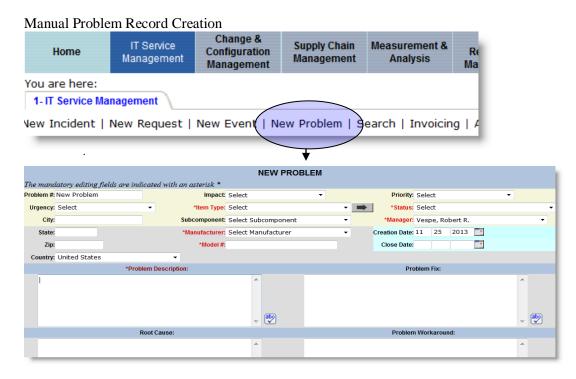
Problem Management

Mandatory criteria (need 100%)

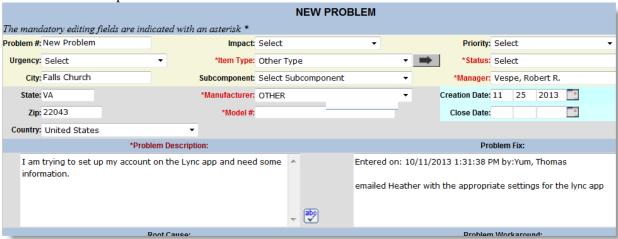
1. Does the tool facilitate the creation, modification, and closure of Problem records?

Comments: Yes. The tool provides two (2) methods in which to create a problem record. The Problem Record can be created manually via the 'New Problem tab and, the problem record may be created directly from the Incident Record. The 2nd method will also populate Incident data into the Problem Record and automatically generate a link between them.



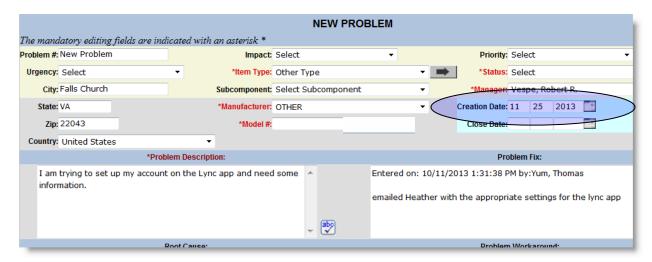
Incident Problem Record Creation Incident Problem | Make Task | Activity Reports | Order Part | View Log | Repair Log | Notify | References | History | Survey | VIEW SERVICE RECORD Workflow Service Reco Service Record Category: Catalog Service: 211680 5999-000 General Support (Service Call Management) - No Price Or Request Status: Priority: QA Complete: Time Zone: Days: Open 1 - Low Reference Incident #: Reference Request #: Reference Event #: Customer Reference #: Priority Lookup Engineer: Select POC: Heather Reis POC Phone: 703-698-8282 POC Extension: 261 Engineer: Opened By: Sisney, Vanessa D. POC @: heather.reis@itgonline.com Problem Record listing Back to Incident (Create Problem | Relate Problems | Help INCIDENT [211680] RELATED PROBLEMS Problem # Problem Description Manager

Problem Record Populated with Incident Data



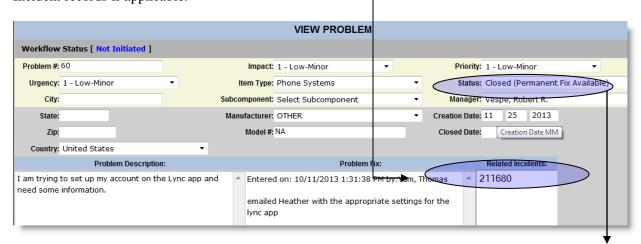
2. Does the tool facilitate the automatic generation of time and date stamping for new Problem records?

Comments: Yes. Time and date stamps are applied automatically to the record.



3. Does the tool support the ability to distinguish between an Incident, Problem, and Known Error?

Comments: Yes. The Problem Record maintains the ability to distinguish between an Incident, Problem, Known Problem, and if Closed. The 'Related Incidents' field identifies all associated Incident records if applicable.

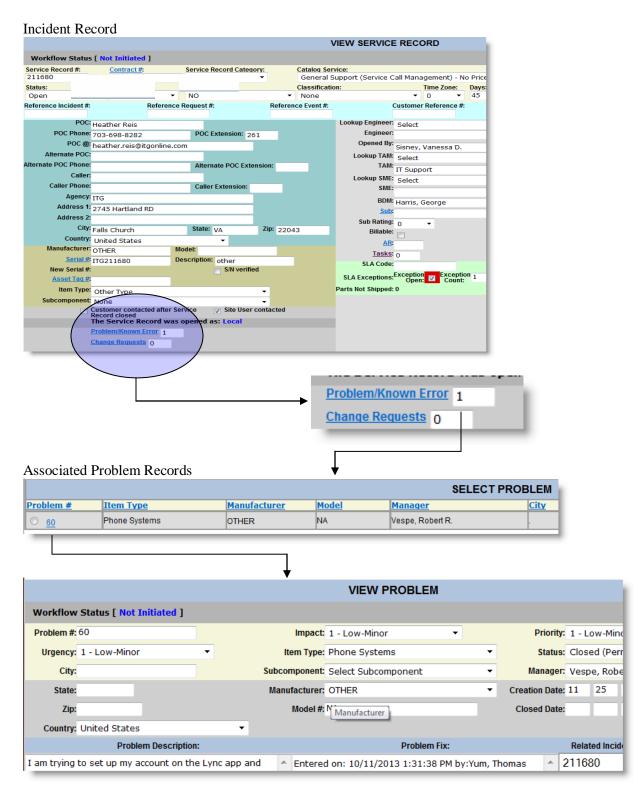


Date: 7/23/2007 Revised: 11/26/2013

Problem (No Solution Available) Known Problem (Workaround Available) Closed (Permanent Fix Available)

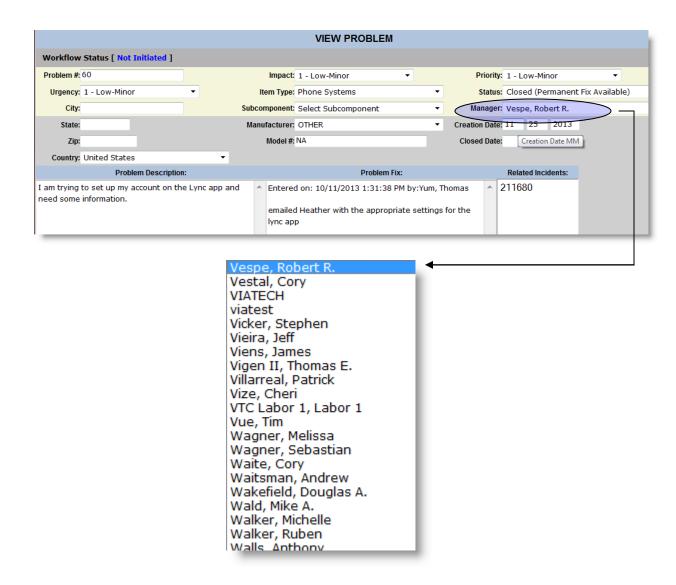
4. Does the tool facilitate the automated matching of Incidents to Problems and Known Errors?

Comments: Yes. The tool matches Incidents to Problem records which may be identified as Problem or known error.



5. Does the tool support the ability to route and assign Problem records to pre-defined support staff or groups?

Comments: Yes. The Problem record is assigned to the Individual who created the Problem record. It may be modified to identify a support staff member or support group.



6. Does the tool enable impact and urgency codes to be assigned to Problem records?

Comments: Yes.



7. Does the tool facilitate progress tracking and monitoring of Problems? For example, tracking ownership and responsibility for resolving the Problem.

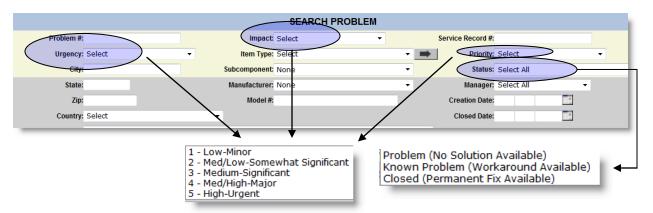
Comments: Yes. The Manager of the record (assigned during the creation of the record) is assigned ownership for resolving the problem.

				VIEW PROBL	EM						
Workflow S	Status [Not Initiated]										
Problem #: 6	0		Impact:	1 - Low-Minor	-		Priority:	1 - Low	-Minor	•	
Urgency: 1	1 - Low-Minor	•	Item Type:	Phone Systems		•	Status:	Closed	Permanent	Fix Available	e)
City:			Subcomponent:	Select Subcomponent	. ($\overline{\mathbf{Q}}$	Manager:	Vespe,	Robert R.		\supset
State:			Manufacturer:	OTHER		•	Creation Date:	11 2	2013		
Zip:			Model #:	NA			Closed Date:	Crea	tion Date MM		
Country: U	United States	•									
	Problem Description	:		Probl	em Fix:			Related	Incidents:		
I am trying to need some ir	o set up my account on the of the office of	e Lync app an	d ^ Entered	d on: 10/11/2013 1:31	:38 PM by:Yu	um, Th	nomas 🔺 2	211680			
			emailed lync app	d Heather with the app p	oropriate sett	tings f	or the				

8. Does the tool facilitate the escalation of Problems after pre-defined thresholds have been breached?

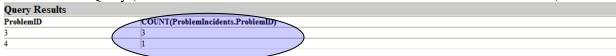
Comments: Yes. There are several methods to facilitate the escalation of Problems.

1- Create a list of Problem Records via the 'Search Problem' screen based upon the status, Urgency, Impact, and Priority.



2- Using a saved ad-hoc report, pull a Problem record listing depicting the number of incidents associated to the non-closed problem or known problem records.

Saved Ad-hoc Query (lists the number of associated Incidents to non-closed Problem Records)



Date: 7/23/2007 Revised: 11/26/2013

Problem Record # 3 from the above list showing the 3 Incidents associated to it, the number of records relating to a Problem may be a threshold breach.

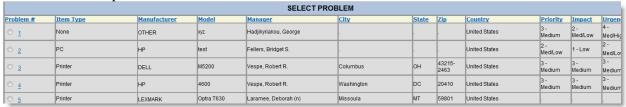
9. Does the tool provide historical data on Problems and Known Errors for use by support staff during the investigation process?

Comments: Yes. Support Staff may interrogate historical data by using the Problem search screen or the ad-hoc reporting system. Using the search screen, any single field or combination of fields may be interrogated. Using the ad-hoc reporting system, reports tailored to ones needs may be executed and saved for future requirements. The ad-hoc reporting system has the capability of combining multiple tables (Problem and Incident tables) for in-depth analysis.

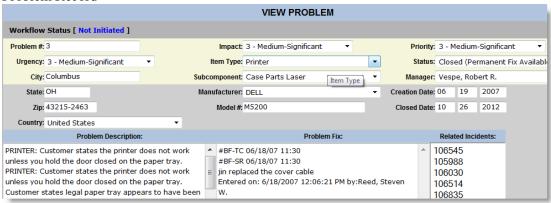
Problem Search Screen



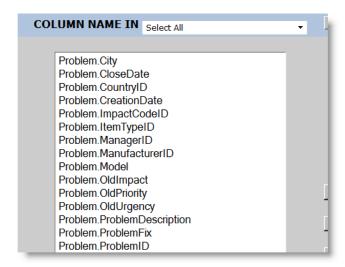
Search Screen Output List



Problem Record



Ad-hoc Reporting System for Problem database interrogation



Sample ad-hoc Report

A	В	C	D	E	F	G	H
ProblemID	SrvcCallID	CreationDate	Model	ProblemDescr	RootCause	DateIncidentOpened	Description
3	106545	6/19/2007	M5200	PRINTER: Customer states the printer does not work unless you hold the door closed on the	Premature Doo	6/13/2007	Printer
				paper tray. □			
				PRINTER: Customer states the printer does not work unless you hold the door closed on the			
				paper tray. Customer states legal paper tray appears to have been taped in the past. Please			
				assist.□			
				HUD ID#047224□			
				Dell M5200□			
				Printer name:CCOL_PIH_DelIM5200_PCL on CLLBNFP001			
				Floor:7th□			
				Room: PIH			

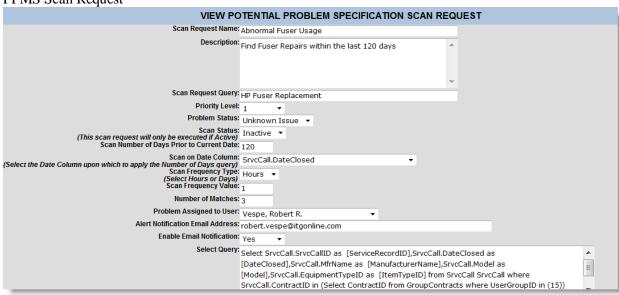
10. Does the tool facilitate the generation of customizable management reports? For example, can the tool facilitate trend analysis reports to identify potential Problems before they occur?

Comments: Yes. The Problem Management system facilitates the generation of customizable management reports from the problem records as illustrated in the previous question (question #9).

Additionally, CENTRE maintains a Potential Problem Management System (PPMS) to identify trends and notify individuals or groups as stated thresholds occur. The PPMS tool is built upon the ad-hoc reporting system criteria, and allows one to select any field or group of fields from the Incident records. Using the Problem entry screen combined with the ad-hoc selection criteria provides the user with infinite methods to select records to identify potential issues before they become problems.

PPMS Screen to Monitor HP Fuser Failures if it detects 3 or more failures within the past 120 days. This scan executes daily and uses the ad-hoc scan parameters (select query) to extract data and generate a report for analysis.

PPMS Scan Request

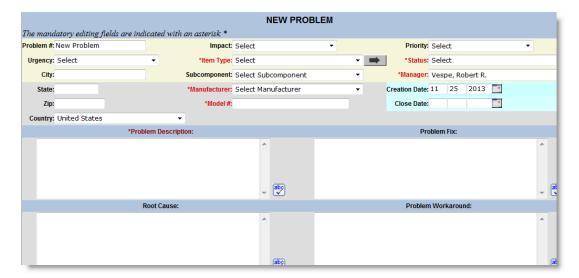


Output Report

•	Potential Problem Records fetched for Scan Request [Abnormal Fuser Usage]											
PPRecordID	PPGroupID	DateTimeCreated	ServiceCallNumber	DateClosed	ManufacturerName	Model						
3453	26	1/20/2007 10:26:23 PM	86232	9/28/2006	HP	LJ 4100						
3454	26	1/20/2007 10:26:23 PM	86293	9/25/2006	HP	LJ 4000						
3455	26	1/20/2007 10:26:23 PM	86310	9/28/2006	HP	8000n						
3456	26	1/20/2007 10:26:23 PM	86374	9/27/2006	HP	LJ 8550						
3457	26	1/20/2007 10:26:23 PM	86619	9/28/2006	HP	4100n						
3458	26	1/20/2007 10:26:23 PM	86827	10/2/2006	HP	LJ 5Si						
3459	26	1/20/2007 10:26:23 PM	87113	10/3/2006	HP	LJ 4100						
3460	26	1/20/2007 10:26:23 PM	87257	10/5/2006	HP	LJ 2200D						
3461	26	1/20/2007 10:26:23 PM	87285	10/5/2006	HP	LJ 4100						
3462	26	1/20/2007 10:26:23 PM	87393	10/10/2006	HP	LJ 5Si						

11. Does the tool facilitate the entry of free text for the recording of Problem descriptions and resolution activities?

Comments: Yes. There are four (4) free text fields.



Integration Criteria

Change Management

1. Does the tool facilitate secured and controlled access to Change Management information such as Change schedules and Change history?

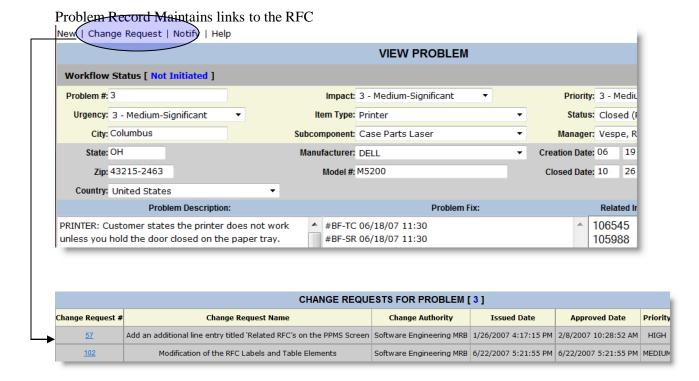
Comments: Yes. Access to CENTRE is provisioned by user ID and passwords at all screen field viewing/modifying and reporting levels.

From: 'ITG CENTRE Introduction' Document Control # 180-v2

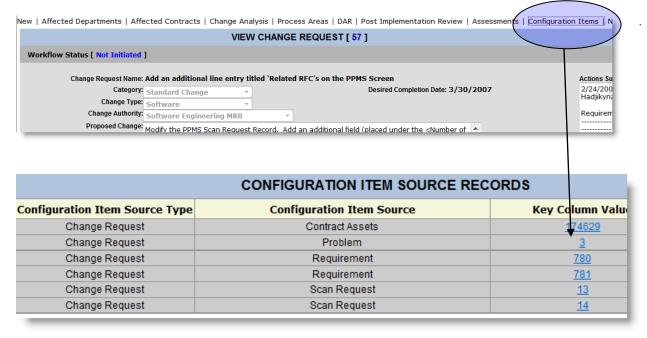
- 1. System Administrator attributes. The System Administrator attributes allow control to be exercised over the Users of "ITG CENTRE" by assigning permissions, passwords, and controlling the Users' ability to see and manipulate data within the system.
- Each time the RFC record is modified:
 - The 'Date Last Updated' and 'Last Updated By' information is captured.
 - The Record may only be edited by the issuer or the Chairman/Deputy Chairman until the 'Status is set to 'Approved', then, only the Chairman/Deputy Chairman or the 'Assigned To' individual may edit the record.
 - Each time a change is made to the record's main page, the details of the change are chronologically reflected in the 'Track Changes' field.

2. Does the tool facilitate the association and maintenance of the relationships between Known Error records and RFCs?

Comments: Yes. The relationships between the Problem Record and RFC's are maintained on the Problem Record.

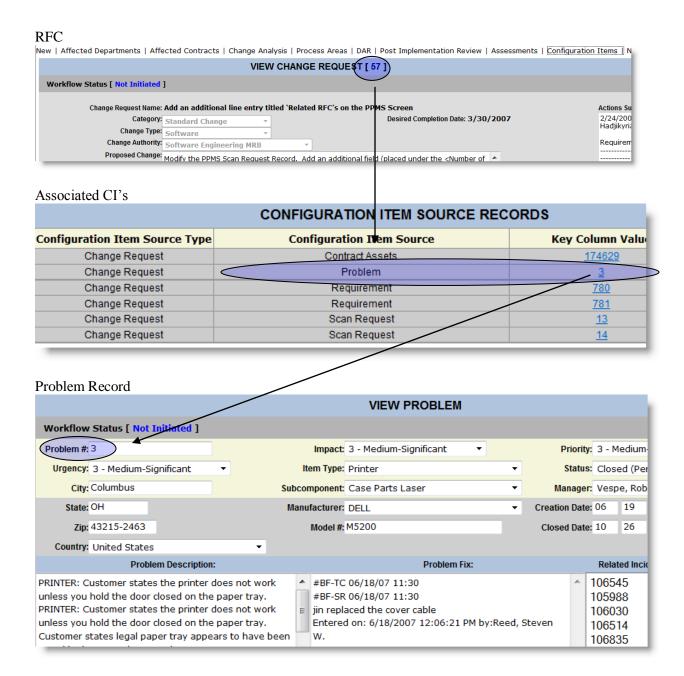


Problem Record automatically creates the RFC Configuration Item link within the RFC Record



3. When a Change has been successfully implemented does the tool facilitate the closure of all associated Known Error records?

Comments: Yes. The RFC maintains the associated Problem record(s) hyperlinks



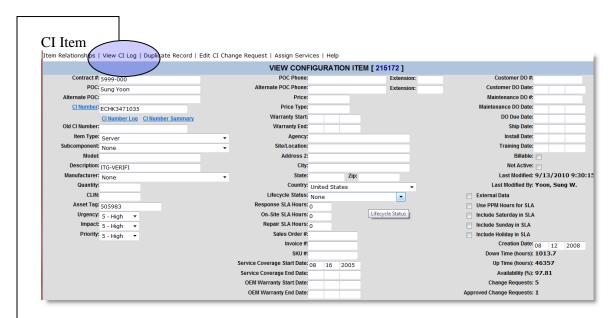
Configuration Management

1. Does the tool facilitate secure and controlled access to the CMDB to navigate, modify, and extract Problem Management related information? For example, the use of historical CI audit logs.

Comments: Yes. Access to CENTRE is provisioned by user ID and passwords at all screen field viewing/modifying and reporting levels.

From: 'ITG CENTRE Introduction' Document Control # 180-v2

System Administrator attributes. The System Administrator attributes allow control to be exercised over the Users of "ITG CENTRE" by assigning permissions, passwords, and controlling the Users' ability to see and manipulate data within the system.

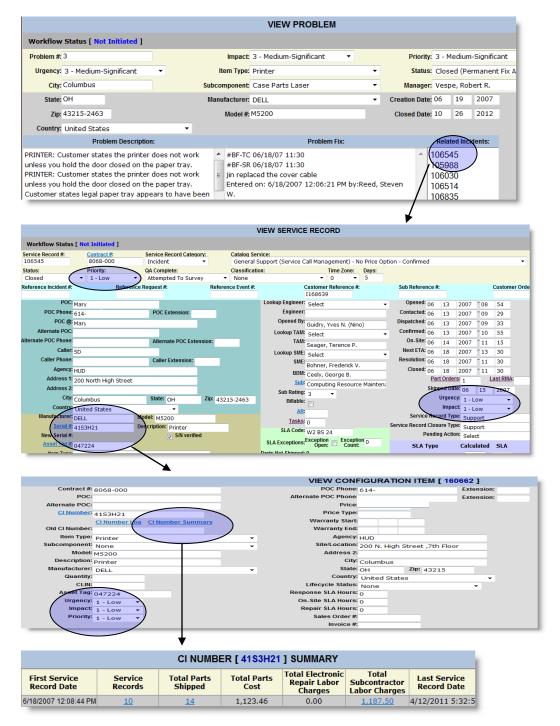


CI Audit Log - Previous Historical Record View

			SELECT CONFIGURATION ITEM LOG					
Contract # Date Log Recorded	CI Number	<u>Manufacturer</u>	Model	Description	Warra			
O 5999-000 12/12/2008 3:08:33 PM	ECHK3471035			ITG-SANCTUARY				
O 5999-000 3/12/2009 3:26:15 PM	ECHK3471035			ITG-VERIFI				
○ 5999-000 12/12/2008 3:08:03 PM	ECHK3471035			ITG-SANCTUARY				
O 5999-000 12/12/2008 3:17:15 PM	ECHK3471035			ITG-SANCTUARY				
○ 5999-000 3/12/2009 11:43:13 AM	ECHK3471035			ITG-VERIFI				
O 5999-000 11/7/2008 5:28:21 PM	ECHK3471035			ITG-SANCTUARY				
O 5999-000 12/12/2008 3:13:47 PM	ECHK3471035			ITG-SANCTUARY				

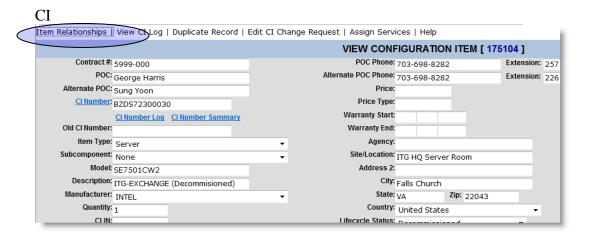
2. Does the tool differentiate between the criticality of CIs to assist Problem Management staff in classifying Problem records?

Comments: Yes. The criticality of CI's are captured during Incident entry as urgency, impact, and priority. Problem Records have the capability to link these associated Incident records. These associated Incident record(s) may be viewed by Problem Management staff to evaluate and differentiate the criticality of Problem records. Problem management may also view the CI historical summary.



3. Does the tool facilitate links with the CMDB to enable the updating of Problem records with Configuration information? (Including CI components, relationships, and dependencies).

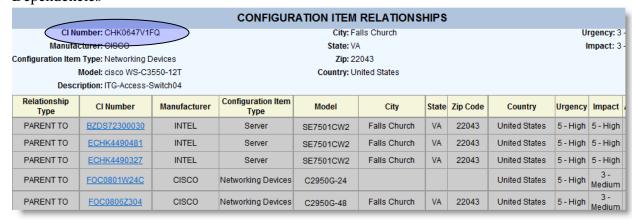
Comments: Yes. As depicted in the previous question, the Problem record links to the CMDB via the Problem Record's associated Incident record(s). The Incident record maintains the direct link to the CMDB. The CMDB record provides relationship and dependency information.



Dependencies

Depende	7110105									
			CONFIGURATION IT	TEM RELATIONS	SHIPS					
С	CI Number: BZDS72300030 City: Falls Church								Urg	gency: 5 -
Manu	ufacturer: INTEL		Sta	te: VA					In	npact: 5 -
Configuration I	tem Type: Server	r	Z	ip: 22043						
	Model: SE750	01CW2	Count	try: United States						
De	scription: ITG-E	XCHANGE (De	commisioned)							
Relationship Type	CI Number	Manufacturer	Configuration Item Type	Model	City	State	Zip Code	Country	Urgency	Impact
LICENSEE TO	39502959	MICROSOFT	Exchange Svr Ent 2003 English OLP NL		Falls Church	VA	22043	United States	1 - Low	1 - Low
LICENSEE TO	<u>505778</u>	DELL	PC	PM	Falls Church	VA	22043	United States	2 - Med/Low	1 - Low
LICENSEE TO	P7200264		Windows Svr Ent 2003 Win32 English OLP NL		Falls Church	Va	22043	United States	1 - Low	1 - Low
CHILD TO	CHK0647V1FQ	CISCO	Networking Devices	cisco WS-C3550-12T	Falls Church	VA	22043	United States	3 - Medium	3 - Medium
CHILD TO	<u>CHK0652W0P3</u>	CISCO	Networking Devices	C3550-12T	Falls Church	VA	22043	United States	3 - Medium	3 - Medium

Dependencies



Configurable CI Relationships

Comigaracic	CI ICIALIOIISII	- P3			
		CONFIGURATION ITEM RELATIONSHIP SUMMA	ARY		
CI Number: BZDS72300030 City: Falls Church Urgency: 5 - High					
Manufacturer: INTEL State: VA Impact: 5 - High					
Item Type: Server Zip: 22043					
Model: SE	7501CW2	Country: United States			
Description: IT	G-EXCHANGE (Decomm	isioned)			
Relationship Type	Relationship Count	Assign Relationships to Another Configuration Item	Remove Relationships		
LICENSEE TO	2	<u>Create new LICENSEE TO configuration item for these</u> <u>relationships</u>	Remove existing LICENSEE TO relationships		

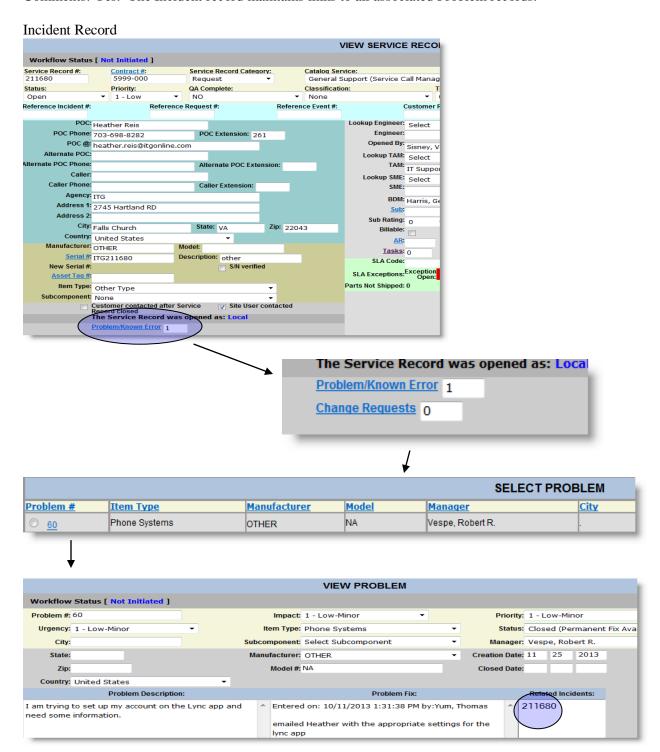
Customizable Relationship Type Table

SELECT RELATIONSHIP TYPE							
<u>Relationship Type</u>	Relationship Type Value						
○ License	1 - many						
Master-Slave	1-Many						
O Parent-Child	1-Many						
O Peer-Peer	1-Many						

Incident Management

1. Does the tool facilitate the association and maintenance of the relationships between Incident and Problem records?

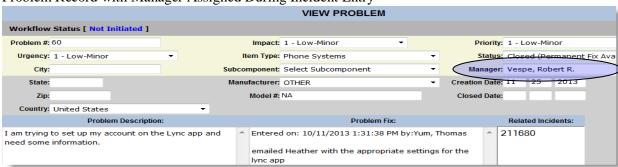
Comments: Yes. The Incident record maintains links to all associated Problem records.



2. Does the tool facilitate the automation of escalation procedures from Incident Management to Problem Management? For example, contact staff, department, and actions required?

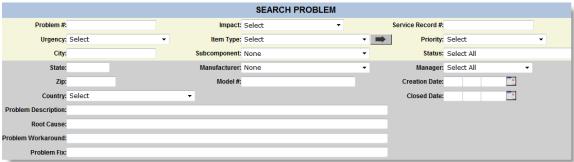
Comments: Yes. It facilitates this during the creation of the Problem record from the Incident entry. This is done by identifying a Problem Management staff member or Problem Management group in the 'Manger Field' of the Problem Record.

Problem Record with Manager Assigned During Incident Entry



The Problem records are searchable by this field and any other or combination of fields (such as the urgency, impact, or priority) to tailor a report.

Problem Record Search Screen



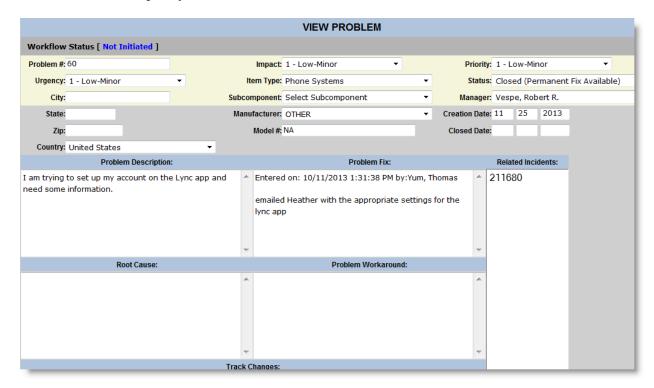
Problem Report



View of Selected Problem Record

3. Does the tool enable the Problem Management team to communicate status and progress reports, as well as temporary solutions and workarounds to the Service Desk staff?

Comments: Yes. The Problem Management team has the capability to enter status, progress information, and, temporary and workaround solutions into the Problem record.



Functional Criteria

1. Is the tool able to automatically increase the severity or impact rating of a Problem according to the number of associated Incidents and/or the number of End Users affected?

Comments: Yes. The Problem record is associated to an Incident-Impact-Urgency Matrix. This configurable matrix is triggered by the number of incidents. As thresholds are reached, the Impact and Urgency may be adjusted. If desired, alert recipients may be added to the matrix.

The Impact and Urgency values modify the priority value and are configurable. If desired, alert recipients may be added to the matrix.

Problem Record Configurable Incident Count values

PROBL	PROBLEM SEVERITY ESCALATION MATRIX										
Service Record Count	<u>Impact</u>	<u>Urgency</u>									
5	1 - Low	1 - Low									
10	2 - Med/Low	2 - Med/Low									
20	3 - Medium	3 - Medium									
30	4 - Med/High	4 - Med/High									
40	5 - High	5 - High									

Service Call Severity Matrix

Service	Can Severi	<u> </u>									
	ALERT SOURCE ITEMS										
Alert S	Alert Source: ImpactUrgencyPriorityMatrix ▼ ■										
Select	ImpactCo	deID Urgency	/CodeID Sev	erityCodeID							
0	1	1	1		Assign Recipients						
0	1	2	2		Assign Recipients						
0	1	3	2		Assign Recipients						
0	1	4	3		Assign Recipients						
0	1	5	3		Assign Recipients						
0	2	1	2		Assign Recipients						
0	2	2	2		Assign Recipients						
0	2	3	3		Assign Recipients						
0	2	4	3		Assign Recipients						
0	2	5	4		Assign Recipients						
0	3	1	2		Assign Recipients						

2. Does the tool automatically alert the Problem Manger of Problems that are in danger of exceeding pre-defined thresholds?

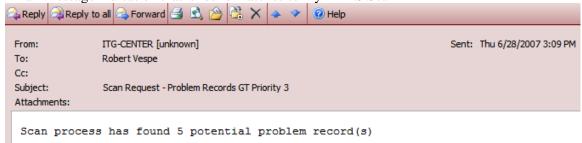
Comments: Yes. The Potential Problem Management System (PPMS) has the capability to run ad-hoc scans against Problem records. The combination of the PPMS Scan Request and the ad-hoc system provides infinite methods in which to define thresholds and send notifications.

In this PPMS example, a request is created to be notified if any Problem records have a Priority of level 3 or higher. An ad-hoc scan is created to periodically review the problem records and send an e-mail to the Assigned User if records are found.

PPMS Scan Request to Analyze Problem Records that are 1-30 days old VIEW POTENTIAL PROBLEM SPECIFICATION SCAN REQUEST Scan Request Name: Problem Records GT Priority 3 Description: Provide a list of problem records that have a priority level of 3 or more. Problem Management ITIL Ques 2 pg 20 est query: Problem Report Priority Level: 1 Problem Status: Unknown Issue 💙 Scan Status: Active V (This scan request will only be executed if Active) can Number of Days Prior to Curent Date: 30 Scan on Date Column: Problem.CreationDate (Select the Date Column upon which to apply the Number of Days query Scan Frequency Type: Hours 🗸 (Select Hours or Days) Scan Frequency Value: 1 Number of Matches: 1 Problem Assigned To User: Vespe, Robert R. ert Notification Email Address: Robert.vespe@itgonline.com Enable Email Notification: Yes Select Query: Select Problem.ProblemID as [ProblemID],ProblemIncidents.SrvcCallID as [SrvcCallID],Problem.CreationDate as [CreationDate],Problem.Model as [Model],Problem.ProblemDescr as [ProblemDescr],Problem.RootCause as [RootCause],SrvcCall,DateOpened as [DateIncidentOpened],SrvcCall,Description as [Description] from SrvcCall SrvcCall,ProblemIncidents ProblemIncidents,Problem

Email notification received from ITG CENTRE | ITG-CENTER | Scan Request - Problem Records GT Priority 3 | Thu 6/28/2007 3:09 PM

Email Message indication that it found matches to my PPMS Scan



Review the PPMS Scan



All PPMS Reports for this PPMS Record

	Potential Problem Groups										
Potential Problem Group ID	Date Created	Potential Problem Specification ID	Potential Problem Specification Name	Review Date	Review By User	Potential Problem Records					
193	6/28/2007 3:09:07 PM	<u>16</u>	Problem Records GT Priority 3			<u>5</u>					
X1		D 1									

Identified Problem Records to Review with their Associated Incident Numbers

PPGroupID	DateTimeCreated	ProblemID	SrvcCallID	CreationDate	Model	ProblemDescr
193	6/28/2007 3:09:07 PM	3	106545	6/19/2007	M5200	PRINTER: Customer states the printer does not we
193	6/28/2007 3:09:08 PM	3	105988	6/19/2007	M5200	PRINTER: Customer states the printer does not we
193	6/28/2007 3:09:08 PM	3	106030	6/19/2007	M5200	PRINTER: Customer states the printer does not we
193	6/28/2007 3:09:08 PM	3	106514	6/19/2007	M5200	PRINTER: Customer states the printer does not we
193	6/28/2007 3:09:08 PM	3	106835	6/19/2007	M5200	PRINTER: Customer states the printer does not we
	193 193 193 193	193 6/28/2007 3:09:07 PM 193 6/28/2007 3:09:08 PM 193 6/28/2007 3:09:08 PM 193 6/28/2007 3:09:08 PM	193 6/28/2007 3:09:07 PM 3 193 6/28/2007 3:09:08 PM 3 193 6/28/2007 3:09:08 PM 3 193 6/28/2007 3:09:08 PM 3	193 6/28/2007 3:09:07 PM 3 106545 193 6/28/2007 3:09:08 PM 3 105988 193 6/28/2007 3:09:08 PM 3 106030 193 6/28/2007 3:09:08 PM 3 106514	193 6/28/2007 3:09:07 PM 3 106545 6/19/2007 193 6/28/2007 3:09:08 PM 3 105988 6/19/2007 193 6/28/2007 3:09:08 PM 3 106030 6/19/2007 193 6/28/2007 3:09:08 PM 3 106514 6/19/2007 193 6/28/2007 3:09:08 PM 3 106514 6/19/2007	193 6/28/2007 3:09:07 PM 3 106545 6/19/2007 M5200 193 6/28/2007 3:09:08 PM 3 105988 6/19/2007 M5200 193 6/28/2007 3:09:08 PM 3 106030 6/19/2007 M5200 193 6/28/2007 3:09:08 PM 3 106514 6/19/2007 M5200 193 6/28/2007 3:09:08 PM 3 106514 6/19/2007 M5200

3. Does the tool facilitate secure and controlled access to Service Level Management information?

Comments: Yes. Access to CENTRE is provisioned by user ID and passwords at all screen field viewing/modifying and reporting levels.

> From: 'ITG CENTRE Introduction' Document Control # 180-v2

System Administrator attributes. The System Administrator attributes allow control to be exercised over the Users of "ITG CENTRE" by assigning permissions, passwords, and controlling the Users' ability to see and manipulate data within the system.

Organization Name Integration Technologies Group, Inc.

Consultant

Brand name of Product CENTRE (Common ENTerprise, REsource, system)

Version of Product to be

Title

Assessed Release 4.6.3 07/23/2007 **Client Contact Name and** Robert R. Vespe

Address 2745 Hartland Road, 2nd Floor

Falls Church, VA 22043

Date: 7/23/2007 Revised: 11/26/2013

Phone # 305 909-3591

Email Robert.Vespe@ITGOnline.com