

What is ServiceNow

What is ServiceNow?

ServiceNow is a software company based in Santa Clara, California, founded by Fred Luddy in 2003, to solve problems large enterprises face with traditional IT delivery by providing a robust, simple to use, cloud-based environment in which businesspeople can solve the business problems themselves.

- ServiceNowSimple working definition



Who is ServiceNow?

Employees

- ServiceNow employs over 17,000 people across the globe
- In 2022, ServiceNow was recognized as one of Glassdoor's Best Places to Work in both the United States and the UK.
- In 2021, ServiceNow was one of FORTUNE magazine's World's Most Admired Companies, Future 50 companies, and 100 Best Companies to Work For



When is ServiceNow?

- 2003: founds the company as GlideSoft

- 2006: Company name changed from GlideSoft to **servicenow**.

- 2012: becomes a publicly traded company

- 2018: ServiceNow #1 on most innovative companies

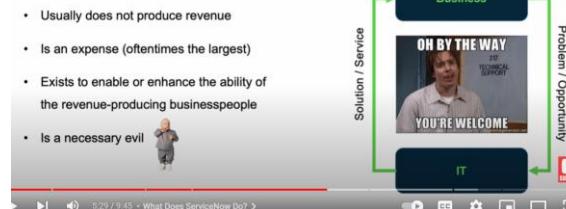
- 2019: named CEO of ServiceNow



Why ServiceNow?

Information Technology (IT)

- Usually does not produce revenue
- Is an expense (oftentimes the largest)
- Exists to enable or enhance the ability of the revenue-producing businesspeople
- Is a necessary evil



Why ServiceNow?

- What if IT services were designed and delivered in a way that allowed businesspeople to solve business problems themselves?
- Is it possible to build a platform where interacting with IT services is intuitive, well-delivered, and enjoyable to work with?



Overview:

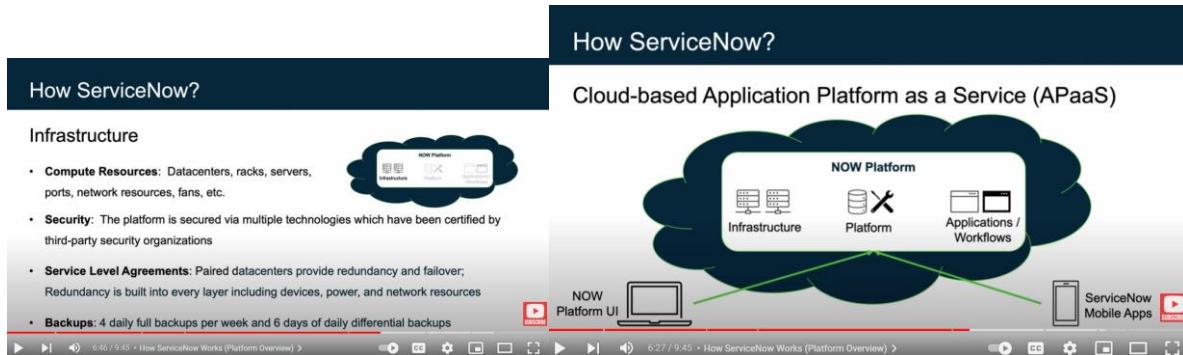
ServiceNow is a cloud-based software company founded in 2003 by Fred Luddy.

It aims to improve traditional IT delivery for large enterprises, enabling business users to solve their own problems through a user-friendly platform.

Purpose:

ServiceNow's mission is to simplify IT processes, enhancing user experience and efficiency.

It was created to address the frustrations business professionals faced with IT inefficiencies, allowing for more effective and self-sufficient IT management.



Platform and Infrastructure:

ServiceNow offers a comprehensive cloud-based platform known as the NOW Platform.

It provides a unified data model, allowing users to create custom workflows and applications tailored to their specific business needs.

The platform includes robust infrastructure features like **four daily backups** and **six days of differential backups** to ensure data security and integrity.

It categorizes its applications into **four main workflow types**:

- **IT Workflows**
- **Employee Workflows**
- **Customer Workflows**
- **Creator Workflows**

Global Presence and Impact:

ServiceNow has a global presence with offices and data centers across multiple continents, ensuring extensive support and redundancy.

The company serves notable clients like **AT&T, Coca Cola, and Microsoft**.

Workplace Culture and Recognition:

ServiceNow is recognized for its strong workplace culture, having been named one of **Glassdoor's Best Places to Work** and **FORTUNE's Most Admired Companies**.

It employs over **17,000 people** and has received various accolades for its work environment.

Leadership and Growth:

CEO Bill McDermott, previously at SAP, has significantly influenced the company's management and market value.

ServiceNow went public in 2012 and was recognized as the **most innovative company by FORBES in 2018**.

Founder's Motivation:

Fred Luddy's motivation to establish ServiceNow was rooted in his experience with IT inefficiencies that often embarrassed businesspeople, leading him to create a more effective and intuitive IT solution.

Historical Background:

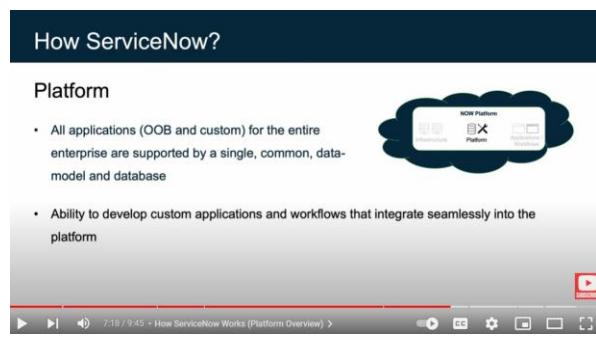
The journey began with the creation of GlideSoft in 2003, which eventually became ServiceNow in 2006.

ServiceNow's growth and public recognition have significantly boosted its reputation in the enterprise software market.

How ServiceNow?

Platform

- All applications (OOB and custom) for the entire enterprise are supported by a single, common, data-model and database
- Ability to develop custom applications and workflows that integrate seamlessly into the platform



Where ServiceNow?

- Headquarters:** Santa Clara, California
- Office Locations & Employees:** Across the globe including North America, Latin America, Europe, Middle-East, Africa, Asia Pacific, Japan
- Data Centers:**
 - Asia Pacific Japan:** Australia, Hong Kong, Japan, Singapore, India
 - Europe, Middle East, Africa:** Germany, Ireland, Netherlands, Switzerland, UK
 - North America:** Canada, USA
 - South America:** Brazil

How ServiceNow?

Applications / Workflows

ServiceNow comes with a robust suite of applications which are functionally categorized into 4 primary workflows:



- IT Workflows:** Service Management (24), Operations Management (13), Business Management (10), Asset Management (4), DevOps (4), Security Operations (8), Governance, Risk, and Compliance (13), Telecommunications Network, Performance Management (3)
- Employee Workflows:** HR Service Delivery (16), Workplace Service Delivery (10), Legal Service Delivery (10), Procurement Service Management (6), Safe Workplace Suite (1)
- Customer Workflows:** Customer Service Management (29), Field Service Management (11), Connected Operations (4), Financial Service Operations (25), Telecommunications Service Management (24)
- Creator Workflows:** App Engine (15), IntegrationHub (8)

ServiceNow Platform Overview

The Now Platform



The Now Platform is an **Application Platform as a Service (APaaS)**.

- ServiceNow is a **cloud-based**.
- ServiceNow provides and supports the **infrastructure** computer resources.
- ServiceNow provides a **platform** upon which you can **develop your own custom solutions**.
- ServiceNow provides a robust set of **applications** and **workflows** to support most common business processes.
- All applications (OOB and custom) for the **entire enterprise** are supported by a **single, common, data-model and database**.

Platform Architecture:

ServiceNow operates on a cloud-based, multi-instance architecture.

Multi-instance Architecture: Each customer has a separate instance, ensuring data is isolated and enhancing security.

Redundancy and Availability: The architecture includes failover capabilities, with paired data centers to ensure system reliability. Redundancy is built into every layer of the infrastructure.

Backup Solutions: The platform offers comprehensive data protection, including four weekly full backups and six days of differential backups.

Now Platform Architecture



When you purchase an instance, it is ServiceNow's responsibility to support the IT infrastructure and compute resources needed to enable and secure that instance.

- Enterprise Cloud
 - Most cloud services are built on a multi-tenant architecture in which your platform and data are co-mingled with other companies. ServiceNow is built on a **multi-instance architecture**. You have your own instance of the platform and database.
- Availability & Redundancy
 - All ServiceNow datacenters are paired with another datacenter to provide redundancy and failover. **Redundancy is built into every layer** including devices, power, and network resources.

Now Platform Architecture (2)



When you purchase an instance, it is ServiceNow's responsibility to support the IT infrastructure and compute resources needed to enable and secure that instance.

- Backups & Security
 - ServiceNow provides **4 weekly full data backups** and **6 days of daily differential backups**. The entire platform is secured using multiple technologies which have been certified by third-party security organizations.
- Domain Separation (multi-tenancy)
 - The ServiceNow platform provides the ability to separate data, processes, and administrative tasks on an instance into logical groupings called domains.
 - All users can potentially see records from the '**global domain**', but only users who belong to a domain can see domain-specific records.

Applications and Workflows:

ServiceNow's Applications: The platform categorizes its applications into four primary workflows:

- **IT Workflows:** Focus on IT service management, operations, and asset management.
- **Employee Workflows:** Enhance HR services, onboarding, and employee experience.
- **Customer Workflows:** Improve customer service, field service, and engagement.
- **Creator Workflows:** Empower users to create custom applications and automate processes.

Sub-Workflows: Each primary workflow is subdivided into more specialized sub-workflows to target specific business needs, such as IT service management or HR service delivery.

Applications and Workflows



ServiceNow comes with a robust suite of applications which are categorized (**functionally**) into 4 primary workflows:

- **IT Workflows:** 79 applications that support internal IT functions
- **Employee Workflows:** 43 applications targeted at the needs of employees
- **Customer Workflows:** 93 applications that support functions related to customers
- **Creator Workflows:** 23 applications designed to enable ServiceNow platform development and operations support

Lesson 2: ServiceNow Platform Overview

Applications and Workflows



IT Workflows	Employee Workflows	Customer Workflows	Creator Workflows
IT Service Management (24)	HR Service Delivery (16)	Customer Service Management (29)	App Engine (15)
IT Operations Management (13)	Workplace Service Delivery (10)	Field Service Management (11)	IntegrationHub (8)
IT Business Management (10)	Legal Service Delivery (10)	Connected Operations (4)	
IT Asset Management (4)	Procurement Service Management (6)	Financial Service Operations (25)	
DevOps (4)	Safe Workplace Suite (1)	Telecommunications Service Management (24)	
Security Operations (8)			
Governance, Risk, and Compliance (13)			
Telecommunications Network			
Performance Management (3)			

User Interfaces:

Now Platform UI: The main interface for accessing ServiceNow's functionalities, designed for ease of use and accessibility.

Mobile Applications: Tailored for specific tasks like onboarding, offering a streamlined experience for new hires.

Service Portal: A customizable, widget-based environment that allows different user groups to interact with the platform based on their specific needs.

Lesson 2: ServiceNow Platform Overview

Now Platform User-interfaces



ServiceNow provides 3 user-interfaces for interacting with the Now platform.

The **Now Platform UI** is the primary UI. It is best used on desktop and laptop computers and is accessed via a web-browser and the instance URL.



The **ServiceNow Mobile Apps** are best used on mobile devices and can be installed from the device's app store. The **ServiceNow Agent** app targets fulfilling requests. The **Now Mobile** app is built for the needs of employees. The **ServiceNow Onboarding** app targets the needs of new-hire employees.



The **Service Portal** is a user-friendly, self-service, widget-based portal accessed via a web-browser and special URL.



Role-Based Access and Authentication:

Role-Based Access: Access within ServiceNow is controlled through roles, which are assigned to users or groups. This ensures that users have the appropriate permissions based on their organizational roles.

- **Roles vs. Direct Permissions:** It's recommended to assign permissions via roles rather than directly to users for easier management and flexibility, especially when users change roles or responsibilities.

Domain Separation: ServiceNow uses domain separation to enhance security by segregating applications and administrative tasks into distinct domains, allowing tighter control over data access.

Lesson 2: ServiceNow Platform Overview

Role-based Access



Not every member of an organization needs access to all information all the time. ServiceNow uses role-based access to ensure a user can get the information they need, and no more. The primary components include:

- A **User** is an individual that has been given access to an instance. Users are usually assigned to 1 or more groups and can be granted multiple roles. A user with no roles assigned is called a self-service user. They can login and access actions like viewing the homepage, Service Catalog, articles, and surveys.
- A **Group** is a set of users who share a common purpose and need access to similar data. Multiple roles can be assigned to a single group.
- A **Role** is a collection of **permissions**. A role can be assigned to an individual user, a group of users, or another role. Multiple roles can be assigned to a single role. It's best to assign roles to a group rather than an individual user.

User Authentication: The initial security layer requires a username and password. ServiceNow supports multiple authentication methods including:

- **Local Database Authentication**
- **LDAP (Lightweight Directory Access Protocol)**
- **OAuth 2.0** for secure, token-based authentication

Lesson 2: ServiceNow Platform Overview

User Authentication



When a user attempts to login to an instance, ServiceNow validates their identity and enables access to functions and data based upon their related groups and roles. The platform can support several methods of user authentication including:

- | | |
|---------------------------------|-------------------------------|
| • Local database authentication | • OAuth 2.0 |
| • External Single Sign-on (SSO) | • Digest Token |
| • LDAP | • Multi-factor Authentication |

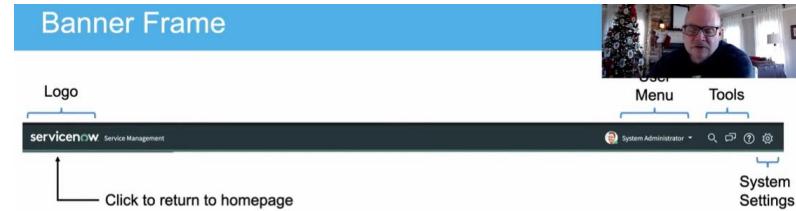
ServiceNow User Interface Overview

ServiceNow Platform User Interface:

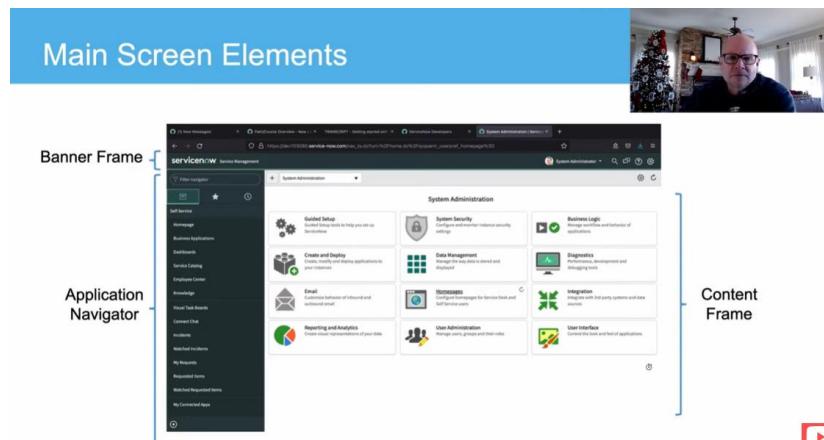
Web-Based Interface: The ServiceNow platform UI is web-based, designed to help users navigate and utilize the platform effectively.

Key UI Elements:

- **Banner Frame:** Located at the top, it contains the user menu, system settings, and global search.



- **Application Navigator:** The main navigation element on the left, providing access to various applications and modules.
- **Content Frame:** The central area where the selected application or module content is displayed.



Identifying Elements of the Interface:

Global Search: Allows users to search across the instance for records matching specific keywords, categorized for easy navigation.

Connect Chat: A built-in chat feature that enables real-time communication between users, enhancing collaboration.

Contextual Help: Provides user assistance based on the current location within the application, offering relevant guides and articles.

Banner Frame: User Menu

The User Menu provides the following tools:

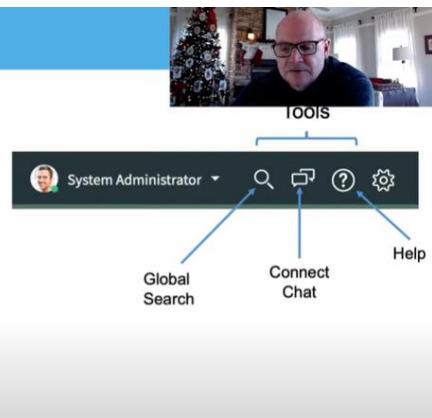
- **Profile:** Set profile attributes including name, phone, title, email, date format, time zone
- **Impersonate User:** Access the instance as another user; available to users with admin or impersonator role
- **Elevate Roles:** A safety mechanism for high-impact actions; available to System Admin
- **Logout:** Logout of the ServiceNow instance



Banner Frame: Tools

Tools on the Banner Frame include:

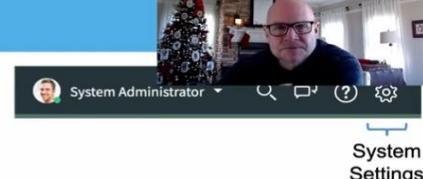
- **Global Search:** Search the entire instance for records matching keywords
- **Connect Chat:** ServiceNow's real-time messaging tool
- **Help:** Displays contextual help as available; a badge on the icon indicates embedded help is available; provides access to User Guide; provides access to documentation search tool;



Banner Frame: System Settings

System Settings allows the user to customize the UI to their preference. Settings are grouped as follows:

- General Settings
- Theme Settings
- Accessibility Settings
- List Settings
- Forms Settings
- Notifications Settings
- Developer Settings



Banner Frame: System Settings (2)

• General Settings

- Enable/disable Compact UI
- Enable/disable Keyboard shortcuts
- Set Home link to Homepages or Dashboards
- Set Date/Time to Calendar, Time Ago, or Both
- Set Time zone

• Theme Settings

- Choose a color scheme for your UI

• Accessibility Settings

- Set accessibility settings

• List Settings

- Enable/disable wrapping of long text in list columns



Banner Frame: System Settings (3)



- **Form Settings**
 - Enable/disable tabbed forms
 - Set related lists to load with form loading, after form loading, or on demand
- **Developer Settings**
 - Select Application and Update Set
 - Enable/disable Application Picker and Update Set Picker
 - Enable/disable JavaScript Log Viewer
- **Notification Settings**
 - Enable/disable notifications and set notification types
 - Enable/disable Automated Test Framework Page Inspector

Application Navigator, Favorites, and History:

Application Navigator:

- The main tool for accessing all applications and modules within ServiceNow.
- Includes a filter option to streamline searches and improve navigation efficiency.

Application Navigator

Navigation Filter

- Filters the list of applications and modules as you type

All Applications

- All applications and modules available to the logged-in user
- Double-click to expand/collapse all

Application Module
Separator Module

History

- Provides quick access to items we've visited recently; default is last 30 items

Favorites

- Access applications and modules you have marked as favorites (like in a web browser)

ServiceNowSimple

Favorites:

- Users can mark frequently accessed applications, modules, or records as favorites for quicker access.
- Favorites can be customized with colors and icons, and items can be added via drag-and-drop.

History:

- Tracks the last 30 accessed items, allowing users to easily revisit previously viewed modules or records.

ACLs (Access Control Lists):

ACLs: Determine what data users can access based on their roles, protecting sensitive information and maintaining security within the platform.

UI Policies:

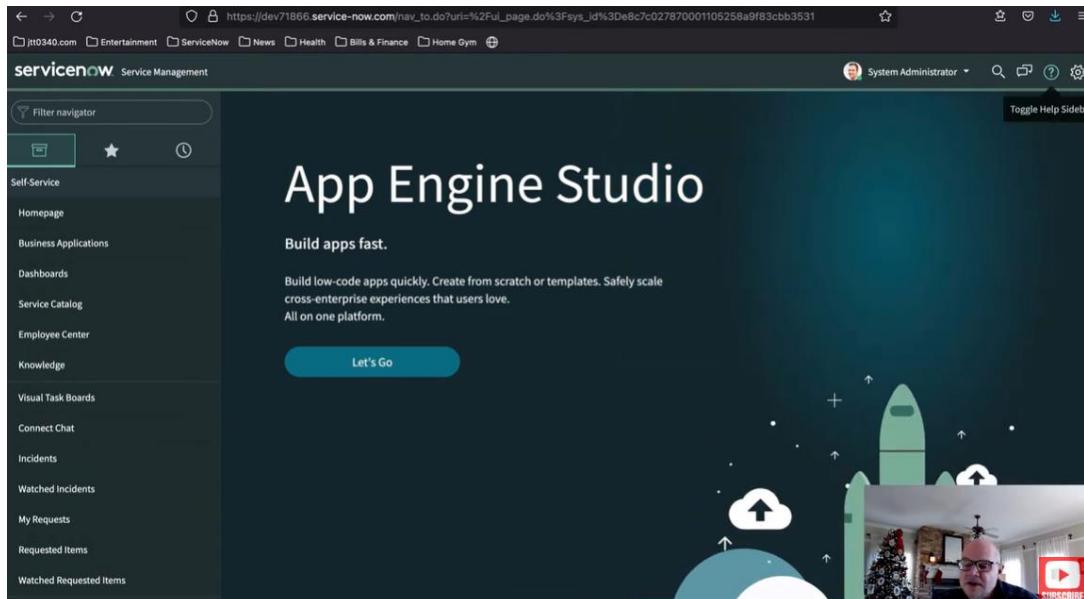
UI Policies: Manage the behavior and appearance of fields within forms, allowing for dynamic changes based on conditions, improving user experience.

Business Rules:

Business Rules: Server-side scripts that execute when records are inserted, updated, deleted, or queried. They ensure business logic is enforced across the platform.

Client Scripting:

Client Scripts: Run in the user's browser to manage form interactions in real-time. They can validate data, modify form elements, and interact with the server asynchronously.



ServiceNow Branding Overview

Introduction to ServiceNow Branding:

Importance of Branding: Customizing the ServiceNow user interface to reflect a company's identity helps foster user comfort, confidence, and adoption of the platform. Branding aligns the platform's appearance with the company's visual identity, including colors, logos, and fonts.

Branding in ServiceNow



What is Branding in ServiceNow?

- Applying your distinct corporate identity across the Now Platform UI to create a shared identity, build trust, and speed adoption

Company Guided Setup:

Guided Setup Wizards: These tools simplify the process of implementing branding changes by providing step-by-step instructions. They assist in configuring essential elements like incident management, IT operations, and overall company branding.

- **IT Service Management (ITSM) Guided Setup:** Focuses on configuring incident management and applying company-wide branding.
- **IT Operations Management (ITOM) Guided Setup:** Assists in operational configurations such as mid servers and cloud provisioning.

Customization Scope: The guided setup affects all users within the organization, ensuring consistent branding across the platform. System administrators are responsible for applying these changes.

Guided Setup



- Guided Setup provides a System Administrator step-by-step instructions to configure various Applications and Modules within your instance to suit the needs of the users.
- To access Guided Setup, locate the **Guided Setup** application in the Application Navigator and select the **ITSM Guided Setup** or **ITOM Guided Setup** module.
- **ITSM Guided Setup** includes the following categories: **Company**, Connectivity, Foundation Data, CMDB, Incident Management, Major Incident Management, Problem Management, Change Management, Service Catalog, Knowledge Management, Continual Improvement Management, Project Communication, Go Live
- **ITOM Guided Setup** includes the following categories: MID Server, Discovery, Event Management, Operational Intelligence, Cloud Provisioning and Governance

ServiceNow Portal and UI Builder:

Service Portal:

- **Personalization Options:** Allows further customization of the user interface, making the portal more familiar and aligned with the company's branding.
- **Customizing the Homepage:** Administrators can tailor the homepage to reflect company identity by using the guided setup for a cohesive appearance.

UI Builder:

- **Advanced Customization:** The UI Builder provides additional tools for personalizing the ServiceNow interface, enabling the creation of a tailored experience that resonates with users.



Service Portal and **UI Builder** are two additional tools that can be used to brand the interface.

Service Portal is a widget-based tool that allows creation of intuitive, user-friendly interfaces to the Now Platform.

UI Builder allows you to build-out a functional page by choosing from a library of components (buttons and data visualizations) and layouts.

Hands-on Branding Demonstration:

Practical Application: The session includes a demonstration of branding features, showcasing how guided setup wizards can be used to personalize the interface effectively. This involves configuring elements like the company logo, color scheme, and other visual aspects.

Welcome Page Customization:

Customizing the Welcome Page: Administrators can modify elements such as page header captions, browser tab titles, and login messages. These changes enhance user engagement and reinforce brand recognition from the moment users log in.

- **System Configuration:** Includes setting default time zones, date formats, and uploading logos. These settings impact the entire organization and contribute to a consistent user experience.

Incidents

Number	Opened	Short description	Caller	Priority	State	Category	Assignment group	Assigned to	Updated
INC0000001	2021-06-16 16:09:51	Can't read email	Fred Luddy	● 1 - Critical	Closed	Network	Service Desk	Charlie Whitherspoon	admin
INC0000002	2021-06-10 16:07:12	Network file shares access issue	Fred Luddy	● 1 - Critical	On Hold	Network	Network	Howard Johnson	admin
INC0000003	2021-06-17 16:07:30	Wireless access is down in my area	Joe Employee	● 1 - Critical	In Progress	Network	Network	Beth Anglin	admin
INC0000004	2021-06-23 15:49:22	Forgot email password	Fred Luddy	● 1 - Critical	Closed	Inquiry / Help	Service Desk	Bud Richman	admin
INC0000005	2021-06-12 16:06:52	CPU load high for over 10 minutes	Alejandro Mascall	● 1 - Critical	Closed	Hardware	Hardware	Bud Richman	system
INC0000006	2021-06-16 16:08:05	Hangs when trying to print VISO document	Joe Employee	● 1 - Critical	Closed	Software	Software	Howard Johnson	admin
INC0000007	2015-08-12 16:08:24	Need access to sales DB for the West	Joe Employee	● 1 - Critical	On Hold	Database	(empty)	David Loo	admin
INC0000008	2021-06-24 16:08:39	Printer in my office is out of toner	Joe Employee	● 1 - Critical	Closed	Inquiry / Help	Hardware	ITIL User	admin
INC0000009	2021-06-23 15:50:23	Reset my password	Rick Berzile	● 1 - Critical	Closed	Inquiry / Help	Service Desk	David Loo	admin
INC0000010	2021-06-17 15:53:02	Need Oracle 10GR2 installed	Fred Luddy	● 4 - Low	Closed	Database	Database	Don Goodliffe	admin
	2021-06-24 2021-06-24	Need new BlackBerry set	Don						

Incidents

Number	Owned	Short description	Caller	Priority	State	Category	Assignment group	Assigned to	Updated
INC0000011	10 rows per page	SAP Sales app is not accessible	Carol Coughlin	● 1 - Critical	In Progress	Service Desk	Beth Anglin	admin	2021-06-17 16:09:51
INC0000012	15 rows per page	Can't log into SAP from my laptop today	Joe Employee	● 2 - High	In Progress	(empty)	Fred Luddy	admin	2021-06-17 16:07:12
INC0000013	20 rows per page	Sales forecast spreadsheet is READ ONLY	Taylor Vreeland	● 1 - Critical	In Progress	(empty)	ITIL User	admin	2021-06-17 16:07:30
INC0000014	50 rows per page	Having problems with Sales Tools performance	Luke Wilson	● 4 - Low	On Hold	(empty)	ITIL User	admin	2015-11-02 14:05:38
INC0000015	100 rows per page	Need access to sales DB for the West	Joe Employee	● 1 - Critical	On Hold	Database	(empty)	David Loo	admin
INC0000016		Oracle 10GR2 installed	Fred Luddy	● 4 - Low	Closed	Database	Database	Don Goodliffe	admin
INC0000017		Rain is leaking on main DNS Server	Bow Ruggieri	● 1 - Critical	In Progress	Hardware	Hardware	ITIL User	admin
INC0000018		Need to add more memory to laptop	Don Goodliffe	● 1 - Critical	In Progress	Hardware	(empty)	ITIL User	admin
INC0000019		Seem to have an issue with my hard drive...	Rick Berzile	● 5 - Planning	Closed	Hardware	Hardware	Don Goodliffe	admin
INC0000020		Lost connection to the wireless network	Rick Berzile	● 5 - Planning	Closed	Hardware	Network	David Loo	admin
INC0000021		My computer is not detecting the headphones	David Miller	● 3 - Moderate	Closed	Network	(empty)	David Loo	admin

Incidents

Personalize List Columns

Available

- Tags
- Task type
- Time worked
- Transfer reason
- Universal Request
- Updates
- Upon approval
- Upon reject
- Urgency
- User input
- Watch list
- Work notes
- Work notes list
- Updated by

Selected

- Number
- Opened
- Short description
- Caller
- Priority
- State
- Category
- Assignment group
- Assigned to
- Updated

Cancel OK

ServiceNow Lists and Filters

The screenshot shows the ServiceNow Incident list view. A context menu is open over the 6th row, which contains the incident number INC0000020. The menu items visible are: Show Visual Task Board, Group By Priority, Bar Chart, Pie Chart, Launch Interactive Analysis, Export, Update Selected, Update All, Create Application Files, Import XML, Show XML, Planning, Inquiry / Help, and JSON. The 'JSON' option is highlighted.

Number	Opened	Short description	Caller	Priority	State	Category	Assignment group	Assigned to	U
INC0000024	2021-06-29 16:52:52	Issue with a web page on wiki	Fred Luddy	5	Open	Inquiry / Help	Service Desk	ITIL User	2021-13:15
INC0000012	2021-06-01 16:07:00	Customer didn't receive eFax	Don Goodliffe	5	Open	Software	Database	David Loo	2021-12:54
INC0000039	2021-06-18 17:41:01	Trouble getting to Oregon mail server	Bud Richman	5	Open	Network	Network	(empty)	2021-12:31
INC0000057	2016-08-10 09:14:59	Performance problems with wifi	Bertie Luby	5	Open	Inquiry / Help	(empty)	(empty)	2016-09:14
INC0000029	2021-06-16 17:00:44	I can't get my weather report	Charlie Whitherspoon	5	Open	Excel (.xlsx)	Service Desk	Don Goodliffe	2021-12:50
INC0000030	2021-06-24 17:01:12	Lost connection to the wireless network	Rick Berzile	5	Open	CSV	Network	David Loo	2021-13:15
INC0000035	2021-06-26 17:32:47	Reset my password	Natasha Ingram	5	Open	XML	ATF	Luke Wilson	2021-13:16
INC0008111	2019-07-22 14:04:57	ATF : Test1	System Administrator	5 - Planning	New	Inquiry / Help	(empty)	(empty)	2019-09:14
INC0000020	2021-06-15 16:51:35	I need a replacement iPhone, please	Fred Luddy	5 - Planning	In Progress	Inquiry / Help	(empty)	ITIL User	2022-06:14
INC00000601	2021-09-12 02:42:59	The USB port on my PC stopped working	Beth Anglin	5 - Planning	Closed	Hardware	(empty)	(empty)	2022-06:14
	2019-07-29 11:48:43	Assessment : ATF Assessor	survey.user	5 - Planning	New	Inquiry / Help	(empty)	(empty)	2019-07:29

```

2
3 Copy URL: https://dev63742.service-now.com/nav_to.do?uri=incident.do?sys_id=46ee8c2fa9fe198100623592c70d643e
4
5
6 Copy SysID: 46c88ac1a9fe1981014de1c831fbcf6d

```

The screenshot shows the ServiceNow Incident list view with multiple rows selected. A context menu is open, listing options such as Actions on selected rows..., Archive Record, Delete, Follow on Live Feed, Repair SLAs, Add to Visual Task Board, Create Application File, Assign Tag:, and a list of tags: New tag, Android, Java, JavaScript, Development, EVAM configuration for Search, High Priority, and Defect. The 'Add to Visual Task Board' option is highlighted.

Number	Opened	Short description	Caller	Priority	State	Category	Assignment group	Assigned to	U
INC00000601	2021-09-12 02:42:59	The USB port on my PC stopped working	Beth Anglin	5 - Planning	Closed	Hardware	(empty)	(empty)	Netwo
INC0008112	2019-07-29 11:48:43	Assessment : ATF Assessor	survey.user	5 - Planning	New	Inquiry / Help	(empty)	(empty)	Hardw
INC0000026	2021-05-31 16:54:59	Seem to have an issue with my hard drive...	Rick Berzile	5 - Planning	Closed	Hardware	(empty)	(empty)	Service
INC0001990	2020-06-07 09:02:25	Unable to access the personal details section in payroll portal	Problem CoordinatorATE	5 - Planning	On Hold	Inquiry / Help	(empty)	(empty)	Hardw

ServiceNow Lists and List Views:

List Interface: Lists in ServiceNow are user interface pages that display records from database tables. Every database table has an associated list view, where you can sort, search, filter, and analyze data.

Accessing Lists: Lists can be accessed via the Application Navigator or by using the dot list command (e.g., task.list opens the task table list view). The sys_db_object.list command opens the list of all tables in ServiceNow.

List View Structure:

Title Bar: Includes the list title, list control menu (hamburger icon), search tool, activity stream icon, and paging controls.

List Control Menu: Provides options to view saved list views, set filters, group data by columns, adjust the number of records per page, and refresh the list.

List Header: Displays column labels and additional tools like the personalize list tool, condition builder, and multi-column search.

Data Rows and Columns: Display the actual data from the table, with each row representing a record and each column an attribute.

List Control Menu:

View and Filter Options: Allows saving and applying different views and filters. Filters can be customized and saved for the entire instance, not just individual users.

Grouping and Pagination: You can group data by specific columns and set the number of records displayed per page to manage performance.

Favorites: Custom list setups can be saved as favorites, accessible via the Application Navigator's favorites tab.

Filtering Data:

Condition Builder: A powerful tool for applying filters using multiple columns, AND/OR operators, and sorting options. Filters can be saved for reuse.

Column Search: Provides a quick way to filter data by entering search terms directly under column headers. Wildcards can be used to refine searches.

Breadcrumbs: Indicate active filters on the list. Clicking on breadcrumbs allows clearing specific filters or all filters at once.

Context Menus:

Column Context Menu: Found next to each column header, it provides options like creating visual task boards, viewing bar or pie charts, and updating fields.

Field Context Menu: Accessible by right-clicking on any field, it allows actions like filtering by value, copying URLs or sys IDs, and assigning tags to records.

Forms in ServiceNow

Forms are the interfaces used to interact with single records in ServiceNow. You can open a form by selecting a record from a list or by searching for a record ID.

Standard Layout

ServiceNow forms have a standardized layout across different tables. Common elements include the header bar (with tools and record information), the main section (with fields), and additional sections for related lists and formatters.

Form Field Types

Fields in a form represent the record's attributes. Types of fields include:

- **String Fields:** Simple text inputs.
- **Boolean Fields:** Checkboxes.
- **Choice Fields:** Dropdown lists.
- **Reference Fields:** Link to records in other tables.
- **List Fields:** Similar to reference fields but allow multiple values.
- **Journal Fields:** Used for notes, like work notes or additional comments.

A screenshot of a ServiceNow Incident form titled "Incident - INC0009005". The form includes fields for Number (INC0009005), Caller (David Miller), Category (Software), Subcategory (Email), Service offering, Configuration item, Channel (None), State (New), Impact (1 - Low), Urgency (2 - Medium), Priority (4 - Low), Assignment group, and Assigned to. Below the form are sections for Notes, Related Records, Resolution Information, Watch list, and Work notes. A video overlay shows a man speaking about ServiceNow forms.



A diagram of a ServiceNow form with various components labeled:

- Header Bar
- Fields
- Required
- Read-only
- Sections
- Related Lists
- Comments

A video overlay shows a man speaking about ServiceNow forms.

Form Field Types

Saving Changes

Changes are not automatically saved. You must use options like **Submit**, **Update**, or **Save**:

- **Submit:** Saves a new record and closes the form.
- **Update:** Saves changes to an existing record and closes the form.
- **Save:** Saves changes but keeps the form open.

Saving Changes

As changes are made on a form, they are NOT automatically saved.

Users must proactively save changes by using the Save menu item or Submit/Update button



If you attempt to leave a form with unsaved changes, the system will provide notification.



Insert / Insert & Stay

These options allow you to create a copy of an existing record:

- **Insert:** Saves a new record based on the existing one and closes the form.
- **Insert & Stay:** Saves the new record and keeps the form open for further changes.

Form Sections

Forms can have sections to organize fields and related data. Sections can be displayed as tabs or in expandable/collapsible containers, depending on user preferences.

Form Sections

Forms are made up of Sections that organize the fields and other data.

Sections can be viewed as tabs or expandable sections, depending on the preference of the user.



Related Lists & Formatters

Related Lists: Display records from other tables that are related to the current record.

Formatters: Special form elements that show related information, like an activity log.

Form Related Lists

A related list is a special form element that displays a list of records from another table that is related to the current record (a one-to-many relationship). For example, a User form might contain a related list displaying all Roles that have been associated with the user.

The screenshot shows a list of roles associated with a user. The columns are Role, State, Inherited, and Inheritance Count. The roles listed are user_criteria_admin, evon_admin, and srn_retailer, srn_retailer_salesperson_admin, all of which are Active and Inherited.

Form Formatters

A formatter is a special form element that displays information that is not a field in the record. For example, an Activity Formatter displays the list of activities, or history, on a Task form

The screenshot shows a task form with an activity history formatter. It displays a list of activities, including a note from a System Administrator changing the priority of an incident, and a field change from 2-Medium to 3-Moderate.

Form Views

Different views can be created for the same form to meet the needs of different users.

You can switch between views via the context menu.

Form Views

Not every user wants to see a record's data in the same way.

Form views provide the ability to display and organize fields, related lists, and formatters in different ways to meet the needs of specific users.

The screenshot shows a context menu for a form view. The options include View, Filters, Group By, Show, Refresh List, Create Favorite, and Default view. The Default view option is highlighted.

Form Personalization

Users can personalize forms by selecting which fields to display. These changes are user-specific and do not affect other users.

Form Personalization

Form personalization allows the user to select which fields are displayed on a particular form view.

These changes do not impact any other users.

Clicking Reset will return the form view to its original settings

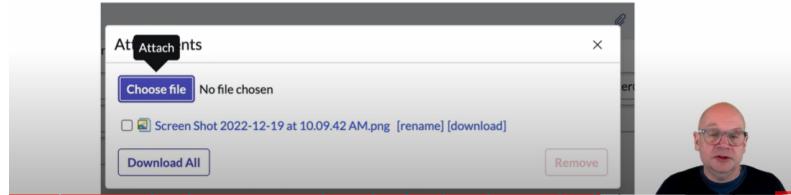
The screenshot shows the personalization settings for a form view. It includes a 'Personalize Form' button and a 'Reset' button. A list of form fields is shown with checkboxes: Business phone (unchecked), Email (checked), First name (checked), Last name (checked), Mobile phone (checked), and Title (checked).

Adding Attachments

Attachments can be added to records using the **Manage Attachments** button. You can also remove attachments if needed.

Form Attachments

The Manage Attachments button  provides the ability to attach files to a record.



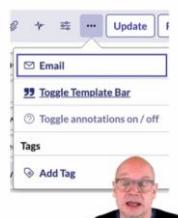
Form Templates

Templates automate the population of form fields when creating new records. Templates are useful for frequently used configurations. The **Template Bar** allows you to create and apply these templates.

Form Templates

Templates are used to simplify the process of creating new records by populating some form fields automatically. The More Options icon provides the ability to toggle on/off the template bar at the bottom of the form.

Any user can toggle on/off the template bar and create templates. The templates a user can access are dependent on the access controls set within each template.



Form Templates

- Templates can set the value of fields regardless of their visibility in the form view
- The checkmark icon  identifies fields modified by an applied template

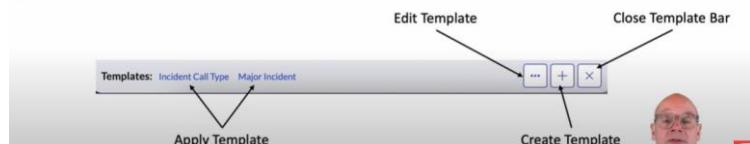
- Field values can include variables (Ex. The logged in user)



- Saving a template with the same name as the table it applies to will make it the default template to be applied on every new user-created record



The template bar provides shortcuts to apply, edit, and create templates for the current form.



Create New Template

Caller	David Miller	X
Category	Inquiry / Help	X
Description	Unable to access the shared folder. Please provide access.	X
Impact	3 - Low	X
Knowledge	False	X
Short description	Unable to access the shared folder.	X
State	New	X
Urgency	2 - Medium	X
Watch list	System Administrator	X

Separate individual references with a comma

--choose field-- --value--

Close Cancel Submit



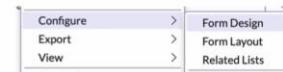
Creating & Editing Views

Users with the necessary permissions can create or modify form views using tools like:

- **Form Design Tool:** A drag-and-drop interface for a more visual approach.
- **Form Layout Tool:** A simpler, more traditional method for managing fields and sections.

Creating & Editing Form Views

Two tools exist for creating and managing form views, both available from the form context menu.



The **Form Design** tool provides a drag-and-drop GUI method of creating views and laying out sections and fields.

The **Form Layout** tool provides a simpler method of creating views and adding/removing fields.



The screenshot shows the 'Form Design' interface. On the left, there's a tree view of available fields: Building, City, Class, Company, Country code, Created, Created by, Default perspective, Document, Domain, Employee number, Employee number, Employee number, Failed login attempts, Gender, Password needs reset, Locked out, Web service access only, Business Integration User, I-split-, Email, Language, Notification, Date format, Data format, Telephone, Mobile phone, Name, Photo, and I-end-split-. Below this, there's a 'Selected' list containing 'Password needs reset', 'Locked out', 'Web service access only', 'Business Integration User', 'I-split-', 'Email', 'Language', 'Notification', 'Date format', 'Data format', 'Telephone', 'Mobile phone', 'Name', and 'Photo'. At the bottom, there's a 'Form view and section' section with 'View name: Default view' and 'Section: User view'. A 'Create new field' section allows defining a new field named 'Name' with type 'String' and 'Field length: Small (40)'. A 'Save' button is visible at the bottom right.

Form Field Dependencies

Some fields are dependent on other fields.

The diagram illustrates field dependencies. On the left, there are two dropdown menus: 'State' set to 'New' and 'Impact' set to '3 - Low'. An arrow points from the 'State' field to the 'Impact' field with the label 'If State = 'On Hold' then display and require On hold reason'. Another arrow points from the 'Impact' field to the 'On Hold' state on the right. On the right, there is a 'State' dropdown set to 'On Hold', an 'On hold reason' dropdown with 'None' selected, and an 'Impact' dropdown set to '3 - Low'. A portrait of a man is shown next to the right-hand form.

Copying a Record

Most forms provide two methods of creating a new record as a copy of an existing one.

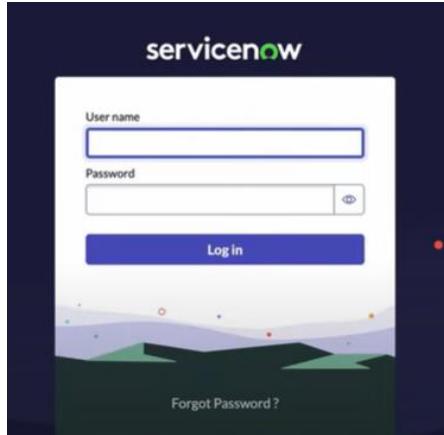


1. **Insert:** Creates and saves a copy of the current record and returns the user to the list of records
2. **Insert and Stay:** Creates and saves a copy of the current record and leaves the user on the new record's form



A Hands-on ServiceNow Tool Demo

Logging In to ServiceNow:

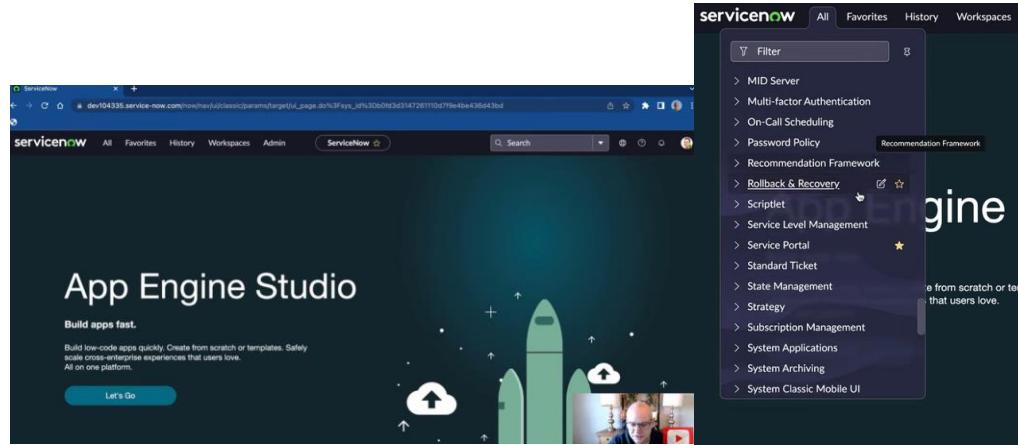


Accessing ServiceNow: Open a browser and enter the URL provided by your company. This URL leads to your ServiceNow instance, which is essentially a full-stack deployment of the platform.

User Accounts and Roles: Log in using credentials. Roles determine what you can see and do. Admin roles provide full access to the platform.

Next Experience UI:

Primary User Interface: The Next Experience UI is the main interface for interacting with ServiceNow. It is designed to offer a modern and streamlined user experience.



Navigation Bar:

User Menu: Access your profile and configure user-specific settings.

Show Notifications: View notifications related to tasks and events.

Contextual Help: Provides help and knowledge-base articles based on your current location in the platform.

Application Scope Picker: Manage application scopes for administrators and developers.

Global Search: Search across the entire platform for records, incidents, or users.

Contextual App Pill: Displays your current location within the platform.

Favorites: Mark screens or applications as favorites for quick access.

Admin Menu: Tools specific to admin roles.

Workspaces: Single screens with widgets for specific tasks or roles (e.g., CMDB workspace).

History: View and navigate to recently accessed screens.

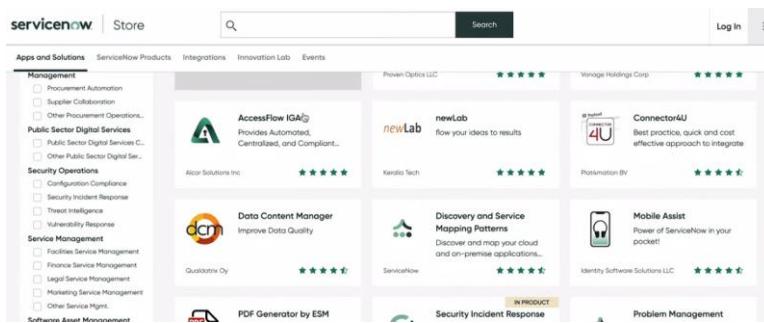
All Menu: Access all available applications, both out-of-the-box and custom.

ServiceNow Applications Overview:

Workflows: ServiceNow applications are divided into four main workflows:

- **IT Workflows:** Applications for internal IT functions.
- **Employee Workflows:** Applications tailored for employee needs.
- **Customer Workflows:** Applications for customer-related functions.
- **Creator Workflows:** Tools for developers to build and enhance applications.

ServiceNow Store: A marketplace for additional applications and integrations, similar to app stores for mobile devices.



Working with Lists and Forms:

Lists:

Filtering: You can filter records using the search box, column filters, and various dropdowns to refine your results. Breadcrumbs help you navigate and understand your current view.

Personalization: You can customize the fields and their order in the list view to suit your preferences.

Actions: You can select multiple rows to perform bulk actions like archiving or deleting. Context menus for columns and rows offer additional options like sorting, grouping, and exporting data.

Forms:

Record Details: Forms display details for a single record from a table, including related lists and attributes.

Editing: Depending on your roles and permissions, you can edit records, create new ones, or use forms to update existing records. Forms also support various functionalities like attaching files and customizing views.

The screenshot shows the ServiceNow interface with two main sections. The top section is a list view titled 'Incidents' under the 'State' filter. It includes a search bar and a toolbar with various icons. Below the toolbar is a header row with columns: Number, Opened, Short description, Caller, Priority, State, Category, Assignment group, Assigned to, Updated, and Updated by. The main body of the list view shows two records:

Number	Opened	Short description	Caller	Priority	State	Category	Assignment group	Assigned to	Updated	Updated by
INC0000046	2022-08-26 15:04:15	Can't access SFA software	Bud Richman	3 - Moderate	New	Software	Software	(empty)	2022-08-25 15:37:27	glide.main
INC0009005	2018-08-31 21:35:21	Email server is down.	David Miller	● 1 - Critical	New	Software	(empty)	(empty)	2018-12-12 23:18:55	admin

The bottom section is a form view for an incident. It shows a large preview image of a smartphone with a cracked screen. Below the image, a message says 'No records to display'. At the bottom of the form are buttons for 'Run', 'Save...', 'AND', 'OR', 'Add Sort', and a search icon. Below these buttons is a condition builder for filtering records. The conditions are:

- State is New
- Category is Software

Knowledge Management:

Purpose: Manage and share knowledge articles to help users understand processes and complete tasks.

Knowledge Base:

Articles: The knowledge base is a repository for helpful articles and documentation. You can search for articles, flag or edit them, and participate in discussions or provide feedback.

The screenshot shows the ServiceNow Knowledge Homepage. At the top, there's a search bar and a 'Create an Article' button. Below the header, there are two boxes: 'IT' (31 Articles) and 'Knowledge' (0 Articles). Under 'Featured Content', there's a message about an email interruption. In the 'Most Useful' section, it says 'No articles to display'. The 'Most Viewed' section lists several articles: 'What are phishing scams and how can I avoid them?', 'Automatic Replies (Out Of Office)', 'Create An Email Signature', 'How to Deal with Spam', and 'How to configure VPN for Apple Devices'.

This screenshot shows a detailed view of an article titled 'How to configure VPN for Apple Devices'. The article has a view count of 59 views. It contains two sections of instructions: one for iOS and one for Mac OS X Mavericks (10.9), Mountain Lion (10.8), or Lion (10.7). The iOS instructions include steps like 'Select Settings > General > VPN...', 'Select Add VPN Configuration', and 'Select L2TP...'. The Mac OS X instructions are similar, involving System Preferences and Network settings. At the top right, there are buttons for 'Flag Article', 'Create Incident', and 'Edit'.

ServiceNow Database:

Structure: The database underpins the platform, storing all records and information related to ServiceNow applications. It supports list and form functionalities by organizing data into tables and fields.

Tables: ServiceNow uses a single database for all its applications, which includes nearly 5,000 tables. You can view and modify these tables if you have the necessary permissions.

This screenshot illustrates the ServiceNow database management interface. It shows a table listing various AI-related search components like 'AI Search Relevancy Training Staging', 'AI Search Retention Policy', and 'AI Search Results Improvement Rule'. Below this, a 'New record' dialog is open for creating a new table named 'MyTab'. The configuration includes setting 'Extends table' to 'None', 'Application' to 'Global', and 'Create module' to checked. A note at the bottom says 'ServiceNow recommends creating custom tables in scoped applications.' At the bottom of the screen, there's a video player showing a person speaking about the ServiceNow database.

Introduction to Importing Data in ServiceNow

Data Import Process in ServiceNow

Terminology:

- **Source Data:** The original data entity from which data is being imported.
- **Target Data:** The destination entity within ServiceNow where the data will eventually be loaded.

Intermediate Step:

- **Staging Table (Import Set Table):** ServiceNow uses an intermediary table called the staging table to hold data temporarily during the import process. This table is automatically created by ServiceNow and is used to facilitate the import from the source to the target.

Process Overview:

- **Source Data → Staging Table → Target Data Store**

Next Steps:

- **Creating a Data Source:** The first step in the import process is to create a data source in ServiceNow. This will be covered in the next note.

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Simple Import Intro

○ August 24, 2021 ○ jtt0340 ○ Importing & Loading Data ○ 0 Comments

Simple Import Series

1. Simple Import Intro
2. Creating a Data Source
3. Understanding Import Sets
4. Creating a Transform Map & Field Maps

So, you have data in your company someplace and you want to get it loaded into ServiceNow. These are my notes describing how to setup a ServiceNow import using a Data Source, Import Set, and Transform Map.

Source -> Staging -> Target

Before we go too far, let's settle on basic concepts and terminology. The process of importing data normally involves pulling data from a Source data table and loading it into a Target data table.

Source -> Staging -> Target

Before we go too far, let's settle on basic concepts and terminology. The process of importing data normally involves pulling data from a **Source** data entity and loading it into a **Target** data entity.

In ServiceNow, the import process introduces an intermediary data entity between those two steps. We will refer to that entity simply as **Staging** (ServiceNow calls it an Import Set Table). That entity is an automatically created custom table that is used to stage the imported data prior to processing and loading into the Target. It enhances the performance of the import and provides a useful tool for designing field-level mappings and data transformations.

So, a ServiceNow import actually involves 3 data entities:

1. Source

- The entity containing the data to be imported into ServiceNow
- ServiceNow is prepared to work with many sources including files (Excel, CSV, JSON, etc.), JDBC-compatable databases, LDAP, REST, and custom scripts

2. Staging

- A table that ServiceNow automatically creates as part of the import process to temporarily store data pulled from the Source prior to transforming and adding to the Target
- Enhances the performance of the import and provides useful tools for designing field-level mappings and data transformations

3. Target

- The ServiceNow table into which the data will be imported
- This could be an out-of-box ServiceNow table or a custom table created specifically for our purposes



Three data entities involved in a ServiceNow import

Creating a Data Source in ServiceNow

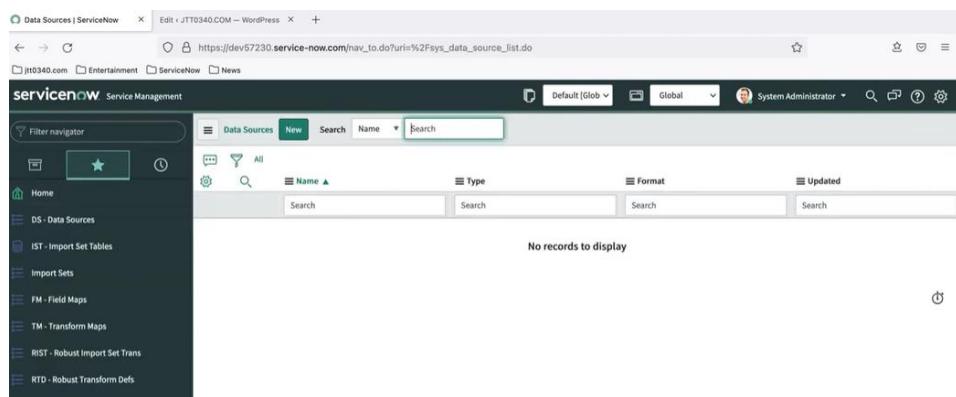
Purpose:

A Data Source in ServiceNow is a record that specifies the details for connecting to an external data source. It tells ServiceNow where to get the data from, how to connect, and how to configure the staging table that will temporarily hold the data before it is imported into the target table.

Steps to Create a Data Source:

Navigate to the Data Source Table:

Use the application navigator to go to System Import Sets → Administration → Data Sources, or use the table name sys_data_source.list to view existing data sources.

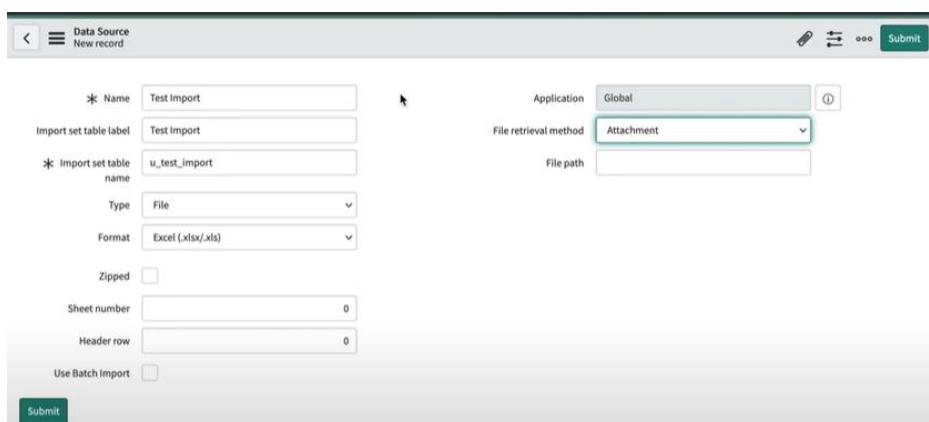


Create a New Data Source:

Click the "New" button to start creating a new Data Source record.

Name: Provide a descriptive name for the Data Source (e.g., "Test Import").

Label: Set a label for the staging table (e.g., "Test Import"). This is used for display purposes, while the actual table name will be prefixed with "u_" (e.g., u_test_import).



Specify Data Source Type:

Type: Select the type of data source. Options include:

- **File:** For files like CSV, Excel, JSON, XML.
- **JDBC:** For databases (e.g., MySQL, Oracle, SQL Server).
- **LDAP, OIDC, REST, Custom Script:** Other data source types.

File: If using a file, specify the format (CSV, Excel, etc.) and the retrieval method (e.g., attachment).

JDBC: Provide database connection details (e.g., database name, port, username, password).

Configure File Data Source:

For an Excel file, specify the sheet number and header row details.

Attach the file directly to the Data Source record for ServiceNow to access.

Save and Submit:

After filling out the required fields and attaching the file (if applicable), click "Submit" to save the Data Source.

Result:

After creation, the Data Source will be listed in the Data Source table. The next step involves testing the Data Source to ensure data can be pulled correctly and understanding how ServiceNow processes this data in the staging table.

Next Steps:

Test the Data Source and proceed to explore Import Sets managed in the staging table.

Understanding Import Sets in ServiceNow

What are Import Sets?

Import Sets in ServiceNow are temporary staging tables that are used to hold data before it is transformed and loaded into the target tables in ServiceNow. They facilitate the process of importing and transforming data from external sources into ServiceNow.

Creating Import Sets

Data Source Creation:

Definition: Define a Data Source record that specifies where the data is coming from (e.g., CSV file, Excel file, database).

Parameters: Include details such as the file type, connection details, and import parameters.

Example: A Data Source record for an Excel file might specify the file location and the name of the staging table to be created.

Staging Table:

Automatic Creation: ServiceNow automatically creates a staging table (Import Set Table) based on the Data Source record parameters. The table is used to temporarily hold the data imported from the external source.

Naming: The table is named based on the parameters provided in the Data Source record (e.g., u_test_import).

Data Import:

Testing and Loading: Test the data source connection and load data into the staging table. This is done through the Data Source's related links, such as "Load All Records" or "Test Load."

Process: ServiceNow pulls data from the external source and populates the staging table. The data is then ready for transformation and mapping.

Data Sources				
Name				
Type				
Search	Search	Search	Search	Search
<input type="checkbox"/> TestImport	File	Excel (.xlsx/.xls)	2021-08-25 12:34:59	
<input type="button" value="Actions on selected rows..."/>				

The screenshot shows the 'Import Processor' progress page. At the top, there's a green bar indicating the task is 'Complete' with a 'Success' completion code. Below the bar, a message states: 'Processed: 5, inserts 5, updates 0, errors 0, empty and ignored 0, ignored errors 0 (0:00:02.632)'. Under the 'Next steps...' section, there are four options: 'Import sets' (blue), 'Loaded data' (grey), 'Create transform map' (grey), and 'Import log' (blue). The 'Import sets' link is currently active.

Transforming and Mapping Data

Transform Maps:

Purpose: Transform Maps define how data from the staging table is mapped to the target tables in ServiceNow.

Components:

- **Source Fields:** Fields in the staging table.
- **Target Fields:** Fields in the target table where data should be moved.
- **Scripts:** Optional scripts to perform custom transformations during the import process.

The screenshot shows the 'Data Source' configuration page for a new import set named 'Test Import'. The 'Name' field is filled with 'Test Import'. Other fields include 'Import set table label' (Test Import), 'Import set table name' (u_test_import), 'Type' (File), 'Format' (Excel (.xlsx/.xls)), and 'Sheet number' (0). The 'Header row' field is also set to 0. On the right side, the 'Application' dropdown is set to 'Global' and the 'File retrieval method' dropdown is set to 'Attachment'. There are also buttons for 'Update' and 'Delete' at the top right.

Creating Transform Maps:

Definition: Create a Transform Map that specifies how to map and transform data from the staging table to the target table.

Configuration: Set up field mappings and transformation rules. Optionally, write scripts for more complex transformations.

A screenshot of the Table Test Import configuration screen. At the top, there's a header with tabs for 'Table' and 'Test Import'. Below the header, a message states: 'A table is a collection of records in the database. Each record corresponds to a row in a table, and each field on a record corresponds to a column on that table. Applications use tables and records to manage data and processes.' A 'More Info' link is present. The main area shows a table structure with one column named 'address'. The column details are: Type: String, Reference: (empty), Max length: 40, Default value: (empty), and Display: false. The table is associated with an application labeled 'Test Import'.

Data Transformation:

Execution: Run the Transform Map to move and transform data from the staging table to the target table.

Verification: Check the target table to ensure data has been correctly imported and transformed.

A screenshot of the Import Sets screen. It displays a list of import runs. There are two entries: 'ISET0010036' and 'ISET0010037'. Both entries show a status of 'Pending'. The 'Created' and 'Load completed' times are both listed as '2021-08-26 12:45:50'. The 'Load run time' is listed as '0 Seconds'. The 'Actions on selected rows...' dropdown is visible at the bottom.

Managing Import Sets

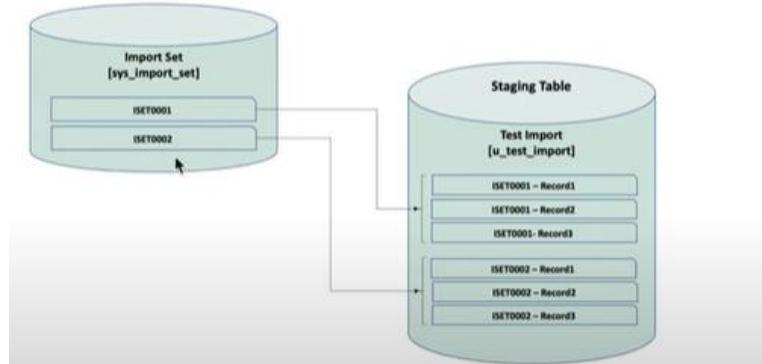
Import Set Table:

Purpose: The sys_import_set table tracks import runs, including details such as which import set was processed and the status of the import.

Details: Records in the sys_import_set table include an ID (e.g., iset10036) that references the import run.

The Import Set [sys_import_set] Table

In order to keep the imported records in our Staging table organized, ServiceNow provides an out-of-the-box table named **Import Set [sys_import_set]**. Each time an import run is executed, the platform adds a record to the Import Set table. That record represents the import run, or the **set** of data. As the imported rows are added to the Staging table, each record is marked with a reference to the Import Set record. The **Set** attribute is used to store that reference. This allows us to organize and identify that our 40 staged records are distributed between 2 Import Sets.



Data Management:

Multiple Runs: Importing data multiple times can result in duplicate entries in the staging table. It's important to manage and clear out old records as needed.

Data Cleanup: Use the **sys_import_set** table to track and manage import runs and ensure data integrity.

ServiceNow Transform Maps & Field Maps

Data Import Overview:

Data Source: Defines where the data is coming from, the type of data, and how to connect to it. It also specifies the staging table where data is initially imported before it moves to the final target table.

Transform Maps:

Definition: A transform map is essentially a grouping mechanism that organizes the field maps which define how data is mapped from the staging table to the target table.

The screenshot shows the 'Table Transform Map' creation screen. The 'Name' field is set to 'Test Transform Map'. The 'Source table' dropdown is set to 'Test Import [u_test_import]'. The 'Target table' dropdown is set to 'My Table [u_my_table]'. The 'Active' checkbox is checked. The 'Order' field is set to '100'. There are several other checkboxes and dropdowns for 'Run business rules', 'Enforce mandatory fields', 'Copy empty fields', and 'Create new record on empty coalesce fields'. A 'Submit' button is at the bottom left, and a 'Run script' button is at the bottom right.

Table Name: sys_transform_map

Purpose: It specifies the source (staging table) and target (final destination table) for the data import. It groups together multiple field maps.

Creation:

- Go to the sys_transform_map table and create a new record.
- Set the name of the transform map.
- Specify the source table (staging table) and the target table (final destination table).

Field Maps:

Definition: Field maps define how individual fields in the staging table are mapped to fields in the target table. Each field map represents a one-to-one mapping between fields in the source and target tables.

Table Name: cis_transform_entry (labeled as "Field Map")

Creation:

- Can be created individually or using tools like Mapping Assist in ServiceNow.

- For Mapping Assist:
 - Access the transform map record.
 - Use the Mapping Assist tool to automatically or manually map fields from the source table to the target table.
- Each mapping is saved as a separate record in the cis_transform_entry table.

Mapping Assist

Source: Test Import

Updated
Updated by
Updates
address
city
name
state
zip

Add > < Remove

Field Map

name	User Name
address	Address
city	City
state	State
zip	Zip Code

Target: My Table

Remove > < Add

Save Cancel

Data Viewer

Show All Fields Mapped Fields

Test Import ◀ Viewing: 1 ▶ My Table ◀ Viewing: 1 ▶

Field	Value	Field	Value
Field Maps			

Defining how data flows from the Staging table to the Target is done on a field by field basis. For example:

- Staging Field 1 maps to Target Field 1
- Staging Field 2 maps to Target Field 3
- Staging Field 3 maps to Target Field 2

Three Field Maps mapping data from Staging to Target
In ServiceNow, each of the field-level mappings is called a Field Map and is stored as a record in the **Field Map [sys_transform_entry]** table. To view a list of all Field Maps, enter **sys_transform_entry.list** in the Application Navigator filter.

Field Map records include attributes that define the mapping relationship:

Attribute	Value
Source Table	The Name of the Staging table
Source Field	The Name of the Staging table field

2:50 / 19:39

	Source field	Target field	Coalesce
<input type="checkbox"/>	u_city	u_city	false
<input type="checkbox"/>	u_name	u_user_name	false
<input type="checkbox"/>	u_state	u_state	false
<input type="checkbox"/>	u_zip	u_zip_code	false
<input type="checkbox"/>	u_address	u_address	false

Actions on selected rows...

1 to 5 of 5 

Coalesce Field:

Definition: The coalesce field is used to identify records uniquely to avoid duplicate entries in the target table.

Purpose: It helps to match records based on a unique identifier (e.g., primary key) when importing data multiple times.

Setting Coalesce Field:

- Choose a field that can uniquely identify records.
- Mark it as "Coalesce" in the field map record settings to ensure that duplicates are not inserted based on this field.

Testing and Finalizing:

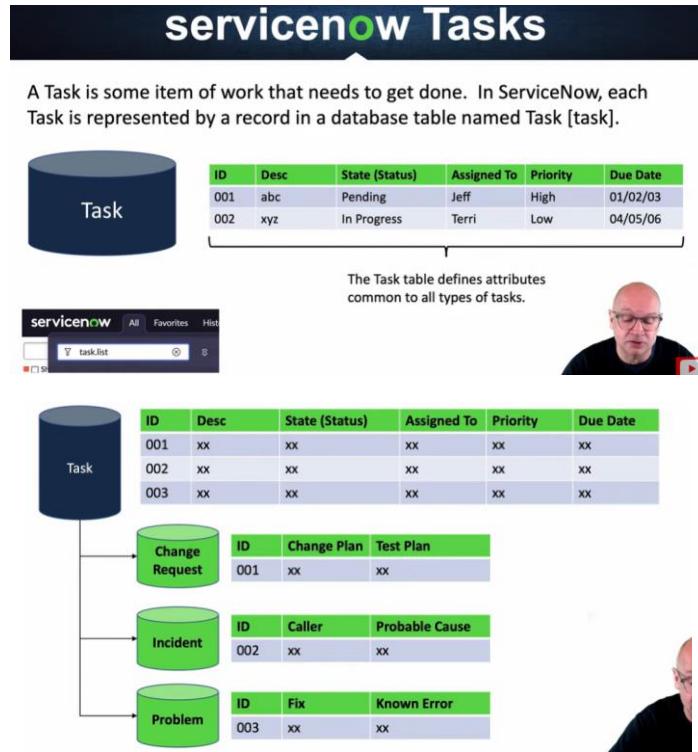
Testing: After setting up the transform map and field maps, test the import process from start to finish to ensure that data flows correctly from the staging table to the target table.

Scheduling: ServiceNow allows scheduling imports if recurring data imports are needed.

ServiceNow Incident Management Tutorial and Task Administration

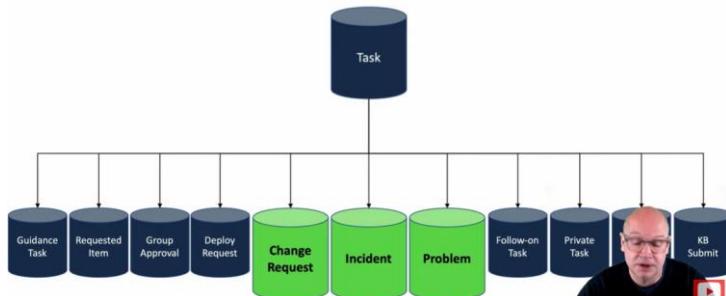
Overview of Tasks in ServiceNow

Definition of a Task: In ServiceNow, a task represents an item of work that needs to be completed. It is a record stored in a database table, typically with attributes like description, status, due date, and assignment details.



Task Table Hierarchy: The task table is the core component, with specialized tables extending it for different task types:

- **Incident:** Represents unplanned interruptions or issues.
- **Change Request:** Represents requests for changes to the system or infrastructure.
- **Problem:** Represents underlying issues causing multiple incidents.



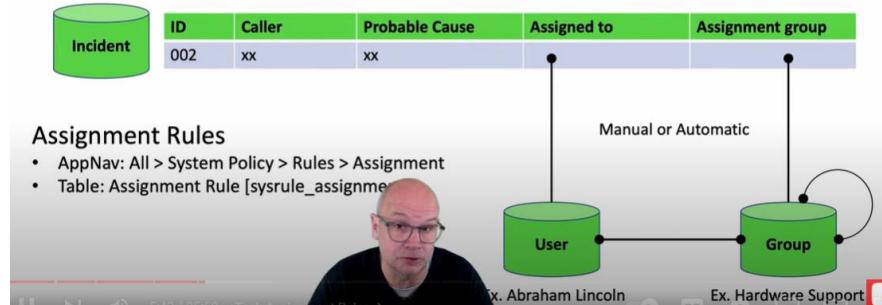
Each specialized table inherits common attributes from the task table and adds its own unique attributes.

Task Creation and Assignment

Task Creation: You do not directly create records in the task table. Instead, you create records in the extended tables like Incident, Change Request, or Problem. These records automatically create related task records in the task table.

Task Assignment

- Tasks can be assigned to an individual User or a Group of Users (or both)



Assignment Rules					
		Name	Execution Order	User	Updated
Table	Name	Execution Order	User	Updated	
incident	High Priority for Network	80	(empty)	2013-12-31 16:00:00	
incident	VIP Callers	90	(empty)	2013-12-31 16:00:00	
incident	Assign to shift member	100	(empty)	2021-03-22 07:22:05	
incident	Networking	100	(empty)	2008-11-25 16:22:55	
incident	Database or Software	100	(empty)	2008-11-25 16:23:11	
incident	Service Desk	1,000	(empty)	2008-11-25 16:22:31	

Assignment Lookup Rules

- AppNav: All > System Policy > Rules > Assignment Lookup Rules
- Table: Assignment Data Lookup [dl_u_assignment]

Assignment Rules:

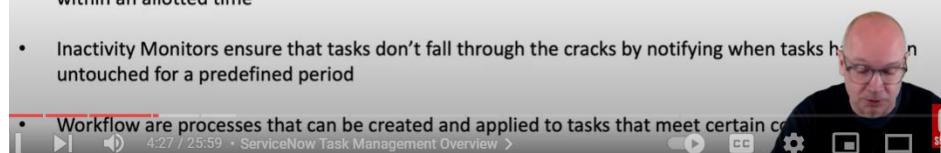
- Purpose:** Automatically assign tasks to users or groups based on certain conditions.
- Configuration:** Created in the sys_rule_assignment table. Rules consist of conditions and actions (assign to user/group). Execution order determines which rule gets applied first.
- Example:** An assignment rule might automatically assign hardware-related incidents to a specific support group and user.

Assignment Lookup Rules: Less flexible than assignment rules, these are used mainly for incident tasks and offer a limited set of conditions and fields.

Task Management and Collaboration

Task Management

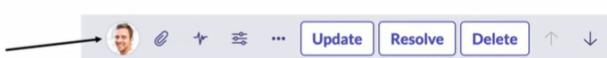
- Defining and managing tasks in ServiceNow allow you to take common work that needs to be done and build repeatable processes to efficiently get it done
- Assignment Rules auto assign tasks to users or groups, making sure they are handled by the most appropriate team members
- Approvals can be created for a list of approvers (manually or automatically) according to approval rules
- Service Level Agreements track the amount of time a task has been open to ensure they are completed within an allotted time
- Inactivity Monitors ensure that tasks don't fall through the cracks by notifying when tasks have been untouched for a predefined period
- Workflow are processes that can be created and applied to tasks that meet certain conditions



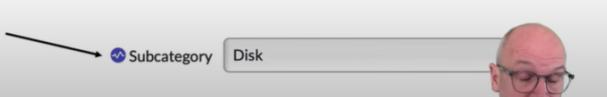
Task Collaboration

User Presence allows multiple stakeholders to view and update a record simultaneously

The Active Viewers Icon will display on the header bar when another user is viewing the record at the same time.



The Real-time Editing (Pulse) Icon will display beside a field that has been changed by another user.



Accessing Tasks:

- Service Desk:** View and manage tasks assigned to you or your group.
- My Work:** Shows tasks assigned to you individually.
- My Group's Work:** Shows tasks assigned to your group.

Collaboration Tools:

- User Presence:** Indicates who else is viewing or editing a record.
- Real-Time Editing:** Displays updates made by other users immediately.
- Activity Stream:** Tracks and displays changes and comments related to a task.

Visual Task Boards

Visual Task Boards

Incidents by Category

Quick Panel: Inquiry / Help 33, Software 13, Hardware 11, Network 5

Lanes:

- Inquiry / Help: Cards include "Can't log into SAP from my laptop today", "Sales forecast spreadsheet is READ ONLY", and "SAP Sales app is not accessible".
- Software: Cards include "Unable to access the shared folder.", "Missing my home directory", "Forgot email password", and "Reset my password".
- Hardware: Cards include "Defect tracking tool is down.", "Hangs when trying to print VISO docu...", "CPU load high for over 10 minutes", and "Having problems with Sales Tools per...".
- Network: Cards include "This is my test hardware incident.", "The USB port on my PC stopped working", "CPU load high for over 10 minutes", and "My computer is not detecting the head...".

Incidents by Category

Labels: Defect (red), High Priority (blue), Feature (green), Idea (orange), Request (yellow), Story (pink), Low Priority (light blue).

Inquiry / Help: 33 cards listed, including "Unable to access the shared folder.", "Missing my home directory", "Forgot email password", "Reset my password", "Can't log into SAP from my laptop today", "Sales forecast spreadsheet is READ ONLY", "CPU load high for over 10 minutes", "Having problems with Sales Tools per...", and "SAP Sales app is not accessible".

Visual Task Board Types

- Guided**
 - Normally created from a list using an attribute that has a pre-defined set of values as lanes
 - Task values are changed when cards are moved between lanes
- Flexible**
 - Normally created from a list using an attribute that does not have a pre-defined set of values as lanes
 - Task values are not changed when cards are moved between lanes
- Freeform**
 - Not created from a list
 - Used for personalized work management via Private tasks

Types of Boards:

- **Guided Boards:** Created from a list with predefined attributes for lanes (e.g., states of tasks).
- **Flexible Boards:** Created from a list with attributes that do not have predefined values. Lanes can be customized.
- **Freeform Boards:** Personalized boards without a tie to existing task records.

Components:

- **Cards:** Represent individual tasks.
- **Lanes:** Group tasks based on attributes or categories.
- **Filters:** Allow viewing tasks by user, category, or labels.

Example: A Visual Task Board showing incidents by category with lanes for different categories. Tasks can be dragged between lanes for visual organization.

ServiceNow Reporting Tutorial

ServiceNow's reporting capabilities revolve around the core database tables that store and manage report data. Here's a breakdown of the main components:

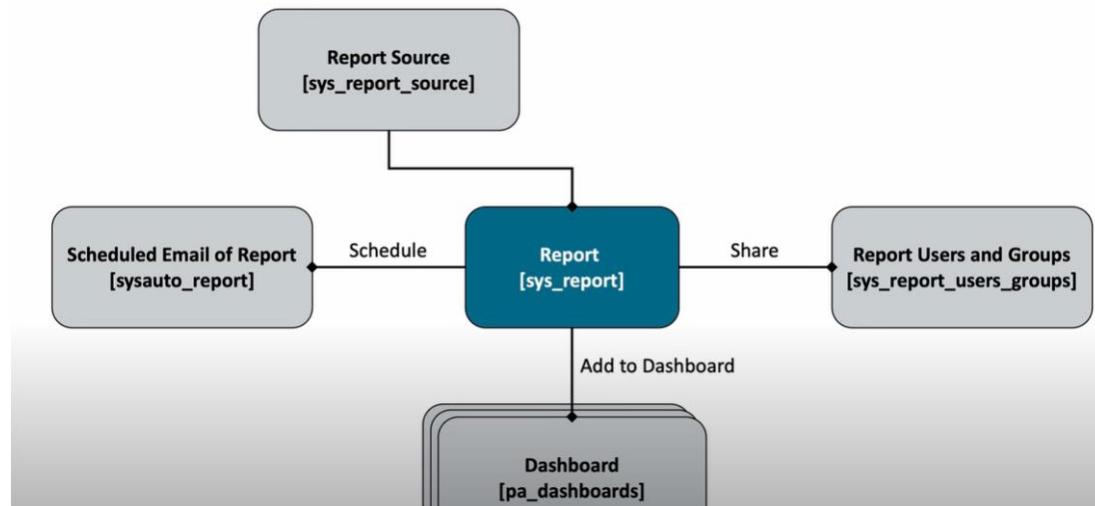
Sys Report Table: This table stores all reports in the instance. Each record in this table represents a report, including its title, the data source, and type of visualization.

Report Source Table: Stores saved queries that can be reused to generate report data.

Scheduled Email of Reports Table (sys_auto_report): Manages automatic execution and emailing of reports. It includes fields for scheduling, recipients, and report format.

Report Users and Groups Table (sys_report_users_groups): Manages sharing of reports with users or groups.

Dashboard Table (pa_dashboard): Allows reports to be added to dashboards for consolidated viewing.



Reports						
Title		Table	Type	Field Name	Created by	Updated
Search	Search	Search	Search	Search	Search	Search
KPI - Average Work Effort for Resolving...	Incident Time Worked [incident_time_worked]	Pivot Table	inc_category	glide.maint	2011-11-30 14:35:43	
30/60/90 Day Desired State Task Aging	Follow On Task [cert_follow_on_task]	Horizontal bar	aging_level	admin	2013-04-18 13:57:43	
30/60/90 Day Task Aging	Follow On Task [cert_follow_on_task]	Horizontal bar	aging_level	admin	2013-04-18 13:30:43	
abc	label [test_2]	Single Score		admin	2020-03-06 18:38:27	
Achieved SLAs by Type	Task SLA [task_sla]	Bar	sla.type	glide.maint	2012-11-29 05:42:30	
Active Change Requests	Change Request [change_request]	List	active	glide.maint	2005-06-21 18:17:56	

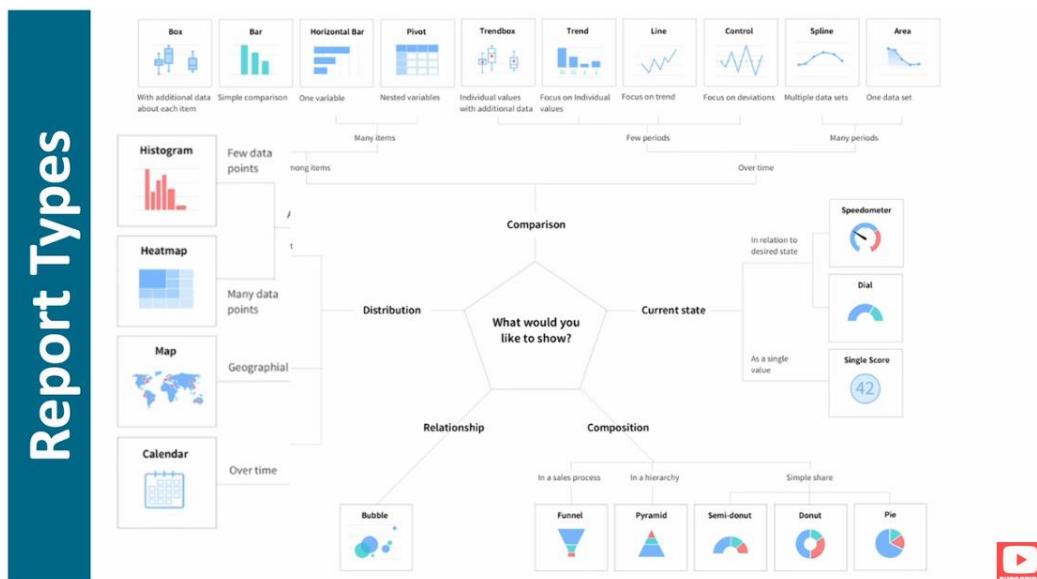
Column label	Type	Reference	Max length	Default value	Display
Additional Group By	String	(empty)	4,000	COUNT	false
Aggregate	String	(empty)	40	false	false
Aggregation Source	String	(empty)	40	false	false
Allow data label overlap	True/False	(empty)	40	false	false
Application	Reference	Application	32	javascript:{!((typeof parent == 'object')...}	false
Apply aliases	True/False	(empty)	40	true	false
Axis max color	Reference	Color Definition	32		false
Axis min color	Reference	Color Definition	32		false

Types of Reports

ServiceNow supports a variety of report types, including:

Lists, Box, Bar, Pivot, Trends, Line, Control, Spline, Area, Histogram, Heat Map, Map, Calendars, Bubble, Funnel, Pyramid, Donuts, Pie, Speedometer, Dial, Single Score

Each type is suited for different kinds of data visualization and analysis.



Creating and Managing Reports

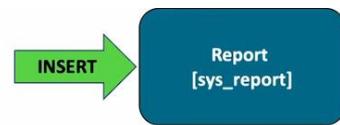
Reports can be created through several methods:

Reports Application: Use the "Create New" module to start a new report.

ServiceNow Studio: Allows for creating reports within an application scope.

From Existing List Views: Create reports directly from list views by selecting the report type from the column context menu.

When you **create a new report** in ServiceNow, you are inserting a record into the Report [sys_report] table.



Reports > Create New



Studio



List View

User ID	Department
alison.brown	Search
alison.brown	Marketing
alison.brown	Sales
alison.brown	Customer Support
alison.brown	Product Management
alison.brown	Product Management
alison.brown	IT
alison.brown	Product Management
alison.brown	Sales
alison.brown	Product Management

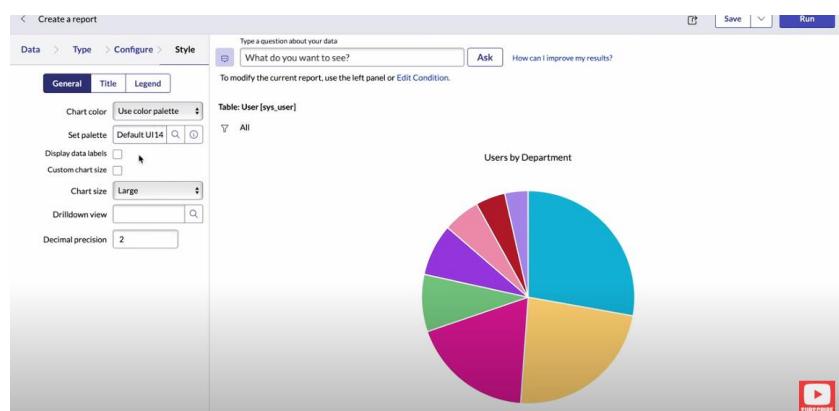
Steps to Create a Report:

Define Basic Report Fields: Set the title, source type (table or data source), and table.

Select Visualization Type: Choose how to present the data (e.g., pie chart, bar chart).

Configure Grouping and Filters: Define fields to group by and apply any necessary filters.

Save and Review: Finalize and review the report settings.



Scheduling Reports

Reports can be scheduled for automatic execution and emailing:

Set Up Scheduling: Define when and how often the report should run (daily, weekly, monthly).

Specify Recipients: Include users, groups, or specific email addresses.

Configure Additional Settings: Set the email subject, body, and attachment type.

When you **schedule a report** in ServiceNow, you are inserting a record into the Scheduled Email of Report [sysauto_report] table.



Reports > View / Run



Reports > Scheduled Reports



Studio



Sharing Reports

Reports can be shared in various ways:

Direct Sharing: Share reports with individual users or groups via the Report Users and Groups table.

Global Sharing: Make reports available to all users or by role.

Type	Title	Description
Report	30/60/90 Day Desired State Task Aging	Follow On Task [cert_follow_on_task]
Report	30/60/90 Day Task Aging	Follow On Task [cert_follow_on_task]
Report	Active Contracts by Cost Per Unit	Contract [ast_contract]
Report	Active Contracts by Lifetime Cost	Contract [ast_contract]
Report	Active Contracts by Monthly Cost	Contract [ast_contract]
Report	Active Contracts by Vendor	Contract [ast_contract]
Report	Active Contracts by Yearly Cost	Contract [ast_contract]
Report	Active Incidents older than 7 days	Incident [incident]

Schedule an email containing this report

Name: Scheduled execution of Users by Department

Report: Users by Department

Users: Abraham Lincoln, Fred Luddy

Groups: CAB Approval

Email addresses: jt0340@gmail.com

Application: Global

Active:

Run: Monthly

Day: 1

Time: Hours 00, 00, 00

Conditional:

Omit if no records:

Subject: Monthly copy of users by department report

Introductory message:

Type: PDF-landscape

Adding Reports to Dashboards

To add a report to a dashboard:

Open the Report: Select the report you want to add.

Add to Dashboard: Use the sharing icon to select "Add to Dashboard."

Choose Dashboard and Tab: Select the desired dashboard and tab for display.

Add to Dashboard ×

Dashboard: CMDB Dashboard - CMDB View Tab

Tab: CMDB Health

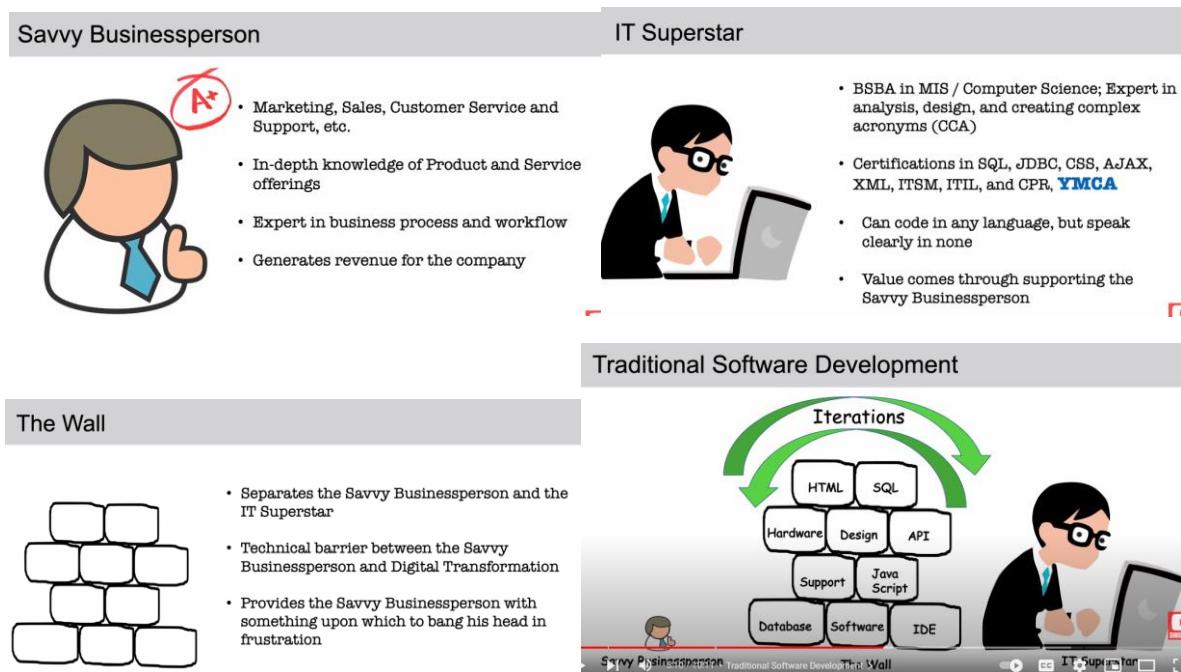
Cancel Add

Report [sys_report] extends Application File		
FIELD LABEL	REPRESENTS	DATATYPE / DESCRIPTION
Sys ID	The unique identifier of the record	Sys ID (String)
Title	The title of the report	String
Source type	The type of data source for the report	String (Table or Data source)
Report source	The Report Source to use when applicable	Reference (Sys ID of a record in the Report Source table)
Table	The database table from which the report data is pulled	Table Name (String)
Field Name	The field the report data should be grouped on	String
Filter	The filter to be applied for the report data	Conditions (String)
Type	The type of report (visualization)	String

Report Users and Groups [sys_report_users_groups] extends Scheduled Job		
FIELD LABEL	REPRESENTS	DATATYPE / DESCRIPTION
Sys ID	The unique identifier of the record	Sys ID (String)
Report ID	The report being shared	Reference (Sys ID of a record in the Report table)
User ID	The user to whom the report is being shared	Reference (Sys ID of a record in the User table)
Group ID	The group to which the report is being shared	Reference (Sys ID of a record in the Group table)

What is Low Code No Code Development?

Before LCNC:

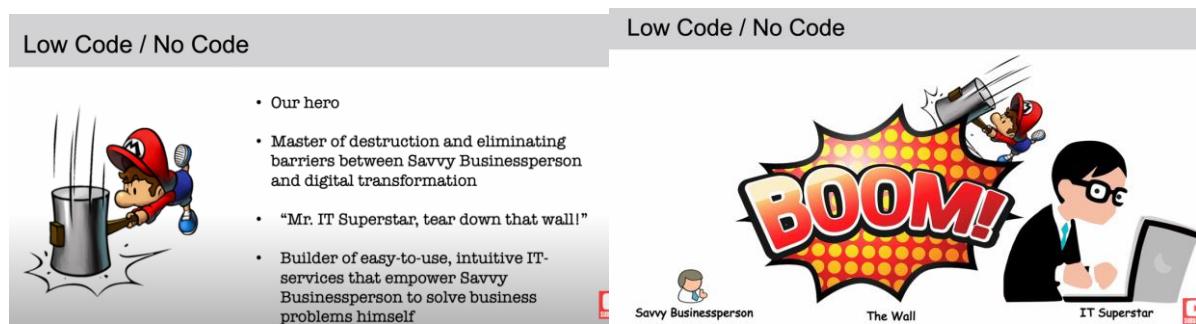


Low Code No Code (LCNC) development refers to software development approaches that enable users to create applications with minimal or no traditional coding. These platforms provide graphical interfaces and pre-built templates, allowing users to build applications through drag-and-drop actions and configuration settings.

Key Concepts:

Low Code: Requires minimal coding, usually involving some scripting or customization.

No Code: Requires no coding at all; users build applications through visual interfaces and configurations.



How LCNC Software Development Works

Visual Interface: Users design applications using drag-and-drop elements, pre-built components, and templates. This visual approach simplifies the development process.

Configuration: Users configure workflows, data models, and integrations without writing code. The platform handles the underlying complexity.

Automations: Users can set up automations and business rules using natural language or simple logic blocks.

Integration: LCNC platforms often provide built-in integrations or connectors to link with other systems and services.

Low Code / No Code servicenow

- **App Engine Studio (AES):** Guided experience for creating everything you need for your low code / no code applications; build tables, import spreadsheets, create workflows, UI's, manage security
- **Studio:** Dig deeper into your applications components and capabilities; IDE
- **Now Experience UI Builder:** Create workspaces and portals via drag-and-drop;
- **Flow Designer:** Use natural language to automate workflows, approvals, tasks, notifications and record operations without writing any code
- **CMDB:** Understand the entirety of your IT infrastructure; the underlying platform upon which your low code / no code apps are built.



Example Tools:

ServiceNow: Offers tools like App Engine Studio and Flow Designer.

Microsoft PowerApps: Provides a drag-and-drop interface for app creation.

Salesforce: Includes low-code tools for custom application development.

Pros and Cons of LCNC Development

Low Code / No Code Pros & Cons

Pros

- Empowers the people that know the business to solve business problems themselves
- Improves agility via tools for creating IT-services quickly
- Lower costs via more apps in less time with less dependence on IT
- Increased automation opportunities

Cons

- Requires generalization which limits flexibility
- Limits technical improvements (I can code this better)



Pros:

Increased Agility: Faster development and deployment of applications.

Cost-Effective: Reduces development costs by minimizing the need for specialized developers.

Empowers Business Users: Allows non-technical users to create and modify applications, fostering innovation.

Improved Efficiency: Streamlines processes and automates repetitive tasks.

Cons:

Limited Flexibility: Pre-built components may not fit all use cases, leading to constraints.

Dependency on Platform: Users are reliant on the platform's capabilities and limitations.

Potential for Technical Debt: Lack of custom code can lead to challenges in scalability and performance.

Security Concerns: Less control over underlying code and infrastructure can pose security risks.

Career Opportunities in LCNC Development

Low Code / No Code Career Opportunities



- Think 'outside the box' about how you get work done; is there a better way?
- Continue to learn IT skills to understand what IT can provide
- With power comes responsibility; start slow and simple and build from there



- Your jobs are safe
- Understand that you are the tail, not the dog
- Learn the business
- Look for ways to eliminate your job

Business Analyst: Works with LCNC tools to create solutions that meet business needs, often without deep technical expertise.

Citizen Developer: End users who leverage LCNC platforms to build custom applications for their own departments or teams.

LCNC Developer: Specializes in using LCNC platforms to develop and maintain applications.

Consultant: Provides expertise on implementing and optimizing LCNC solutions for various organizations.

Product Manager: Manages and defines the direction for LCNC tools and features.