ServiceNow Platform User Interface, Navigation, Worflows and Integration with Symantech PAM (Privilege Access Management)

Seema Kalwani

seemakalwani@gmail.com Security Engineer, IL, USA

Abstract

The article provides ServiceNow basic overview covering different workflow support, Mobile app features, instances, unified navigation capabilities. ServiceNow Implementation can establish a single system of record to consolidate organization's data. ServiceNow integration with PAM solution provides an audit trail for access of password from the PAM system. This is a short snippet of the user friendly UI of ServiceNow also depicting a glimpse of the back-end integration capabilities the tool encompasses.

Keywords: ITSM, ServiceNow, PAM, Workflow, instance, knowledge articles, forms, lists, Audit

I. INTRODUCTION TO SERVICENOW

"What is ServiceNow? It's a platform; a piece of technology that lets people automate workflow in a business. ServiceNow Information Technology Service Management (ITSM) resolves issues quickly and speeds up the pace of innovation and machine learning. Key benefits include:

- 1) Efficiently identify, track, and resolve incidents with AI assistance.
- 2) Operate on a single cloud-based platform with built-in best practices.
- 3) Consolidate IT services and tools, simplifying your business applications.

ServiceNow provides services to its users from a configurable web-based user interface, built on top of a flexible data schema (organized data). The Platform and the applications that run on it use a single system of records to consolidate your organization's business processes. The single data model integrates easily with other enterprise systems and supports a wide variety of plug-and-play applications. You can also build custom applications. With ServiceNow, one can choose from workflows:

- 1) Customer workflows
- 2) Industry workflows
- 3) Information Technology (IT) workflows
- 4) Finance and Supply Chain workflows
- 5) Employee workflows
- 6) Customer workflows

2



Fig. 1. Workflow screen taken from ServiceNow user guide.

II. SERVICENOW PLATFORMS

The ServiceNow Platform has a number of interfaces you can interact with.

A. The Next Expereince

The Next Experience Unified Navigation is the primary way to interact with applications, records, and data in a ServiceNow instance. Access lists, forms, updates, applications, links, history, workspaces, and landing pages.

W At Favorites	History Workspaces			C Hane 2	194, Bearth	0 •
So glad you'v Now you've got a sto navigate around and	ve landed here, Be raight shot to the moon wil I do your best work yet!	eth th now menu featur	es that make it easi	erto	2	
Review your work	1					<u> </u>
Assignments III				o	Critical Tasks	Newtasks
Las other estates	Created	State +	Priority +	Short description	4	27
PVC0000050	2022-03-01 18:05:40	In Progress	1 - Critical	Can't access Eachange server - is it down?		
INC000000	2020-07-25 14:41:46	in Progress	1 - Critical	Wireless access is down in my area	Open tasks by priorit	v
PAC0000055	2022-03-02-04:49:39	in Progress	1 - Critical	SAP Sales app is not accessible		
INC0000053	2022-03-01 20.48.46	In Progress	1 - Critical	The SAP HR application is not accessible		
NC000047	2022-03-01 20:53:47	In Progress	3 - Moderate	Issue with email		
TASK0020024	2022-03-24 08:00:04	Open	4 - Low	See the audit results below for the discrepancies that must be addressed		32
TA5H0020138	2022-05-27 06:00:03	Open	4 - Low	See the audit results below for the discrepancies that must be addressed		
TASK0020194	2022-05-30 06:00:03	Open	4 - Low	See the audit results below for the discrepancies that must be addressed		
TA5K0020120	2022-05-26 06:00:04	Open	4 - Lew	See the audit results below for the discrepancies that must be addressed	1 - Cristal 4 52%	0 - Mashrufe 6: Cow 1 25 27 645
View all						

Fig. 2. Next expereince screen taken from ServiceNow user guide

B. Now Mobile App

The Now Mobile app enables employees to submit incidents and requests, manage tasks, and access company resources from anywhere! Through the mobile app, a user can also:

- Upload images and attachments
- Sign documents
- Take surveys
- View and report issues
- View and complete tasks

C. ServiceNow Portal

The Service Portal provides a user-friendly self-service experience by providing access to specific features using widgets. Service Portal is a great way for external (and existing, legacy) customers to engage with the

Platform. When accessing the portal via web browser, type: https//<instance-name-here>.servicenow.com/sp. Users can:

• Search for articles, catalog items, and records

- Submit requests
- Browse the corporate news feed, and more!

To return back to the Platform view from the Service Portal, remove the "/sp" from your browser URL.

servicenow				a WGat Taus 🅘 Belli Arg
	,	How can we help?		
	How can we help?		Q	
	Request Something trease the satisfy the service, and terms you read	Knowledge Base Immus Md suach for articles, rate or submit Immus.	Get Help Contact togent to make a request, or report a preteren	
	Current Status	My Assessments and Surveys		
	No system is reporting an issue.	Short Columner Satisfaction Survey using Smiley Face MC2020811 - Due in 1V		
	Ware information .	Announcements		
	Top Rated Articles	No information available		
	Getting Minutel Mindows			
				0
				10

Fig. 3. ServiceNow portal screen taken from ServiceNow

D. Employee center

This dynamic portal improves productivity by reducing time and effort employees spend accessing information across all departments. The Employee Center experience provides a platform for communication, engagement, and content experiences for internal employees.

There are no additional licensing costs associated with the Employee Center. It is available to all customers! When accessing the center via web browser, type: https//<instance-name-here>.service-now.com/esc

To return back to the Platform view from the Employee Center, remove the "/esc" from your browser URL.

III. SERVICENOW INSTANCE

When you are accessing ServiceNow, you are accessing an instance of the Platform. An organization can have several instances (e.g., Development, Quality Assurance (QA), Test, and Production) and each instance is a single implementation of the ServiceNow Platform. Benefits of the instance are detailed in this section.

- A. An instance in the Platform is independent, changeable, and highly configurable.
- B. Data is protected

Data isn't mingled in the same database as another organization's data or other ServiceNow customers.



Fig. 4. Data protection using instance screen from ServiceNow user guide

C. Instance Upgrade

Upgrades are made on individual instances. Upgrading a Non-Production (Development or other) instance to complete testing before upgrading to Production is recommended.



Fig. 5. Instance upgrade screen taken from ServiceNow training portal

IV. NEXT EXPERIENCE UNIFIED NAVIGATION

The ServiceNow Next Experience Unified Navigation is the main way for users to interact with the applications and information in a ServiceNow instance. The Unified Navigation features offered through the Next Experience helps you to navigate and access components of ServiceNow. Notable Next Experience features include real-time form updates, user presence, and menus for easy access to all applications, modules, in addition to menus for your favorites, history, and workspaces. Next experience features and menus

A. All Menu

The All menu provides access to all applications and modules they contain. An application is a group of modules (or pages) that provide related information and functionality in an instance. For example, you'll work in the Incident application in this course, which contains modules for creating and viewing incidents. Selecting the All menu opens the Filter Navigator. Search for applications and modules using the Filter Navigator.



Fig. 6. All menu screen taken from ServiceNow training portal

5

B. Filter Navigator

The Filter Navigator is where you can quickly navigate to applications and modules. Simply begin by typing the application or module name (all, or part of, any module name). For example, if you were to search Service Catalog, you can start to type, "Service Cat" and all applications with the keyword will display.





C. Adding and customizing favorites

Selecting the star icon next to an application or module will create a Favorite menu item. Favorites can be re-ordered, edited, or removed from the menu by selecting the Edit (pencil) icon. To re-order a favorite item, select the pencil icon first to edit it, then click and drag the item (or select the icon with six dots) to whichever order one prefers! To change the name, color, and icon of a favorited item, select the item and change one or all three options! While editing a favorited item, don't forget to Save your edits (select Save edits) before exiting the Edit your favorites window.

Self-Service - Employee C II ×										
Re-order favorite	Icens									
		8	68	9	ଜ	٥	ρ		A	8
					-	88	٩	°Es		Ø
· Į	Ø	Û	6	Q	4	۲	*	\$	۲	A
Remove favorite		0	0	7	8	D	+	-	0	\odot
	0	1ª	Ð		ď	٥	٩	8€		



D. History Menu

Select the History menu, then select any recent activity to open the item in the Content Frame. By default, the maximum number of items displayed in the History tab is 30. The system creates history entries for many types of content including lists, records, and homepages. Some content types are not tracked in the history, such as UI pages and other non-standard interfaces.

6

Volume 11 Issue 2

E. Workspaces Menu

Agents, case managers, helpdesk professionals, and managers use workspaces to help find, research, and resolve issues. There are different workspaces for different environments. For example, Agents can use IT Service Management (ITSM) workspaces or Customer Service Management (CSM) workspaces depending on the request.



Fig. 9. Workspaces menu taken from ServiceNow training portal

V. COMMON USER INETRFACE

A. Lists

The list view displays records from a table in the Platform. With personalization and filtered lists, you can easily locate records and view activity associated with those records.

۹ 🗆	Number -	Problem statement	State	Resolution code	Assignment group	Assigned to	Configuration item	Related Incidents	
	PR80040002	Unable to connect to network server.	New		Network	(empty)	(empty)		0
	PRB0007601	Unable to send or receive emails.	Now		(empty)	Problem Coordinator A	Email		0
	PRB0001002	Unable to connect to Wifi	Assess		(empty)	Problem Coordinator B	WIRELESS		0
	PR80001001	Issue in connecting to internet using modern.	New		(empty)	Problem Coordinator B	Zoom V.92 USB Modem		0
	PR80001000	Unable to connect to the VPN	New		(empty)	Problem Coordinator B	WIRELESS		0
	PR80000109	USB port has stopped working	Closed	Risk Accepted	Problem Solving	Problem Coordinator A	"BETH-IBM		0
	PR80000106	The Webex application is unavailable to all employees	Root Cause Analysis		(empty)	Problem Manager	(empty)		0
	PR80000105	Email system is down again	Closed	Duplicate	(empty)	Problem Coordinator A	(empty)		0
	PR80000055	Email down	Closed	Fix Applied	Problem Solving	Problem Coordinator A	IronMail-SD-01		
	PR80000053	Slow switching	Closed	Fix Applied	(empity)	Problem Coordinator B	my8500-nbxs09		
	PR80000051	Exchange server outage	Closed	Fix Applied	(empty)	Problem Coordinator A	EXCH+SD-05		
	PR80000050	Switch occasionally drops connections	Resolved	Fix Applied	(empty)	Problem Coordinator A	my8500-mbxs08		
	PR80000032	Lawson DB seems to be running slowly	Root Cause Analysis		Problem Solving	Problem Coordinator B	lawson_db		
	PR80000029	Oracle database running slowly and dropping connections	Closed	Risk Accepted	(empty)	Problem Coordinator A	SAP ORAD1		
	PR80000014	My laptop is performing very badly	Resolved	Fix Applied	(empty)	Problem Coordinator A	Windows		
	PR80000012	Cannot disable wireless when plug into an Ethernet port	Assess		Problem Solving	Problem Coordinator A	Dell Wireless WLAN Utility		

Fig. 10. Lists menu taken from ServiceNow training portal

B. Forms

A form displays fields from one record, where users can view and edit the record data. The specific information depends on the type of record displayed. The form can also contain sections and Related Lists (records in tables that have a relationship to the current record). Easily access forms by using Global Search.

New	Assess	> *	oot Cause Analysis	Fix in Progress	Resolved		Closed
	ater PPD040002			Que.	New		
- Containing				-	2. Mada		
Pracrigary	() ()			imput	2.000000		
Can	gory recovers			Urgency	2 Medium		
Subcate	gory - None -			Priarity	3 - Moderate		
Se	rvice IT Services		X O	Assignment group	Network		0
Service off	ring	٩		Assigned to		9	
Configuration	ken	٩					
* Problem state	went Unable to connect to re	etwork server.					Q
Descri	tion The department netwo	rk server is down and we c	annot access stored files th	at are critical to our daily tasks.			
			Relate	(Search Results)			
Rotes Analysis Information R	nolution Information Other	Information					

Fig. 11. Forms menu taken from ServiceNow training portal

C. Dashboards

A dashboard is a custom arrangement of widgets and enables you to display multiple performance analytics and reporting on a single screen. If you have access to the dashboard, you can share it with multiple users. Navigate to Self Service > Dashboards or All > Platform Analytics > Library > Dashboards to view the different dashboards in your instance.



Fig. 12. Picture depicting the dashboard view from ServiceNow training portal

D. Knowledge Articles

Knowledge articles are uploaded to the Platform in specific categories to help platform users receive information or help about their job role or function. Articles live in Knowledge Bases (groups of articles set up by System Administrators). You may request a Knowledge Base by navigating to All > Self-Service > Service Catalog. Then, select Can We Help You? Finally, select Request Knowledge Base.

NOW All Favorites History	= Knowledge Homepage 🏚
▲ If × Q, Seech (ninimum 3 cherach)	ni de la companya de
Categories Tags	Email Set by Lat opdated ~
Q, Filter Calegoree	tý Mhat is Spant?
Appleation	Authored by Pan Kathering = 10 Week = Last updated Imm sign + Refres 作会な会社 Weak is Spant Spant Backersamp beccma a policies in the Manaeux Weak avery bisment user receives scores spans, email addresses podded to web sites or in revengences and chat
Devices	spens attract the revel span. "Definitions The laws: "span" is interval stang Knowledge Taxes: (1) Costange: Taxel
Outcok	What are planning scame and fuce can I assolition 1 Advanced by the relations + 0 all uses i balanced after same + Ratios that that the same + Ratios that the same + Ratio
. 11	Proteing explained Proteing Explained Printing scame are typically feacifier event reassages appearing to come from legitimate enterprises (e.g., your company, your Internet associate
Operating Systems	precessing your haved, these messages usually there put to a specific web Knowledge Baser [] Campory: Email
- Supplers	C Benefit from Money Andread or for Money Andread or for Money (with All and or for an All and and a strain for Money press). The shall a result to put Dente Hense Mone 2 put pupper in wreat the share of the share press). The share of the share to put Dente Hense Mone 2 put pupper in wreat memory (many 1 and 1
	¹⁰ Inters before all houses Automatic the starting of 17 hours - Last question (17 years - Range (25 ± 17 ± 10 ± 12 ± 10 ± 10 ± 10 ± 10 ± 10 ± 10 ±
	C Reads A trade Reports Address for the Sprace T. There is a provided in any pair. A Reg 2 8 5 0 2 Counce & Total Sprace T. There is surrounded and pairs. On the Counce manage, Chills Research Mar. It is Industry proj. Into Spraces, and the clinic Spraces, Chille Spr

Fig. 13. Picture depicting the knowledge artilce view from ServiceNow training portal

E. Service Catalog

Navigate to Self-Service > Service Catalog to access this application that provide customers with self-service opportunities. Customers can view and request catalog items (services and product offerings).

ervice Catal	Dg			Q, Search catalog
╳	Services Document production services. Create and produce high-quality, professional documents.		Hardware Order from a variety of hardware to meet your business needs, including phones, tablets and laptops.	Top Requests Request email alias Access
?	Can We Help You? Your IT gateway: Report issues and submit requests.		Software A range of software products available for installation on your corporate laptop or desktop computer.	Cisco jabber softphone Standard Laptop Pixel 4a
	Office Office services such as printing, supplies requisition and document shipping and delivery.		Mobiles Cell phones to meet your business needs.	Shopping Cart Empty
	Peripherals End user peripherals such as mobile phone cases, dongles, and cables]		

Fig. 14. Picture depicting the service catalog view from ServiceNow training portal

V. SERVICENOW INTEGRATION WITH PAM SOLUTIONS TO MEET AUDIT REGULATIONS

PAM (Privileged access management) is a vault, enterprises use to manage/rotate passwords of sensitive accounts. PAM can be easily integrated with your ServiceNow tenants so that interactions within PAM records can be added to the corresponding ServiceNow Incidents activities. Once the integration is properly configured, all one needs to do in PAM is reference the ServiceNow (SN) Incident number in the access request form to check-out the password. This ties the check-out of password with the purpose (the ticket) for which password was extracted.

It helps in satisfying audit regulations where the reasons for password extraction from PAM needs to be provided. An audit trail is always helpful. That way password extraction are not permissible without a valid ticket. PAM solutions can check for the status of the ticket in ServiceNow to be a valid status before letting the user access the password. This prevents users to get passwords when there is no valid ticket in ServiceNow.

A. Ability to write to ServiceNow

ServiceNow allows PAM solutions to write comments in the incident ticket after validation, approval and access of the password.

B. Check-out in PAM

The below screen shows user has logged on to a PAM solution and making a request to check-out the password. The user is using the ServiceNow incident number in the request form which is the purpose for requesting the password.

Reason 9									
Rebuilding inde	Rebuilding indexes as required in SN# INC0010009								
Requested Mi	nutes 😧								
45									
Requested Fro	om 😧								
2019-04-30		10		13					
Requested To 😧									
2019-05-01		10	-	13					
Workflow Templa	te								
IT Dept Connec	t Approval	(after hour	s)						
Checkout Required 9									
Cancel					Request				

Fig. 15. Picture depicting the password check-out request screen from imprevata site.

C. PAM updates in ServiceNow

As the user input the ticket number in PAM and there is an integration in place between PAM and ServiceNow, PAM starts to send updates of the request to access password and updating the incident ticket.

< Incident INC0010009		🖋 🔨 🛱 👓 Follow 👻 Update Reso	olve Delete 🛧 🗸
Notes Related Record	s Resolution Information		
Watch list	â 2	Work notes list 🔒 🔮	
Work notes	Work motes		Ę
		Additional comments (Customer visible) Post	j
Activities: 7	System Administrator PAM Comment: Request completed	Additional comments + 2019-04-30 08:06:30	Ţ
	System Administrator Resolution code Closed Bitsolved by Caller Resolution note Closed By Caller Incident state Closed was In Progress	Field Changes + 2019-04-30 08:06:30	
	System Administrator PAM Comment: Request approved	Additional comments + 2019-04-30 07:20:07	
	System Administrator PAM Comment: User chrisk approved request	Additional comments + 2019-04-30 07:20:06	
	System Administrator PAM Comment: User john requested access: Rebuilding indexes as required	Additional comments + 2019-04-30 07:16:14 ed in SN# INCC010009	

Fig. 16. Picture depicting the ServiceNow screen with inputs from PAM from imprevata site.

Conclusion: ServiceNow has great features for an organization's information technology service management (ITSM). ServiceNow Platform and the applications that run on it use a single system of records to consolidate organization's business processes. The single data model integrates easily with other enterprise systems and supports a wide variety of plug-and-play applications. ServiceNow is user friendly in terms of UI to use at the same time has great back-end features to integrate with PAM solutions, workday, upstream/downstream applications and more to facilitate audit requirements and cater to enterprise needs.

Volume 11 Issue 2

REFERENCES

- [1] ServiceNow, "ServiceNow Basics", https://developer.servicenow.com/dev.do#!/learn/learningplans/washingtondc/new_to_servicenow/app_store_learnv2_buildmyfirstapp_washingtondc_servicenow _basics_objectives (accessed Feb 21 2025)
- [2] ServiceNow, "ServiceNow Basics User Training", https://nowlearning.servicenow.com/lxp/en/pages/learningcourse?id=learning_course&course_id=92e0b5fb97d742506eedb30e6253afd0&child_id=1ff0f1b3c39f0 a100b9cd0af05013171&spa=1 (accessed Feb 2025)
- [3] ServiceNow, "Leran ServiceNow?", <u>https://nowlearning.servicenow.com/lxp/en/pages/learning-course?id=learning_course&course_id=92e0b5fb97d742506eedb30e6253afd0&child_id=1ff0f1b3c39f0 a100b9cd0af05013171&spa=1, (accessed Feb 2025)</u>
- [4] Imprevata, "Integration with ServiceNow", https://help.xtontech.com/content/installation/integrations/servicenow.htm, Aug 2023
- [5] Seema Kalwani, Symantech PAM (Privileged Access Management) features enablement security audit compliance regulations, IJIRMPS Volume 13, Issue 1, January-February 2025.