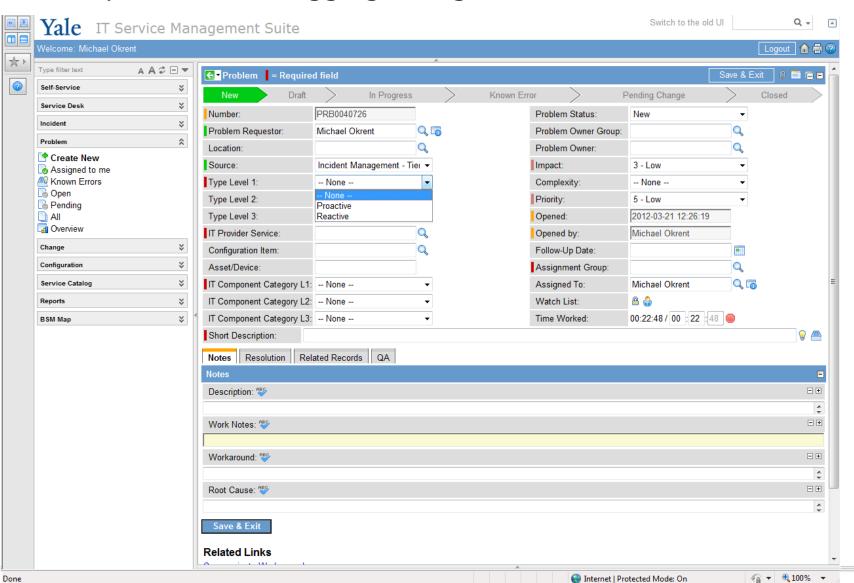


Problem Types

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Level 1	Level 2	Level 3	Descriptions
Reactive	Trend	Consistent	The problem is based on a clearly identified and recurring associated incidents trend.
Reactive	Trend	Inconsistent	The problem is based on a trend of associated incidents that is inconsistent but recurring.
Reactive	One-Time	Authorized Change	The problem is related to incidents generated from a suspected authorized change.
Reactive	One-Time	Un-Authorized Change	The problem is related to incidents generated from a suspected unauthorized change.
Reactive	One-Time	Major Incident	The problem is related to a major incident where root cause analysis was requested directly or determined to be necessary in the major incident review.
Reactive	Other		The problem is related to one or more incidents that share some other characteristic(s).
Proactive	Release Pre- Deployment Known Error		The accepted known error was identified as part of release and deployment review activities. This also includes known errors identified for COTS packages (i.e. release notes).
Proactive	Event-Driven (Warning)		The problem is related to event monitoring warnings where the service has not yet been impacted from a customer's perspective.
Proactive	Other		The problem has been identified proactively through some other means.

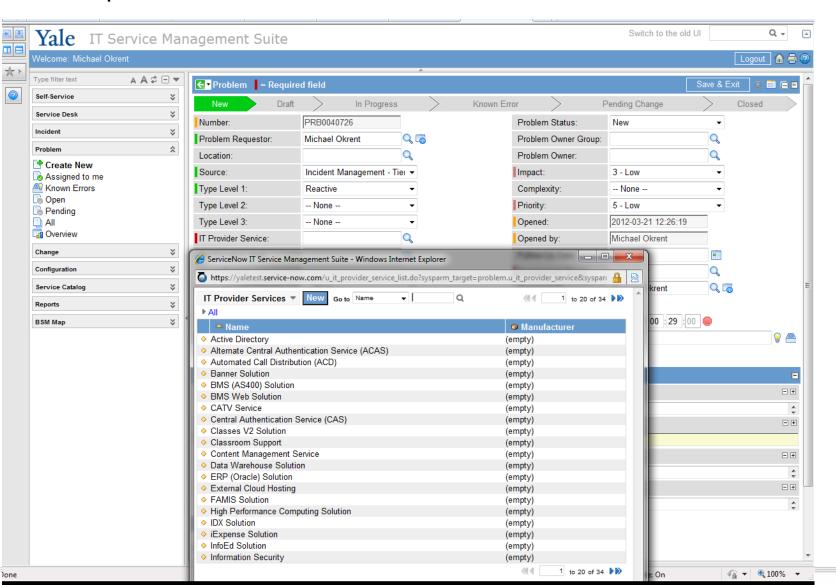
Type Level 1

Step 2 Problem Logging Categorization - Proactive or Reactive

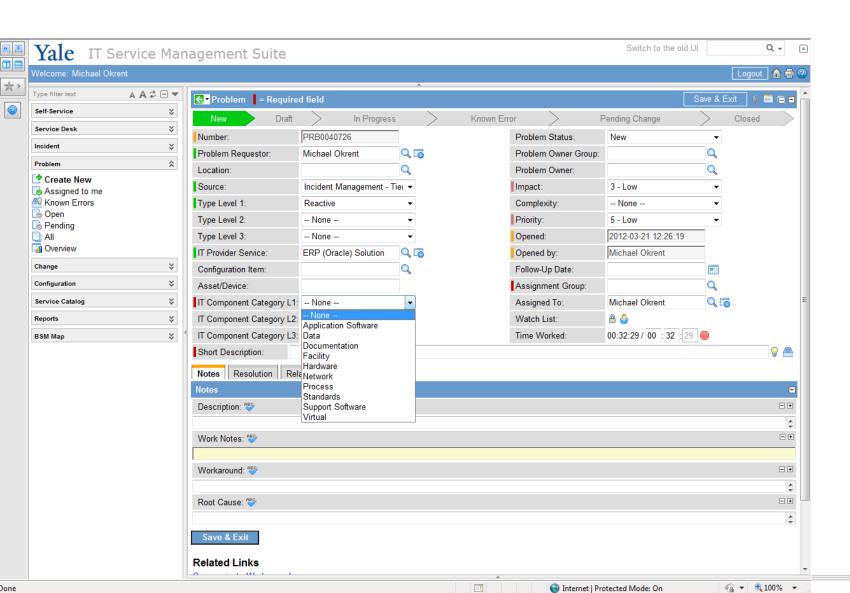


IT Service Provider

Step 2 Continued

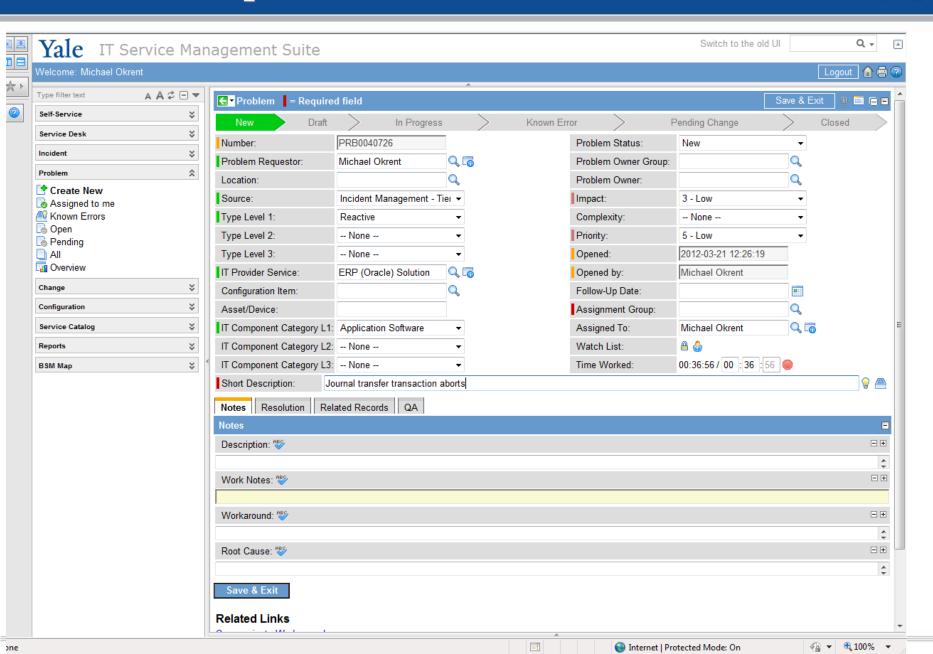






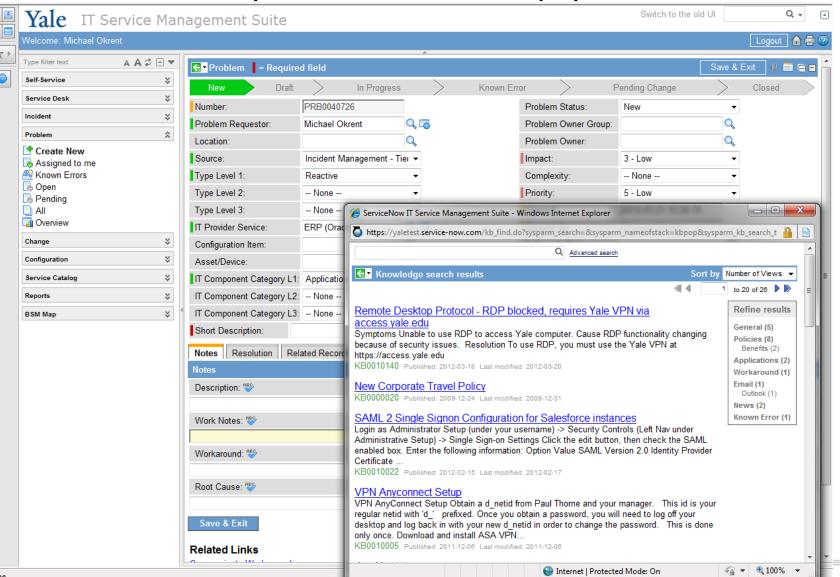
Short Description





Short Description (KB)

Short Description must be empty to find KB articles





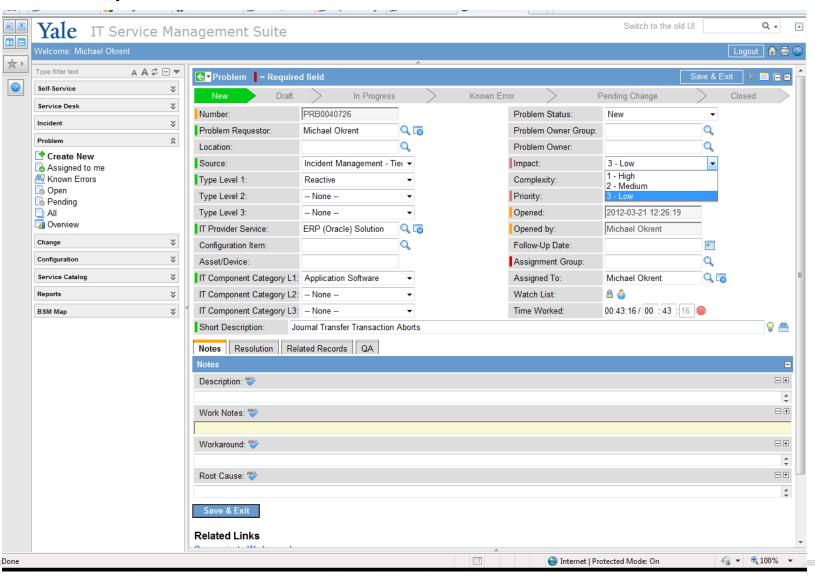
	High	3	2	1	
Impact	Medium	4	3	2	
	Low	5	4	3	
		High	Medium	Low	
		Complexity			

Impact Values						
Value	Description					
High	The problem is causing a high number of customer impacts, often derived through the volume and priority (e.g. high impact) of associated incidents. In addition, problems that are deemed to be incurring high expense or lost revenue would be considered high impact.					
Medium	The problem is causing a some customer impacts, often derived through the volume and priority (e.g. medium impact) of associated incidents. In addition, problems that are deemed to be incurring expenses or potentially lost revenue would be considered medium impact.					
Low	The problem is having a minimal impact on customers, often derived through the volume and priority (e.g. low impact) of associated incidents. No appreciable revenue lost is predicted.					

	Complexity Values			
Value	Description			
High	The problem is complex due to factors including very high costs and/or significant effort required by IT support staff to diagnose and/or remove the problem.			
Medium	The problem presents some complexity due to a combination of cost and/or requirement to focus a large number of resources (or a select few who are critical) to diagnose and/or remove the problem.			
Low	Acceptable or minimum complexity due to costs and/or resource requirements to diagnose and/or remove the problem.			

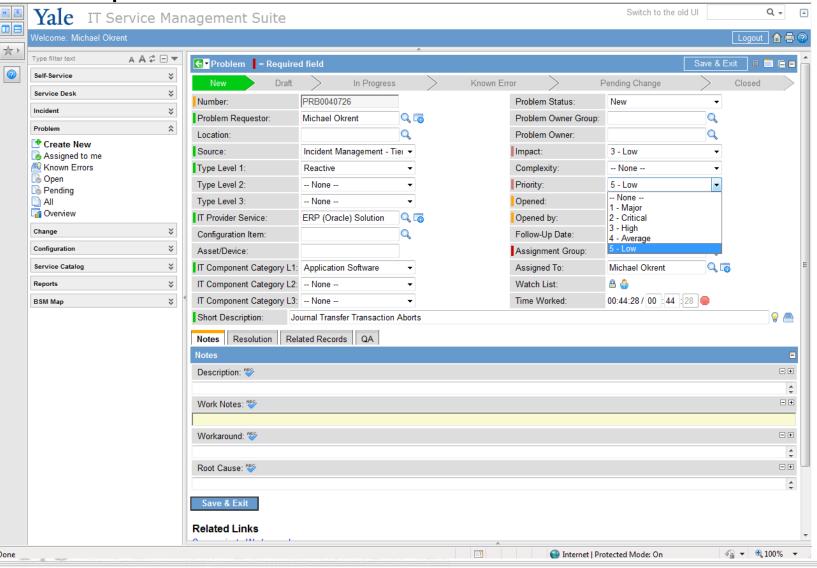
Impact

Step 3 Prioritization



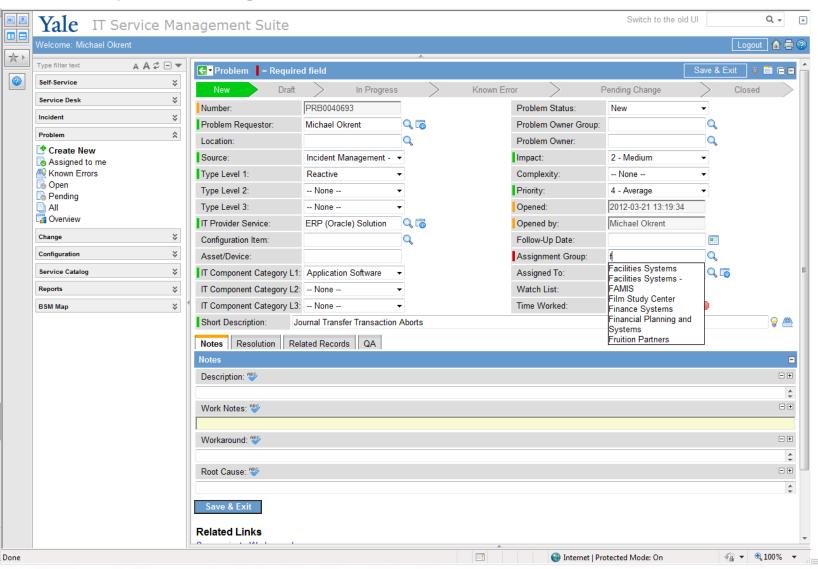
Priority

Step 3 Prioritization



Assignment Group

Step 3 Assignment



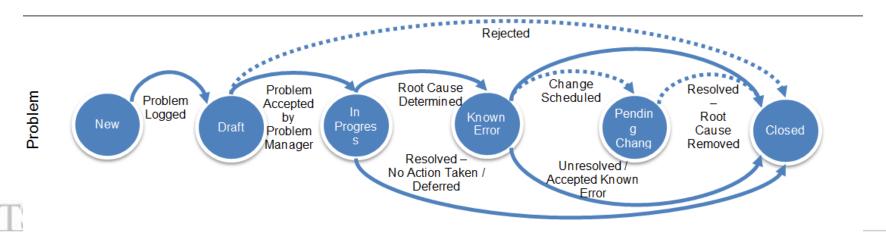
Lab - Create a Problem

Problem

- Create a Problem from an incident using the incident queue
 - In the Incident Section on the left navigation pane, Click on Open
 - Select Incident and click on number in the incident column
 - Hover over incident on the left side of the blue bar at top, click create problem
 - Complete required fields, click Save and Stay on blue bar at top of screen or press Save and Exit
- Update a Problem
 - In the Problem Section on the left navigation pane, Click on Open
 - Update Workaround, Root Cause or other fields as required
 - Press Save and Exit

Problem States

- New
- Problem Logged
- Draft
 - Problem Accepted by Problem Manager
- In Progress
- Root Cause Determined/Resolved No Action Take/Deferred
- Known Error
- Change Scheduled/Unresolved/Accepted Known Error
- Pending
 - Change Resolved Root Cause Removed
- Closed



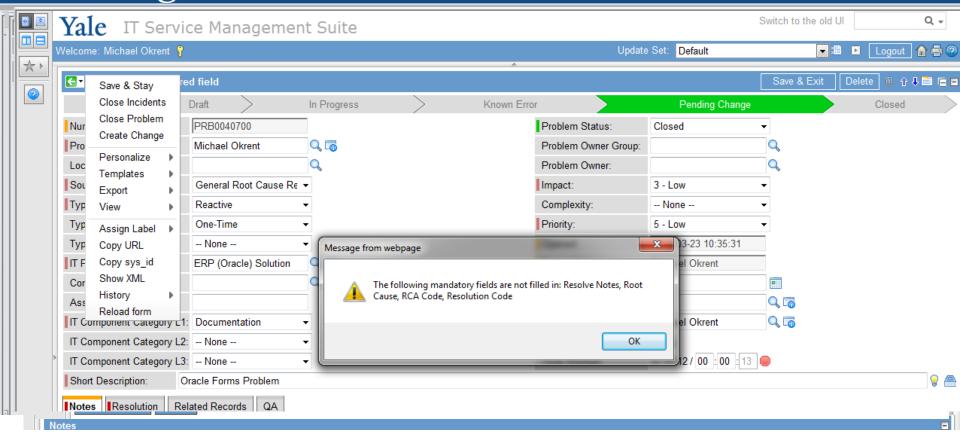
Incident -> Problem -> Change



Incident = Required	d field	Save & Exit	Assign to me Du	plicate Incident	Resolve Incident] () 🛅 🕞 🖪
Incident state:	New ▼		Opened:	2012-02-27 14:45	:48	
Incident:	INC0010894		Opened by:	Michael Okrent		
Caller:	Q		Impact:	3 - Low	•	
Reported By:	Q		Urgency:	3 - Low	▼	
Notify:	Send Email ▼		Priority:	4 - Average	▼	
Contact type:	Phone ▼		Assignment group:		Q	
Location:	Q		Assigned to:	Michael Okrent	Q 🐻	
IT Business Service:	Q		Watch list:	<u>a</u>		
Incident Type:	None ▼		Knowledge:			
IT Provider Service:	Q		Time worked:	00:01:14 / 00 : 01	: 14	
Asset/Device:						
IT Component Category L1:	None ▼					
IT Component Category L2:	None ▼					
IT Component Category L3:	None ▼					
Short description:						@ 🖴
Notes Related Records	Resolve Information QA S	ecurity				
Related Records						₽
Problem:	Q		Change Request:		Q	
Parent Incident:	Q		KB Article:		Q	
Save & Exit Assign	n to me Duplicate Incident	t Resolve In	cident			

Working on a Problem

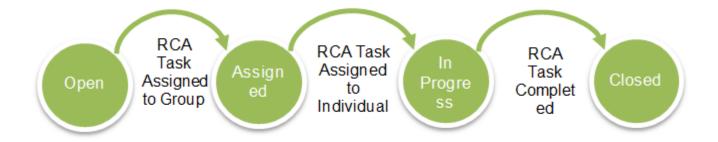




Root Cause Analysis Task States

- Open
- RCA Task Assigned to Group
- Assigned
- RCA Task Assigned to Group Individual
- In Progress
- RCA Task Completed
- Closed

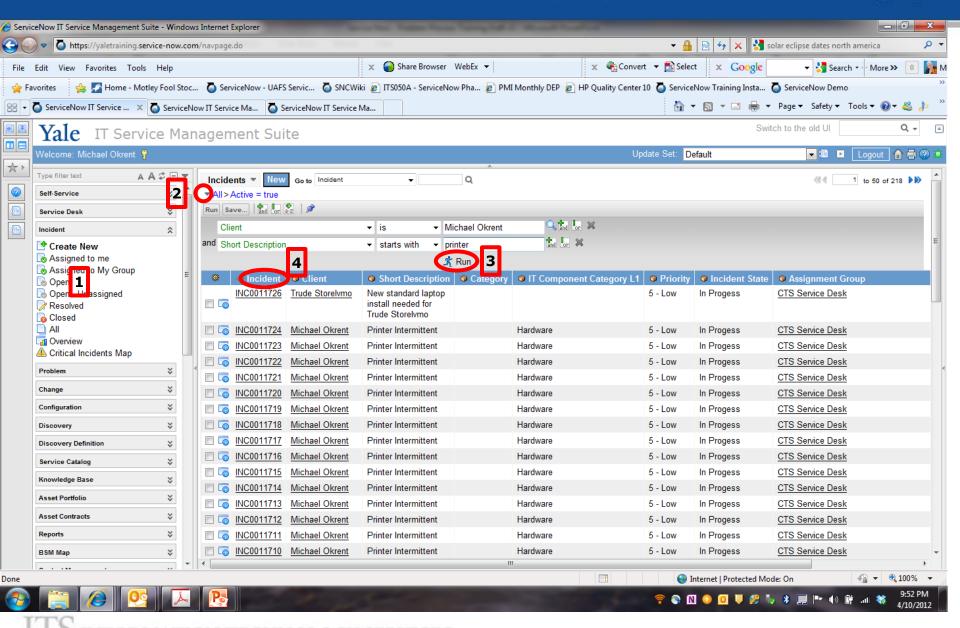
Root Cause Analysis Task



- Michael Okrent calls the service desk with a complaint that his MFD printer is not printing all his jobs.
 - Click Incident in left Navigation Panel, then Click Open
 - Find an Incident with Client = Michael Okrent, Short Description contains Printer
 - Escalate the Incident to a problem.
 - Save and Exit the incident
 - Open the problem, Problem Group is INF Infrastructure, Problem Owner is Louis Tiseo,
 - Create a Root Cause task to investigate the reason for the printer printing intermittently.
 - Suspect that it may be the print server. Since scans work without delay.
 - Assign the task to winsys Ken Hoover to investigate the server
 - Ken reports that the server is missing a required patch that will fix the problem.
 - Create a Change request so that the patch can be installed

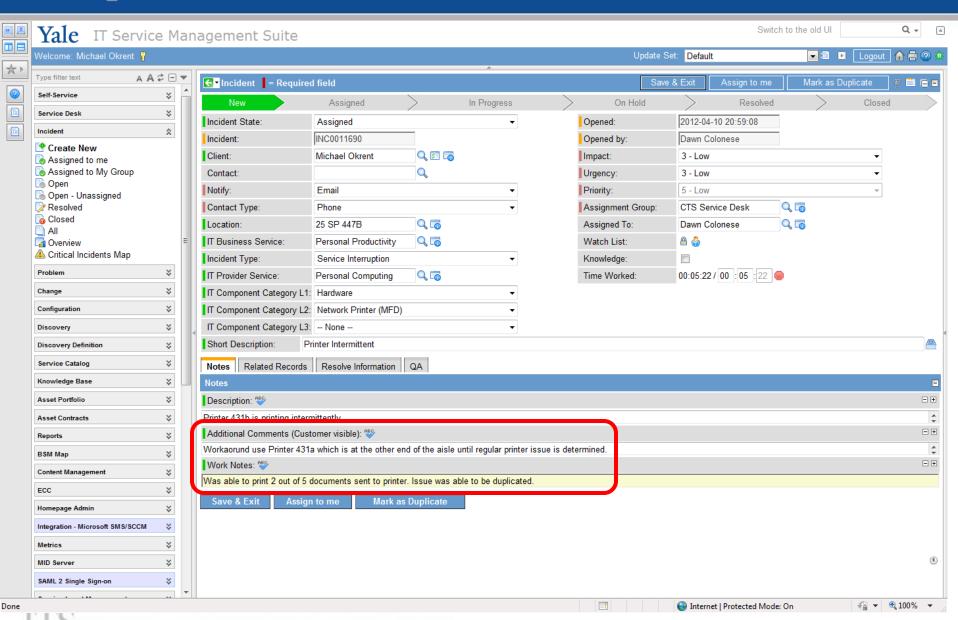
Find an Incident like the one below:





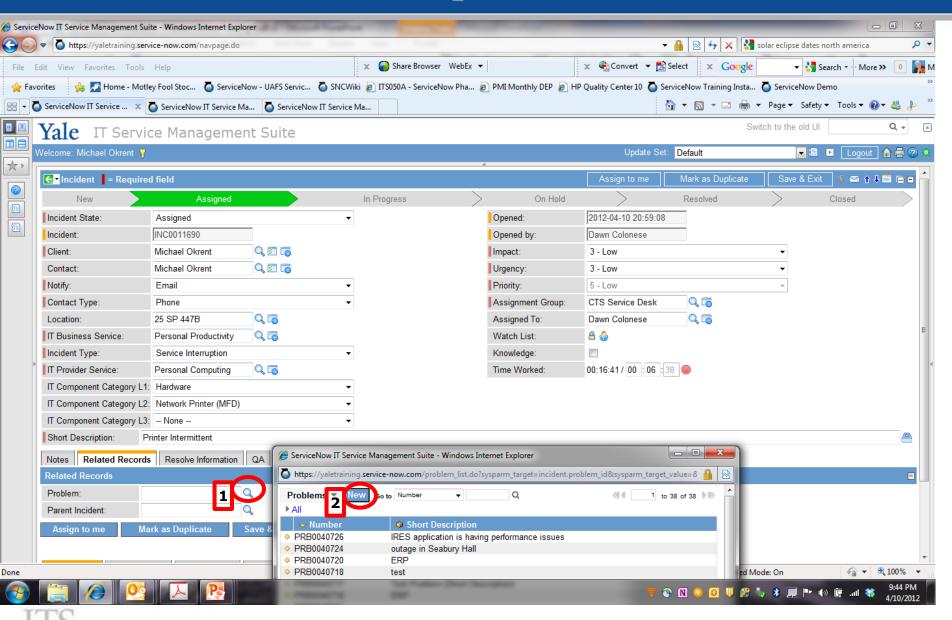
Complete the text below





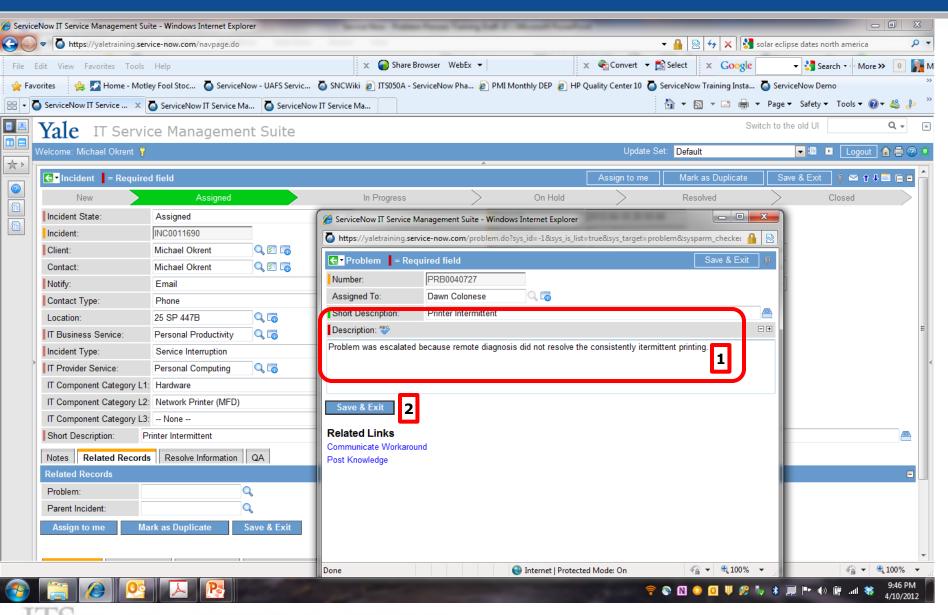
On related records click problem search





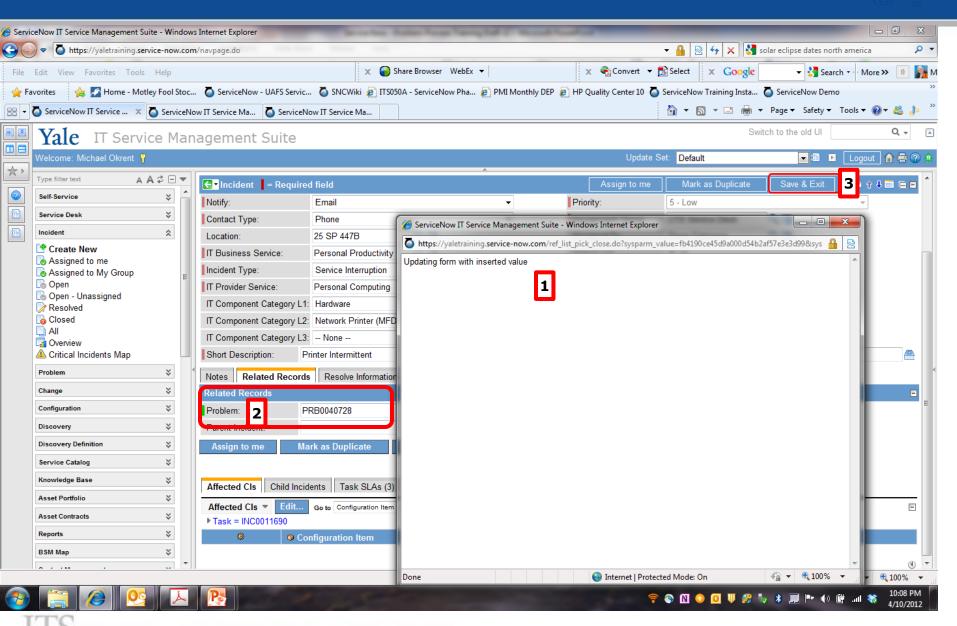
Complete Required field, click Save&Exit



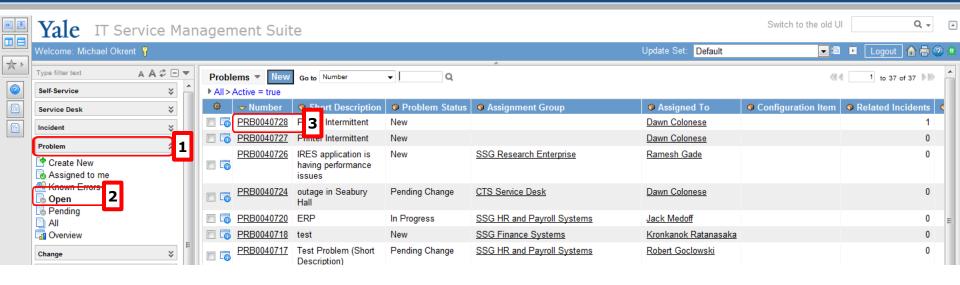


Problem is associated with Incident



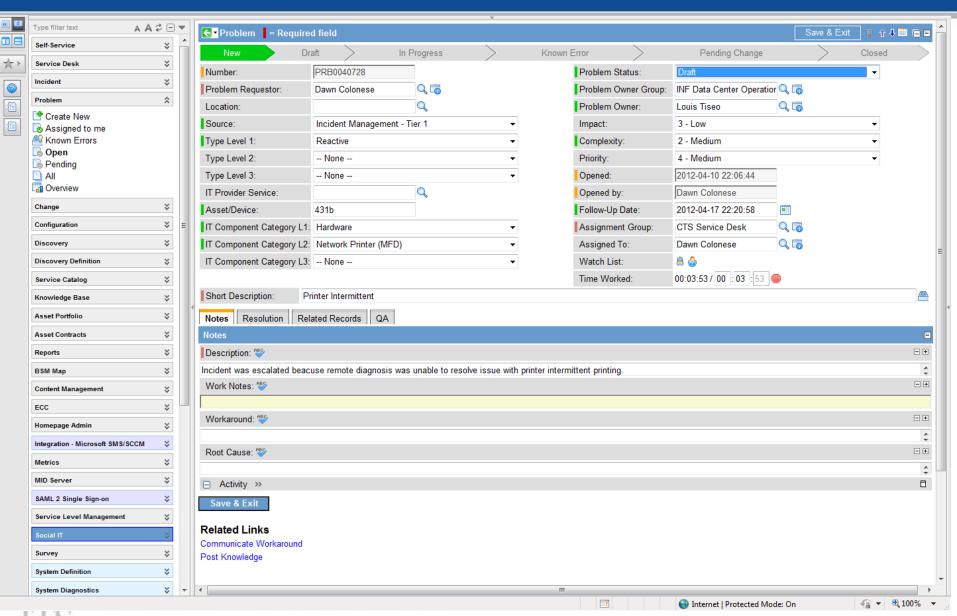


Yale



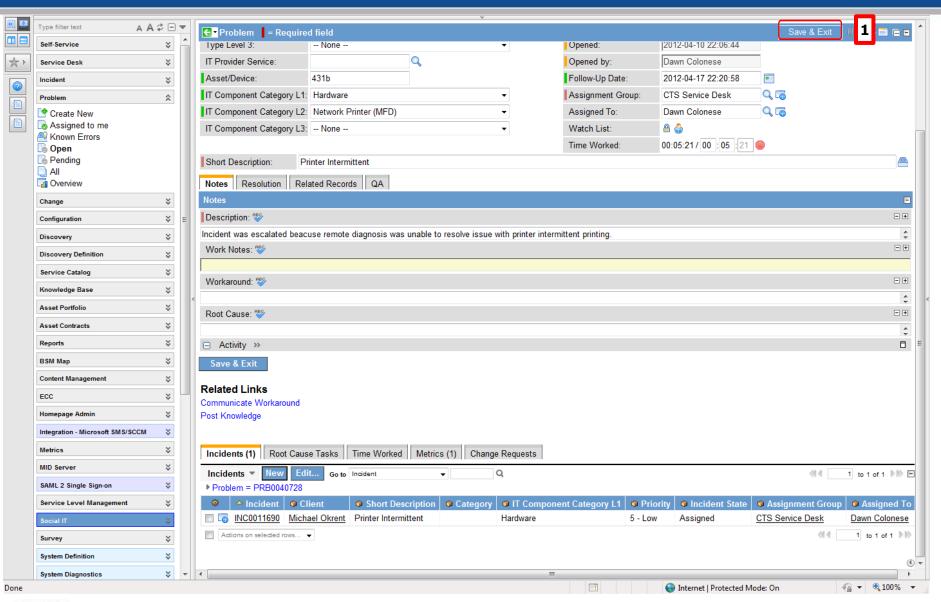
Complete required field as below





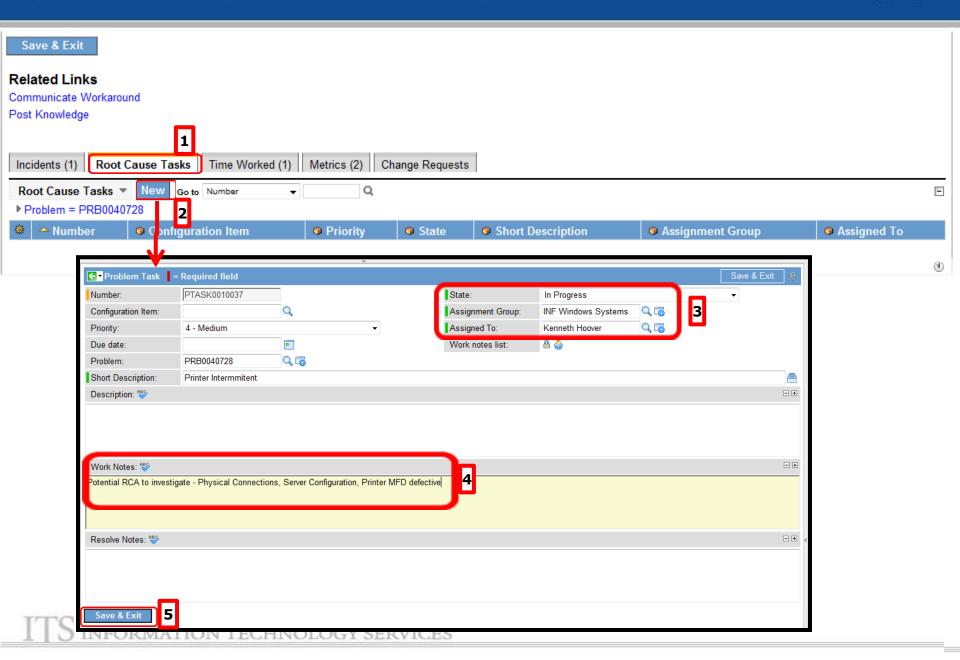
Scroll to bottom to note related incident





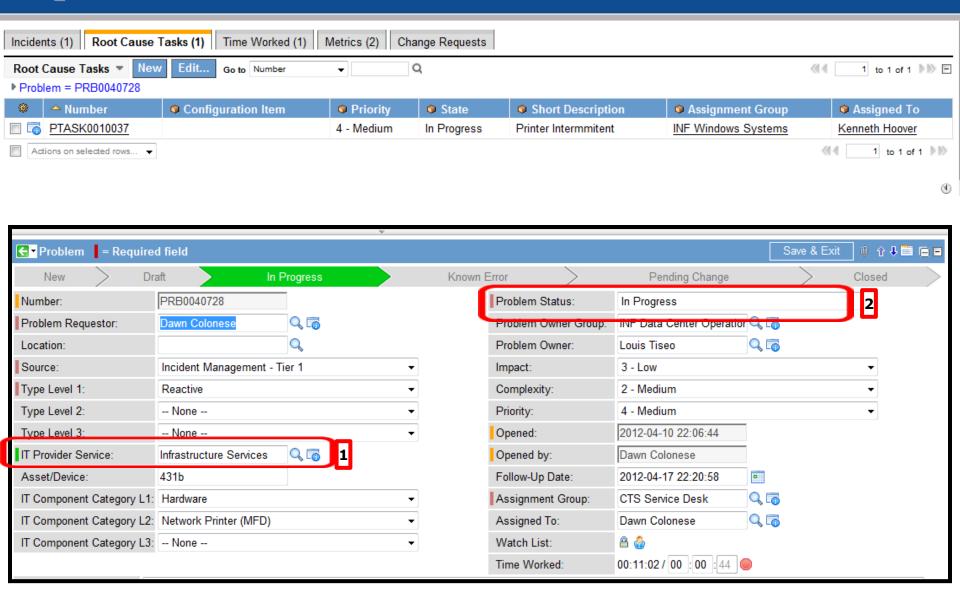
Click Root Cause Task Tab and New





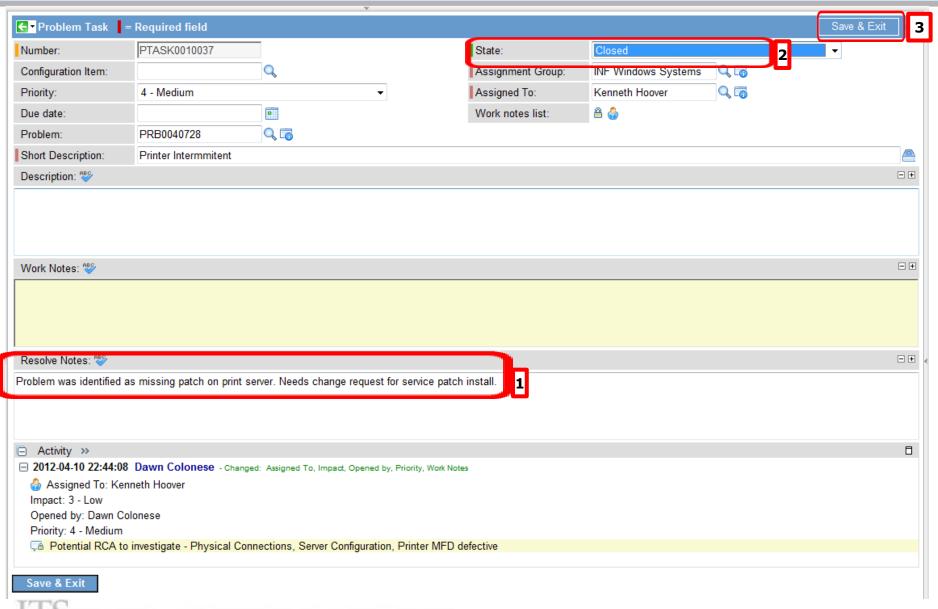
Update Provider and Status





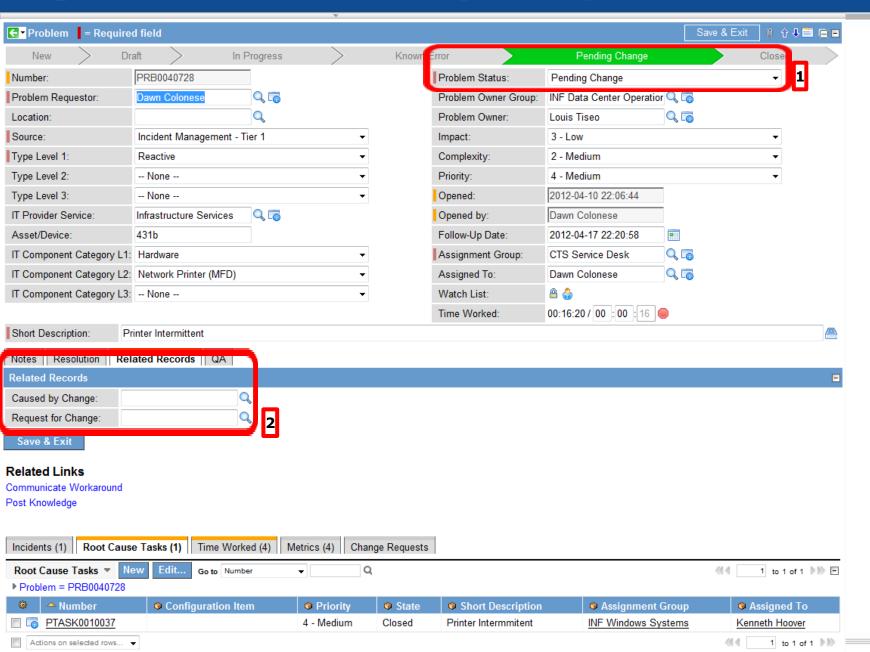
Close RCA Task





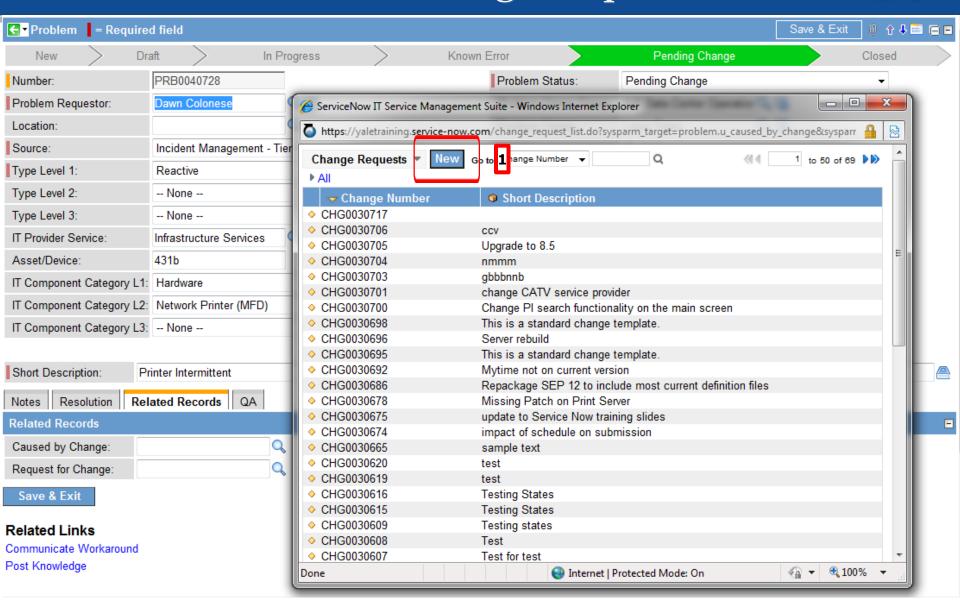
Update Status to Pending Change





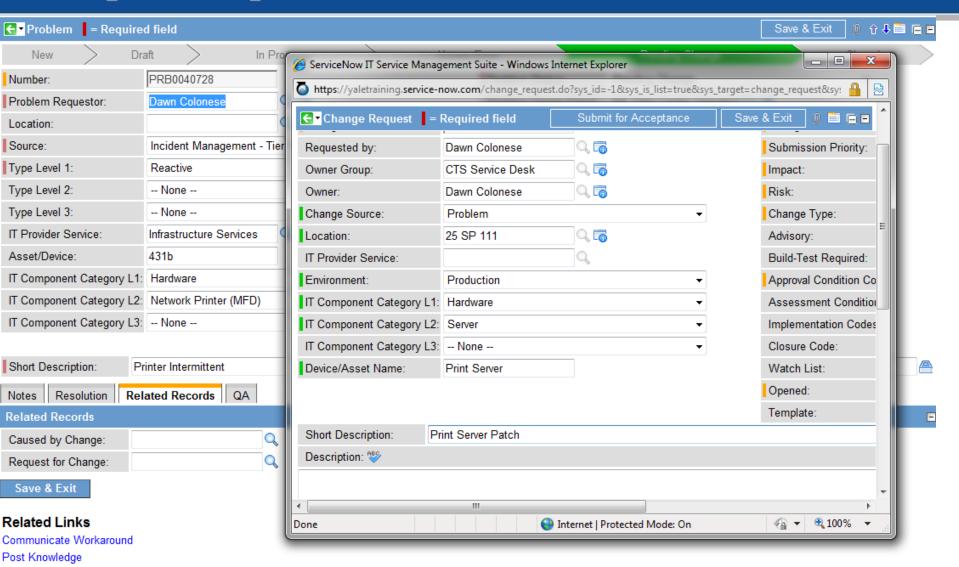
Click New to create a Change Request





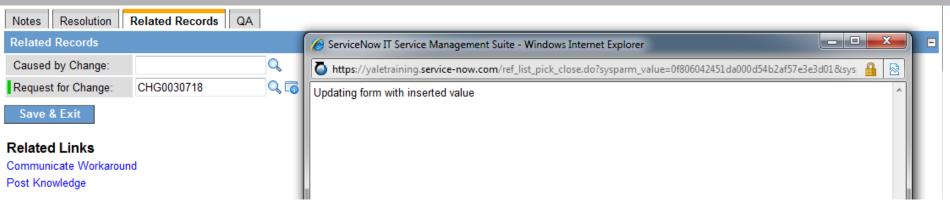
Complete required fields, save and exit

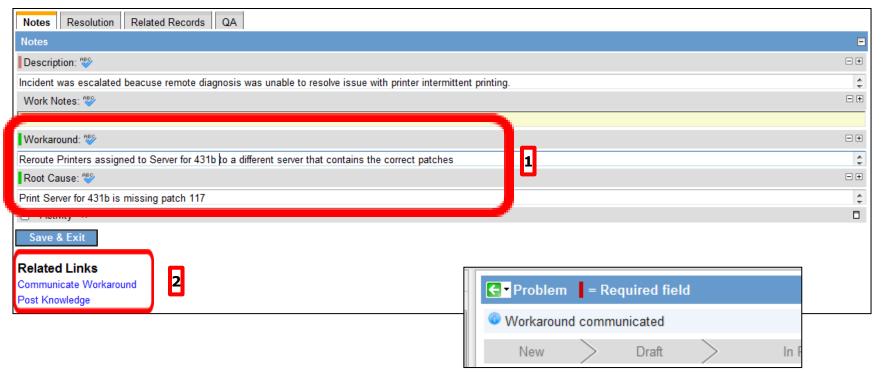
Yale



Observe Change ID







Lab – Create a Root Cause Task

Create a RCA Task

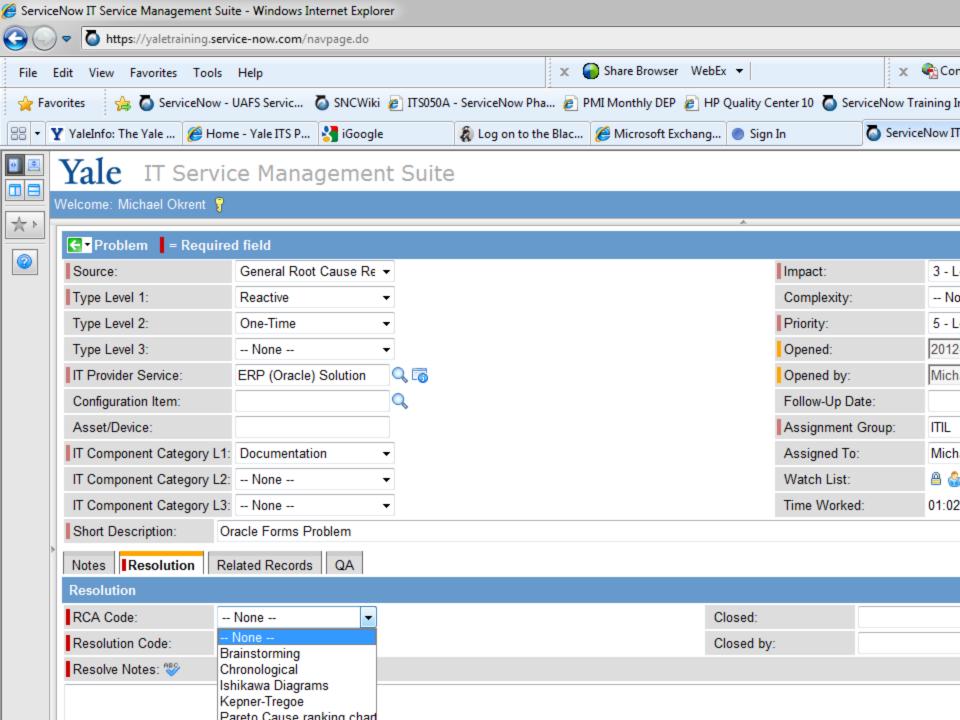
- In the Problem Section on the left navigation pane, Click on Open
- Scroll to bottom of screen and select the Root Cause Tasks Tab
- Click the new button
- Enter the required fields
- Press Save & Exit on blue bar at top or below Resolve Notes

Assign an RCA Task

- Select the problem record from open
- Select the root cause tab at bottom
- Click on the problem task link to be assigned
- Select assigned to from dropdown list or begin typing first name space last name
- Click on person for assignment
- Press Save & Exit



- Reassign an RCA task
 - Select the problem record from open
 - Select the root cause tab at bottom
 - Click on the problem task link to be re-assigned
 - Select assigned to from dropdown list or begin typing first name space last name
 - Click on person for re-assignment
 - Hover over problem on the blue bar and click save and stay
 - Scroll down to activity tabs at bottom of screen and view the most recent update to the task
 - Press Save & Exit
- Close an RCA Task
 - Select the problem record from open
 - Select the root cause tab at bottom
 - Click on the problem task link to be closed
 - Update the task level resolve notes and change the state dropdown to "Closed" in upper right
 - Press Save & Exit



Problem Closure Codes

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•The problem was closed without root cause determination (e.g. costs are too high to diagnose, value to remove is too low etc.).

Accepted Known Error - Workaround Implemented

•The problem will not be removed as the workaround is acceptable.

Accepted Known Error - No Workaround

•The problem will not be removed and no workaround exists however the impacts are minimal/acceptable.

Resolved - No Action Taken

•The problem affects stopped and during an accepted monitoring period the problem did not resurface.

Resolved - Root Cause Removed

•The most common closure code, indicating that a change was successfully implemented to remove the problem.

Unresolved - Rejected

•The criteria required to accepted a problem were never met and the problem has been rejected by the problem manager.

Unresolved – Cost

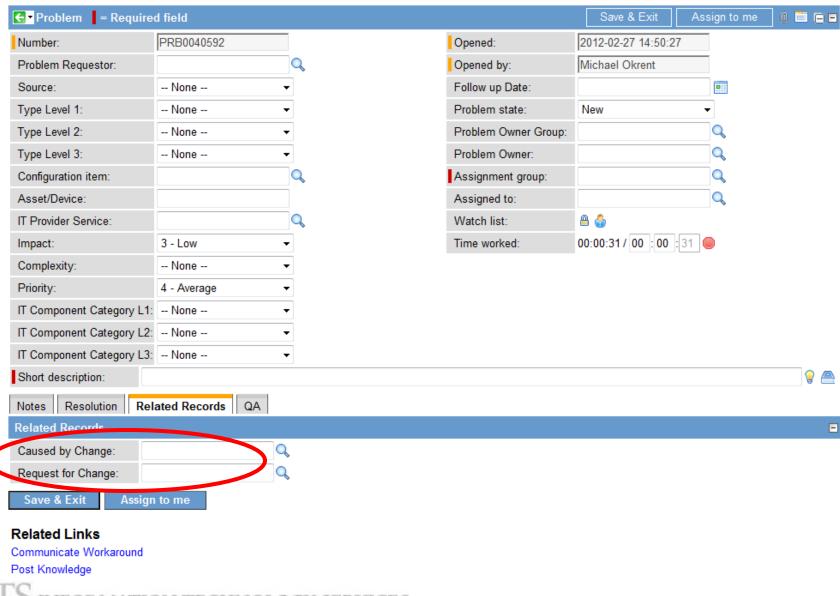
 Used when a feature request has been raised, but the cost of the request is too high to action and acceptable to the business/customer (payer).

Unresolved - Future Release

•The feature request was already defined for a future release. Unresolved problem may be associated to an originating problem for the initial request.

Incident -> **Problem ->** Change





INFORMATION TECHNOLOGY SERVICES

Lab Close and Resolve a problem

- Required fields
- Close a problem
- Resolve a problem

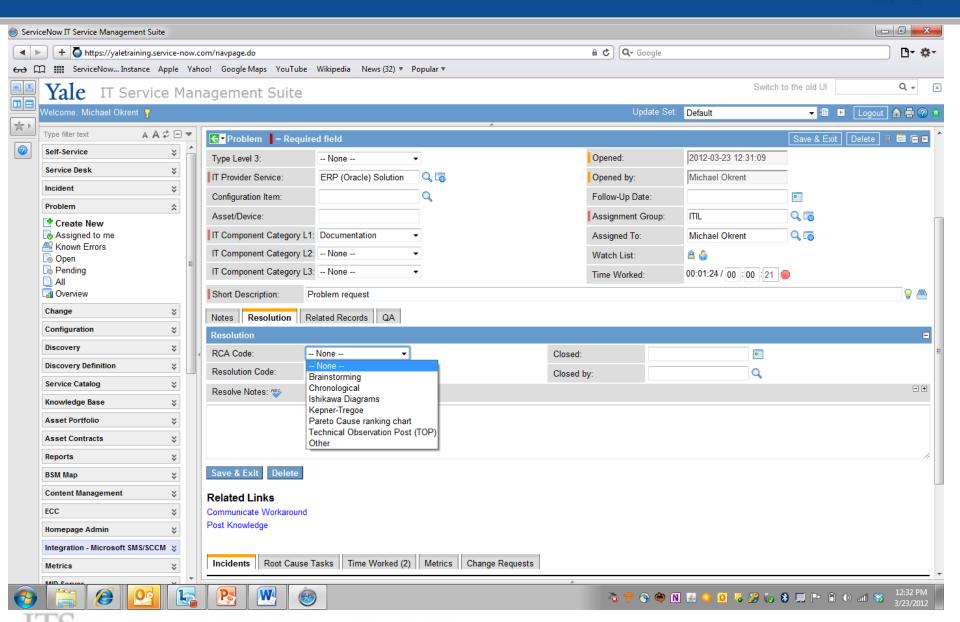
Lab - Known Problems

- Create a Known Error
 - In the Problem Section on the left navigation pane, Click on Open
 - Select and click on appropriate Problem
 - Change the problem Status "Known Error"
 - Hover over Problem in blue bar at top of screen and click Save & Stay
 - Progress bar moves from In Progress to Known Error
- Create a Knowledge Base Article from Problem-Known Error
 - Select an appropriate Known Error Problem Record from the Known Errors in the left navigation menu
 - Scroll down to the related links section and click the Post Knowledge link
 - Hover over Problem in blue bar at top of screen and click Save & Stay
 - Observe that Knowledge Submission Created with number

- Resolve a Known Error
 - Select and appropriate Known Error Problem Record from the Known Errors in the left navigation menu
 - Scroll to the Resolution Tab and select the RCA Code from the dropdown list
 - Select the Resolution Code from the dropdown list
 - Enter the Resolve Notes
 - Click on the Notes Tab and enter the Root Cause Text
 - Scroll to top of screen and update Problem Status to either Pending Change or Closed
 - Hover over Problem in blue bar at top of screen and click Save & Stay
- Notify users with linked incidents of Problem Resolution
 - Scroll down to Related Links
 - Click on Communicate Workaround
 - Observe message at top of screen that "Workaround communicated"

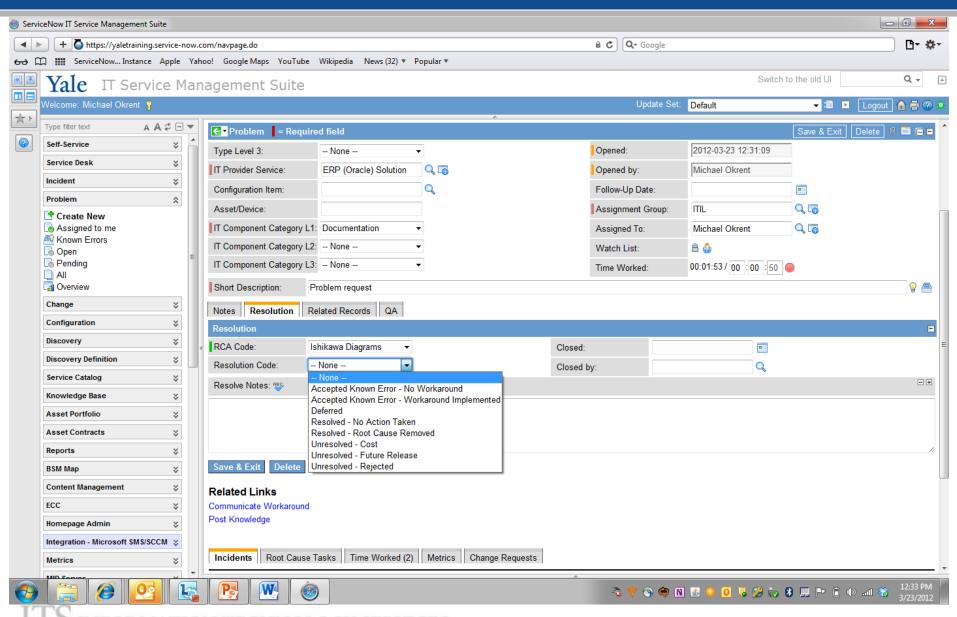
RCA Codes





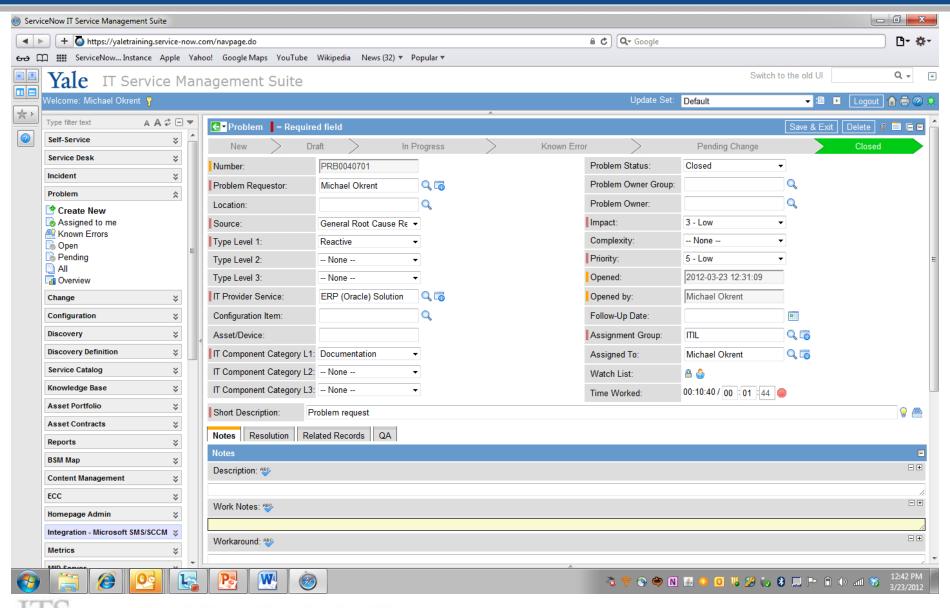
Resolution Codes





Close Problem







- To see Known Errors associated with Problems
 - Go to Problem and click All
 - Click on gear at top left of blue bar, Personalize List Columns appears
 - Scroll down list to Known Error, highlight then click add in center
 - Place the column where you want it using the up down buttons, press OK
 - At the Top of the Known Error Column right click to group or sort for true
- To see all Known Errors
 - In box under the your name at top left (type filter text) type known
 - Click on Known Errors for list of all

There will be one Problem Management Process for all of the IT organization.

Service Ownership is a critical component to assuring the quality of services provided by IT. The Service Owner must be designated for each service to be managed by the Problem Management process. The Service Owner works to ensure that any Problem that may impact their service is controlled.

Each Problem Analyst who works on a problem will be responsible for updating the Problem record and Problem status on an ongoing basis.

A major Problem is declared when the degree of impact on the user community is high and the complexity is low (Priority 1). This is based on the normal Priority Table taking impact and complexity into account. The Major Problem procedure will be followed for these problems.

When the root cause of a Problem is identified the Problem status will be changed into a Known Error (KE). KE information (including a workaround or Quick Fix) will be made available for the Incident Management Process.

Problem Management Policies



Each Problem will be assigned a Priority based on complexity and urgency. The impact of a Problem describes how broadly the Problem will be realized. Complexity represents the effort required (cost, resourcing etc.) to diagnosis and resolve.

Each Problem will be assigned a Category using the same classification system used by Incident and Change Management.

Problem investigations will determine the Root Cause and Configuration Item (CI) at fault.

The Problem Management process will identify the single best solution to the Known Error based on business requirements.

The Problem Manager will receive sufficient resources to perform the task of administrating the process of Problem Management. Resource requirements will be based on the scope of the problem. Resources from the business and technical analyst teams will be required. Problem teams may have the need to call on Users to help identify root causes. The business service owner will be responsible for arranging User support of problem teams.

After executing a successful Change resulting in the removal of a Known Error, that Change and that Problem will be evaluated for a period of time. This is to ensure that the Known Error has been permanently removed.