MODULE 1

ServiceNow Platform and Development Fundamentals

What is Servicenow?

Servicenow, founded by Fred Luddy in 2003 is a software company to solve problems faced by large enterprises with conventional IT delivery methods. The platform offers a powerful, user-friendly, cloud-based environment to empower business people to independently tackle and resolve their own business problems.

History of ServiceNow

In 2003, Fred Luddy founded the company as GlideSoft.
In 2006, the company was renamed as Servicenow.
In 2012, Servicenow becomes a publicly traded company.
In 2018, Servicenow becomes #1 on most innovative companies.
In 2019, Bill McDermott became the CEO of Servicenow.

Servicenow Platform

- The Now Platform is an Application Platform as a Service (APaaS).
- It is cloud based
- It supports and provides Infrastructure computer resources.
- It provides a platform where you can develop your own custom solutions.
- It 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.
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Applications and Workflows

There are 4 primary workflows:
1. IT Workflows
2. Employee Workflows
3. Customer Workflows
4. Creator Workflows

Now Platform Architecture

- <u>Enterprise Cloud</u>
  Most cloud services support multi-tenant architecture in which your platform and data are co-mingled with other companies. Servicenow supports multi-instance architecture where you have your own instance of the platform and database.
- <u>Availability and Redundancy</u>
  All datacentres are paired with another datacentre to provide redundancy and failover. Redundancy is built into every layer including devices, power, network resources.

- <u>Backups and Security</u>
  4 full backups per week and 6 days of daily differential backups are supported. The platform is secured via multiple technologies which have been certified by various third-party security organizations.
- <u>Domain Separation</u>
  Servicenow platform provides the ability to separate data, processes and administrative tasks on an instance into logical groupings called domains.

User Interfaces

Servicenow provides 3 user interfaces for interacting with the Now Platform:

The <u>Now Platform</u> is the primary UI. It is best suited for desktop and laptops. It can be accessed via a web browser and the instance URL.

The <u>Servicenow Mobile Apps</u> are best suited for mobile devices and can be installed from the app store.

- The Servicenow Agent app targets fulfilling requests.
- The Now Mobile app is built for the needs of the employees.
- The Onboarding app is built for the needs of new-hire employees.

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

Role Based Access

Not all members of an organization need to have access to all the information all the time. Servicenow ensures that the user gets access to the information they need and not more than that.
The primary components include:

A <u>User</u> is an individual who can be assigned to one or more groups and can be granted multiple roles. A user with no roles is called a self-service user. They can login and perform actions like viewing the homepage, Service catalog, articles and surveys.

A <u>Group</u> is a set of users who share a common purpose and access to similar information. A group can be assigned one or more roles.

A <u>Role</u> is a collection of permissions. A role can be assigned to an individual user, a group or another role. Its best to assign roles to a group rather than a user.

User Authentication
When a user logins to an instance, Servicenow validates their identity and gives access to functions and information according to the user's assigned roles and groups.
The platform can support several methods of user authentication:

- OAuth 2.0
- Single Sign-On (SSO)

- Multi-factor authentication
- Digest Token
- LDAP
- Local database authentication

Servicenow Platform UI

Three primary elements that make up the Servicenow platform UI:
- Banner Frame
  Logo, User Menu, Tools, System settings
- Application Navigator
  Navigation Filter, All applications, Favorites, History
- Content Frame
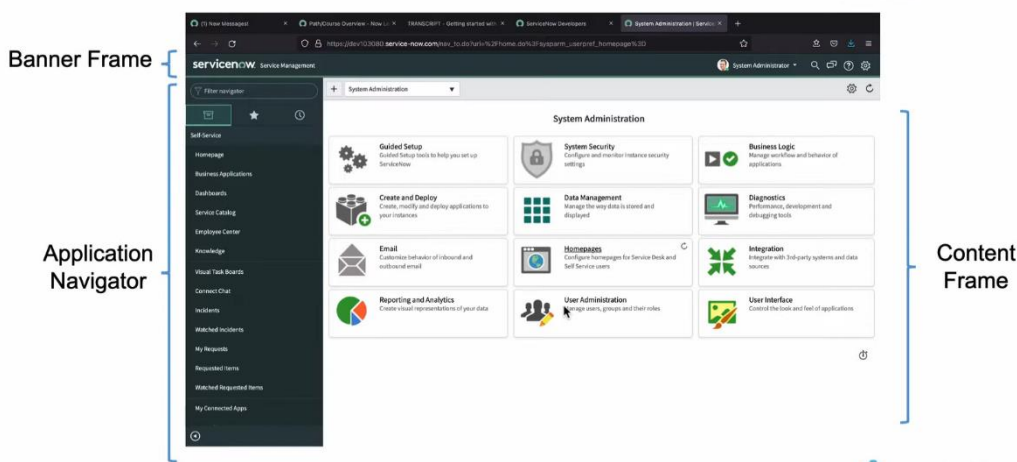
Servicenow Branding

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

Guided Setup:
It provides the system admin step-by-step instructions to configure applications and modules within your instance.
To access guided setup, locate the guided setup application in the application navigator and select the ITSM guided setup or ITOM guided setup module.

Service Portal and UI Builder:
Service Portal and UI Builder are two additional tools 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 clicking from a library of components (data and visualizations) and layouts.

Forms

A form in ServiceNow is a common set of tools and user-interface elements used to view and update a single record from the database.
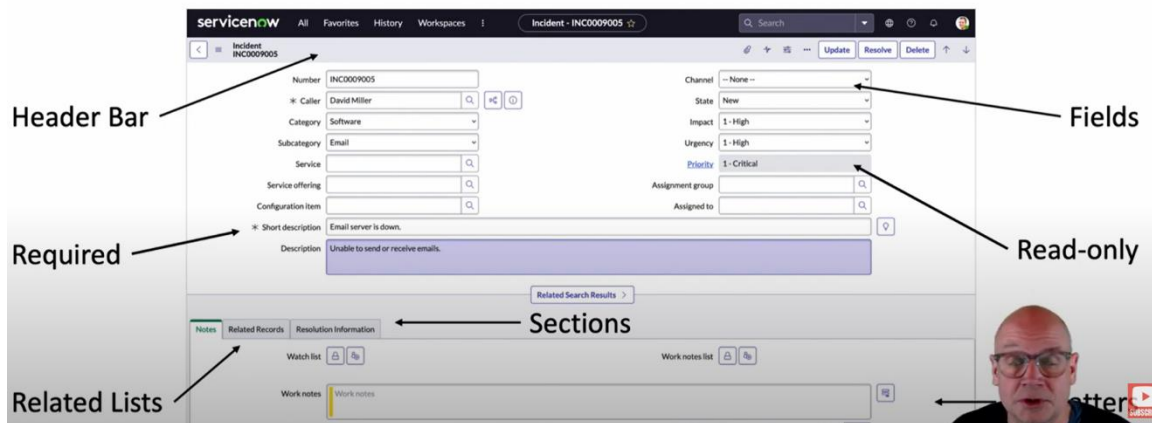
Form field types:
- String field
- Boolean(true/false) field
- List field
- Choice field
- Reference field
- Journal field

Form Related Lists

A related list is a special form element that displays a list of other records from another table related to the current record. (one to many relationship)

Form Formatters

A formatter is a special form element that displays information that is not a field in the record.

Form Views

Not every user wants to see record data in the same way. Form view provide the ability to display and organize fields, related lists and formatters in different ways to meet the needs of specific users.
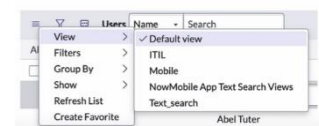
Form Personalization

Form personalization allows users to select which fields are displayed on a particular form view. These changes don't impact the form view of other users.
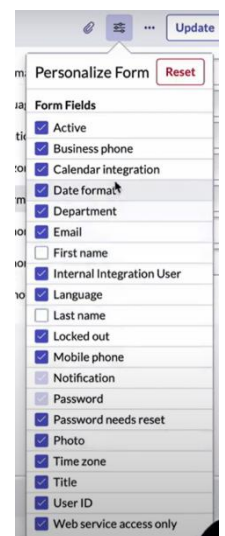
ServiceNow Next Experience UI
Service Now Platform is a cloud-based platform designed to provide IT services.
It is like a cloud-based IT Department.

To access the Servicenow platform, a company is given access to one or more URLs that point to their instance

An instance is a full stack deployment of the platform.

In most cases a company will request multiple instances. One for production, test and development.
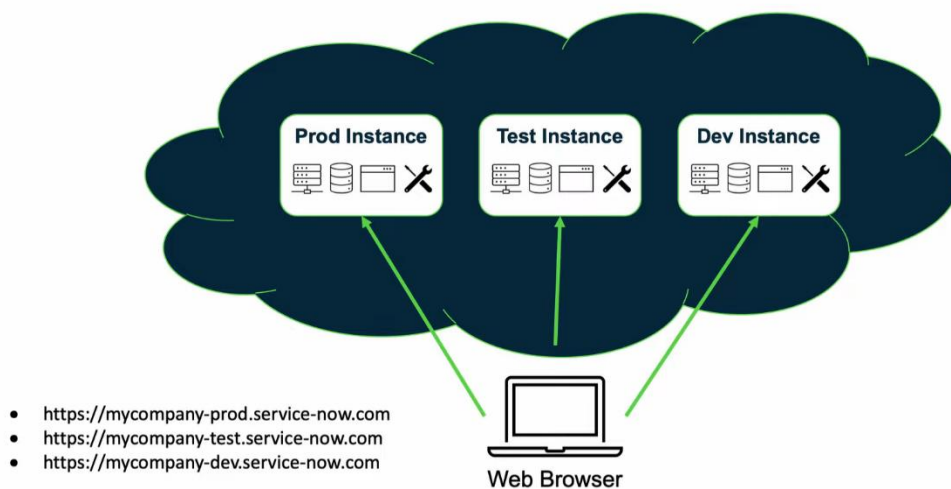

Now Platform Navigation Bar

- User menu
  It includes profile, impersonate user, Elevate user and Logout.
- Notifications
  You can set up notifications within the platform and tell the platform how and when you want to be notified when certain events and tasks are being completed.
- Help
  It provides contextual help as available; a badge on the icon indicates help is available; provides access to user guide, provides access to documentation search tool.
- Application Scope Picker
  It is an administrator or developer kind of thing; most people won't be able to see it. You can think scope as a container around an application used to limit who can get in and who can get out. It is also used to deploy your applications up to different platforms.
- Global Search
  You can enter anything to search within the platform and you will get a list of records similar to what you are looking for.

- Contextual app pill
It is always there. It tells you where you are in the platform. You can use the star to favorite your current screen so it will be easy to come back to the same screen later quickly.
- Admin menu
It allows admins to manage and maintain the ServiceNow instance efficiently.
- Workspaces
It provides a focused environment with tools, dashboards, and data relevant to a specific role or process, streamlining daily work and improving productivity.
- History
It keeps track of everything you are doing moving around the application. Keeps a list of last 30 screens or 30 places that you have been.
- Favorites
Allows users to quickly access frequently used applications, modules, or specific records. Users can add items to Favorites by clicking the star icon next to a menu item, making it easier to find and navigate to commonly accessed areas of the platform.
- All

Servicenow Store

When you can't find an application on the all applications menu you can go to the servicenow store. Some of the applications you can purchase. Some of them you can just add. It is just an extensive list of IT service applications.
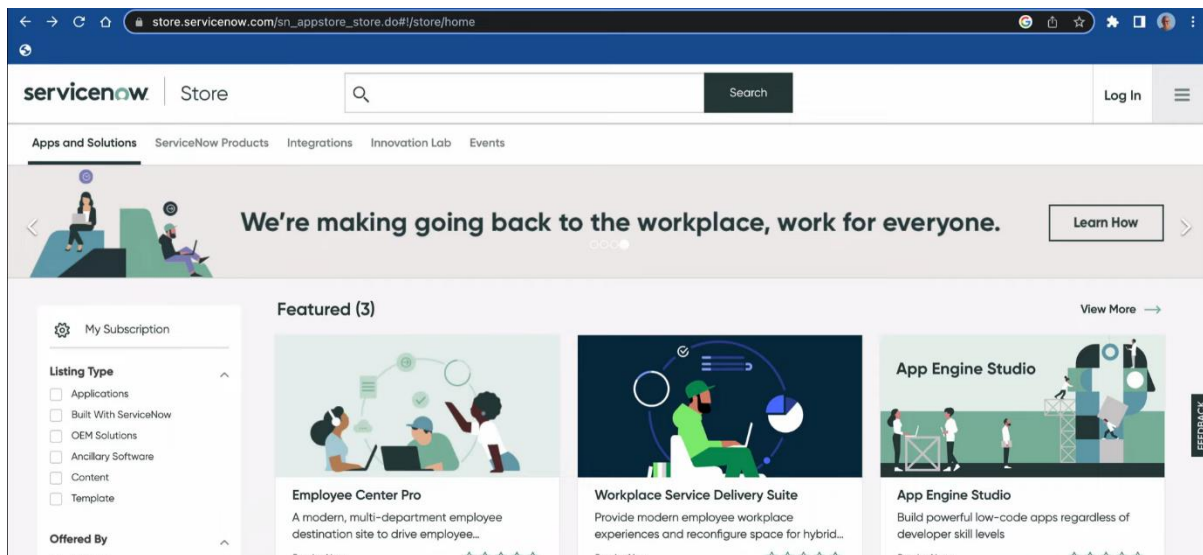
Knowledge articles

Knowledge articles in servicenow are built as libraries of important articles or documentation that you want to create and publish so that the users can get access to help

and information to help them better understand how to solve problems within the application. Knowledge articles are divided into knowledge bases.
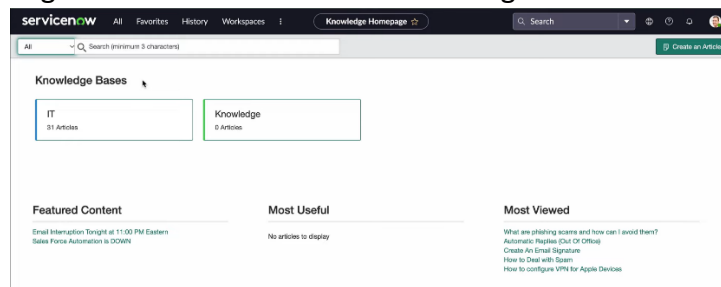
# Importing Data in servicenow

Sourcing->Staging->Target

A servicenow import involves 3 data entities:

1. Source: It contains the data to be imported into servicenow. Servicenow is prepared to work with many files (Excel, JSON, CSV, etc), JDBC database, compatable database, REST, LDAP and custom scripts.
2. Staging (Import Set Table): This is the intermediary step. It is a table that servicenow creates as part of import process and temporarily stores data pulled from the source. It enhances the performance of the import and provides useful tools for field level mapping and data transformation.
3. Target: Table where the data will be imported. This could be an out of box table or custom table created specifically for our purpose.

sys_data_source.list -> to see a list of the records in Data Source.

OR

System Import Sets < Administration < Data Sources
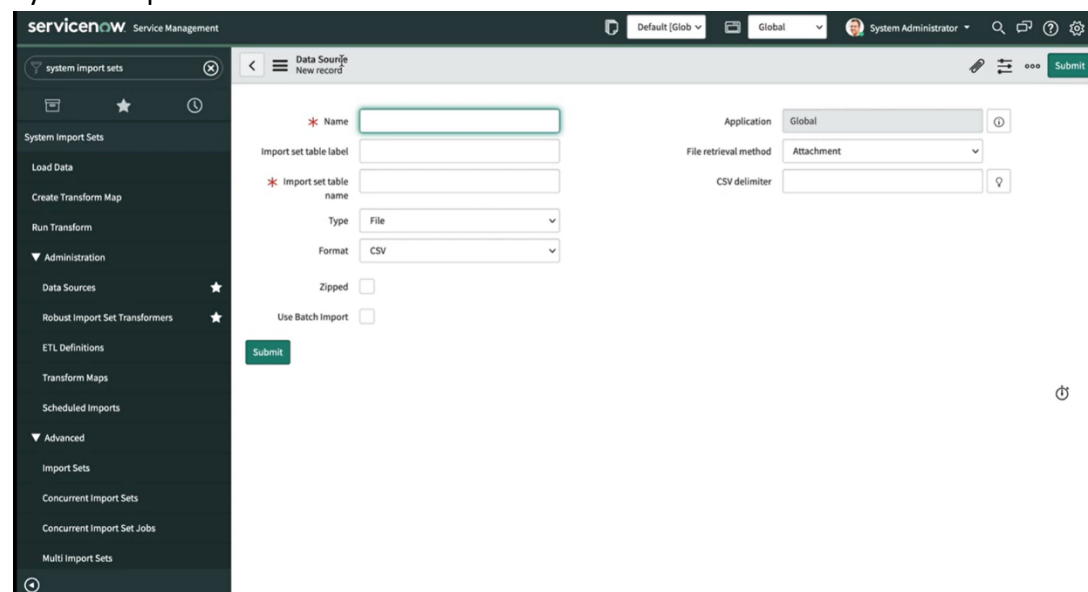
The Import Set [sys_import_set] Table

In order to keep the imported records in our staging table organized, servicenow provides an out of box table named 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 records are distributed b/w import sets.
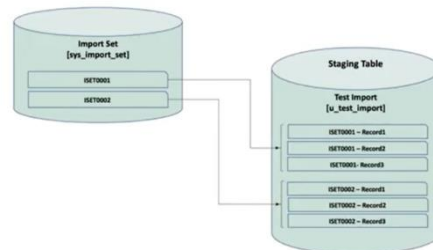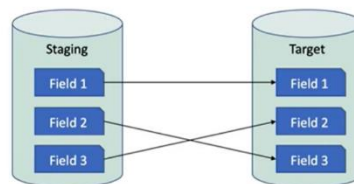

Field Maps

Defining how data flows from from the staging table to the target is done on a field basis. In servicenow, each of the field-level mappings Is called a Field map and is stored as a record.

Defining how data flows from 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.

sys_transform_entry.list -> Field Maps

sys_transform_map.list -> Table Transform Maps

Tasks

A task is some item of work that needs to get done. In servicenow, each task is represented by a record in a database table named Task [task].

Most commonly used types of Tasks in servicenow:
Change request. Incident, Problem.
They are extensions of the task table. They inherit the common properties of the task table and then add their own attributes as needed.

Task records in ServiceNow are only created when entries are added to those extended tables so you never actually create a task record in the task table directly.

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 untouched for a predefined period.
- Workflow are processes that can be created and applied to tasks that meet certain conditions

Task Assignment
Tasks can be assigned to an individual user or a group of users (or both).

Assignment Rules
An assignment rule is a record in servicenow database that tells the platform how to automatically populate the assign to an assignment group attributes when tasks are created.

AppNav>System policy>Rules>Assignment

Table: Assignment Rule [sysrule_assignment]

Assignment Lookup Rules

These can only be created against the Incident Tasks so you don't have the option of choosing which task table you want these to apply to. Also, they only give you the ability to choose from a small predefined set of fields to build your conditions against.

AppNav>System policy>Assignment Lookup Rules

Task Collaboration

Oftentimes the process of researching and completing tasks requires input and communication with multiple stakeholders.

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 that record at the same time.

The real-time editing (Pulse) icon will display beside a field that has been changed by another user.

Additional comments are viewable by a large audience including the customer or the person that created the task.

Work notes are the place to put notes meant for your internal working team members.

Visual Task Boards
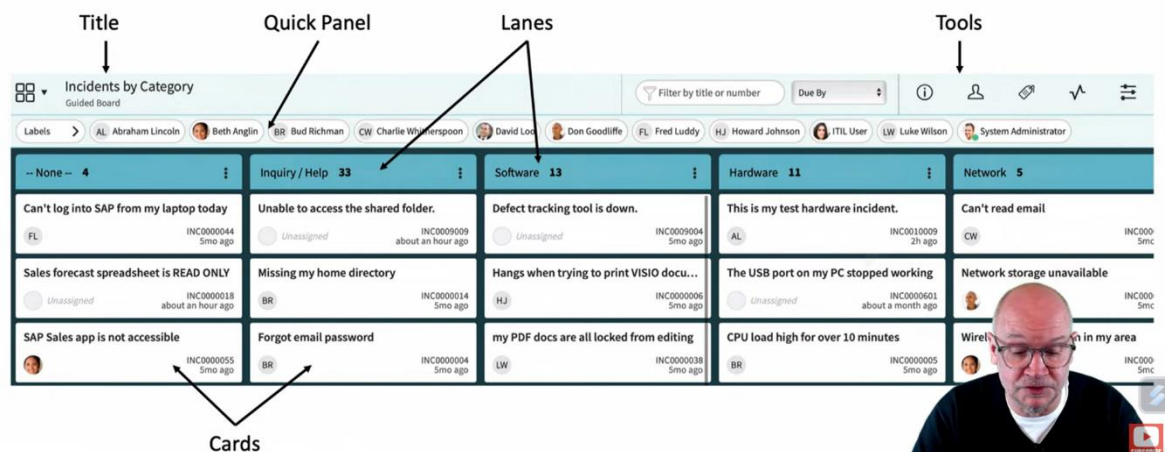
Visual Task Board Types

- Guided
  - o Normally created from a list using an attribute that has a predefined set of values as lanes
  - o Task values are changed when cards are moved b/w lanes.
- Flexible
  - o Normally created from a list using an attributed that does not have a predefined set of values as lanes
  - o Task values are not changed when cards are moved b/w lanes
- Freeform

o Not created from a list

o Used for personalized work management via private tasks

Reporting
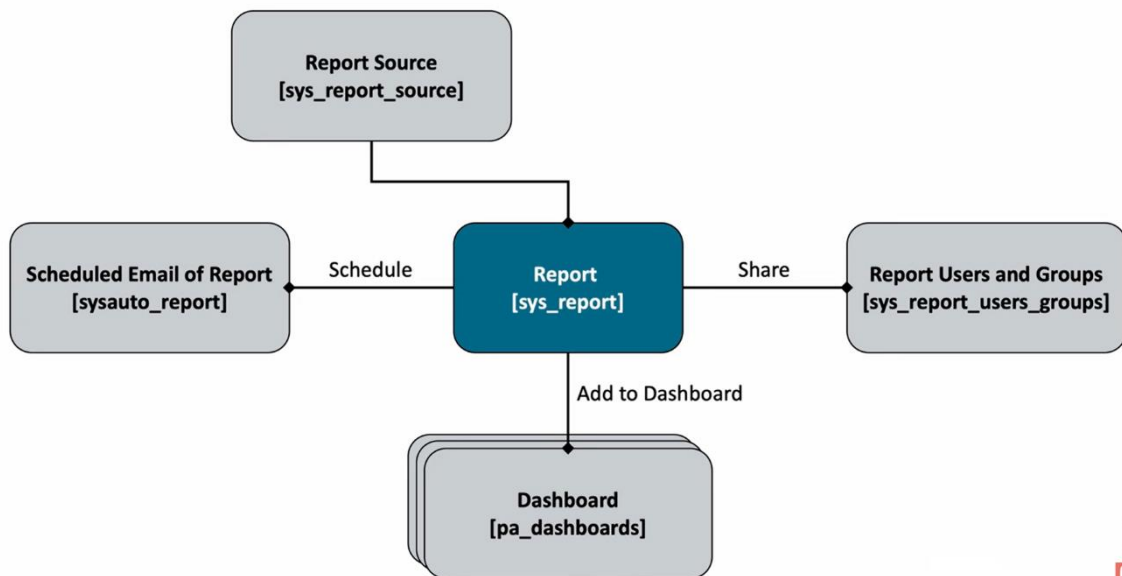
Report [sys_report] extends Application file

Reporting Fields

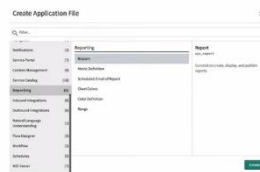| Report [sys_report] extends Application File		
FIELD LABEL	REPRESENTS	DATATYPE / DESCRIPTION
Sys ID	The unique identifier of the record	Sys ID (String)
Title	The title of the report	String
Source type	The type of data source for the report	String (Table or Data source)
Report source	The Report Source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

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

Ways for creating Report:
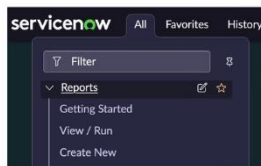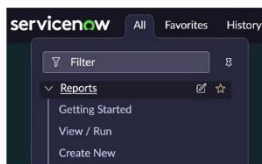

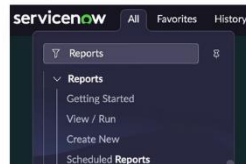**Reports > Create New**   **Studio**   **List View**

When you schedule a record in servicenow, you are inserting a record into the scheduled email of Report [sysauto_report] table.

Ways to schedule a report:

Reports > View / Run   **Reports > Scheduled Reports**   **Studio**