

INTRODUCTION

The course acts as a comprehensive reference guide for ServiceNow administration competency, with the objective of equipping learners with all the key competencies expected to pass the ServiceNow Admin examination and subsequently ace job interviews. Emphasis is placed on practical knowledge of the functionality and features in ServiceNow.

Key Learning Objectives:

Understand the general features of ServiceNow.

Learn to set up and customize the platform. Get hands-on practice with activities, such as incident management and business process automation.

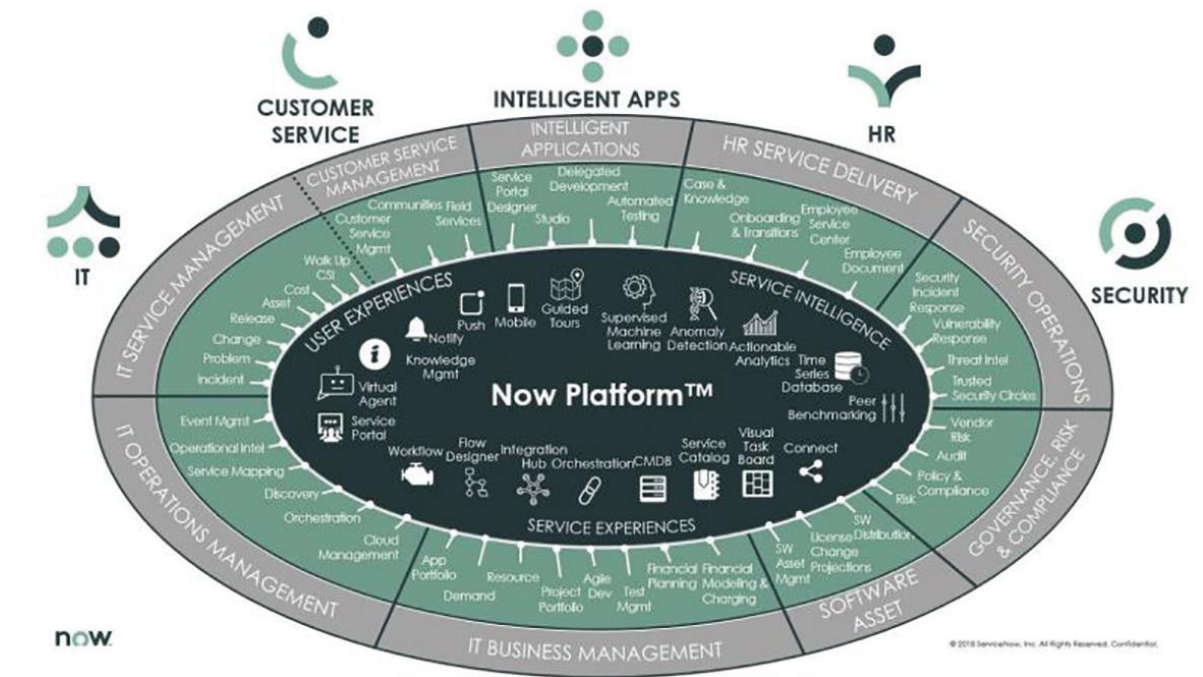
Platform Overview and Architecture

ServiceNow is a cloud-based, multi-instance architecture, which is designed to enable several business activities, including IT services and processes of various types. It is flexible; hence, easy extension and customization are possible.

Key Features:

Multi-instance Architecture: Each customer functions within a distinct and segregated environment, thereby safeguarding data privacy and enhancing security.

High Availability: The system is designed to minimize total interruptions through its integrated redundancy mechanisms. The relational database schema in the system facilitates the integration of additional tables and fields quite easily whenever required.



Branding and User Interface

ServiceNow offers three primary platforms for user engagement:

Native UI: Web-based interface that provides access to all functionalities of the platform.

Mobile applications: Easy to access on iOS and Android platforms, with a simple interface to perform daily chores on the go.

The Service Portal: The website developed and designed to make requesting services and accessing information easy even for non-technical persons.



Lists and Filters

In the ServiceNow platform, lists provide a means for users to view and interact with data from a host of tables, which include incidents, changes, and assets.

Lists themselves organize records into tabular format to achieve quick access, sorting, and filtering of the most pertinent information. A filter is a crucial tool that assists users in defining what data should be shown in a list by specifying various conditions. For example, a user might filter an incident list so that it displays only high-priority, open incidents assigned to their team.

Such filters can be saved and reapplied, thereby streamlining a user's regular activities. ServiceNow also allows users to create complex, multi-level filters that further refine data using multiple AND/OR combinations. List views can also be customized for each user to enable display of only those fields that are most relevant to the user's job.

Additionally, ServiceNow allows for grouping, list editing, and the ability to export, further making list management a valuable asset for administrators and end-users alike.

The image shows a screenshot of the ServiceNow user interface for filtering incidents. At the top, there's a header bar with a hamburger menu icon, the text 'Incidents (All)', a blue 'New' button, a search input field containing 'for text', and buttons for 'Grid' and 'Split'. Below the header, there's a filter bar with a funnel icon, the text 'All', and buttons for 'Load Filter', 'Save Filter', 'Sort Filter', 'Clear All', and a blue 'Run' button. The main area shows a filter rule: 'All of these conditions must be met'. The first condition is 'Active' (selected from a dropdown) 'is' (selected from a dropdown) 'true' (selected from a dropdown). To the right of the condition are buttons for 'OR' and 'AND'. Below this, there's an 'or' section with a 'New Criteria' button.

Forms

Forms in ServiceNow are the primary interface that users interact with to access specific records. Each form is associated with a specific table, such as incident, change, or request, and provides fields to input or edit data. Basic forms used for simple data entry have an easy, straightforward layout that includes fields like short description, status, and priority.

Complex forms can encompass associated lists, tabs, or sections, facilitating user interaction with interconnected records or supplementary data, including activity logs or audit trails. These forms exhibit dynamism; fields may be displayed or concealed conditionally, contingent upon user roles, the data contained within the form, or established business rules.

For example, if an incident is set to a critical priority, additional fields like "Impact" or "Root Cause" may appear, allowing the user to capture specific information. With integrated forms, more advanced functionality may be possible, such as pulling data from another application or custom-built widgets to extend the user experience. ServiceNow forms can also be customized with client-side scripts to improve the user experience by validating data, populating fields automatically, or starting a background process.

Incident INC0009009

Number: INC0009009

* Caller: David Miller

Category: Inquiry / Help

Subcategory: -- None --

Service:

Service offering:

Configuration item:

* Short description: Unable to access the shared folder.

Channel: -- None --

State: New

Impact: 3 - Low

Urgency: 2 - Medium

Priority: 4 - Low

Assignment group:

Assigned to:

Buttons: Update, Resolve, Delete

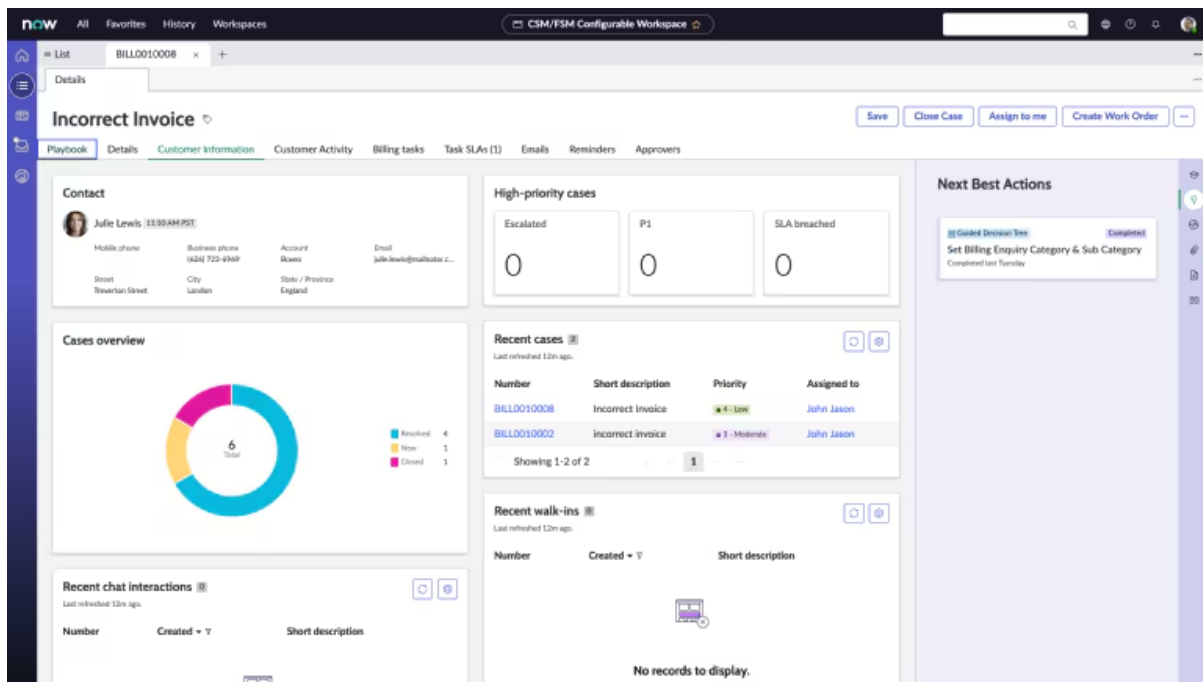
Task Management

Task management in ServiceNow is a core component of many business processes, providing a comprehensive system for tracking and managing work. A task represents a record that captures work to be performed and may be made available in modules for incident management, change management, and request fulfilment.

These tasks are assigned to individuals or teams for better workload distribution and teamwork. A lifecycle for each task, starting with "Open", then "In Progress", and finally "Closed" when the work is complete.

ServiceNow, therefore, provides mechanisms like Assignment Rules, which automatically assign tasks to the right team or person based on location, expertise, or availability. Besides, tasks may be escalated manually if they are of high priority or need immediate attention. It also introduces a better way of monitoring tasks, including visual means such as SLAs and dashboards, where it is easy to monitor the progress and keep the execution within the prescribed time.

Also, tasks can be linked to other documentation such as issues, changes, or knowledge articles to ensure that activities that are associated will be done in a controlled way.



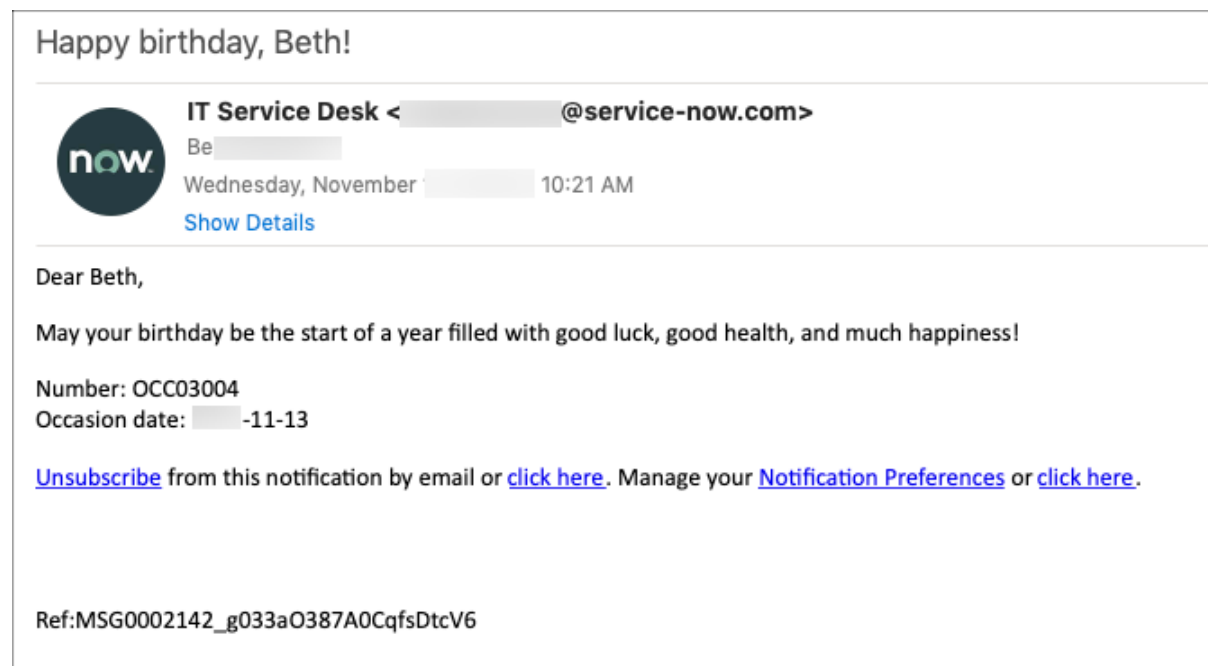
Notifications

Notifications within ServiceNow are crucial to ascertaining that users are constantly updated on changes, modifications, and events that take place. These notifications take place through several means, including email, in-app notifications, or even text messaging, depending on the gravity of the information being communicated or the user's preference.

Email notifications are the default forms of communication and can be automatically triggered upon certain activities, for instance, when a task is assigned, changed, or completed. Most of these emails will include action details, links to the respective record, and an interactive button that makes it easy for respondents or actors to reply or act upon in their email window.

In-app notifications in ServiceNow display in real time to users who have accessed the application. These can be set up to appear in the Notification pane or as pop-up messages. Critical updates or SMS notifications are great for road employees so they can receive critical alerts even when out of their working station.

Similarly, notifications can be customized through templates and through rules that define what events lead to notifications and who gets those notifications. ServiceNow allows each user to tailor their notification preferences by picking the types and methods of alerts they would like to receive.



Knowledge Management

Knowledge management within ServiceNow is the systematic method of capturing, organizing, and sharing knowledge within an organization.

Knowledge articles are the key building blocks that can be step-by-step guides, frequently asked questions, trouble-shooting documents, and solutions to common issues. These are housed in Knowledge Bases, organized repositories of information that users can search.

Knowledge bases can be personalized for IT professionals, human resources people, or end users. Articles can be accessed in the knowledge base via keyword searches, categorized sections, or via tags, enabling quick access to needed information for end users.

Knowledge portals provide an intuitive interface for finding knowledge articles and are often combined with the Service Portal for easy access to

enable self-service. Versioning and approval workflows are natively supported in ServiceNow, so information is kept up-to-date, having been vetted before publishing. Additionally, feedback mechanisms- Rating and Commenting-are present for articles so that over time, quality and relevance improve.

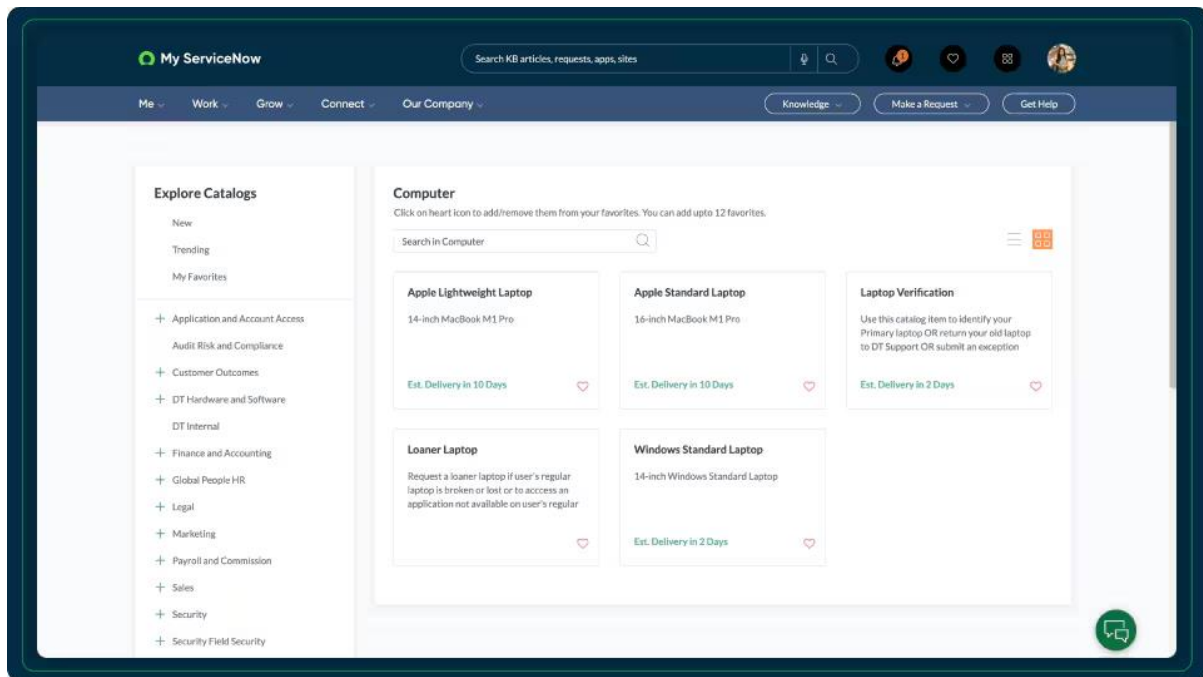


Service Catalog

In ServiceNow, the Service Catalog provides a centralized site that users can use to request services, products, or information from any other entity within the organization. Items in the catalog can range from IT services- such as requesting a new laptop or installation of software-to HR services, such as requesting time off or updating personal information. Service items can be customized with associated workflows, ensuring that each request is properly approved, validated, and fulfilled before completion.

The Service Catalog allows grouping of items- for example, onboarding a new employee can incorporate a laptop, software, and access requests into one to make it easier for the end user. Catalog item-related forms and fields can be customized to capture the required information, such as justification or attachments.

Catalog requests can be tracked in real time, enabling users to observe and receive notifications of their request status. Also, administrators are able to categorize and organize the catalog for easier perusal, and thus simplify the process for users looking for the services they need.



Tables and Fields

In ServiceNow, tables are the basic entities that store data, while fields define the structure of that data. Each table is designed to process a certain record type-specific incidents, changes, and/or users.

There is a set of predefined tables within the system-the so-called base tables, such as incident, problem, or user tables-but administrators may create custom tables to cope with specific business requirements. The fields are the data elements within these tables.

Each is of a specific type, such as string, integer, and date. Examples of fields on an incident table include "Incident Number", "Short Description", "Priority", and "Assigned To." ServiceNow has a large variety of field types.

Some examples include reference fields, which link to other tables; choice fields, which appear as dropdowns; and calculated fields, whose values derive from other fields.

Associations like one-to-many and many-to-many relationships, which may exist among tables, allow for thorough data modelling and provide greater functionality of the platform. For example, one user can be associated with multiple incidents, while one incident can be assigned to multiple tasks.

Columns	Controls	Application Access
<div><div>Table Columns</div><div>New</div><div>Search for text Search</div></div> <div>1 to 6 of 6</div>		
Dictionary Entries		
	<div>Column label</div>	<div>Type</div>
	<div>Reference</div>	<div>Max length</div>
	<div>Default value</div>	<div>Display</div>
	<div>Created by</div>	<div>String</div>
	<div>Created</div>	<div>Date/Time</div>
	<div>Sys ID</div>	<div>Sys ID (GUID)</div>
	<div>Updates</div>	<div>Integer</div>
	<div>Updated by</div>	<div>String</div>
	<div>Updated</div>	<div>Date/Time</div>
	<div>Insert a new row...</div>	

Access Control Lists (ACLs)

Access Control Lists (ACLs) serve as security mechanisms that stipulate the permissions of users regarding the viewing, creation, modification, or deletion of records within ServiceNow.

Individual records or fields may be governed by distinct ACL regulations, thereby guaranteeing that confidential information is accessible exclusively to users with proper authorization.

The concept of roles is integral to ACLs, as each user is allocated specific roles that determine their capabilities and limitations on the platform. For instance, Records can only be deleted by users of administrative role type,

while ITIL users can update records on incidents but are not allowed to make any changes in the core configurations.

ACLs can be condition-based according to a user's role, department, or group membership. Scripted ACLs allow for finer-grained control by the developer and can restrict access.

The screenshot shows the ServiceNow 'Business Details' form for record BUS0001004. The form is divided into several sections:

- Header:** Includes a back arrow, a menu icon, the title 'Business Details BUS0001004', and action buttons for 'Update', 'Delete', and a refresh icon.
- Number:** A text field containing 'BUS0001004'.
- Location:** A text field.
- Company Name:** A text field containing 'ACME Americas'.
- Company Off. Email:** A text field containing 'acmeafricas@xyztest.com'.
- Company Off. Phone:** A text field containing '1234567890'.
- Contact Person:** A text field containing 'Janice Twiet'.
- Contact Person Phone:** A text field containing '9876543210'.
- Contact Person Email:** A text field containing 'janicetweet@xyztest.com'.

Below the 'Number' field, there is a list of ACLs (Access Control Lists) for the record:

- record/u_business_details.u_number/read = true (0:00:00.000)
- record/u_business_details.u_number/read = true (0:00:00.001)
- record/u_business_details.u_number/read = true (0:00:00.001)
- record/u_business_details.u_number/read = true (0:00:00.001)
- record/u_business_details.u_number/write = true (0:00:00.000)

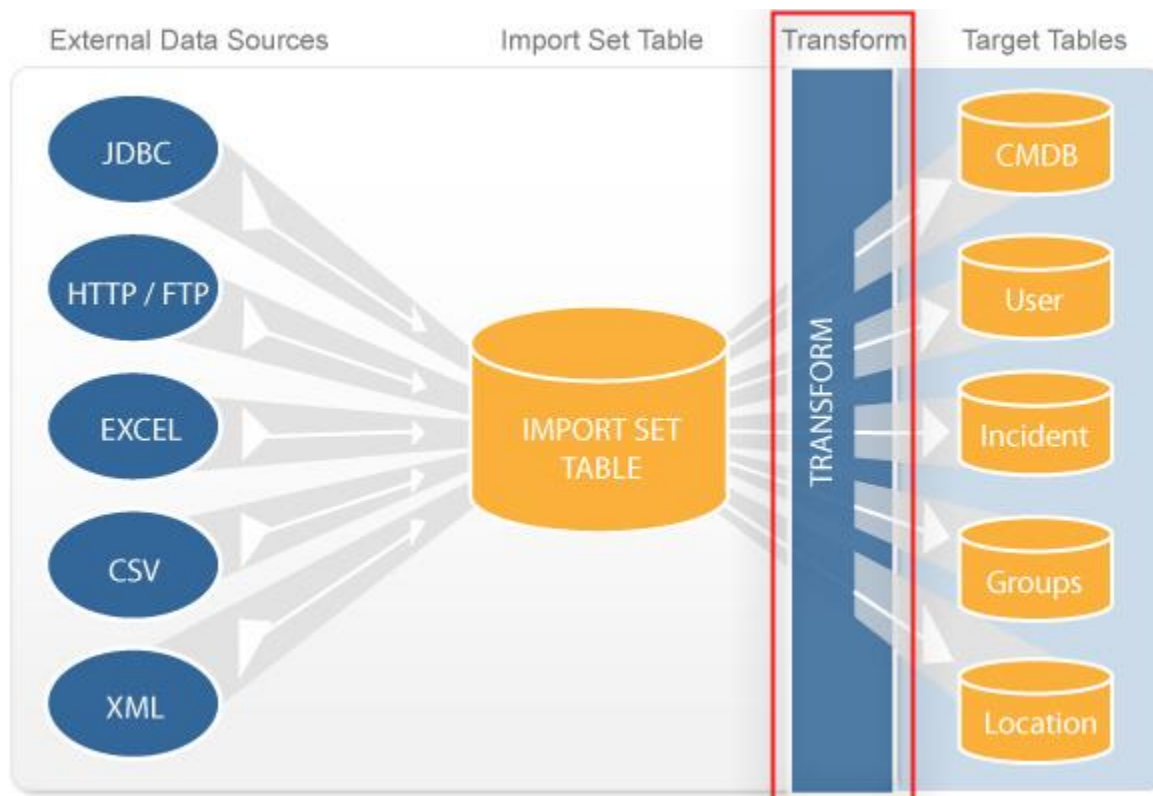
At the bottom of the form, there are 'Update' and 'Delete' buttons.

Data Import

Data import in ServiceNow allows administrators to import data from other systems into the application. Importation of information is a key function for data migration, record synchronization, and updating of existing information.

Data sources could include but are not limited to CSV, Excel, and external databases accessed using JDBC. The Transform Map facility allows the mapping of data coming from a source file into the appropriate tables and fields in ServiceNow so that the correct data is placed or updated.

Also, administrators are allowed to schedule periodic imports to ensure that the information received from other systems is up-to-date on a regular, consistent basis. The platform also provides error logging and previewing for administrators to review the data before importing into the system; this will reduce the occurrence of incorrect data imports.



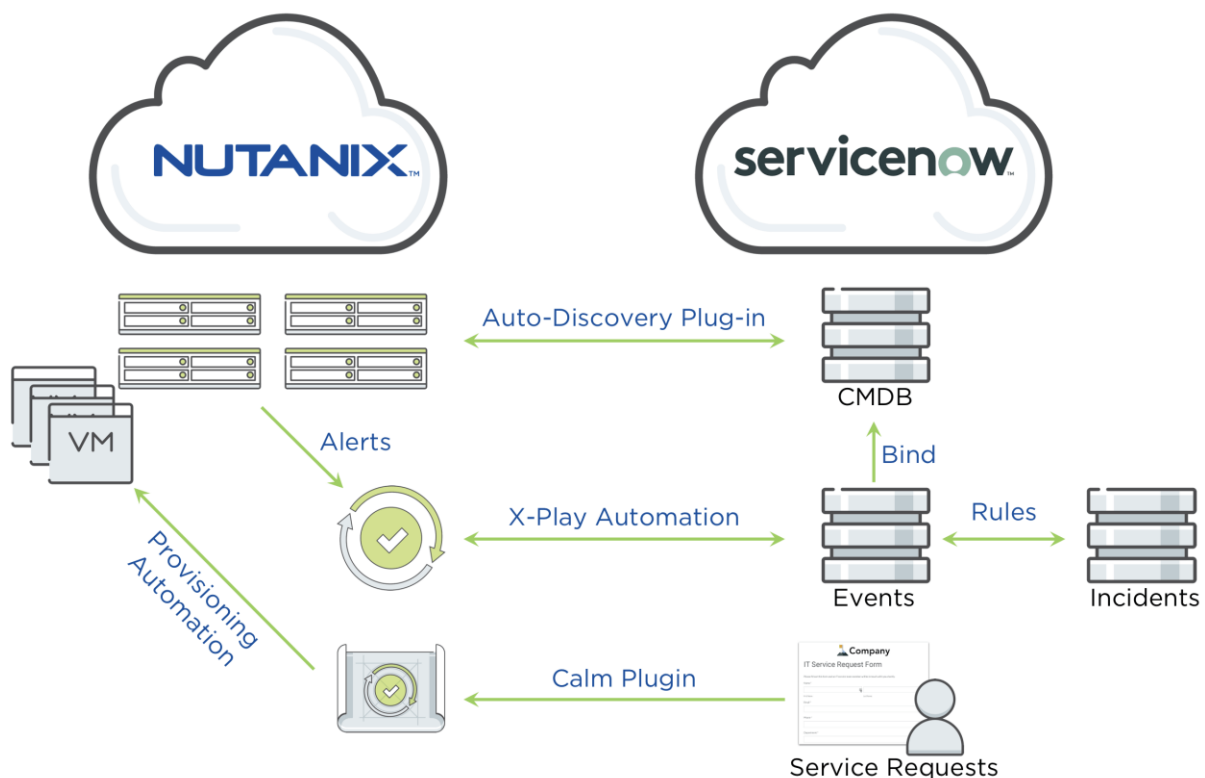
CMDB Integration

The Configuration Management Database (CMDB) in ServiceNow is a centralized repository that stores information about the IT assets and configuration items (CIs) in an organization.

CMDB integration enables organizations to synchronize and manage IT infrastructure data between ServiceNow and other systems. It helps track hardware, software, networks, and their relationships, providing a real-time, comprehensive view of the IT environment.

Discovery tools within ServiceNow can automatically scan the network to identify and update the CMDB with current information on assets. The CMDB is essential for change and incident management as it allows teams to assess the impact of potential changes or incidents on various CIs.

Effective CMDB integration enhances decision-making, ensuring accurate data is available for managing and resolving issues.



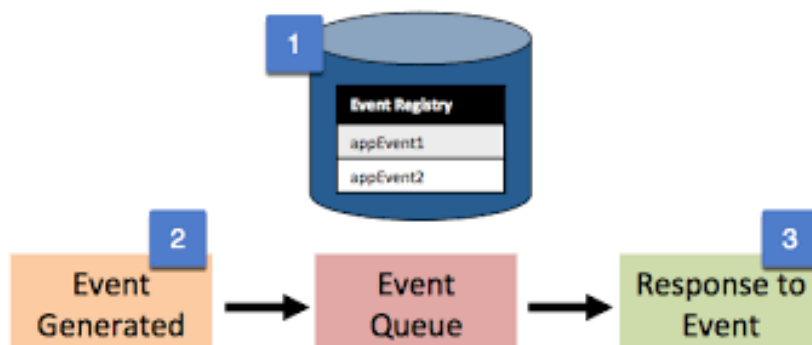
Events

In ServiceNow, events represent automated notifications generated by the system that indicate a notable occurrence or alteration in the state within the platform, for instance, the creation, modification, or deletion of a record. Such events are activated by user interactions, workflows, or predetermined processes.

The creation of events can be facilitated through Business Rules or Scripts, enabling administrators to establish particular triggers based on defined conditions. Events are further actions that may send email notifications, update records, or launch workflows, among other things.

For example, an event might be created when a high-priority incident is created, sending an alert to the on-call team. In this way, event

management becomes an important part of business process automation, and users receive notification or even undertake certain steps in response to key system changes.



Update Sets

Update sets in ServiceNow are the mechanisms for organizing changes across instances, such as moving from development and testing into production environments.

Changes can include configurations like workflows, business rules, UI customizations, or new tables and fields.

Update sets enable the administrator to collate these changes into a coherent, exportable unit that streamlines and systematizes the process of customization migration. When an update set is created, it can then be deployed to the target instance, ensuring that all related changes go live at the same time.

Versioning of update sets is tracked within ServiceNow, allowing administrators to revert changes of an update set when necessary.

However, especially with large implementations, any dependencies between multiple update sets should be managed properly in order to avoid issues while applying updates.

Platform Statistics

ServiceNow contains native tools to measure the performance and operational health of the platform.

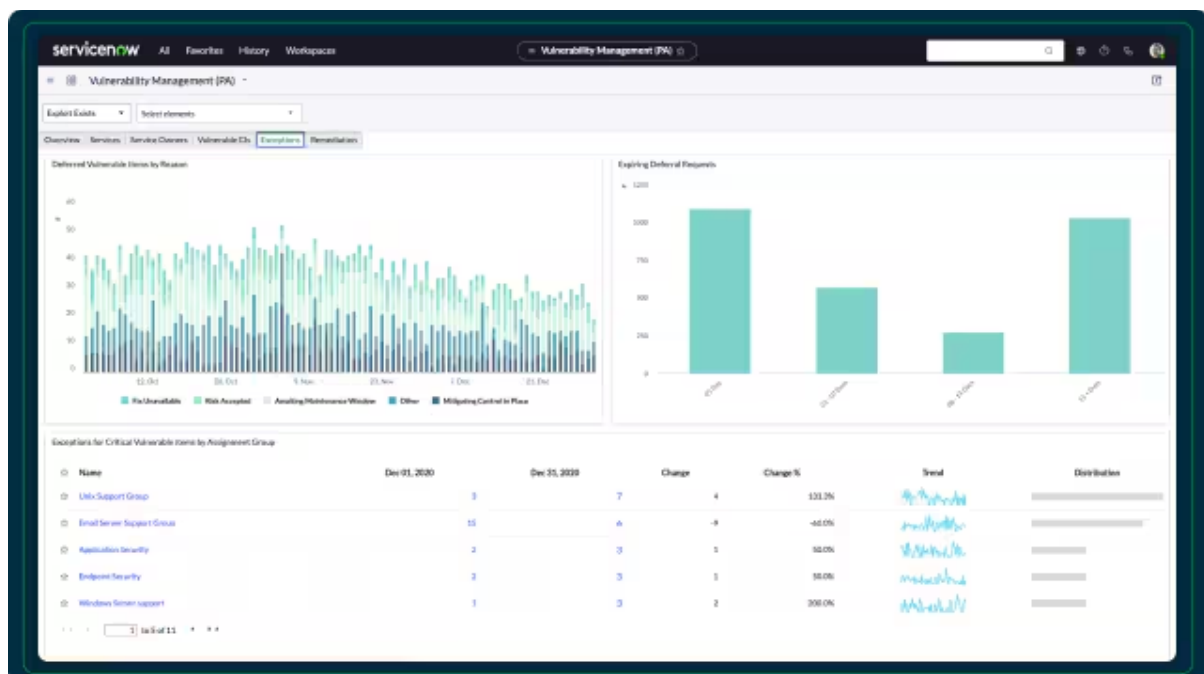
Platform metrics, such as system availability, response times, and transaction volumes provide critical insight into how an instance is performing under different workload conditions.

Real-time information on memory usage, database queries, and network throughput allows administrators to quickly identify potential bottlenecks or issues.

Performance Analytics is an advanced capability in ServiceNow that enables organizations to track KPIs and generate reports on system effectiveness and user satisfaction over time.

Dashboards visualize the performance of the platform, allowing administrators and IT to observe trends and proactively take action to improve the system.

Such statistics ensure that the platform constantly meets the business needs and is user-friendly.



Scripting in ServiceNow

In ServiceNow, scripting is a powerful tool to customize and automate almost anything. The most important programming language used in the platform is JavaScript, first and foremost in client-side browser and server-side backend environments.

By utilizing scripting, business rules, client scripts, and UI actions can be developed by the users, hence introducing complicated functionality or enforcing the business logics throughout the platform.

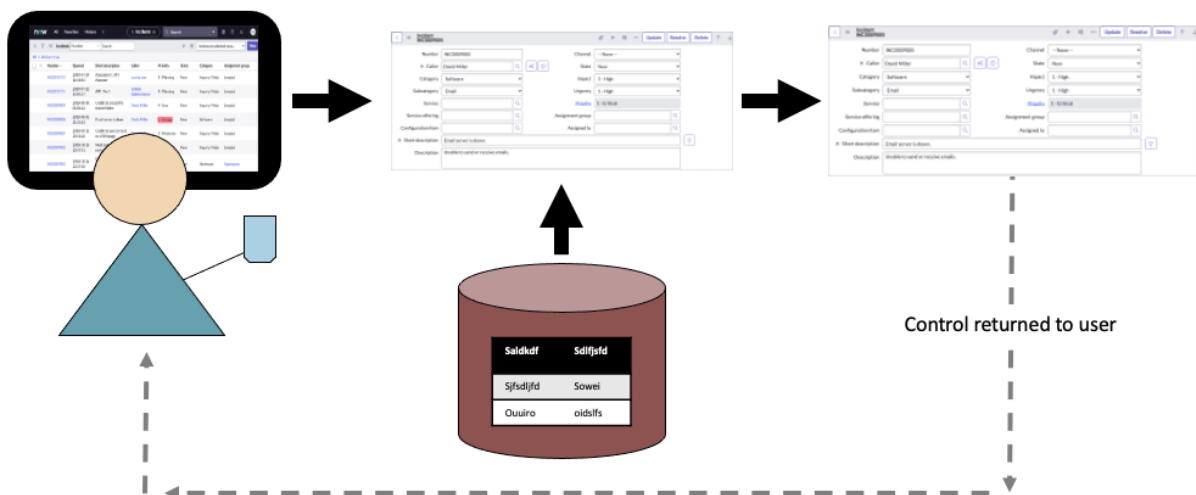
For example, business rules can be scripted such that when the value of one field changes, another auto-populates, or an approval process triggers to complete. The Glide APIs allow users to leverage various functions to simplify scripting by providing easy access to the systems records, user data, and systems functionality.

Scripting allows flexibility in moulding the platform to specific business needs, thus making it more adaptable for varied use scenarios.

User selects record to view

Form loads and is populated with record data

onLoad() Client Scripts execute

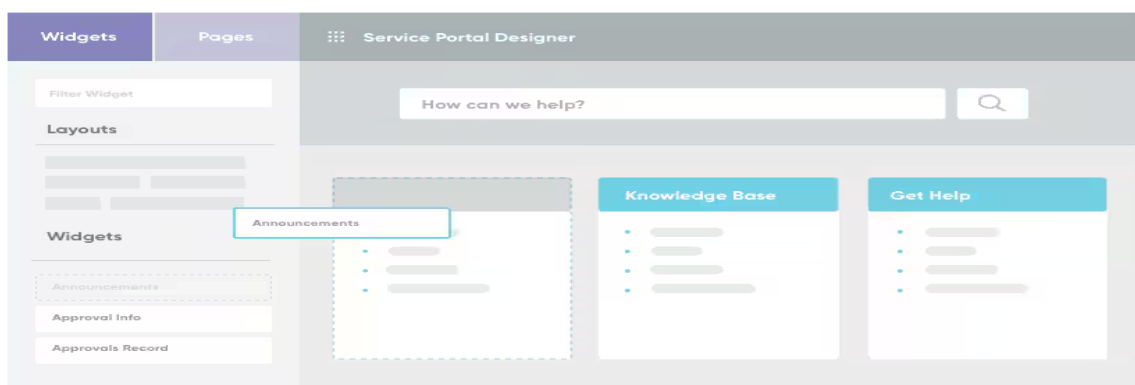


Custom Application Development

Custom application development in ServiceNow enables organizations to build tailored applications to address unique business needs not covered by out-of-the-box functionalities.

Using App Engine and Flow Designer, users can create applications without needing extensive coding knowledge. For more complex scenarios, developers can create custom workflows, forms, and integrations using JavaScript and ServiceNow APIs.

The Studio in ServiceNow is a development ecosystem for managing and deploying custom tables, scripts, and user interface components.



Examples of custom applications include everything from custom incident forms to entirely new modules for facilitating business processes outside of Information Technology, such as Human Resources services or customer support.

These built applications can be published for internal use, shared to another instance of ServiceNow, and even submitted to the ServiceNow Store for wider distribution.

Detailed Overview

The ServiceNow Administration course provides a deep overview of the platform: from basic features and configurations to advanced level customization and automation techniques.

The participants will master the very structure of ServiceNow-architecture, user interfaces, and task management processes-along with hands-on experience with data import, integration with CMDB, and scripting.

Additionally, the course delves into practical aspects such as notification, knowledge management, and creation of custom applications. Ultimately, students will be prepared for the ServiceNow Admin exam and be proficient in solving real-life scenarios, hence being prepared for the certification and thus be fully capable of administering and enhancing ServiceNow environments.