## What is ServiceNow?

ServiceNow is software Company situated in Santa Clara, California and was started by Fred

Luddy in 2003 with the aim of addressing the issues that big companies encounter in the

traditional adequate IT provision by offering them a reasonably uncomplicated and feasible

Cloud- based environment in which business people can help solve those issues.

This company's main focus area is the management of IT processes “Incident, Problem and

Change Management”

###### Purpose of ServiceNow Platform-

According to the primary purpose of the ServiceNow Platform – it is to offer a cloud-based

infrastructure that allows organizations to automate and optimize their business processes,

enhance service provision and improve the management processes within the organization.

ServiceNow Platform is a pure cloud computing platform that provides corporate clients with

digital workflow automation focused on the management of different business processes and IT

operations.

The company has a number of applications in IT service management (ITSM), IT operations

management (ITOM), IT business management (ITBM), as well as in other spheres of business –

HR management, corporate security, customer support and other functions.

## ServiceNow Platform Overview

ServiceNow Platform is an Application Platform as a Service. It is noteworthy that the platform

is cloud based. Companies no longer have to purchase and administer the requisite hardware in order to host these applications.

● ServiceNow employs an efficient and revolutionary architecture which is multi-instance and focuses on single-tenancy as its basic distinct offering to clients. On the other hand, each instance contains an independent structure including a separate database, specific applications and features local content.

● Employees of ServiceNow do not physically go to her office because he provides services to his/her users by means of configuring web based user interface over web browser over flexible database schema.

● This works in tandem with the applications which run over it to standardize business processes of the clients on one system.

● Such enterprise structures could be linked to other subsystems of an organization using the Platform and include many.

● ServiceNow Provides Development Framework for Development of new Applications

● To avoid service interruption all datacentre Data Center Services offered by SaveNow

● Backups & Security - Servicenow subscribes to the Frances appeal of offering operational 4 full data backups every week and 6 days’ worth of daily differential backups. Every component of the application is backed by external security company.

ServiceNow Applications and Workflows

A workflow can be defined as the undirected or coordinated activity of working (to achieve business objectives) where the cooperation of two or more persons is involved over a number of prescribed functions within a business project. Workflows assist in improving processes, controlling process compliance and the amount of manual actions that are needed.

4 Primary Workflows of ServiceNow

IT Workflow

Primarily considers improving processes of maintenance and management of IT services. The Supporting Processes include incident, change and request management. Incidents for example Resolving an IT incident or processing a change request.

Employee Workflow

Add value to the staff through automating intra-organisation activities. The Supporting Processes include HR service delivery, employee centre and onboarding of new employees. New employee onboarding includes the processes of engagement of newcomers and departments and sustaining that engagement as well sans requiring intervention of many employees or managers. Through the use of IT

Customer Workflow

Improves services related to customers and probably their support as well. The Supporting Processes include Case management, Field service management, and customer service management. Example based on this raise in rapid evolution in the worldwide marketing was managing customer inquiries and scheduling field service appointments.

Creator Workflow

Makes it possible to engage in the creation of applications and have them developed in accordance with the needs of the business The Supporting Processes include App engine and Integration hub. Business apps follow certain rules, for example any business application must have a specific layout and fluffy temporary informational pages like – About us and Contact us – should be avoided.

Now Platform User-Interfaces

Now Platform UI (Classic UI)- It is traditional UI that suits best the usage by workplaces such as desktop and laptop. It features a navigation pane at left and contents on right side. It enables a user to switch to templates, forms, lists and pairs among others.

ServiceNow Mobile Apps- Small Interface design intended for mobile usage for performing mobile actions, actions like making requests and approving, Creating incidents and notifications.

Service Portal - An intuitive, responsive web interface focused on end-users. Often usedfor self-service activities, such as submitting requests, searching for knowledge articles, and reporting incidents.

Next Experience UI (Unified Navigation) - Provides a more aesthetic and user - friendly experience.

User, Role and Group in serviceNow

User: A person with access to the ServiceNow platform. Each user has a unique loginand may have many different permissions based on their roles.It is a record in the sys\_user table.

Role: A collection of permissions that describe what a user could see and do in the ServiceNow platform. Roles are assigned to users and can grant access to specific features or applications.They are used to set Access Controls (ACL).It is a record in the sys\_user\_role table.

Group: A group of users who share a common purpose or responsibility, such as a Department or Team. Groups can be used for user permission management and workflow, and for roles assigned to groups for easy management of the access.It is a record in the sys\_user\_group table.

Role Based Access in ServiceNow

Whenever a user logs into an instance, Servicenow verifies his identity and delivers him the permission to access applications and modules according to his assigned roles and groups. It uses

1. The local database authentication

2. External Single sign on(SS0)

3. Multi factor authentication

1.3 ServiceNow User Interface Overview

Includes three elements-

1. Banner Frame

2. Application Navigator

3. Content Frame

Banner Frame Contains:

Company Logo, Navigation Menu, Global Search Bar, Discussions sidebar(chat tool) ,Show Help, Notifications and User Menu

Important Things in User Menu-

1. Profile - shows the profile of current user
2. Impersonate User - used to login and assume the identity of another user
3. Elevate Roles - Available to only base admin to elevate his role to security\_admin

System settings - enables you to view and customize a few settings for your ServiceNow user experience such as themes, Display options, Time zone.

Global Search : Find anything in the instance that matches keywords

Help : Contextual help is displayed as available; A badge on the icon indicates is available, gives access to User Guide and documentation Search tool

Discussions Sidebar (Connect Chat) - Chat tool for real-time messaging

Content Frame:

The Content Frame refers to the primary area within the ServiceNow interface where content pertinent to the application or module selected can be found. In this area, users interact with forms, lists, dashboards,reports, and other forms of data.

Application Navigator:

The Application Navigator that is a feature presented on the side of the ServiceNow interface, facilitates easy accessibility to various applications, modules, and functionalities by users.Users, therefore, can easily access applications, modules, and functionalities without much struggle as they are directly presented from the left side of the ServiceNow interface.

Applications constitute aggregation of files and data, they act as a foundational requirement for providing IT, HR resource management, Service Desk etc .Modules are the individual functionalities or operations provided under each Application.

We can Pin the Applications and modules to favorites for quick access

We can use the Favourites to mark the application that we frequently use and have quick access to it.We also have a History option to look at our recent actions. Default is last 30 items we have accessed.

ACL - Access Control List

It determines how the servicenow user is going to interact with the Data. It is a security imposed on tables to restrict users to interact or modify with the data of the table,It restricts the use of CRUD operations.

It is stored in the table sys\_security\_acl. To create or modify Acl, we have to have the role of security admin. Thus we should Elevate the role from Admin.

## ServiceNow Branding Overview

Applying your Distinct Corporate identity across the Now Platform UI to Create a shared identity is Called Branding in serviceNow.

Guided Setup is a feature in serviceNow that provides a structured, Step-by-step process to help administrators configure and customize their ServiceNow Instance.

It included best practice into the configuration process, so it became easy for the admins to configure the instance according to recommended practices. It includes company, CMDB, incident Management, Problem Management, Change Management, Configuration Items, Service Catalog, Knowledge management, etc.

ITSM Guided Setup

All the customization like change logo or the company name can be done using the properties of the system

ALL - System Properties - System Configuration - Set timezone, date, color

ALL - System Properties - My Company - UI Banner - logo - Banner Text

All the above properties are a table in servicenow; so these are the properties that fall under sys\_properties table

## 1.5 ServiceNow Lists and Filters

Lists in serviceNow are kind of interface which demonstrate a collection of records from a table in a grid or tabular format. Lists allow the user to view, filter, sort, and take action on multiple records simultaneously.

Table\_name.list shows the list view of the table. Table\_name.LIST opens list in new tab. The List Header contains many useful things in order to perform action on list.

1. List Controls

2. Filter Lists

3. Table Search bar

4. Personalize Icon

List Controls

In ServiceNow, context menus in lists give users instant access to actions that may be performed on list items (records) or on the list itself.

For lists are three types-

1. List Control menu - Has Views, Filters, GroupBy, Refresh List, Create Favorite

2. Column option men - Has Configure, import, Reporting, Sorting

3. List field menu - used to copy sys\_id

Views

Views enable an user to represent the same list or form in many different forms. System administrators can create views for a list or for a form.

To create view-Control options menu - configure - List Layout - select the fields using list Collector - Scroll Down to select view - new -enter the view name - save

You see the created view from

List Control Menu - views

Filters in List

A filter is a set of conditions applied to a table list to isolate a subset of the data.

There are three parts to a filter condition:

1. Field: A choice list based on the table and the user's access rights. The choice list includes

fields on related tables by dot-walking.

2. Operator: A choice list based on the field type.

3. Value: Single-line text field or choice list, depending on the field type .

Wildcard conditions Column search row

\*value contains

!\*value does not contain

=value equals

!value does not equal

Value % starts with

% value ends with

Add filters to your Favorites Click the List Controls icon and select Create Favorite

In the classic list, click Run to view the results of your filter in the list.

To save a filter, click Save. A new field will appear where you can name your filter. Once you have named the filter, click who it will be visible to, then click the Save button to the right of the name and visible to options.

The new filter will now be accessible through selecting Filters from the list context menu.

Breadcrumbs

Filter conditions applied to the list are summarized in the breadcrumbs, which are presented in blue letters.across the top of the list. In addition to giving you a quick "at-a-glance" view of the conditions imposed by a filter, breadcrumbs enable you to edit conditions based on need.

For example, you can click the greater than sign before a condition to remove that condition,or click on a breadcrumb to remove all of the conditions following that one.

Group By - It is used to group the list records based on a field.

Refresh List - Allows refreshing the list to accommodate the changes made recently.

List Personalization

Personalize List formats a list for a single user only. It will not change the platform default.

Use personalization for temporary scenarios only. Global changes will not be displayed in a personalized list

If the system administrator sets up a list view that the user has personalized they will not see those newly added default changes until they choose Reset to Column Defaults.

List Layout Configuration

List layout means adding, removing, changing order of the columns or fields on the list view.

The configuration can only done by admin, and once configured it would apply to all the users.

To configure the List Layout for a table:

1. Navigate to the list and ensure you are in the correct view

2. Select any column options menu

3. Proceed and click on Configure > List Layout

## 1.6 Forms in ServiceNow

Forms are a way of displaying one record in servicenow with all of its fields. Users may enter new records, andedit the records into the form. The forms have various fields taking in the data in accordance with the use.

Standard Layout

● The sections organize the fields into the logical groups within a form

● The Formatter is a form element utilized to display information that is not on a form.

● Related Links - UI Actions comprise the buttons, links and context menu items located on forms and lists. It makes the UI more interactive, customized and of specific user activities.

● Related Lists shows records in tables which are linked to the record being accessed. For instance, the User form has Roles and Groups Related

Difference between Insert and Insert and Stay :

● Insert: It makes a duplicate copy of the current record and goes to the list view or the previous page. Once a new record is created, the form gets auto-closed.

● Insert and Stay: A new copy of the current record will be generated, but the user remains on the form view of the newly created record, and he will be able to continue editing the new record or review it right away.

Field Types

1. Reference Field: The search request that returns data from another table.

2. Document ID : Typically used to retrieve entries in one or more tables.

3. Date/Time: Date and time of day, selected via a calendar widget.A few calendar widgets do not have the time included in this record, only including the date (as shown in the screen shot above).

4. String: Available for free entry, with use of letters, numbers, and special characters. For 254 characters or less, the string field will be a single-line text field. Anything 255 characters or over will appear as a multi-line text box.

5. Choice List: Drop-down list of choices that can be configured.

6. True / False - represented using a checkbox

Choice List

They show all the predefined values that a user could select from. We can add, remove, edit choices in choice list by right clicking on the choice field and opening From field menu

Show choice list - add new choice

Configure Dictionary - delete the choice

Configure choices - configure, change the order

Dependent Choice list - The values that appear on the choice list depend on the choice made in another choice list, then it is called a dependent choice list.

Reference Field VS Document ID

Document Id use to mention the records from multiple tables at the same time multi table reference. Whereas Reference field is used to link a record from a single table only single table reference. Document Id shows a dropdown menu from which you have to choose the table first then also record from table, reference field you choose only record.

Document Id Stores both table name and sys\_id, while reference field only stores sys\_id

Formatters

A formatter is an element used to display information that is not a field in the record.

Some Formatters that the base platform provides includes:

The Activity Stream is a formatter; that shows a list of activities.

Some of the formatters in the base platform include:

● Activity formatter: Displays a list of activities, or history, on a task form. It offers an easy way to track items not saved with a field in the record, for example, journal fields like comments and work notes

● Process flow formatter: It displays the different stages in a linear process flow across the top of a record

● Parent breadcrumbs formatter: The formatter provides breadcrumbs to show the parent or parents of the current task

● Approve summarizer formatter: Displays dynamic summary information about the request being approved

● CI relations formatter: Displays on the CI form and allows for the viewing of relationships between the current CI and related CIs

Templates

Templates allow form fields to be pre-filled automatically, making it easier to create new records

Click the More options icon **(**∘∘∘**)**  from the form header, then Toggle Template Bar to work with templates

Use the template bar on the bottom of the form to manually apply, create or edit templates.

To use a template, fill in the most used fields for a specific table, save it as a template and from there make the template available to the users.

They have three Context menus-

1. Form control menu / Additional Actions

2. Field context menu

3. Related list menu

Additional Actions

It has Form views and Configure Options

Configure

1. From Layout

2. Form Design

3. Form Controls

Creating and Designing Form Views in Form Design

We can choose or select a new view from the Page Header. Then we can drag and drop the fields we want in the form from the Field Navigator to the Form Layout.

Form Views can be viewed form additional Actions in the Form Header

Form Personalization

Personalizing a form will only affect what you see on a form-other users will not be affected. Mandatory fields can't be hidden. When you exit the form, the next time you return to personalize the form you must reset your modifications for a form whose fields you've hidden.

## 1.7 A Hands-on ServiceNow Tool Demo  Instance In ServiceNow

In ServiceNoe, an instance refers to a single, Unique implementation of the ServiceNow  Platform. Each Instance is a separate and isolated environment where the platform is installed,  configured, and customized according to the needs of the organization using it.

Instance In an organization

1. Single Instance Per organization

2. Shred Access for employees

3. Customization and configuration

4. Development and Production Instances

Types of Instance in Organization

1. Production - it is the instance used by employees in performing day to day tasks

2. Non Production - It is has development, Testing, Quality assurance

Each customer organization receives a minimum of two instances of ServiceNow: production and non-production (also referred to as sub-production). They have the ability to obtain .More non-production instances for UAT, Review,Development, or QA.

Every instance has a different URL like, https://"<instance name>" .service-now.com

Application Navigator:

The Application Navigator in ServiceNow is a component placed on the left hand side of the interface that gives a way for users to quickly access multiple applications, modules and functionalities in the platform.

Applications can be developed according to a business need of an organization by using ServiceNow development tools and environment. Modules are the functionalities in a Application Or They can be accessed from the ServiceNow Store

ServiceNow Store

It is an online marketplace where users can discover, purchase and download a variety of applications and integrations built on the ServiceNow platform. These apps and integrations are Desgined to provide the ability to extend the service of ServiceNow to assist organizations in enhancing the workflows and processes according to particular needs.

ServiceNow Certification and Roles

There are 5 main Certifications or roles to be done in ServiceNow:

1. System Administrator

2. Developer

3. Implementer

4. Architech

5. Application Specialist

Being an Implementer enables out capabilities to integrate various applications and plugins into the serviceNow

Knowledge Management

The Knowledge Management application in the Platform enables the sharing and viewing of articles. Users have access to a Knowledge Base where they can interact with relevant information that can be useful to their work activities.

Knowledge Management allows users to create, classify, evaluate, and publish, as well as search through critical information that are centrally located but shared across the organization.

Knowledge content resides within a Knowledge Base, which is owned by one or more

Knowledge Managers. With Knowledge Management, each organisation may have its own  Knowledge Base (KB) .

Administrators can create several Knowledge Bases and assign them to individual users in the Platform. This is known as User Criteria. User Criteria defines conditions that are matched against users to identify which users may add (upload or author), read (view), write (edit), and retire (make articles inaccessible to all users) knowledge articles. User Criteria applies at the Knowledge Base level in the Platform .

ServiceNow DataBase

All the applications and features in servicenow are records in a table. Each record has a unique Sys\_id. All the tables in servicenow are stored inside sys\_db\_object .

Sys\_db\_object - table used to store information about all the tables in servicenow

Sys\_dictionary - table used to store information about all the fields of all the tables in servicenow

Sys\_documentation - tables used to store all the field labels in servicenow

CMDB Configuration Management Database in service is a centralized repository that stores information about all the Configuration Items which are required to provide IT services. Using this we effectively manage all the IT infrastructure of the Organization.

## 1.8 Introduction to Importing Data Into Servicenow

Importing data into servicenow cannot be done directly, It mainly Involves 3 entities-

1. Source - It is an entity that holds the information to be imported to ServiceNow, Servicenow is well-equipped to handle many such so sources like Excel, CSV,JSON,JDBC, etc

2. Staging - A table ServiceNow created to hold temporarily pulled data from source

3. Target - The ServiceNow table to which the data will be imported

## 1.9 Creating a DataSource in ServiceNow

DataSource

All the data Source records are in sys\_data\_source table, or you can navigate to

All - System import Sets - Administration - Data Source

Adding a data Source

From Sys\_data\_source table select new and fill the from

Then Submit and go to attachments and attach the form you want to give as a data

## 1.10 Understanding Import Sets In serviceNow

In service now we can not load directly data in tables, Thus we use the Import sets.Import Sets provides a mechanism to draw data into ServiceNow. Import Sets store data in Import Set tables. Any user logged in with the admin or import\_admin role can manage all aspects of Import Sets .

You have to follow the below 5 steps to import data-

1. Data Source

2. Load Data

3. Import set Table

4. Transform Map

5. Transformation

Define Import Sets:

1. Data Source: Define a data source: Finds and identifies the format (e.g., CSV, Excel, JDBC) of the incoming data.

2. Import Set Table: ServiceNow automatically creates an Import Set Table that is used as a staging area for the imported data.

3. Load Data: Under the Import Data module loads the incoming data into the Import Set Table.

1.11 ServiceNow Transform Maps and Transform Fields

Transform Maps are a guide on how to move data from Import Set (staging) tables to "Target" Tables. Field mapping is a direct field-to-field data move.

A transform map is a set of field maps which define mappings between fields in an import set and fields in a current ServiceNow table, for example Incidents [incident] or Users [sys\_user].

The type of mapping done in Transform Map

Automatic Mapping Utility: field names of the Import Set match the name of the fields on the Target table where the data will be transformed. In this case, simply click Auto Map Matching\Fields in the related links in the Table Transform Maps.

Mapping Assist Utility: The Mapping Assist utility provides a visually intuitive environment for specifying mapping between Import Set fields and Target table fields. With the Mapping Assist utility, it is possible to map a single source field (field on an Import Set table) to multiple destination fields (fields on a Target table).

Process for importing data in servicenow table from excel

All - System import sets - load data - creating import set table - choosing the file - loading data into import set table - open the import set table - go to related links - transform map -Assist mapping - select the Servicenow table - map the fields - save - Transform

The following steps (process) can be completed by any user with the role import\_admin or import\_set\_loader and import\_transformer.

you can also use import option in Column options menu for excel and import XML for XML data

## 1.12 ServiceNow incident Management and Task Administration

Tasks in ServiceNow

A task is some item of work that needs to get done. In serviceNow, each Task is represented by a record in the Task table.

All - Navigation - Task.list

Three of the most commonly commonly used tasks are-

1. Change Request

2. Incident

3. Problem

These are the children of the task table, they inherit the properties of the task table.Task table stores attributes of all types of the task and child children store attributes to specific task needs .

To administer a proper Task Management the following can be done

Assignment Rules - auto assign tasks to users and groups best to solve

Service Level agreements - to ensure task completion in allotted time

Inactivity Monitors - to determine if the task is not touched

Create an Assignment Rule

New - Applies to - Table - Conditions - add condition - - Assign to - User - Group - save

Assignment Lookup rules

They can be applied to incident tasks only and not all the tasks, they are available in dl\_u\_assigment table. They are much weaker than assignment rules.

Solving tasks from user perspective We can view the tasks assigned to the user using Service Desk Navigation in my groups work or my works

Task Collaboration and User Presence

User Presence lets several users or stakeholders view and update records concurrently.

Visual Task Boards (VTBs) in Servicenow.

Convert your lists and forms into an interactive graphical experience. VTBs can arrive in the Platform with a range of functionality. We might use VTBs to generate a personal to-do list, and collaborate in real time with our group members on assignments. That's represented graphically as lanes and cards, and is a landing page for viewing and organizing work in ServiceNow.

Visual Task Board Types

1. Guided / Data Driven - Developed from a list based on an attribute that has a fixed set of  values as lanes

2. Freeform - Not developed from list, self-service Work management

1.13 ServiceNow Reporting

Reports is a visual way in ServiceNow and can be read and interpreted by you and your colleagues. Data can be presented in many formats, such as: bar charts; pie charts; dials; lists and pivot tables; donuts; etc.

Reports can be run ad hoc or as a scheduled task. Reports are interactive. Users who have access to a report may click on the report to drill down from a summary perspective into the detail records that are represented by the report;

Sys\_report - stores all the reports of the instance.

Report Source - sys\_report\_source table stores the filters condition of list that are used to populate the report.

Sys\_report\_users\_groups - used to share reports to groups and tables.

Dashboard - pa\_dashboards used to store multiple reports

Predefined reports

All > Reports > View / Run

we can create our own reports by navigating to

All > Reports > Create Report module.

you can simply select most column context menus in any list to make a report directly from the data in that list.

Report from studio

All - System Applications - Studio - Select Application - File - Create New - Report - from here it is the same again i.e Data - Type - configure - style

Scheduled Reports

All-reports view/run/open report-sharing icon calendar-fill the form

Distribution of the reports

All-reports view/run/open report-sharing icon share-fill the form

ServiceNow Dashboard

A dashboard is a customized combination of widgets. It allows you to present various performance analytics and reporting on a single screen.

All-Reports-View/Run-Open report-Sharing icon-Dashboard-Fill up the form

## 1.14 Low Code No Code Development

Low Code No Code development bridges the gap between the business, IT, and digital transformation. Low code No code applications enable non-IT professionals to arm tools to construct conventional IT applications using minimal programming knowledge.

App Engine Studio (AES) : walk-through experience for building everything you require for low-code/no-code applications, build tables, import data, create Workflows and security management.

Now Experience UI Builder : Build Workspaces and portals using drag-and drop

Flow Designer : Use natural language to automate workflows, approvals, tasks, notifications and records operation with no code line written.

Advantages and Disadvantages of Low Code / No Code

Advantages:

1. Improved Speed

2. Reduces the demand for heavy coding

3. Facilitates business users so that they can develop applications that empower a business user

Disadvantages:

1. Functionality and Customization are Severe Limitations

2. Scalability becomes a big problem