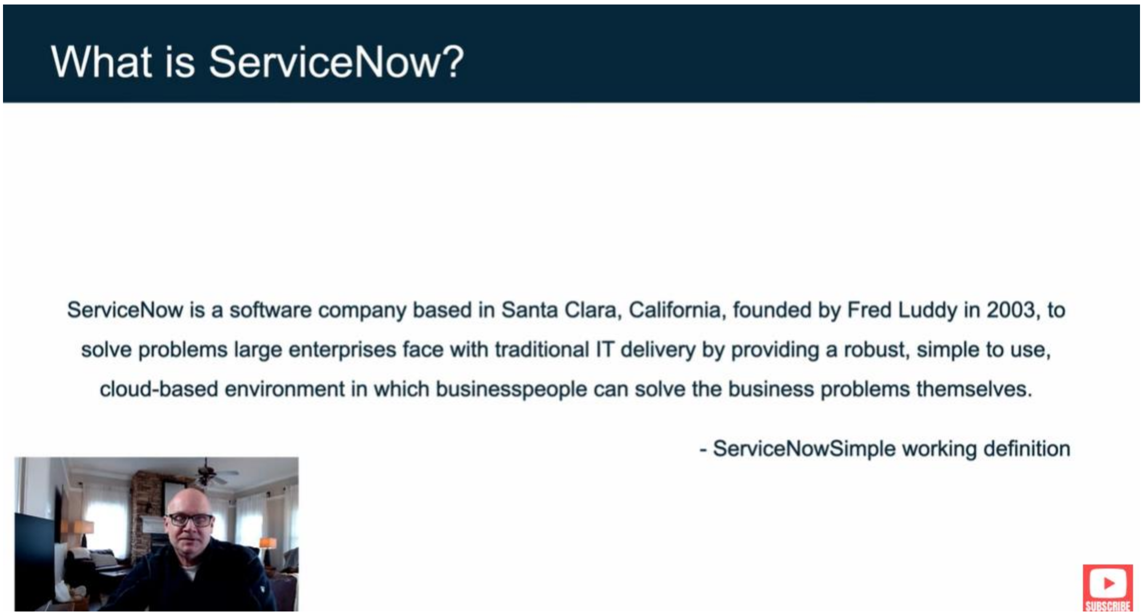
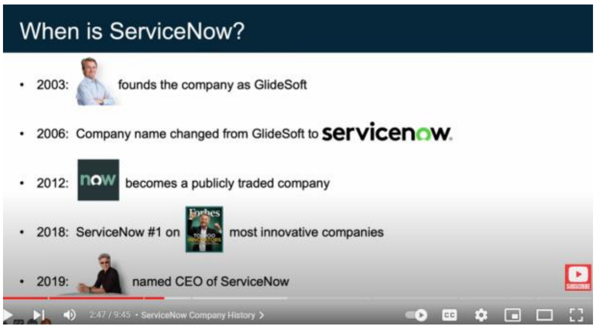
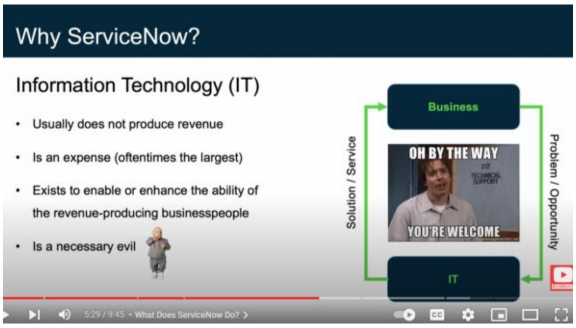
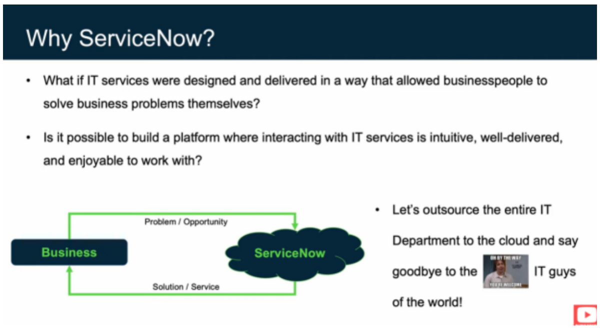
What is ServiceNow









Overview:

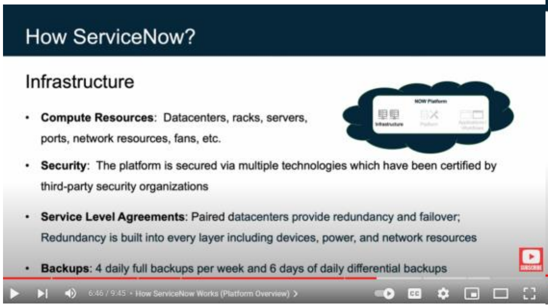
ServiceNow is a cloud-based software company founded in 2003 by Fred Luddy.

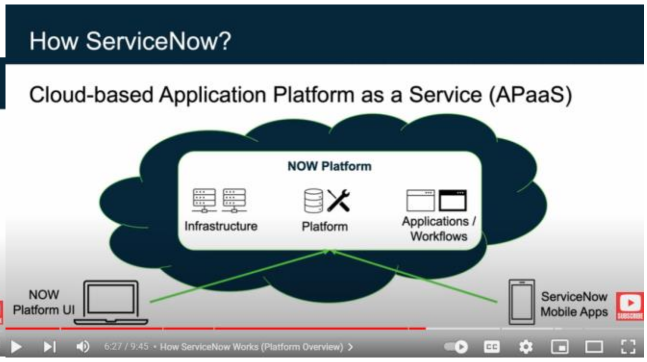
It aims to improve traditional IT delivery for large enterprises, enabling business users to solve their own problems through a user-friendly platform.

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**.

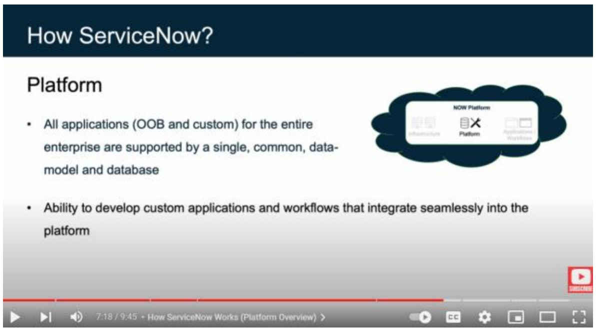
Founder's Motivation:

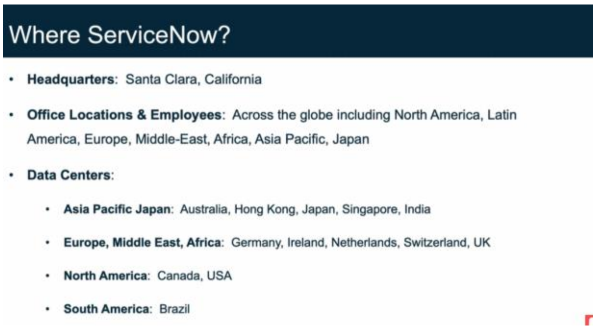
Fred Luddy's motivation to establish ServiceNow was rooted in his experience with IT inefficiencies that often embarrassed businesspeople, leading him to create a more effective and intuitive IT solution.

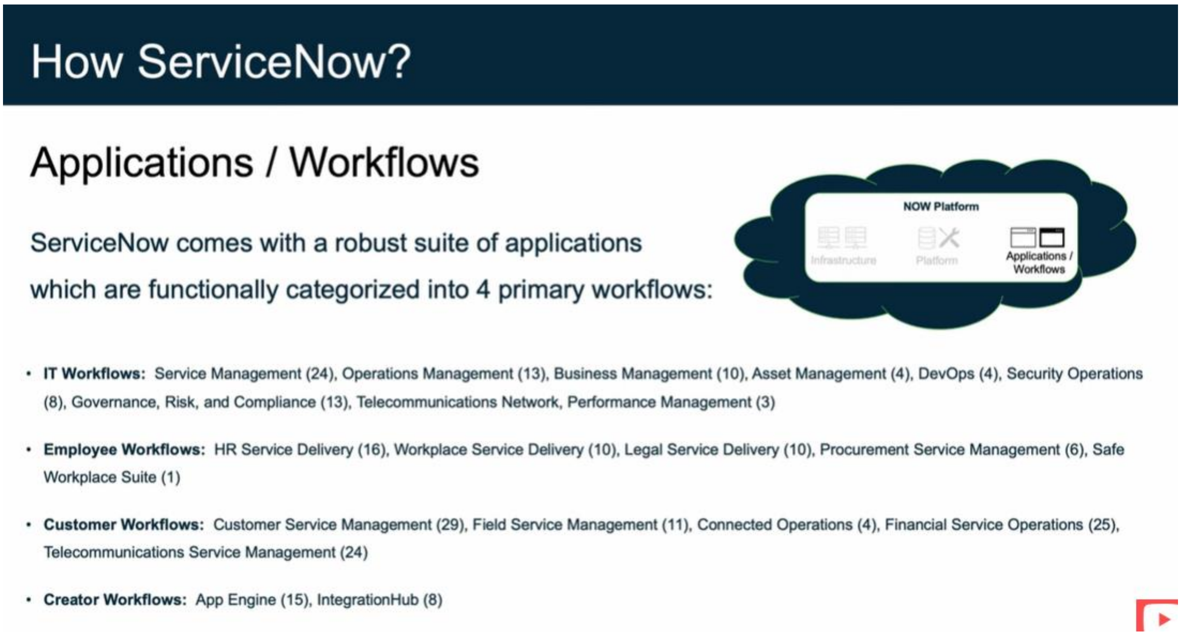
Historical Background:

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

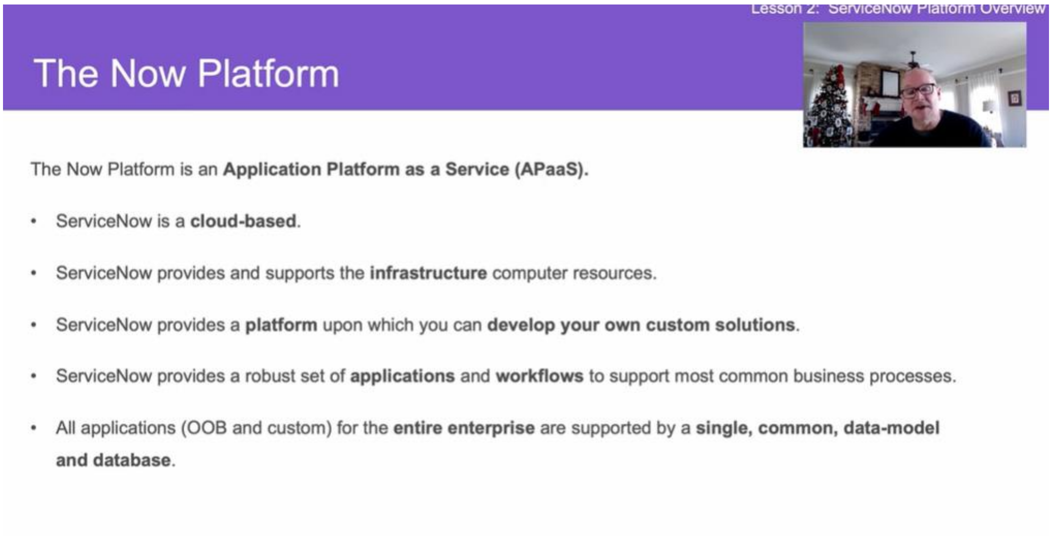
ServiceNow's growth and public recognition have significantly boosted its reputation in the enterprise software market.







ServiceNow Platform Overview



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.

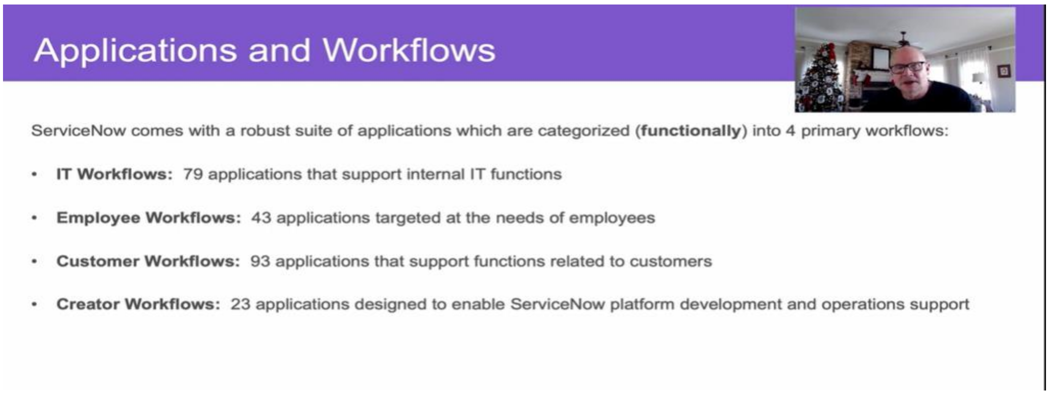
Backup Solutions: The platform offers comprehensive data protection, including four weekly full backups and six days of differential backups.

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.

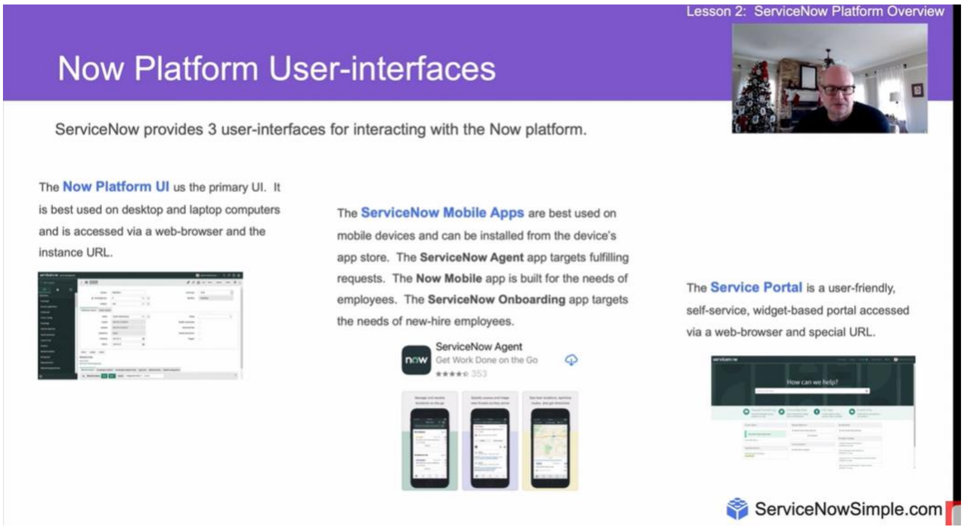


User Interfaces:

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.

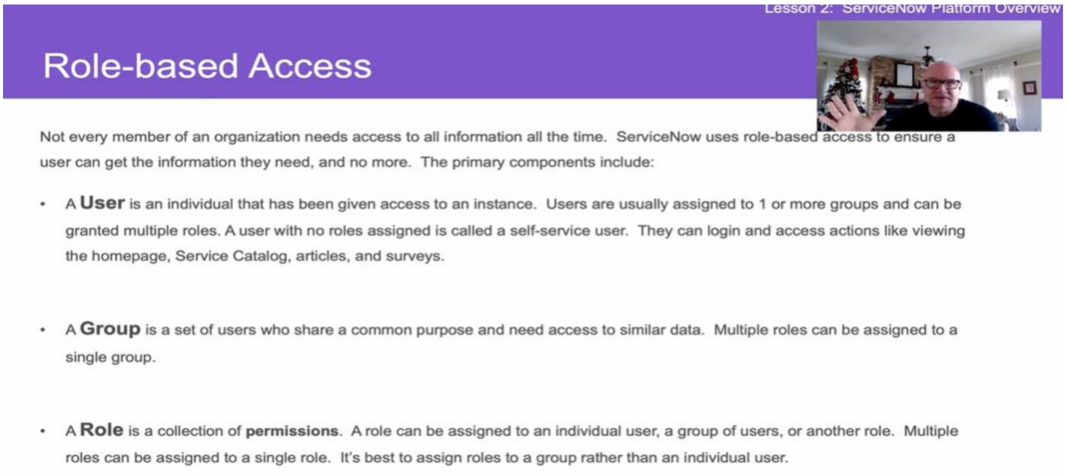


Role-Based Access and Authentication:

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.

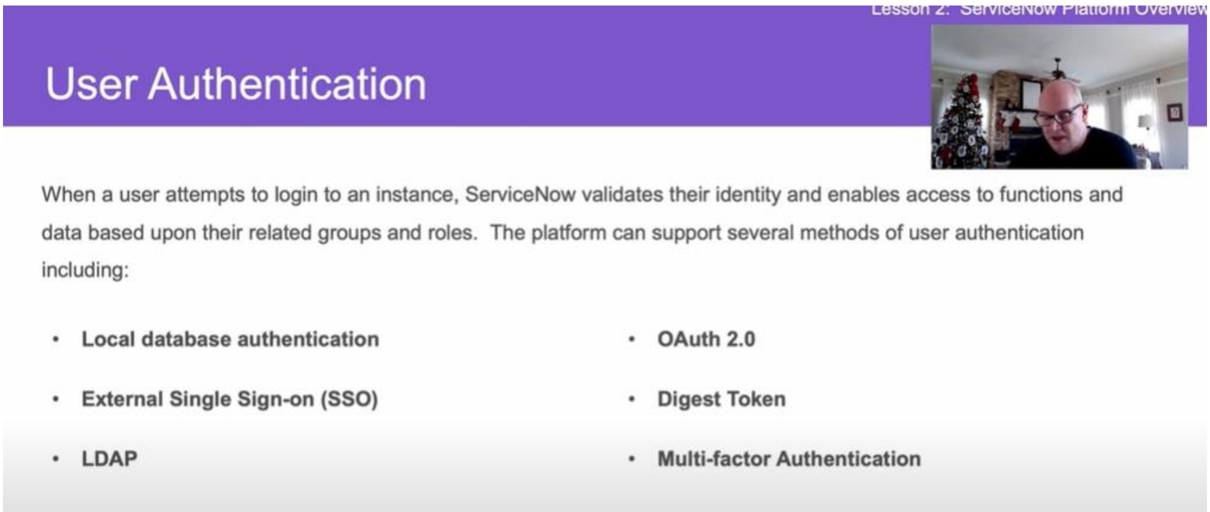
- **Roles vs. Direct Permissions:** It's recommended to assign permissions via roles rather than directly to users for easier management and flexibility, especially when users change roles or responsibilities.

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



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



ServiceNow User Interface Overview

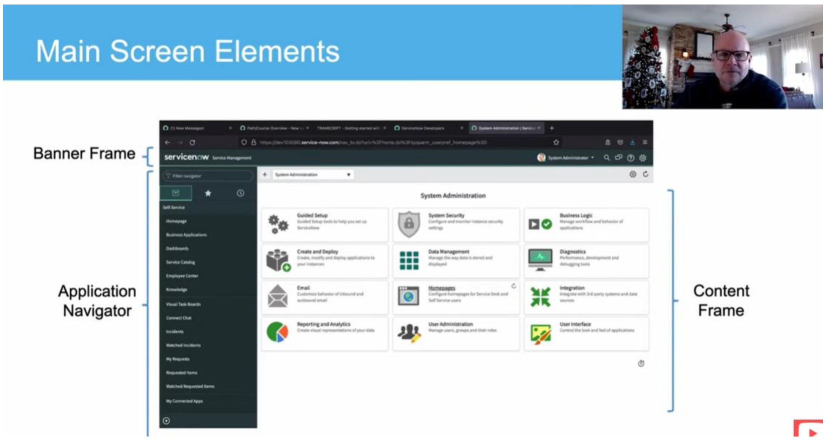
ServiceNow Platform User Interface:

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:

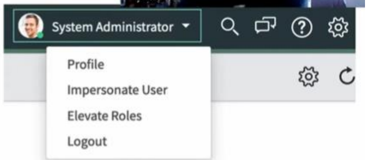
Global Search: Allows users to search across the instance for records matching specific keywords, categorized for easy navigation.

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

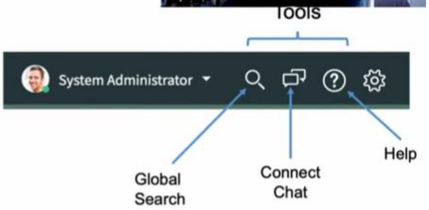
The User Menu provides the following tools:



- **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

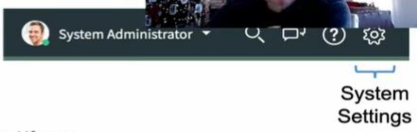
Tools on the Banner Frame include:



- **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

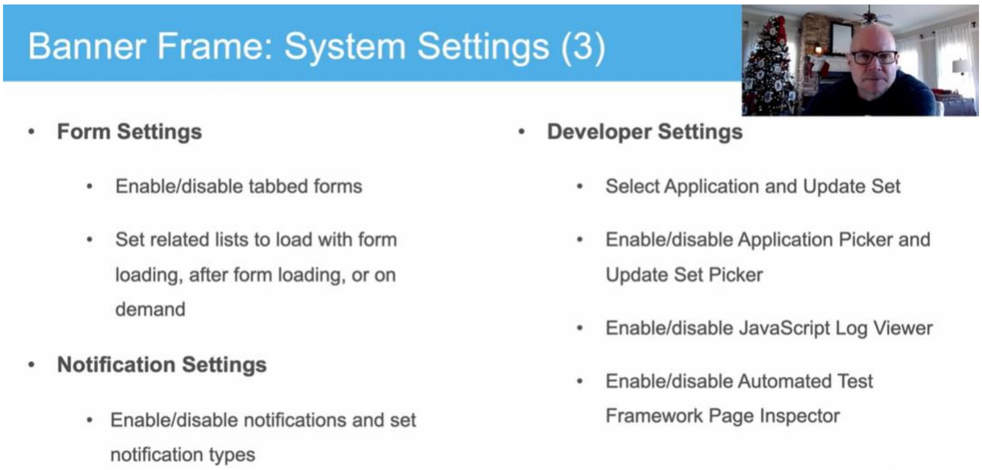
System Settings allows the user to customize the UI to their preference. Settings are grouped as follows:



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

Banner Frame: System Settings (2)

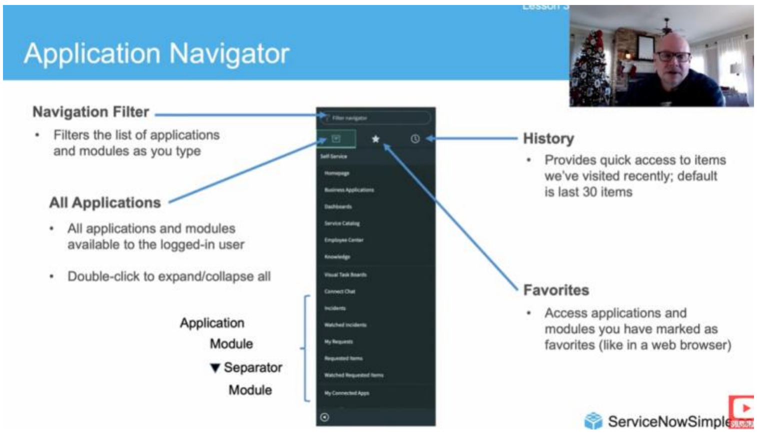
- **General Settings**
  - Enable/disable Compact UI
  - Enable/disable Keyboard shortcuts
  - Set Home link to Homepages or Dashboards
  - Set Date/Time to Calendar, Time Ago, or Both
  - Set Time zone
- **Theme Settings**
  - Choose a color scheme for your UI
- **Accessibility Settings**
  - Set accessibility settings
- **List Settings**
  - Enable/disable wrapping of long text in list columns



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.



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:

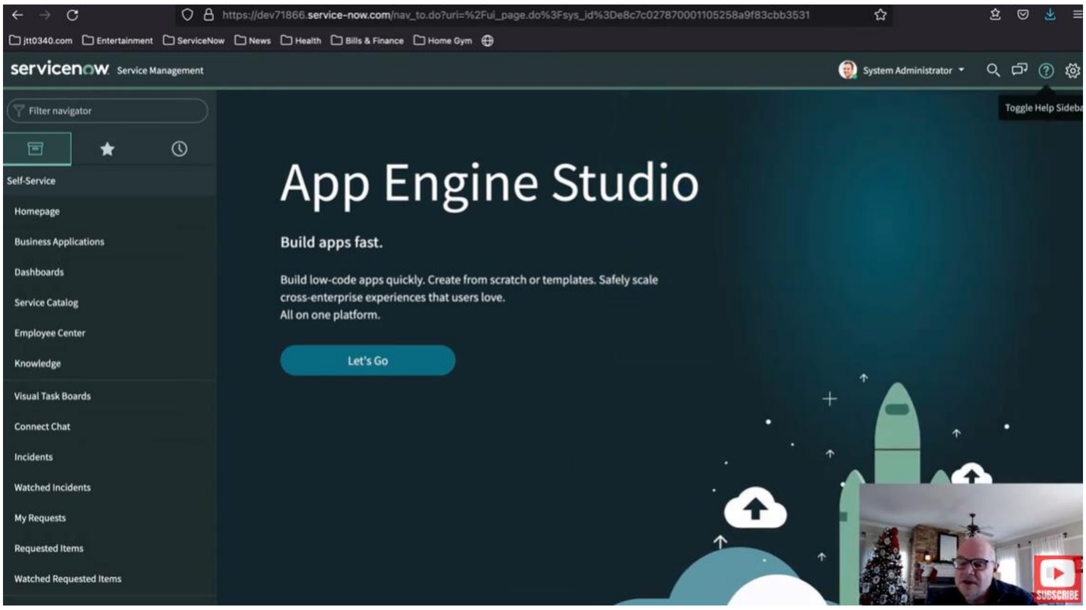
UI Policies: Manage the behavior and appearance of fields within forms, allowing for dynamic changes based on conditions, improving user experience.

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:

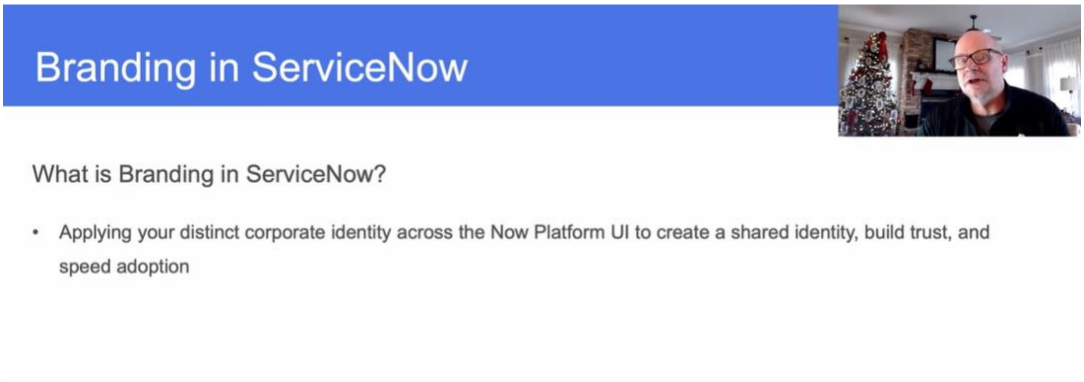
Client Scripts: Run in the user's browser to manage form interactions in real-time. They can validate data, modify form elements, and interact with the server asynchronously.



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.

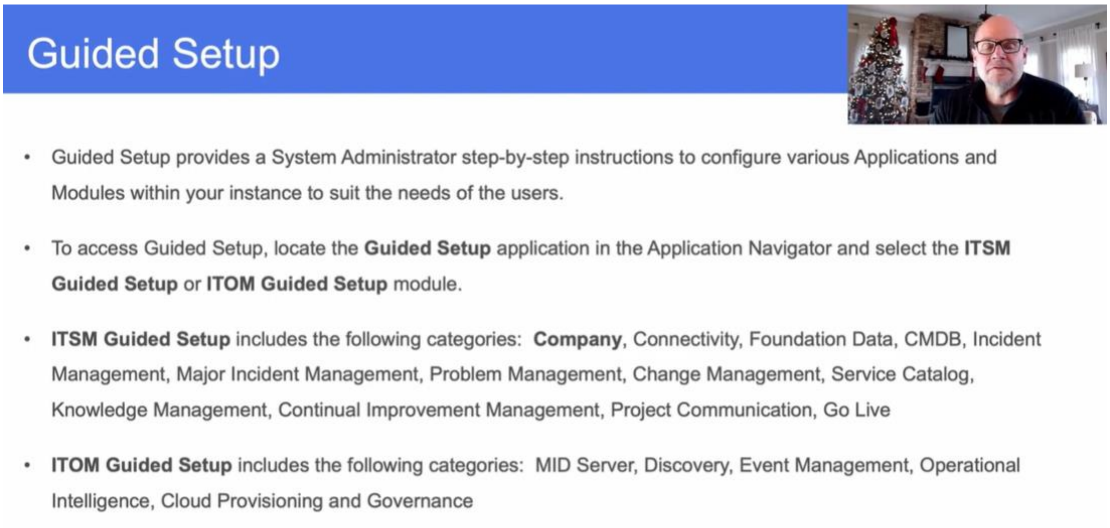


Company Guided Setup:

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.



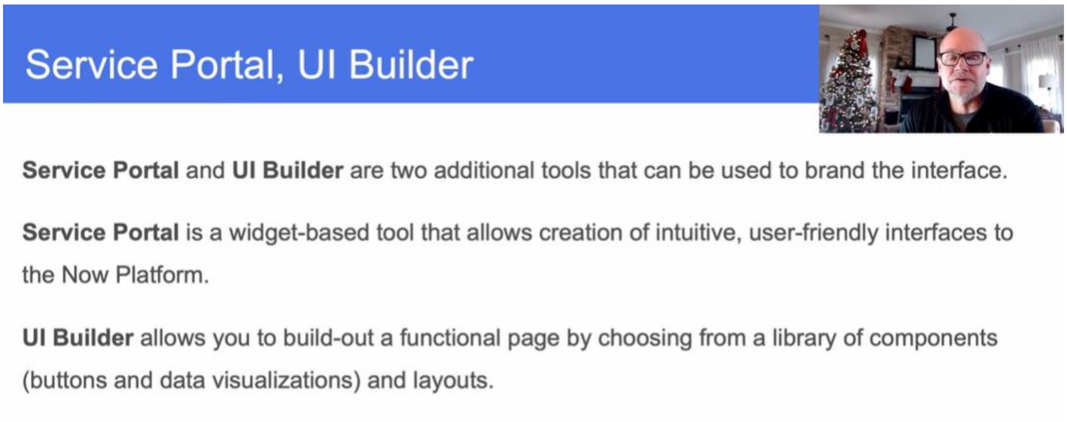
ServiceNow Portal and UI Builder:

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.



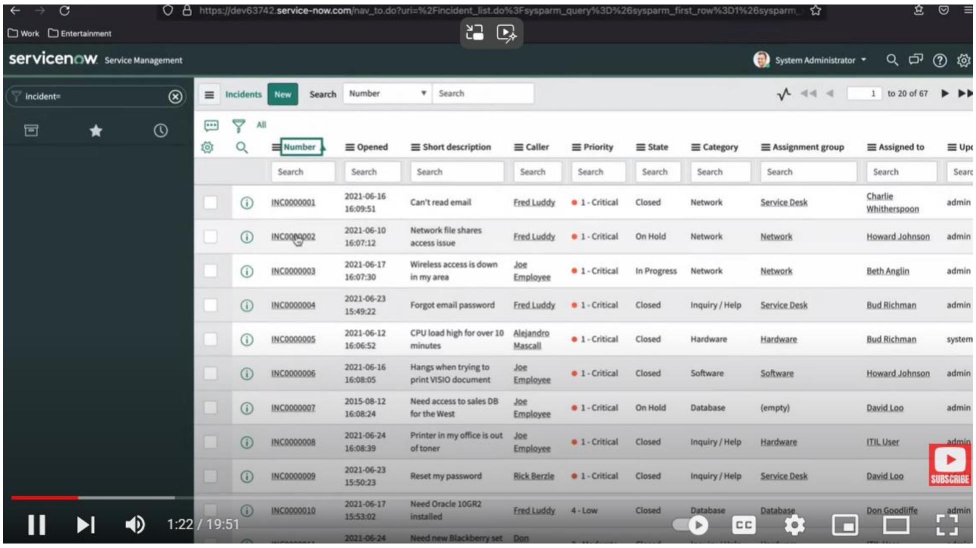
Hands-on Branding Demonstration:

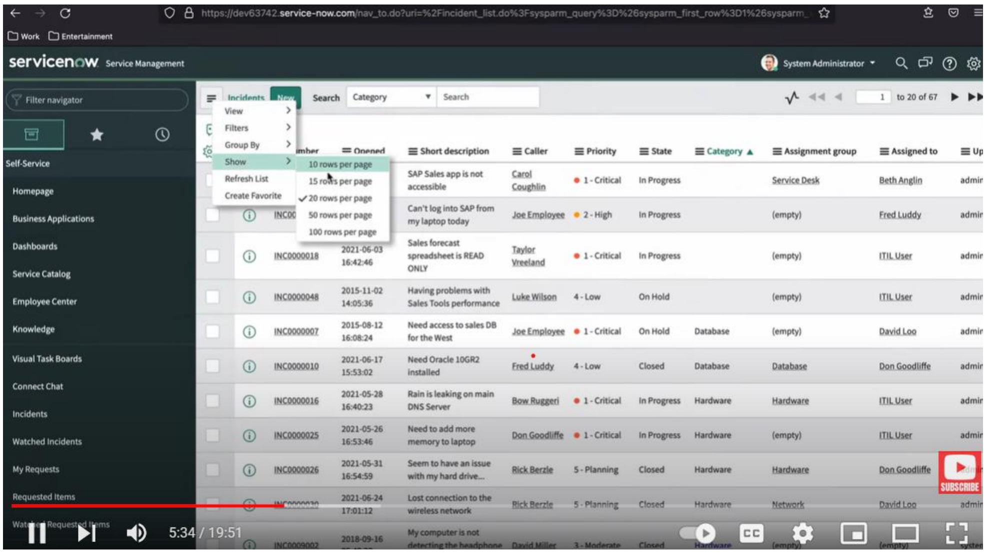
Practical Application: The session includes a demonstration of branding features, showcasing how guided setup wizards can be used to personalize the interface effectively. This involves configuring elements like the company logo, color scheme, and other visual aspects.

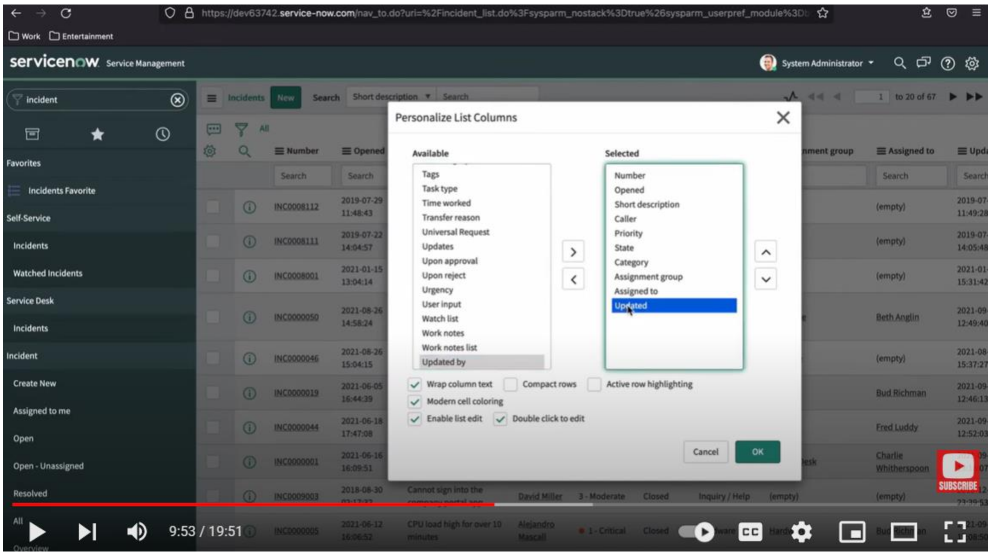
Welcome Page Customization:

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.


servicenow Service Management
System Administrator
Incidents
New
Search
Number
Number
Opened
Short description
Caller
Priority
State
Category
Assignment group
Assigned to
INC0000001
Can't read email
Fred Luddy
1 - Critical
Closed
Network
Service Desk
Charlie Whitherspoon
INC0000002
Network file shares access issue
On Hold
Howard Johnson
INC0000003
Wireless access is down in my area
Joe Employee
In Progress
Beth Anglin
INC0000004
Forgot email password
Inquiry / Help
Bud Richman
INC0000005
CPU load high for over 10 minutes
Alejandro Mascall
Hardware
INC0000006
Hangs when trying to print VISIO document
Software
INC0000007
Need access to sales DB for the West
Database
David Loo
INC0000008
Printer in my office is out of toner
ITIL User
INC0000009
Reset my password
Rick Berzle
INC0000010
Need Oracle 10GR2 installed
4 - Low
Don Goodliffe
1:22 / 19:51


servicenow Service Management
Filter navigator
Self-Service
Homepage
Business Applications
Dashboards
Service Catalog
Employee Center
Knowledge
Visual Task Boards
Connect Chat
Incidents
Watched Incidents
My Requests
Requested Items
View
Filters
Group By
Show
Refresh List
Create Favorite
10 rows per page
15 rows per page
20 rows per page
50 rows per page
100 rows per page
Category
SAP Sales app is not accessible
Can't log into SAP from my laptop today
Sales forecast spreadsheet is READ ONLY
Having problems with Sales Tools performance
Need access to sales DB for the West
Need Oracle 10GR2 installed
Rain is leaking on main DNS Server
Need to add more memory to laptop
Seem to have an issue with my hard drive...
Lost connection to the wireless network
5:34 / 19:51


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
Wrap column text
Compact rows
Active row highlighting
Modern cell coloring
Enable list edit
Double click to edit
Cancel
OK
Favorites
Incidents Favorite
Self-Service
Incidents
Watched Incidents
Service Desk
Incident
Create New
Assigned to me
Open
Open - Unassigned
Resolved
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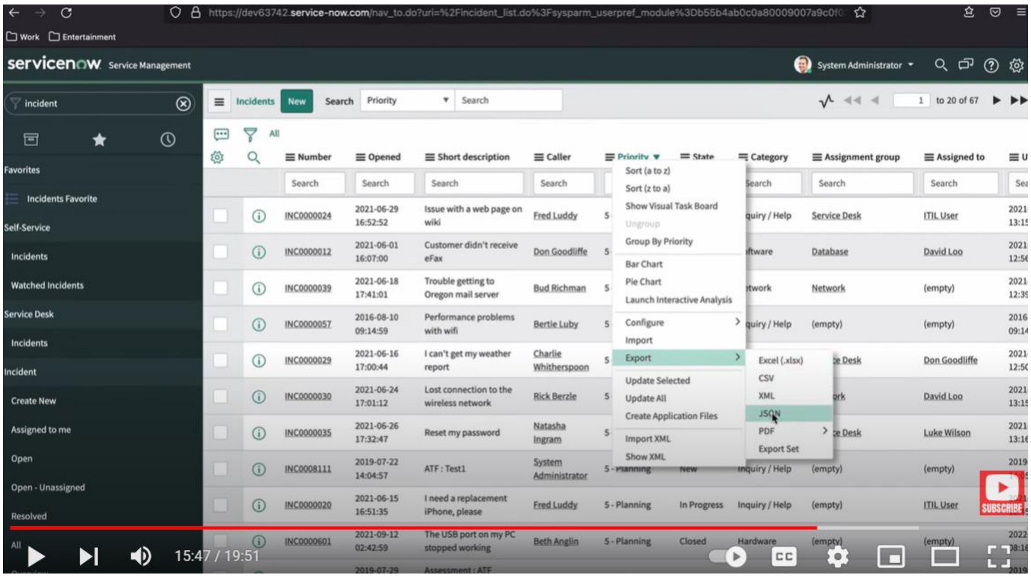
ServiceNow Lists and Filters

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Copy URL:  https://dev63742.service-now.com/nav_to.do?uri=incident.do?sys_id=46ee8c2fa9fe198100623592c70d643e

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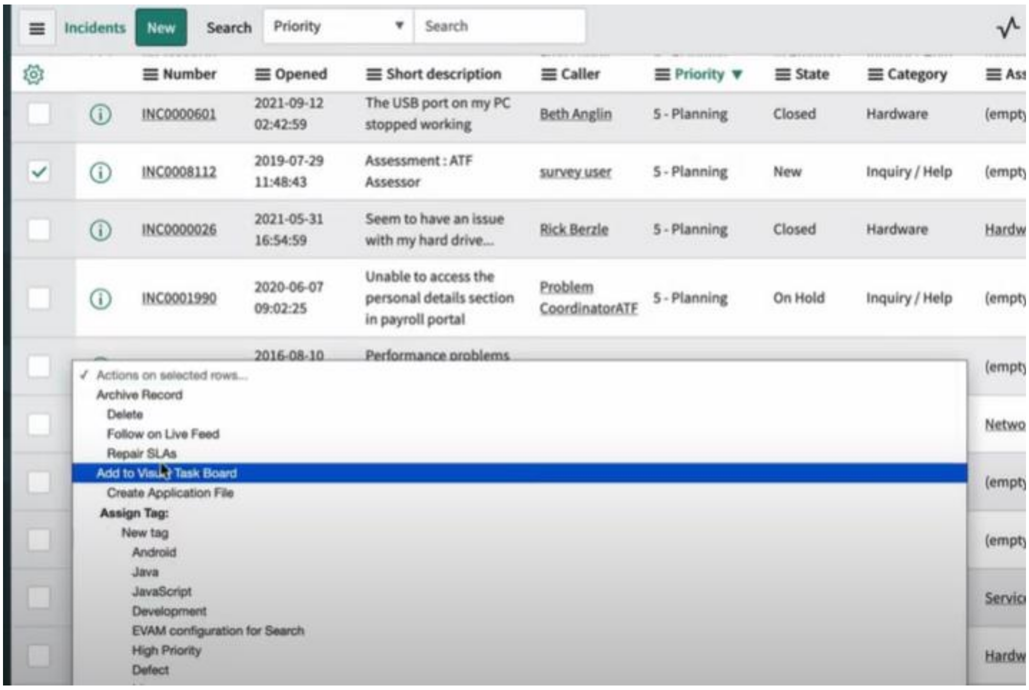


ServiceNow Lists and List Views:

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.

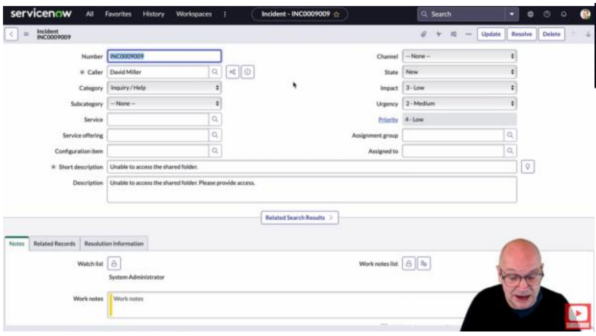
Standard Layout

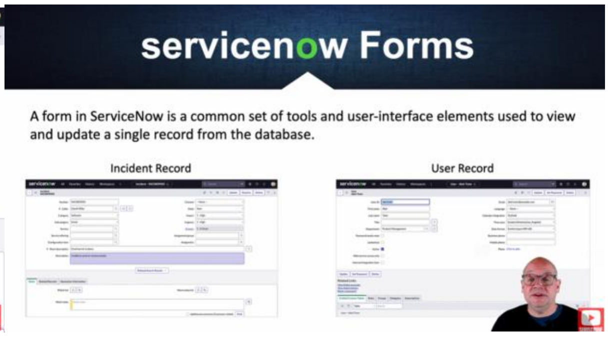
ServiceNow forms have a standardized layout across different tables. Common elements include the header bar (with tools and record information), the main section (with fields), and additional sections for related lists and formatters.

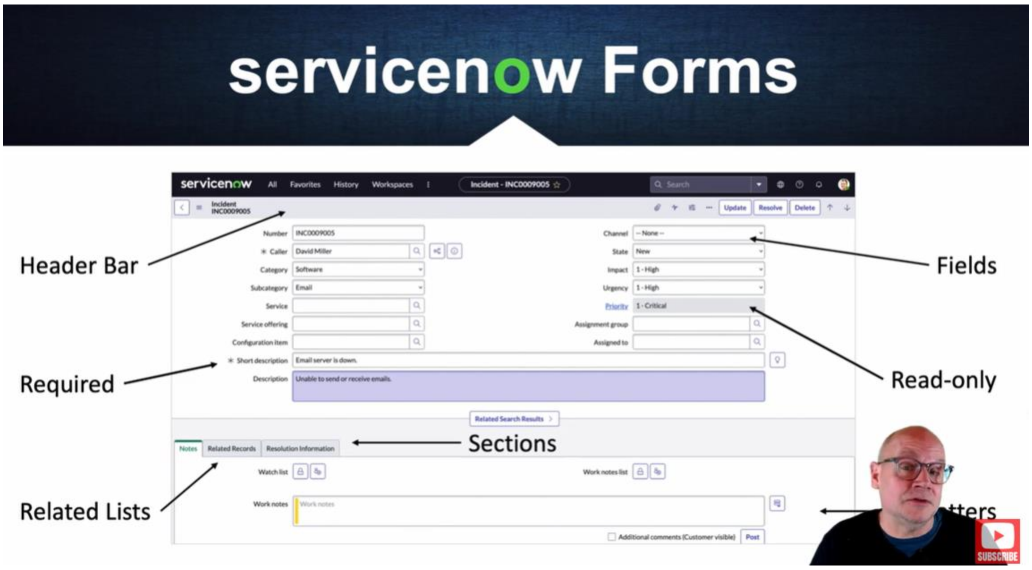
Form Field Types

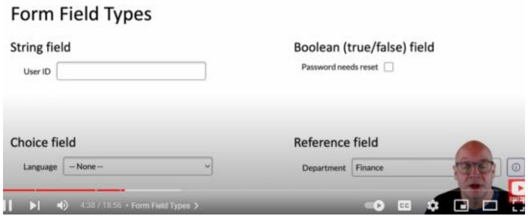
Fields in a form represent the record's attributes. Types of fields include:

- **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.





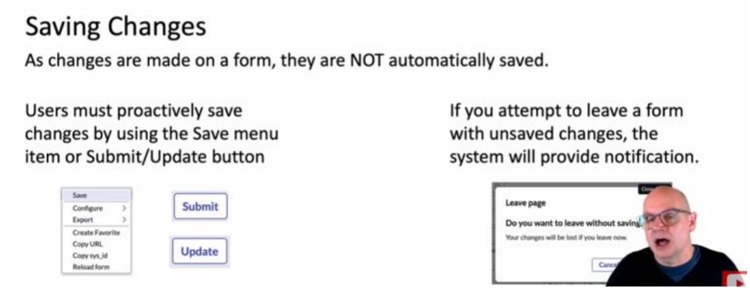




Saving Changes

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.



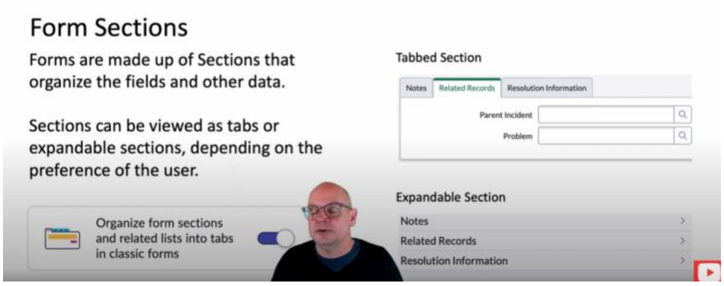
Insert / Insert & Stay

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

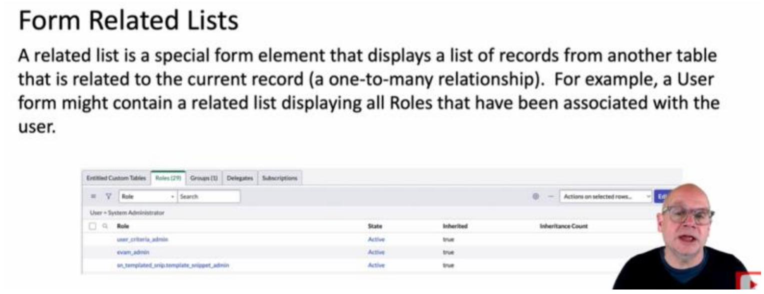
Forms can have sections to organize fields and related data. Sections can be displayed as tabs or in expandable/collapsible containers, depending on user preferences.

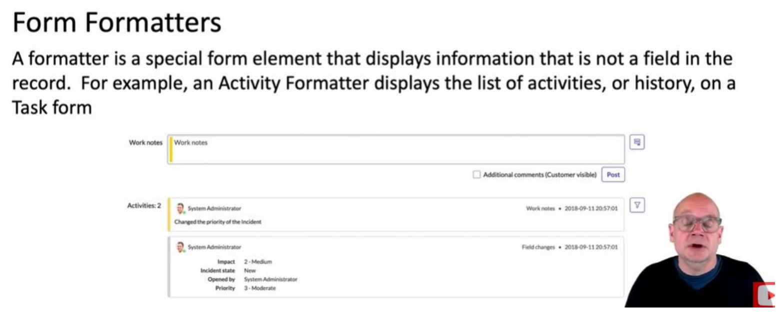


Related Lists & Formatters

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

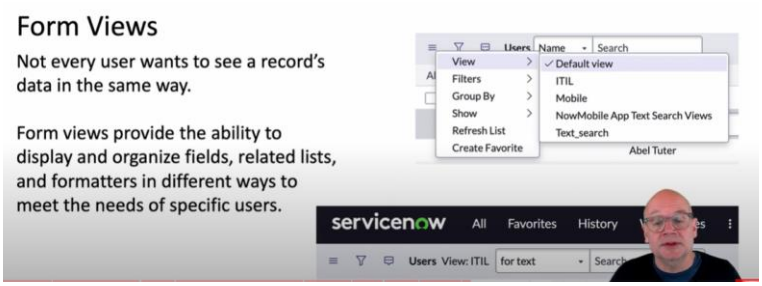
Formatters: Special form elements that show related information, like an activity log.





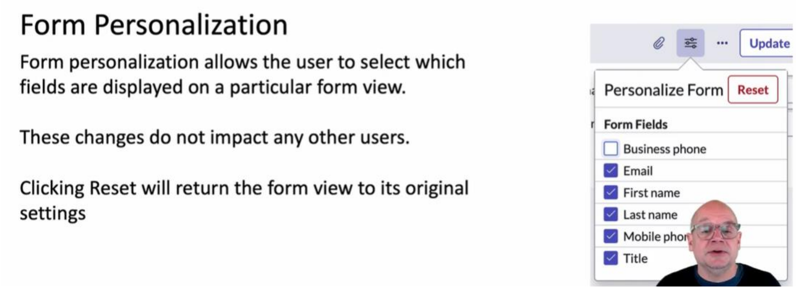
Form Views

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.



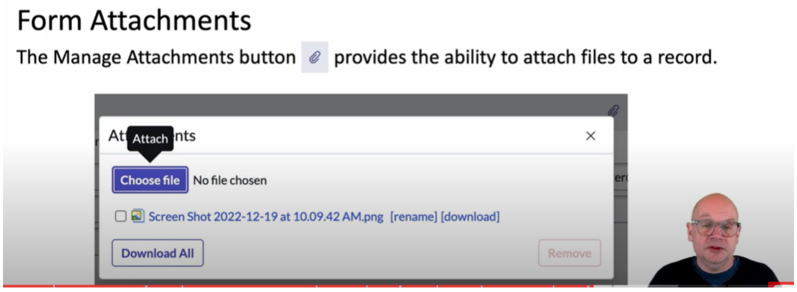
Form Personalization

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



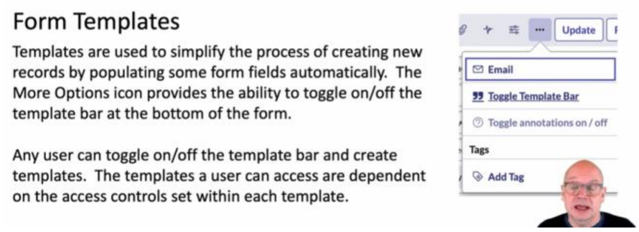
Adding Attachments

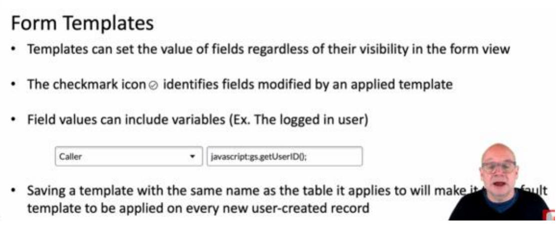
Attachments can be added to records using the **Manage Attachments** button. You can also remove attachments if needed.



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.

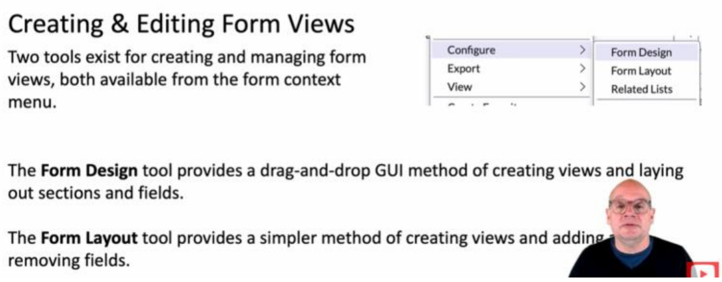


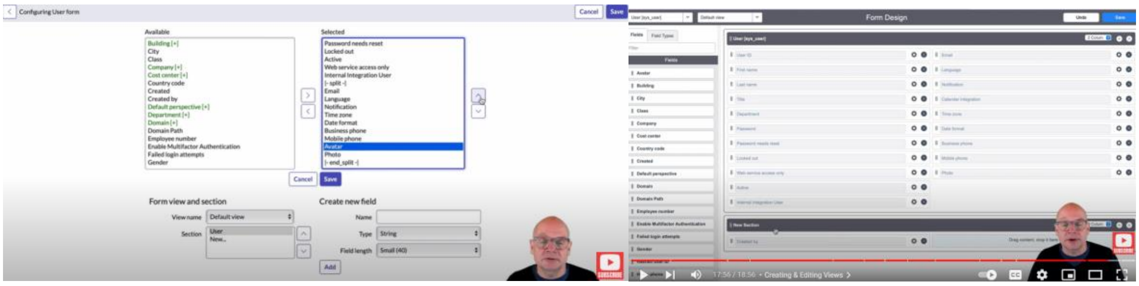


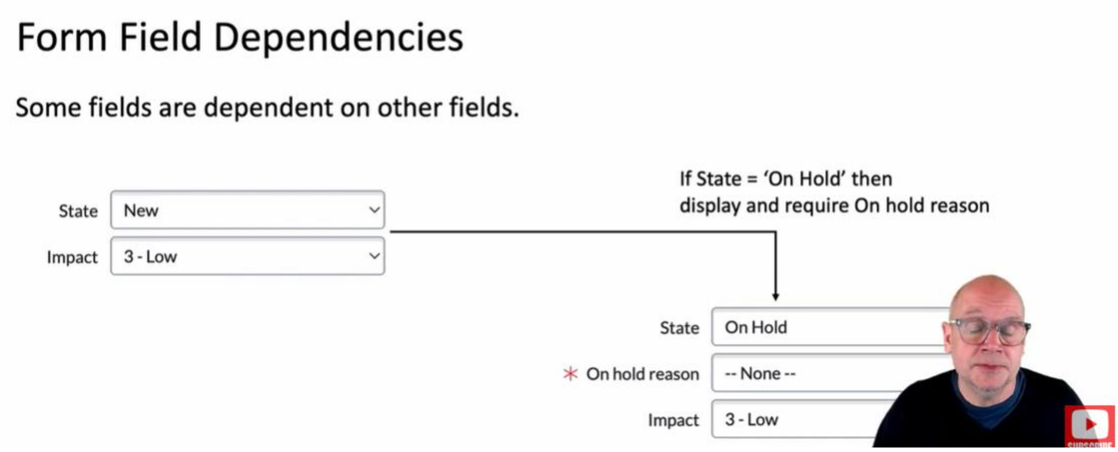
Creating & Editing Views

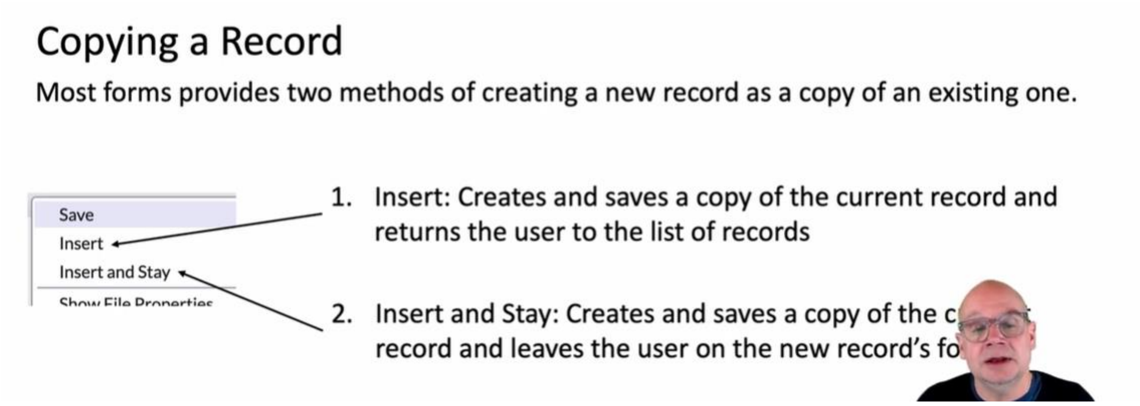
Users with the necessary permissions can create or modify form views using tools like:

- **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.



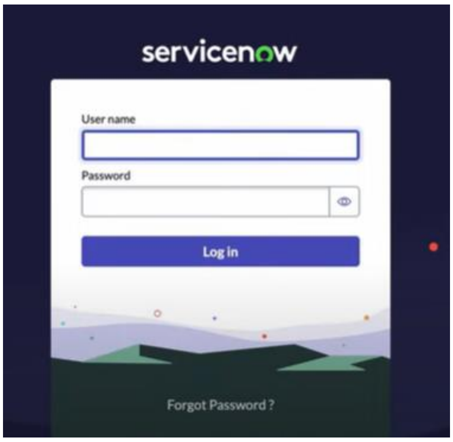






A Hands-on ServiceNow Tool Demo

Logging In to ServiceNow:

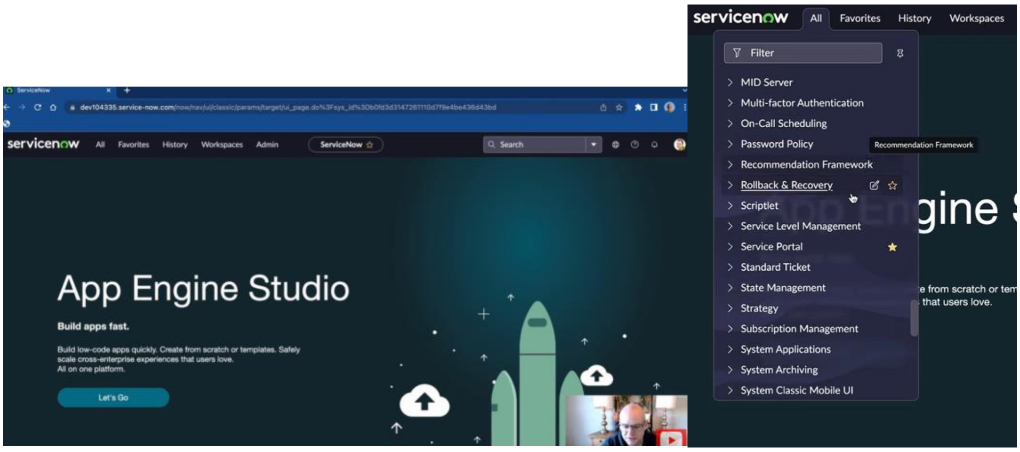


Accessing ServiceNow: Open a browser and enter the URL provided by your company. This URL leads to your ServiceNow instance, which is essentially a full-stack deployment of the platform.

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.

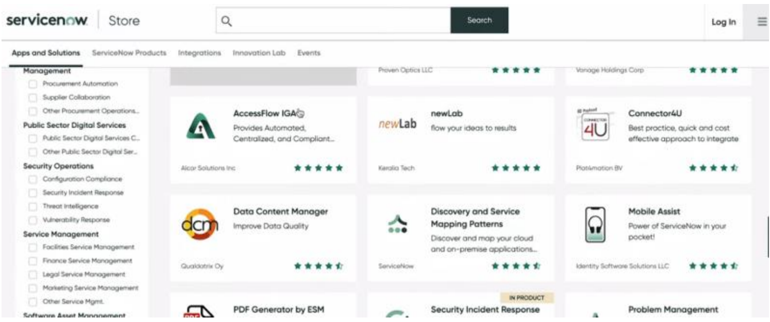
All Menu: Access all available applications, both out-of-the-box and custom.

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.

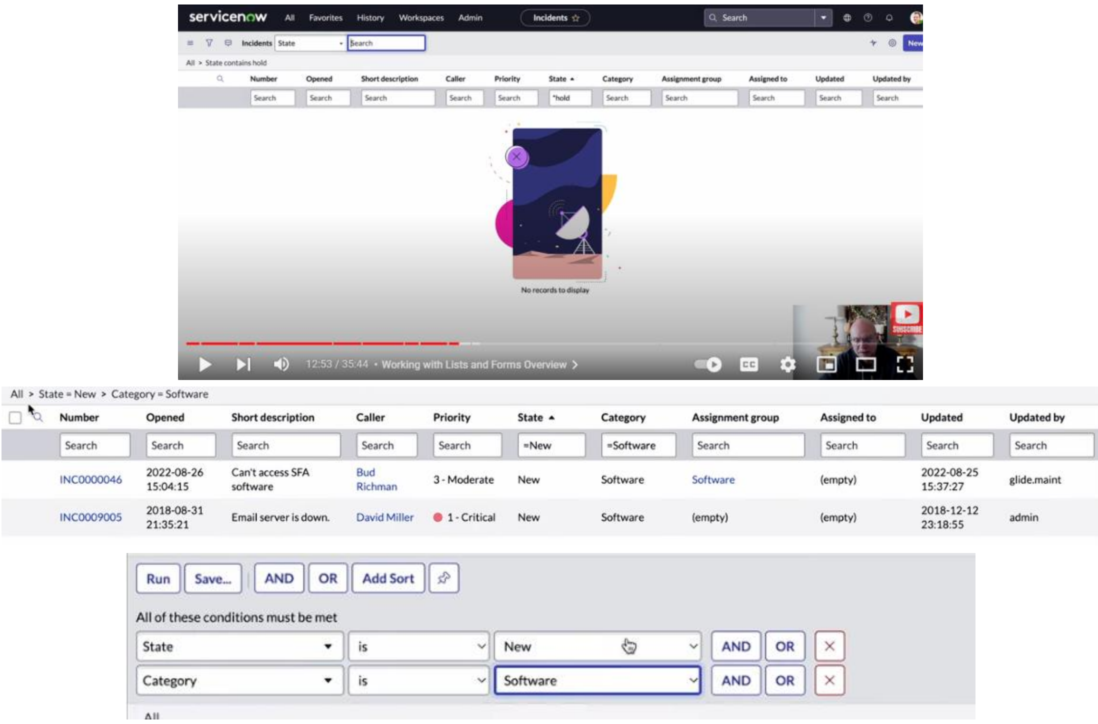
Personalization: You can customize the fields and their order in the list view to suit your preferences.

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.

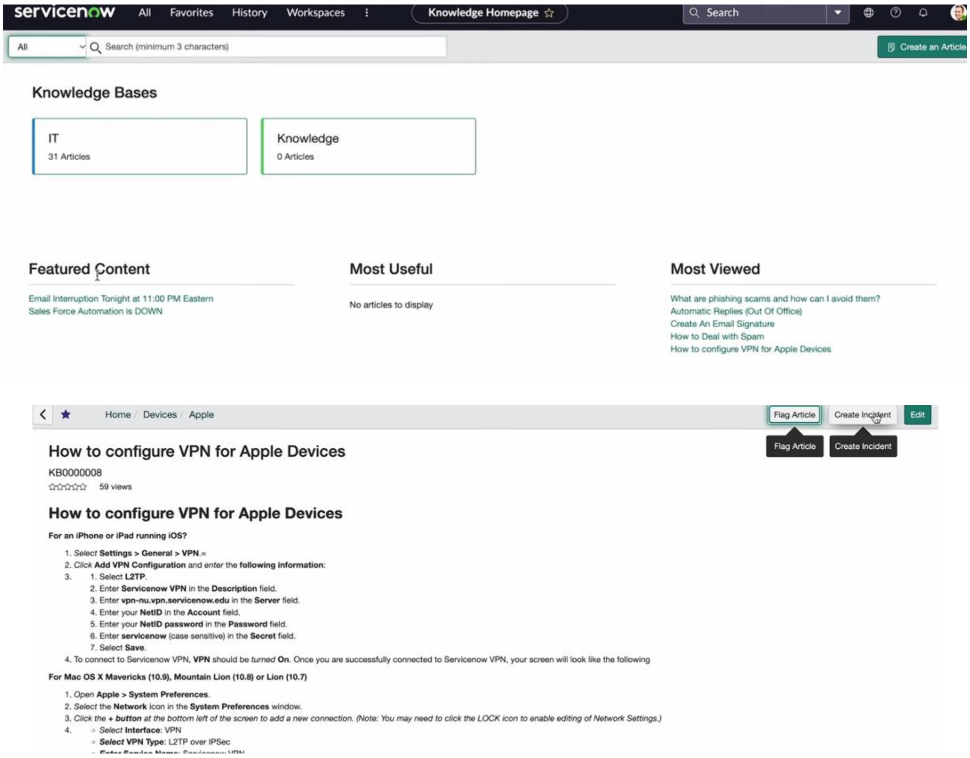


Knowledge Management:

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

Knowledge Base:

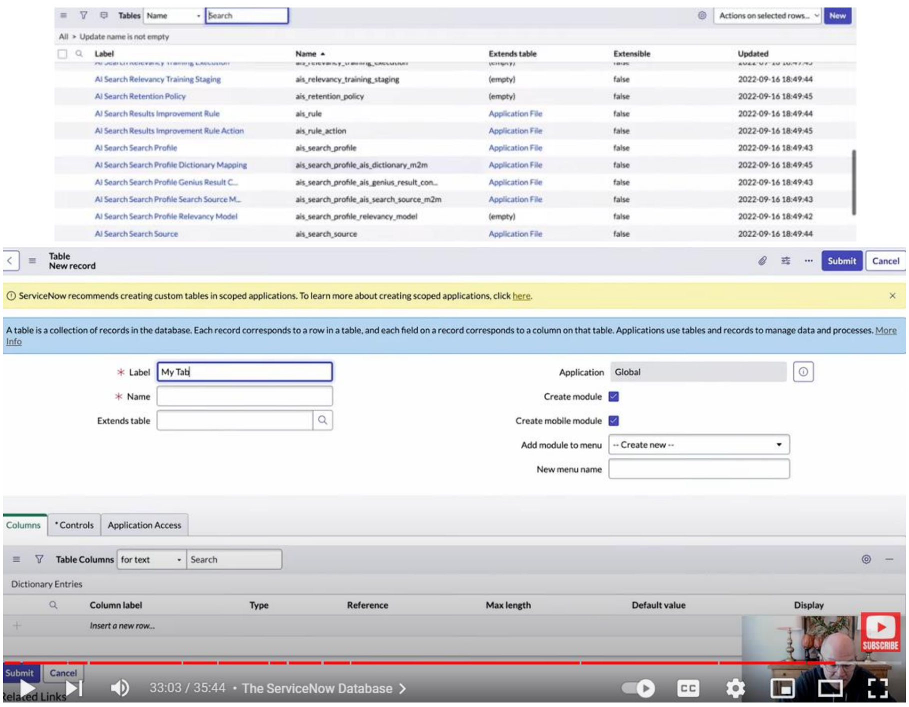
Articles: The knowledge base is a repository for helpful articles and documentation. You can search for articles, flag or edit them, and participate in discussions or provide feedback.



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.



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:

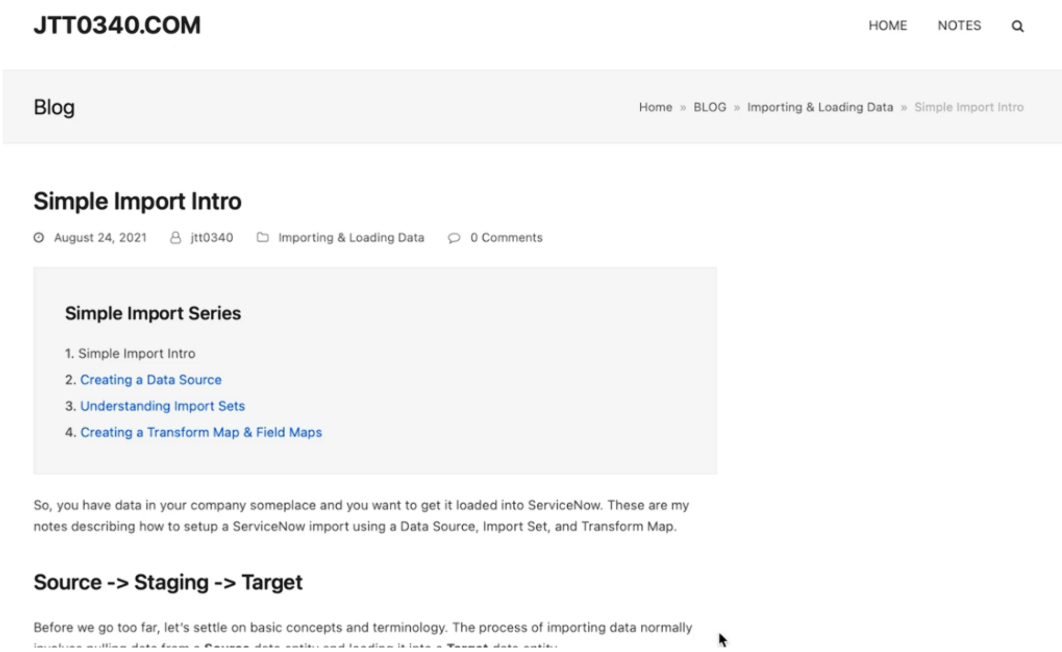
- **Staging Table (Import Set Table)**: ServiceNow uses an intermediary table called the staging table to hold data temporarily during the import process. This table is automatically created by ServiceNow and is used to facilitate the import from the source to the target.

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.



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

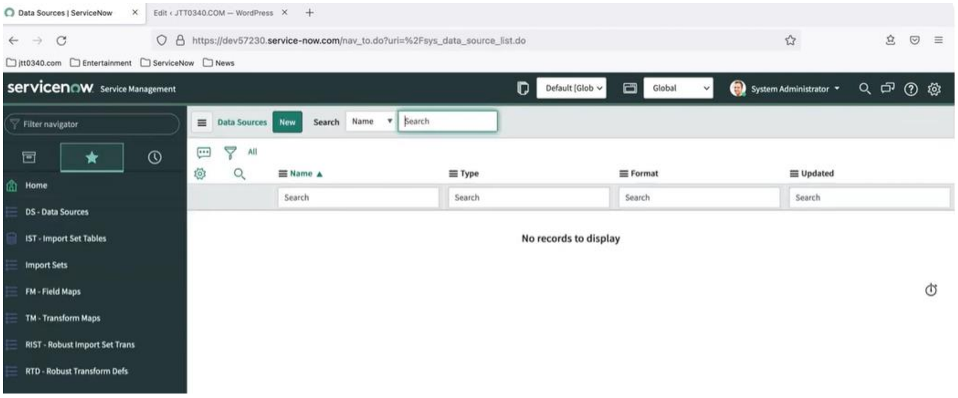
Purpose:

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.

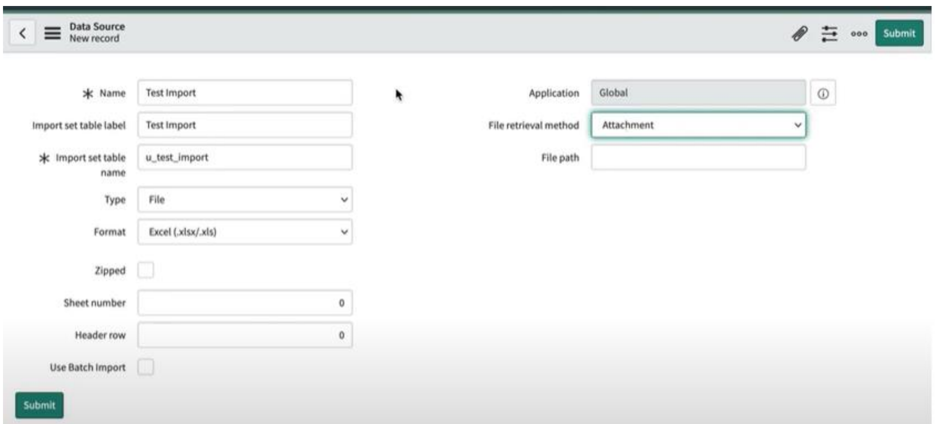


Create a New Data Source:

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:

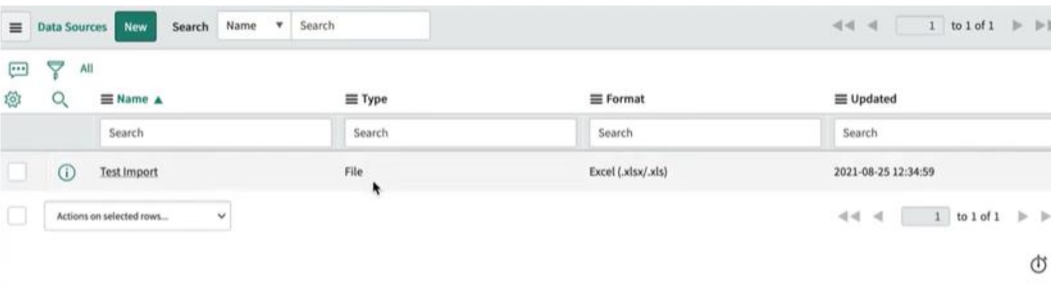
Automatic Creation: ServiceNow automatically creates a staging table (Import Set Table) based on the Data Source record parameters. The table is used to temporarily hold the data imported from the external source.

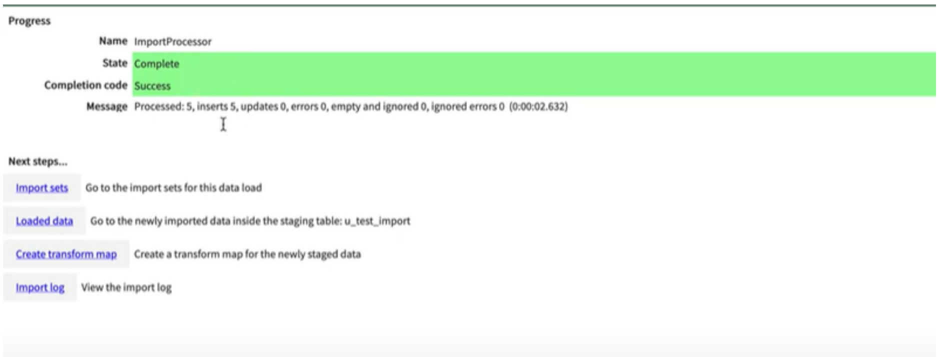
Naming: The table is named based on the parameters provided in the Data Source record (e.g., u_test_import).

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.





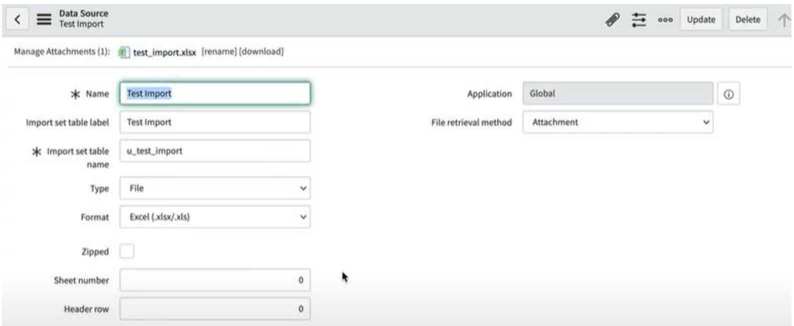
Transforming and Mapping Data

Transform Maps:

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

Components:

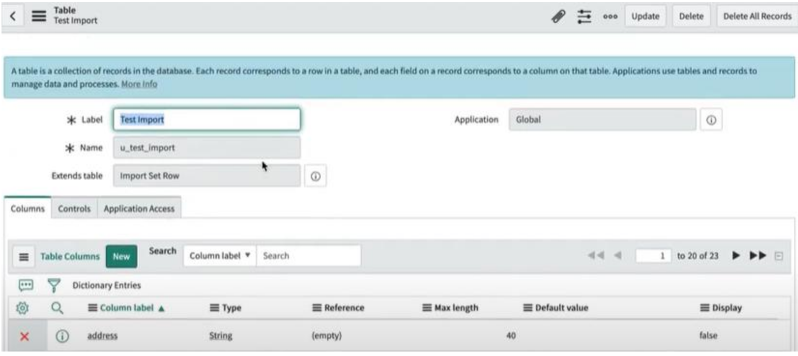
- **Source Fields:** Fields in the staging table.
- **Target Fields:** Fields in the target table where data should be moved.
- **Scripts:** Optional scripts to perform custom transformations during the import process.



Creating Transform Maps:

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

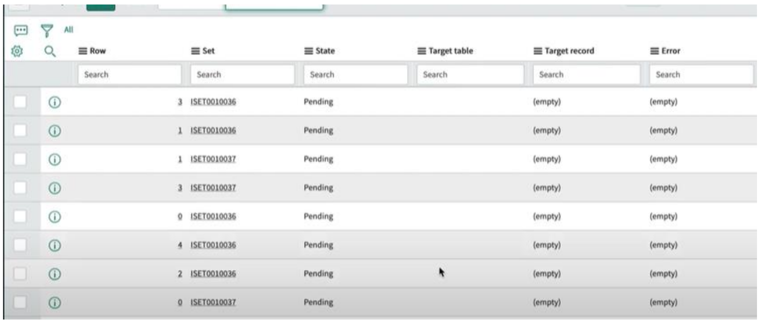
Configuration: Set up field mappings and transformation rules. Optionally, write scripts for more complex transformations.

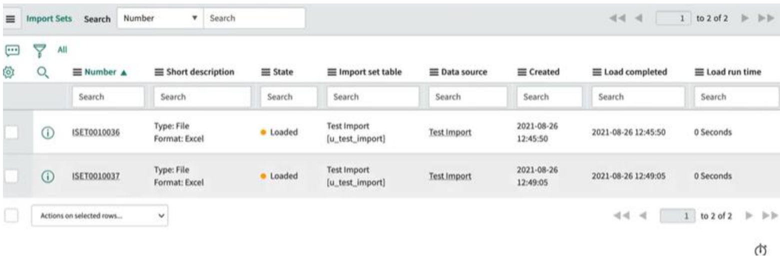


Data Transformation:

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.



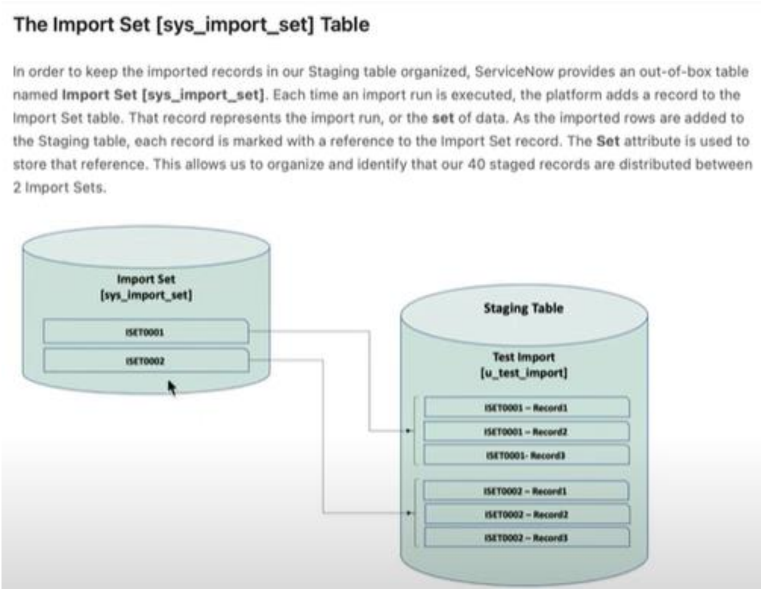


Managing Import Sets

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.



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.

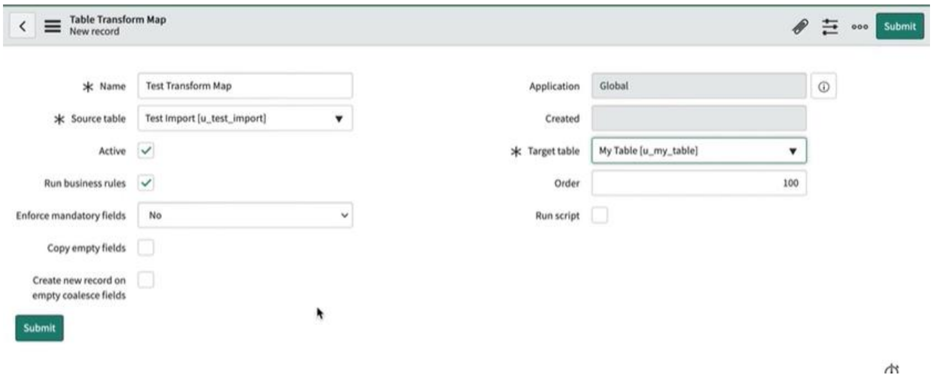


Table Name: sys_transform_map

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:

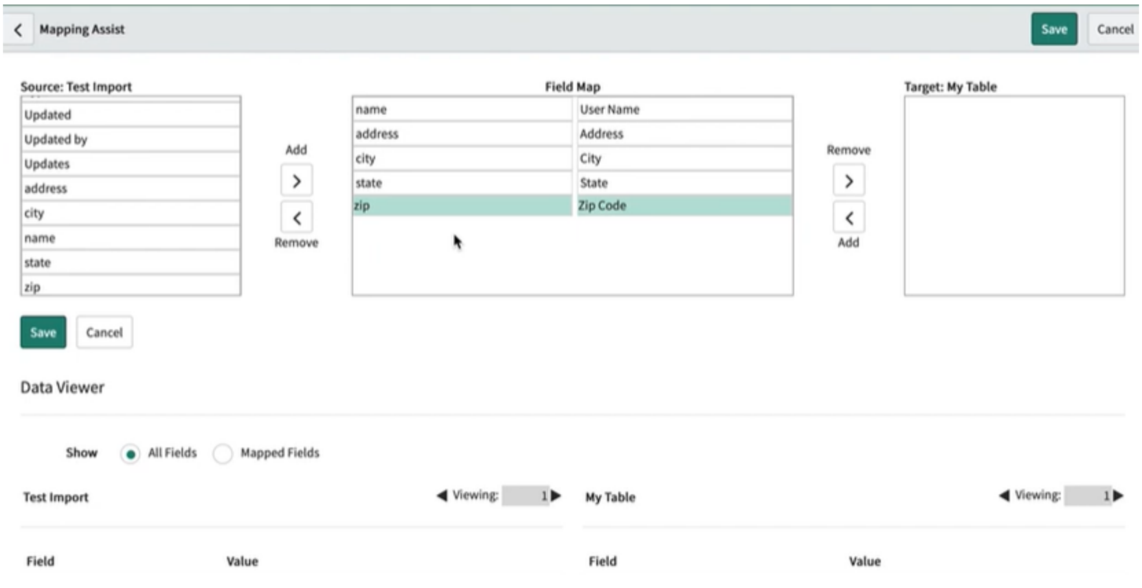
Definition: Field maps define how individual fields in the staging table are mapped to fields in the target table. Each field map represents a one-to-one mapping between fields in the source and target tables.

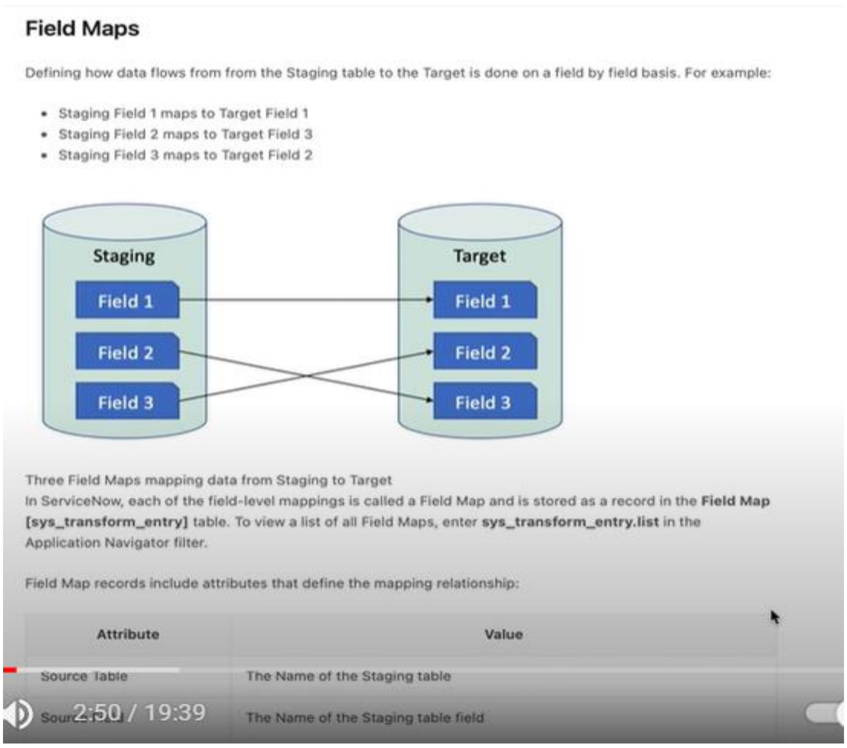
Table Name: cis_transform_entry (labeled as "Field Map")

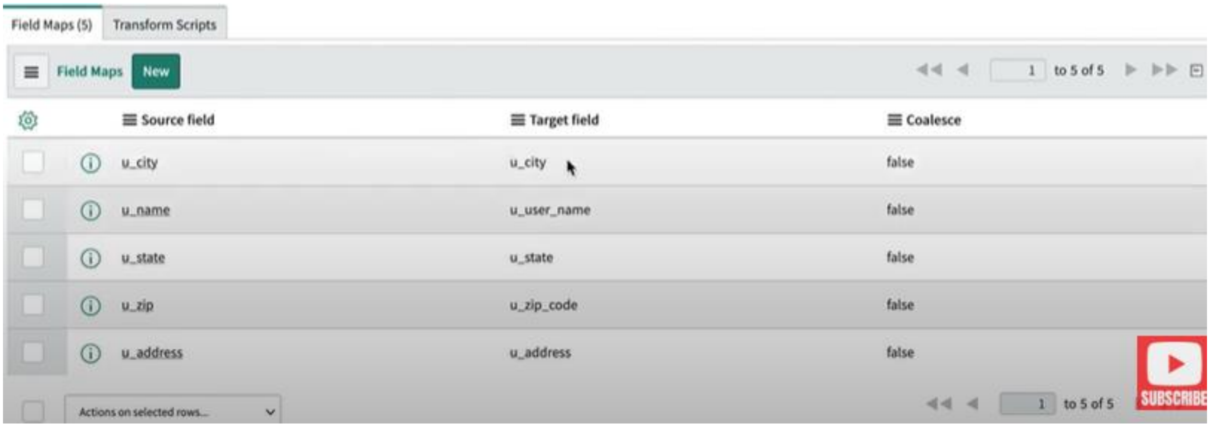
Creation:

- 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.







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:

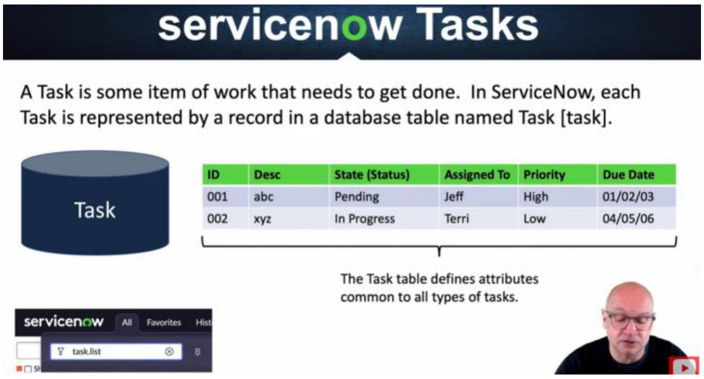
Testing: After setting up the transform map and field maps, test the import process from start to finish to ensure that data flows correctly from the staging table to the target table.

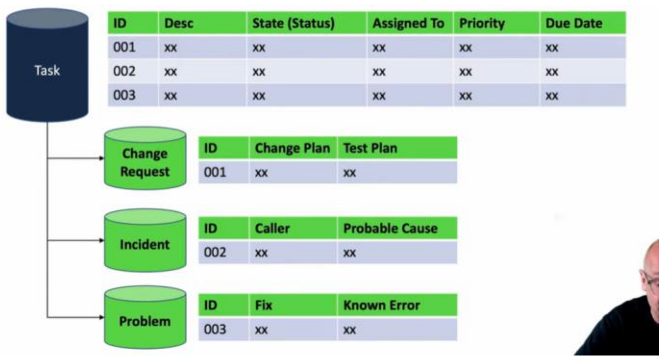
Scheduling: ServiceNow allows scheduling imports if recurring data imports are needed.

ServiceNow Incident Management Tutorial and Task Administration

Overview of Tasks in ServiceNow

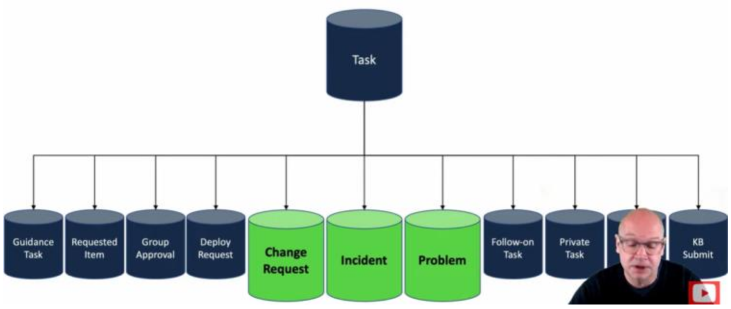
Definition of a Task: In ServiceNow, a task represents an item of work that needs to be completed. It is a record stored in a database table, typically with attributes like description, status, due date, and assignment details.





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

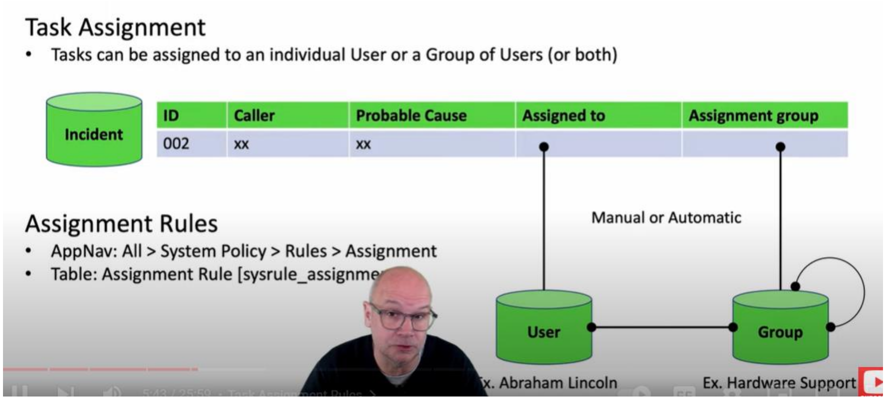
- **Incident**: Represents unplanned interruptions or issues.
- **Change Request**: Represents requests for changes to the system or infrastructure.
- **Problem**: Represents underlying issues causing multiple incidents.

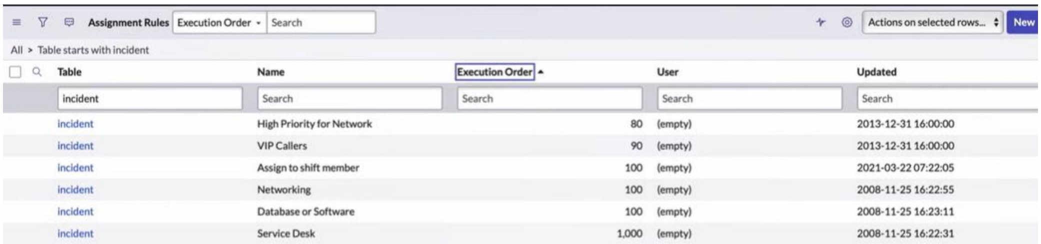


Each specialized table inherits common attributes from the task table and adds its own unique attributes.

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.

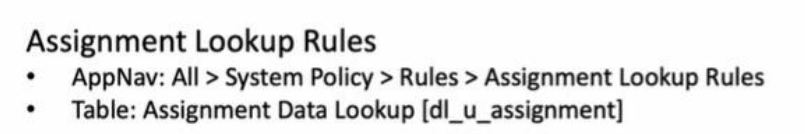




Assignment Rules | Execution Order | Search | Actions on selected rows... | New

All > Table starts with incident

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

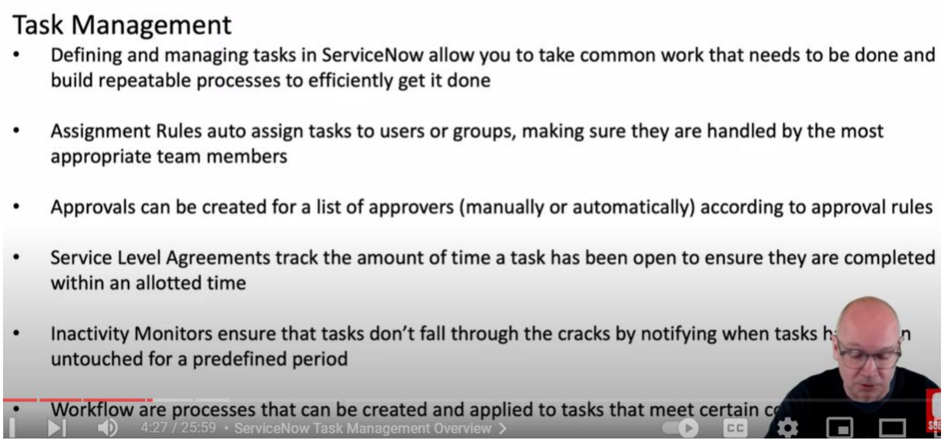


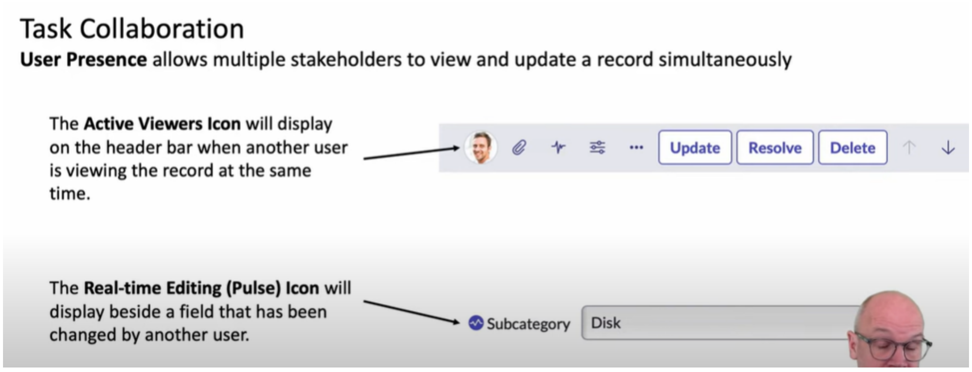
Assignment Rules:

- **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



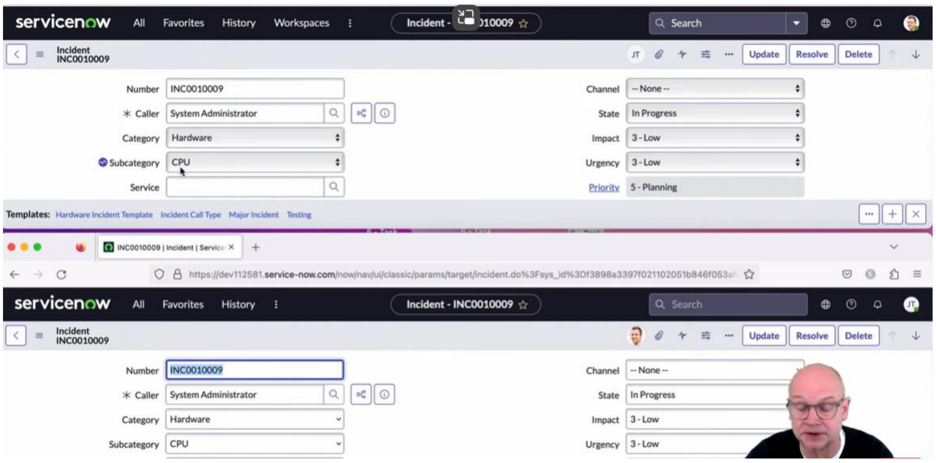


Accessing Tasks:

- **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.



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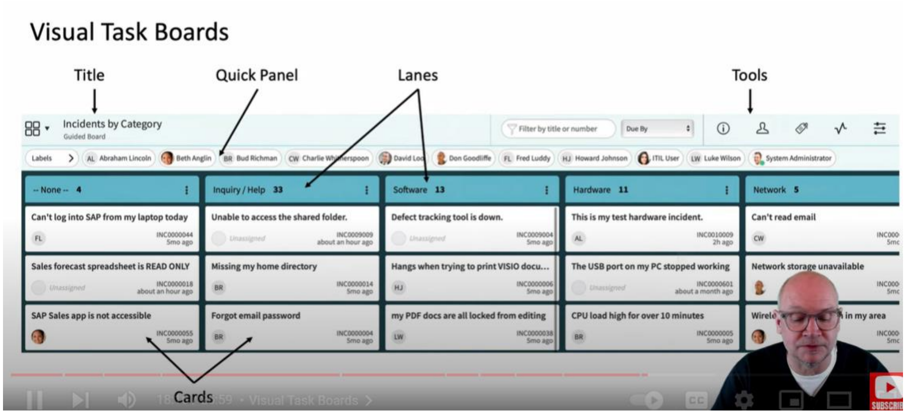
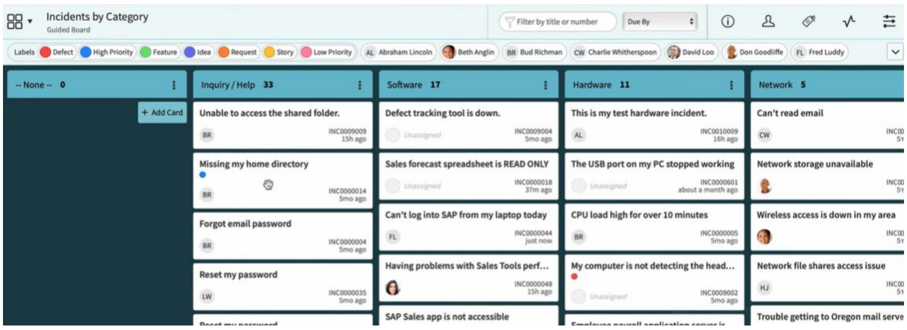
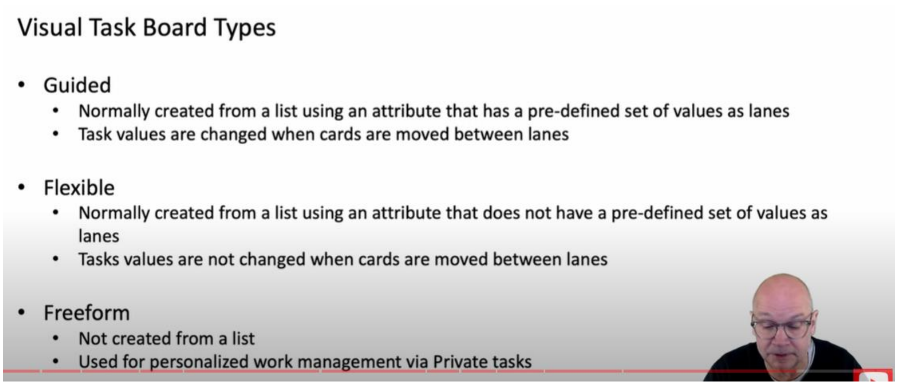
Visual Task Boards







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:

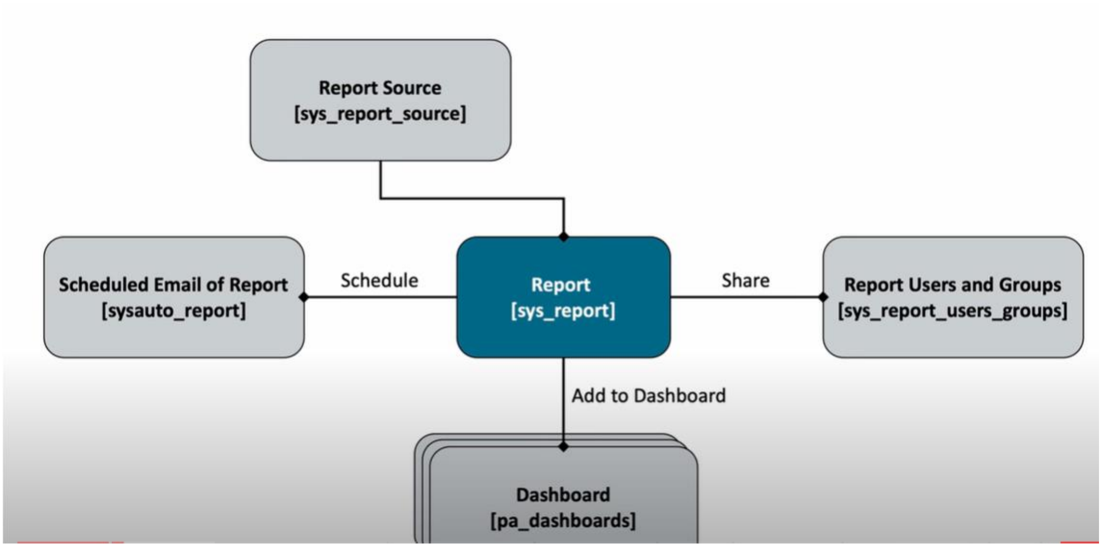
Sys Report Table: This table stores all reports in the instance. Each record in this table represents a report, including its title, the data source, and type of visualization.

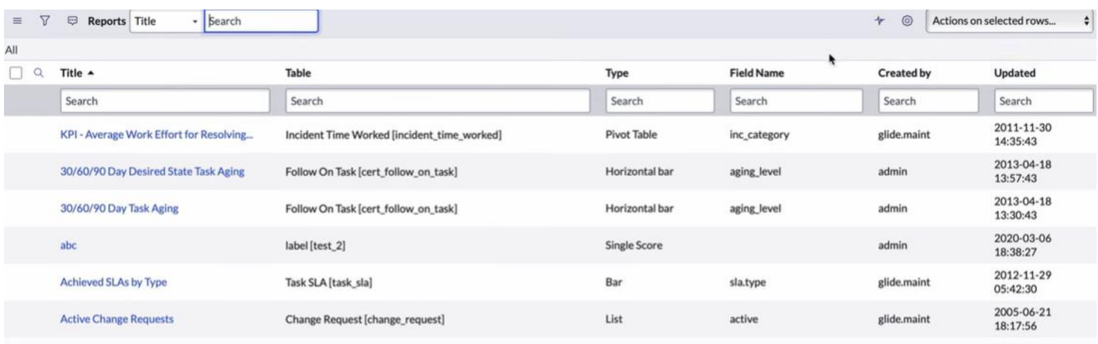
Report Source Table: Stores saved queries that can be reused to generate report data.

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.





Title	Table	Type	Field Name	Created by	Updated
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

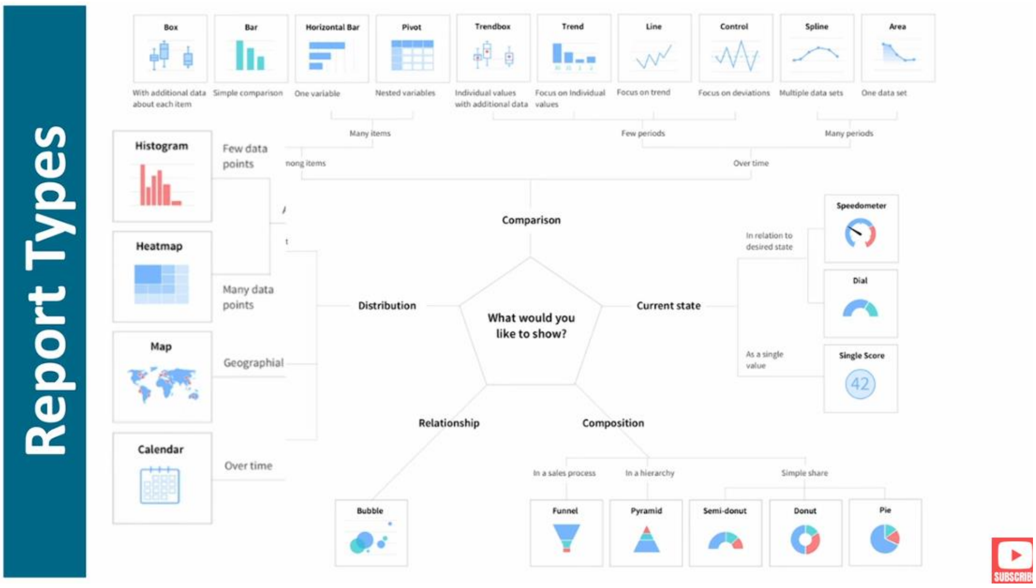
Column label	Type	Reference	Max length	Default value	Display
Additional Group By	String	(empty)	4,000		false
Aggregate	String	(empty)	40	COUNT	false
Aggregation Source	String	(empty)	40		false
Allow data label overlap	True/False	(empty)	40	false	false
Application	Reference	Application	32	javascript:(((typeof 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.



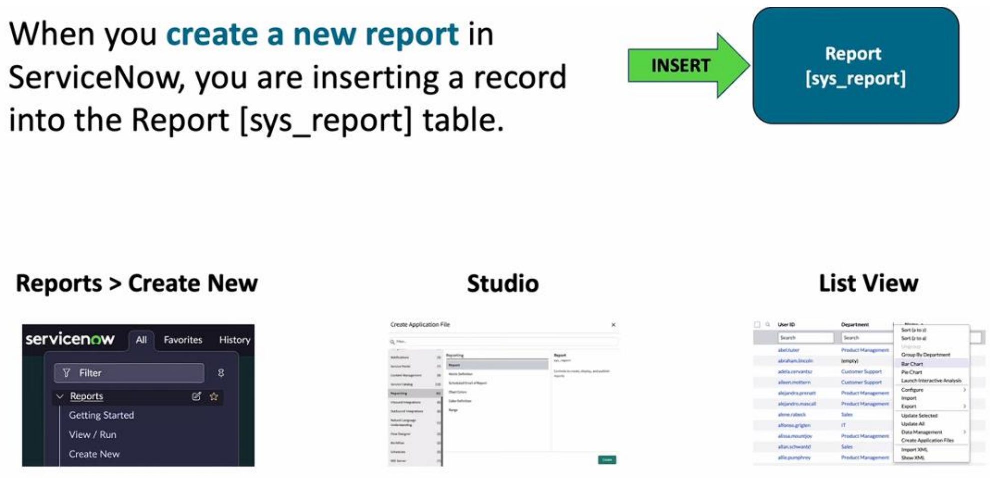
Creating and Managing Reports

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.



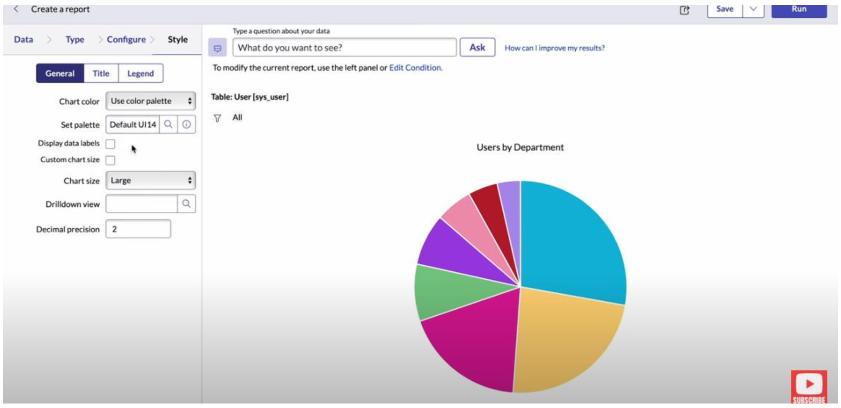
Steps to Create a Report:

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.



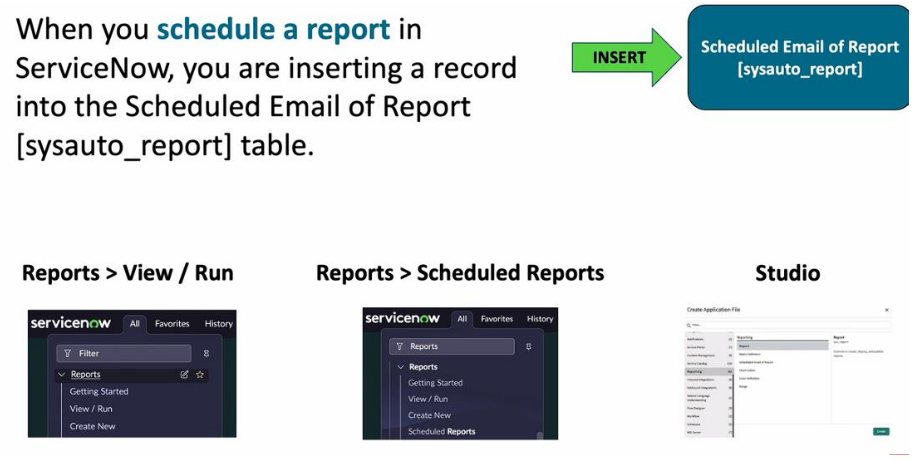
Scheduling Reports

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.

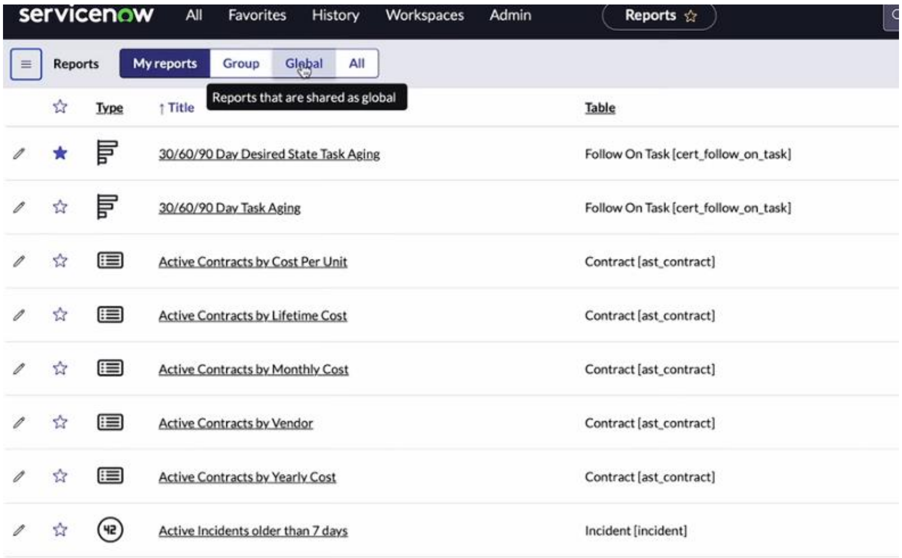


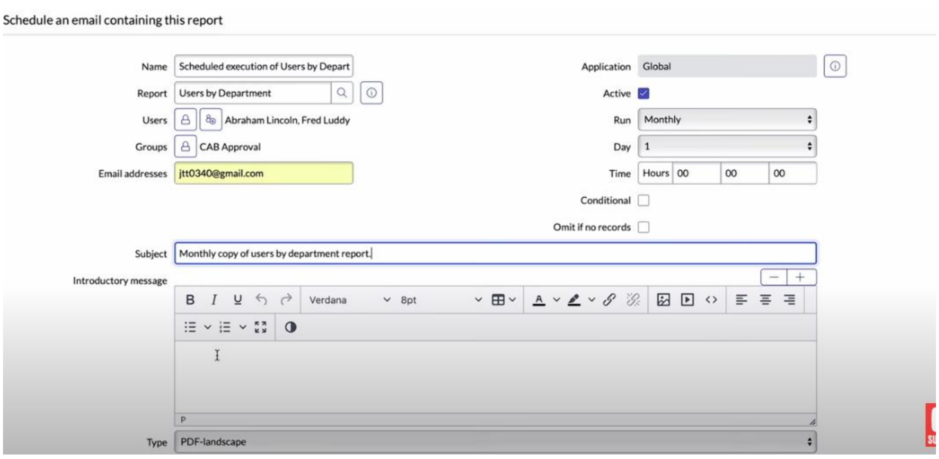
Sharing Reports

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.





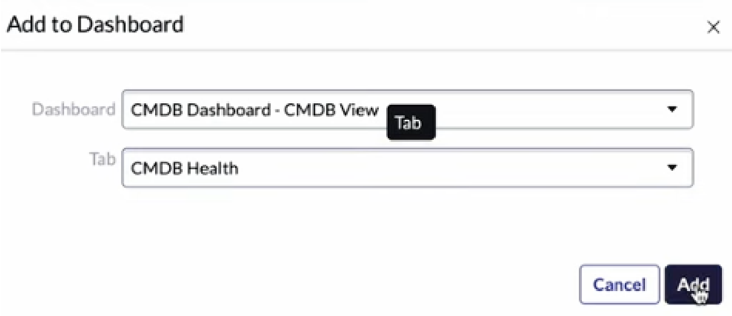
Adding Reports to Dashboards

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.

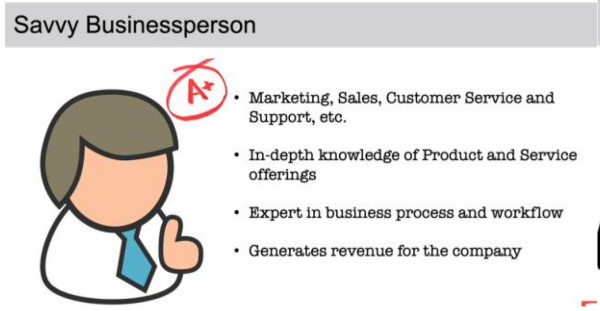


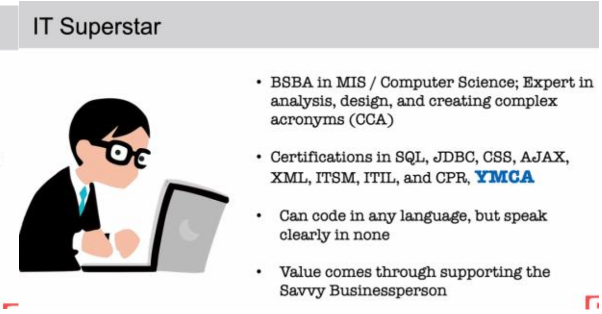
Report [sys_report] extends Application File		
FIELD LABEL	REPRESENTS	DATATYPE / DESCRIPTION
Sys ID	The unique identifier of the record	Sys ID (String)
Title	The title of the report	String
Source type	The type of data source for the report	String (Table or Data source)
Report source	The Report Source 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

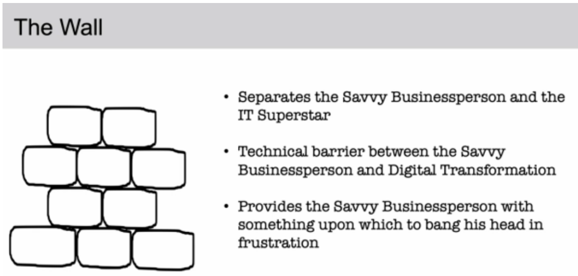
Report Users and Groups [sys_report_users_groups] extends Scheduled Job		
FIELD LABEL	REPRESENTS	DATATYPE / DESCRIPTION
Sys ID	The unique identifier of the record	Sys ID (String)
Report ID	The report being shared	Reference (Sys ID of a record in the Report table)
User ID	The user to whom the report is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

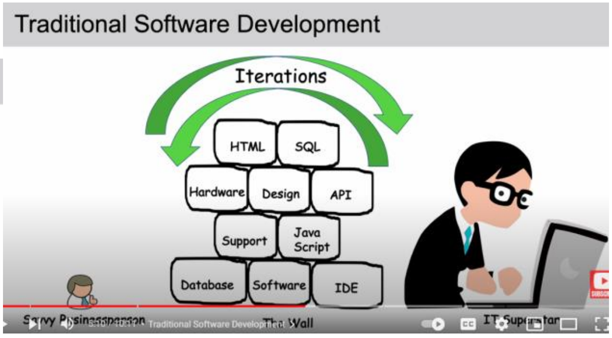
What is Low Code No Code Development?

Before LCNC:







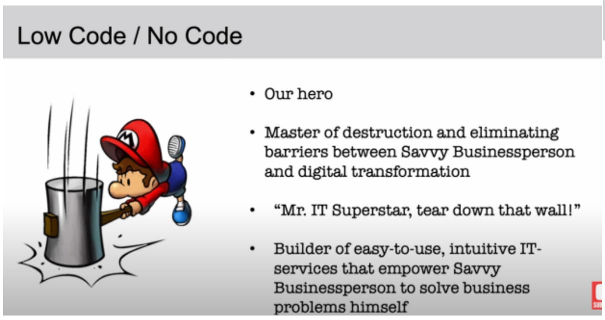


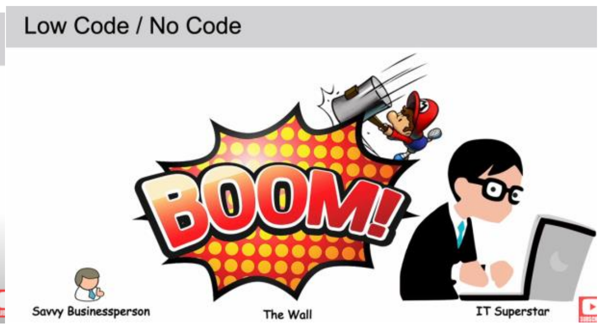
Low Code No Code (LCNC) development refers to software development approaches that enable users to create applications with minimal or no traditional coding. These platforms provide graphical interfaces and pre-built templates, allowing users to build applications through drag-and-drop actions and configuration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





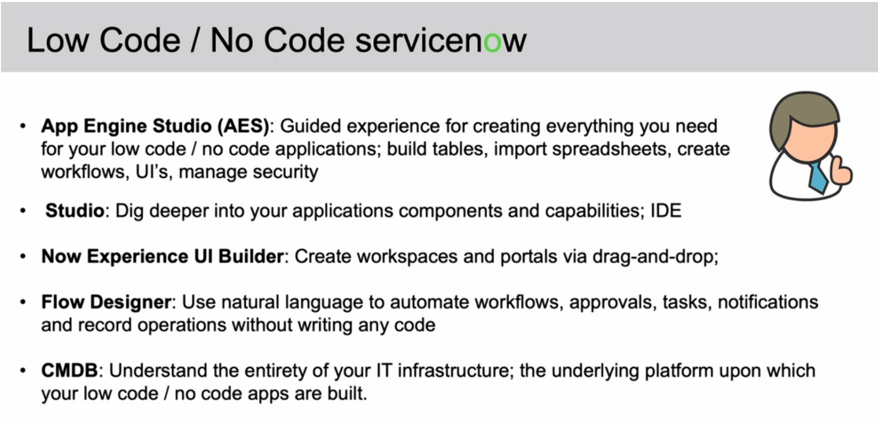
How LCNC Software Development Works

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.



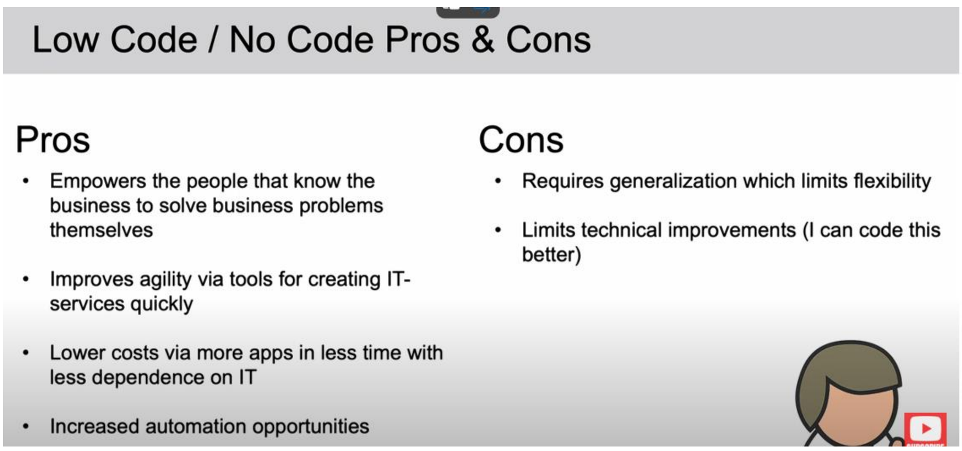
Example Tools:

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



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:

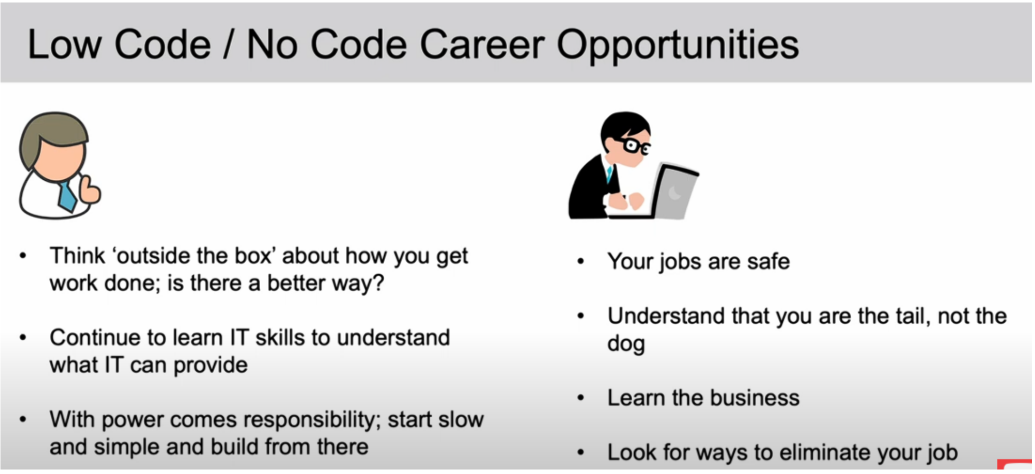
Limited Flexibility: Pre-built components may not fit all use cases, leading to constraints.

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



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.