WEEK 2
ServiceNow Administration Fundamentals

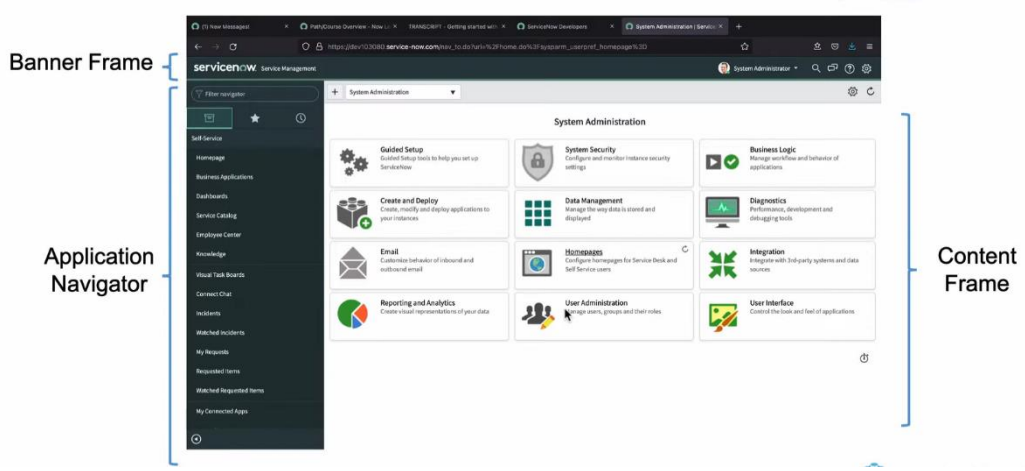
Servicenow Architecture

- 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.
- 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.

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



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

User Interfaces

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

The Now Platform 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 Servicenow Mobile Apps 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 Service Portal is a user- friendly, self-service, widget-based portal accessed via a web browser and special URL.

Servicenow supports most of the major browsers like Chrome, Microsoft Edge, Firefox and Apple Safari.

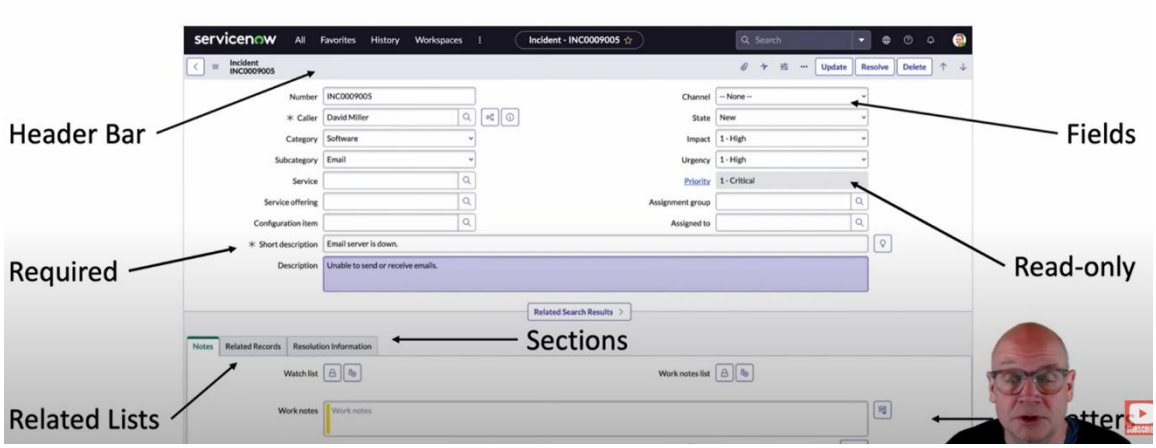
Servicenow Branding

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.

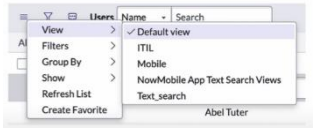


Form field types:

- String field
- Boolean(true/false) field
- List field
- Choice field
- Reference field
- Journal field

Form Related Lists

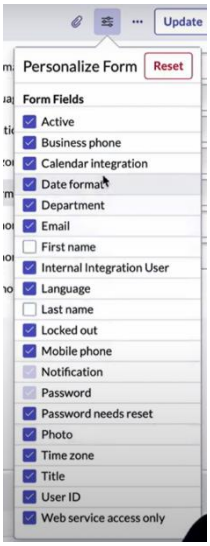
A related list is a special form element that displays a list of other records from another table related to the current record. (one to many relationship)



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.

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.

Notifications

When records are created, updated or any event is generated, servicenow can send notifications to the users configured in those notifications.

Outbound and Inbound

Servicenow sends a notification which is received by a user and this is called Outbound notification.

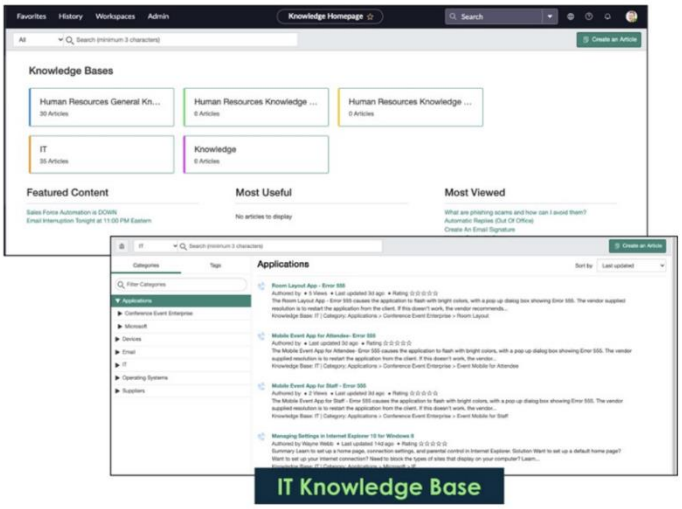
Users can also respond to the emails received or create new email and send it to the servicenow which can basically perform some action on the records of the table which is called inbound action.

OOB Notifications
Servicenow also has out of the box notifications configured for existing modules and applications provided by servicenow like incident notifications, change notifications, problem management notifications or request notifications.
Servicenow admins can edit existing notifications or they can create new notifications.

You can access notifications via module notifications under system notification.

The table under all the notifications are stored: [sysevent_email_action].

Knowledge Management



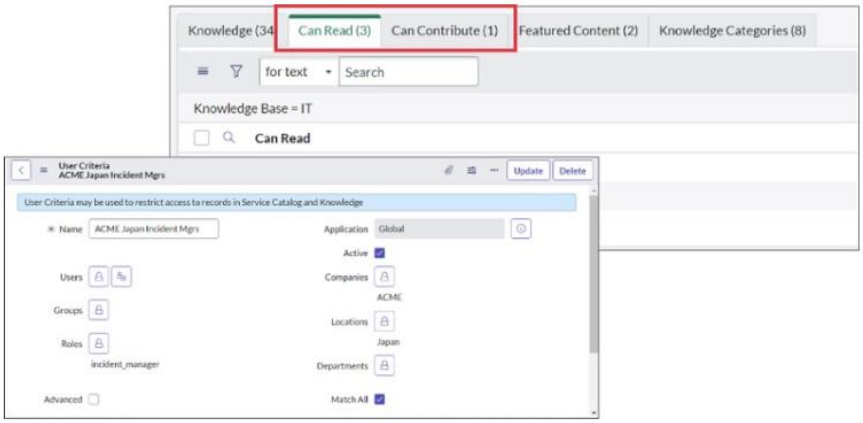
A knowledge article is a record in a knowledge base that provides information to users. A knowledge articles can be a policy, self-help tips, troubleshooting and resolution steps.
Benefits:

- One stop shop to find answers.
- Provides a centralized location for the creation, categorization, viewing of articles.
- Stores information in knowledge bases.
- Articles are referred as KB articles.

Knowledge Security and Visibility:

User Criteria defines conditions that are evaluated against users to determine which users can create, read, write and retire knowledge articles.

- You can apply several user criteria records to knowledge content.
- User criteria is applied at the knowledge base level.



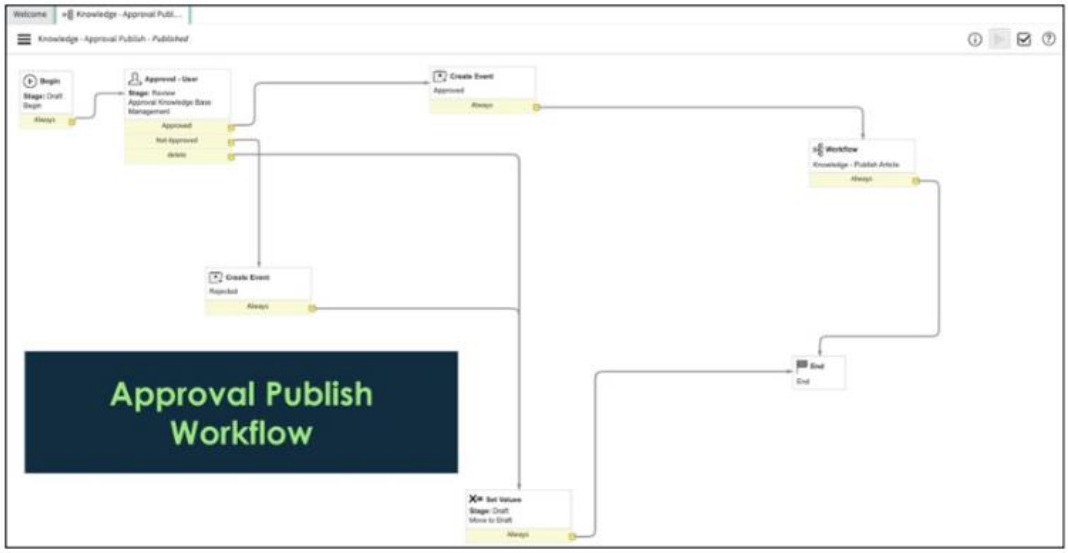
If a knowledge base has no criteria selected, articles within that knowledge base are available to all users.

User criteria outcomes include:

- canRead
- cantRead
- canContribute
- cantContribute

<u>Knowledge base: Workflows</u>

The publishing and retirement processes for a knowledge article are controlled by workflows defined for the knowledge base that article belongs to.



You can assign different workflows to each knowledge base.
You can use one of the default workflows or create your own workflow to define custom publishing and retirement processes for different types of knowledge.
The knowledge base workflows available in servicenow baseline instance include:

- Knowledge-Approval Publish: Requests approval from a manager of the knowledge base before moving the article to the published state. If the manager rejects the request, the article remains in the draft state and the workflow is cancelled.
- Knowledge-Approval Retire: Requests approval from a manager of the knowledge base before moving the article to the retired state. The workflow is cancelled, and the article remains in the published state if the manager rejects the request.
- Knowledge-Instant publish: Immediately publishes an draft article without requiring an approval.
- Knowledge-Instant Retire: Immediately retires a published article without requiring an approval.
- Knowledge-Publish Knowledge: A subflow that moves the knowledge article to the published state. You can use this subflow when defining your own workflow.
- Knowledge-Retire Knowledge: Moves a knowledge article to retired state.

To import a Word document into the knowledge base:

- Navigate to All>knowledge>articles>Import articles
- Select the knowledge base
- Select the Category*
- Add the word file
- Click Import
- Click Continue

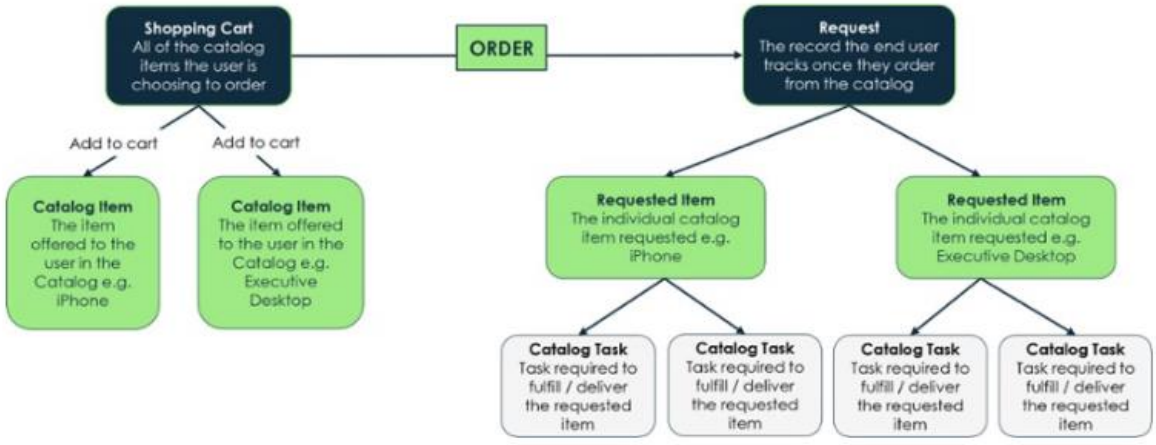
The import a word doc feature allows you to upload more than one doc at a time. When uploading multiple docs, one article is created for each uploaded item.

Service Catalog

Service catalog is a request ordering system to request services and products offered by different departments of any organization.

The service catalog lets users to see a list of things they might need(to create a request for) or would like to have- usually but not limited to, IT products and services.
Administrators and users with various catalog roles can define catalog items, including formatted descriptions, photos, and prices.
Categories define the organization for Service Catalog items. It organizes service catalog items into logical groups.
Users with admin or catalog_admin role can manage multiple Service Catalogs and provide services to different teams within the organization.

Service Catalog and Request Management:
Service Catalog: The users browse the catalog foe items they wish to order or request.
Request Management: Once the order has been placed the request needs to be tracked and fulfilled.



After placing an order, the request management process begins. For each catalog item, workflows facilitate the approval process as well as the fulfilment tasks.

<u>Service Catalog major components</u>

Items are the building blocks of the service catalog including hardware, software and services. Items once selected and submitted result in requests or other records like incidents. To create a new item or modify an existing item, navigate to All>Service Catalog>Catalog Definitions>Maintain Items

Record Producers appear as simplified forms, allowing users to provide information that is translated into task-related records being added or modified in the database. It is an interface used as an alternative to lists and forms. Each Record Producer focuses on a specific process or task and can be used anywhere in the servicenow platform. In the Service Catalog, Record Producers are presented in categories along with catalog items. Service Catalog can be used as a complete front-end UI.

Variables are global by default and provide options to tailor a catalog item to the customer's needs. It defines the questions to ask the end user ordering the catalog item. Question choices can define the available options and might affect the order price.

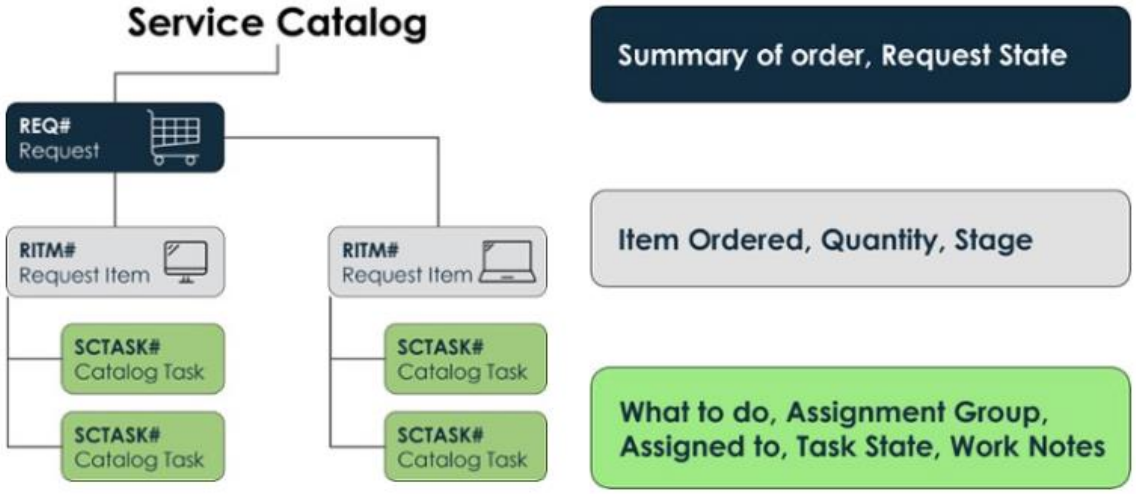
Examples: Which monitor size?, Who is the hiring manager?, What is the budget code?

The service catalog variables help define the structure of a catalog item form that is displayed to the customer.

Variable set is just a container, so it has only two fields: Name and Description. Navigate to All>Service Catalog>Catalog Variables>Variable Sets to create a new variable set.

Order Guides provide the ability to order multiple, related items as one request. Variables are represented by the Order field number.. Use an order Guide to assist users in determining what items the need.

Service Catalog Item Request Output



For catalog items, a request is created. A request can have one or more items associated with it. An item can have one or more tasks associated with it. Each output is stored in the appropriate corresponding table.

- REQ# Requested Item [sc_request] table: A request number generated to keep track of an order. Records on this table begin with REQ and behave like containers.
- RITM# Requested Item [sc_req_item] table: Records on this table begin with RITM and manage the delivery of each individual item in the request. Each discrete item ordered is given a specific “Requested Item Number” known as RITM (number).
- SCTASK# Catalog Task [sc_task] table: Records in this table begin with SCTASK and are the assigned tasks needed to complete the delivery of each request item from start to finish.

<u>Progress Stages for a Requested Item:</u>

While viewing the requested item, you can expand the flow stages which provide summary-level feedback about the progress or state of an item in the delivery process.

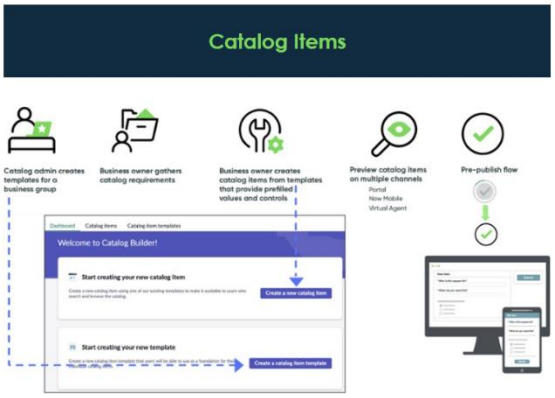
After a request has been submitted, users are able to easily track it by navigating All>Self-Service>My Requests and opening the record associated with the request.

The Flow stages attached to an item indicate the progress or state of an item in the delivery process with one of the following stages:

- Waiting for approval(In progress)
- Approved
- Pending(has not started)
- Fulfilment(In progress)
- Deployment/Delivery
- Completed

Catalog Builder

Create or edit a catalog item or record producer using a visual and guided experience along with specified instructions. The catalog builder experience enables you to delegate the creation and maintenance of the catalog.



Users can also create a template that can be used to create catalog items. While creating template you can specify values or restrictions for items create using the template.

From the homepage of the catalog builder, you can do the following:

- Create a catalog item
- Create a catalog template
- View the available catalog items
- View the available catalog item templates
- View the catalog items that are recently updated
- View the configured content that describes the catalog building process in your organization.

Flow Designer

Flow Designer is a non-technical interface for building and enabling process automation capabilities, known as flows.

Navigate to All>Process Automation>Flow Designer

Flows automate business logic for a particular application or process such as approvals, tasks, notifications, and record operations.

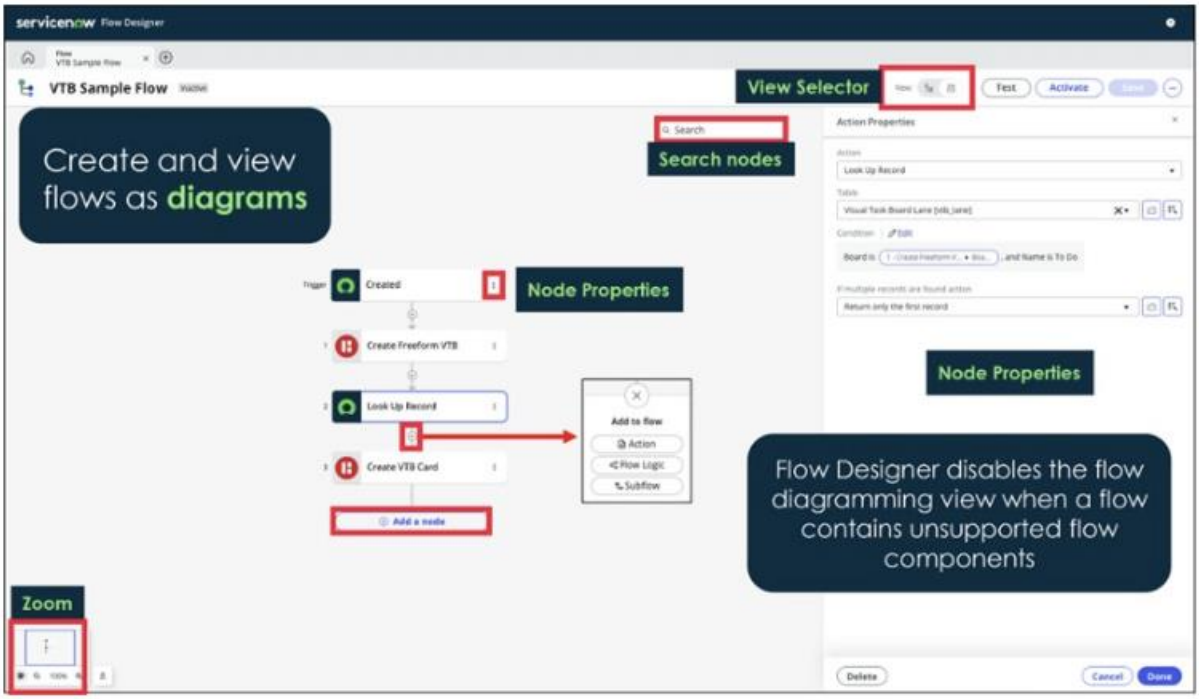
The following roles might be required to work with the Flow Designer in one capacity or another: flow_designer, flow_operator and action_designer.

Benefits

- Single environment to build and visualize business processes
- Configuration and runtime information available to create, operate, and troubleshoot flows from a single interface
- Provides natural-language-descriptions of flow logic
- Promotes process automation by enabling subject matter experts to develop and share reusable actions
- Allows extending Flow Designer content by subscribing to Integration Hub or installing spokes
- Create a flow with an SLA Task Trigger

In situations like service catalog, where you may have hundreds of items with many associated flows, moving forward, Flow Designer flows are a preferred approach.

Flow Diagramming View



The diagramming view offers features for working with your flow in a visual diagram.

Supported flow components

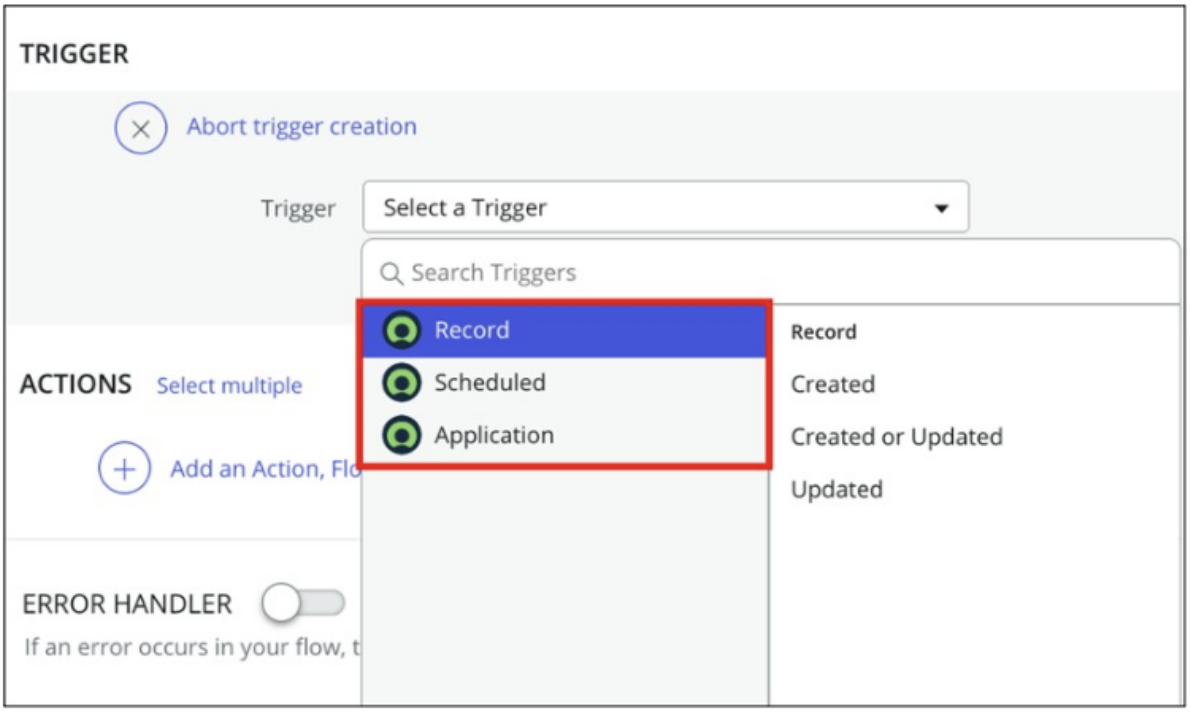
The flow diagramming view only displays flows with these trigger types.

- Record triggers
- Date triggers
- Inbound email
- Service Catalog
- SLA Task

The flow diagramming view only displays flows containing these flow logic types.

- Call a workflow
- Do the following in parallel
- Dynamic Flows
- Else If
- End Flow
- For Each
- Get Flow Outputs
- If
- Set Flow Variables
- Wait for a duration of time

Flow Components: Triggers

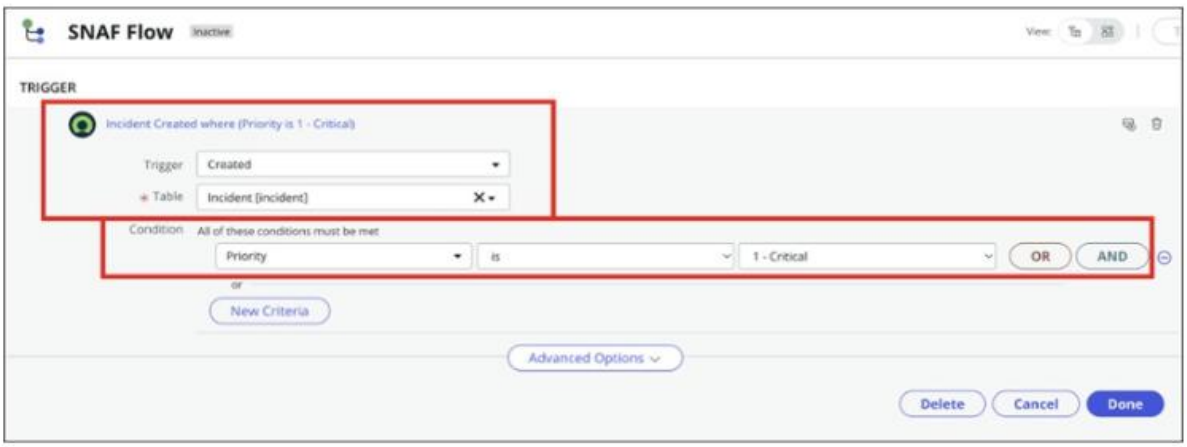


Triggers can be record-based, date-based, or application-based.

Triggers instantiate the flow and can be record-based, date-based, or application-based.

- Record-based triggers run a flow after a record has been created, updated, or deleted. When using a record-based trigger, the triggering record can be used later in the flow as input for actions.
- Date-based triggers run a flow at the specified date and time: daily, weekly, monthly, etc. The execution time can be used as an input for actions in the flow.
- Application-based triggers are added when the associated application spoke(contains triggers and actions dedicated to a particular application eg. ITSM Spoke contains actions for managing Task records such as the Create Task action. Spokes are activated when their parent application is activated.) is activated. In some instances, a plug-in might need to be activated as well (All>System Definition>Plugins)

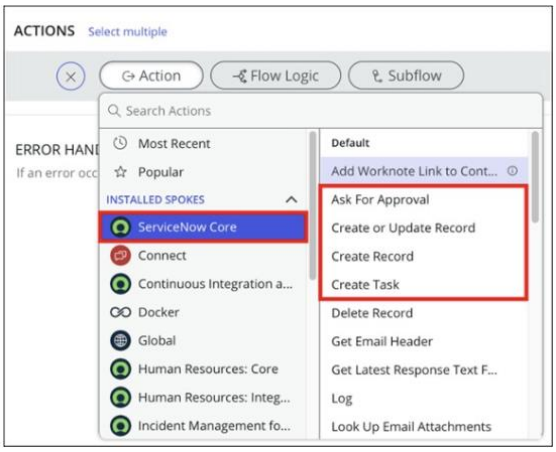
<u>Flow components: Triggers and conditions</u>



A flow can include triggers and conditions.

Trigger: An activity that initiates the flow, such as record created in a specified table or a scheduled job.

Conditions: Statements that determine when or how an action runs. For example, run an action only if a field is over a certain value.



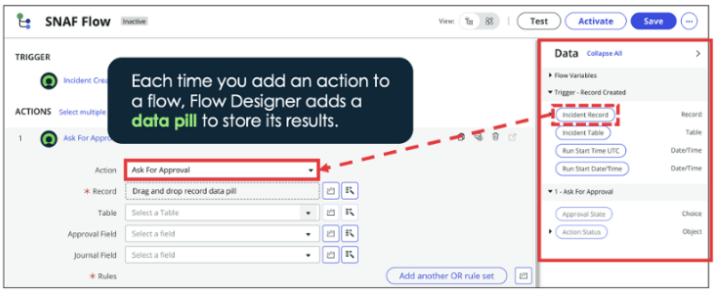
Flow Components: Actions

Actions are operations executed by the system, such as looking up a record, updating a field value, requesting an approval, or logging a value.

In flow designer, under actions you can view the most recent and most popular actions that have been used in the last 7 days for all Flow Designer users.

Some servicenow core actions include:

- Ask for approval
- Create Record
- Delete Record
- Look up record
- Wait for condition



Flow Components: Data

The **Data** section of the flow designer contains the data pills that can be used in subsequent actions. To reference the data stored in the data pill, drag and drop the data pill from the Data section to the appropriate field in the flow or click on the **Data Pill Picker** icon.

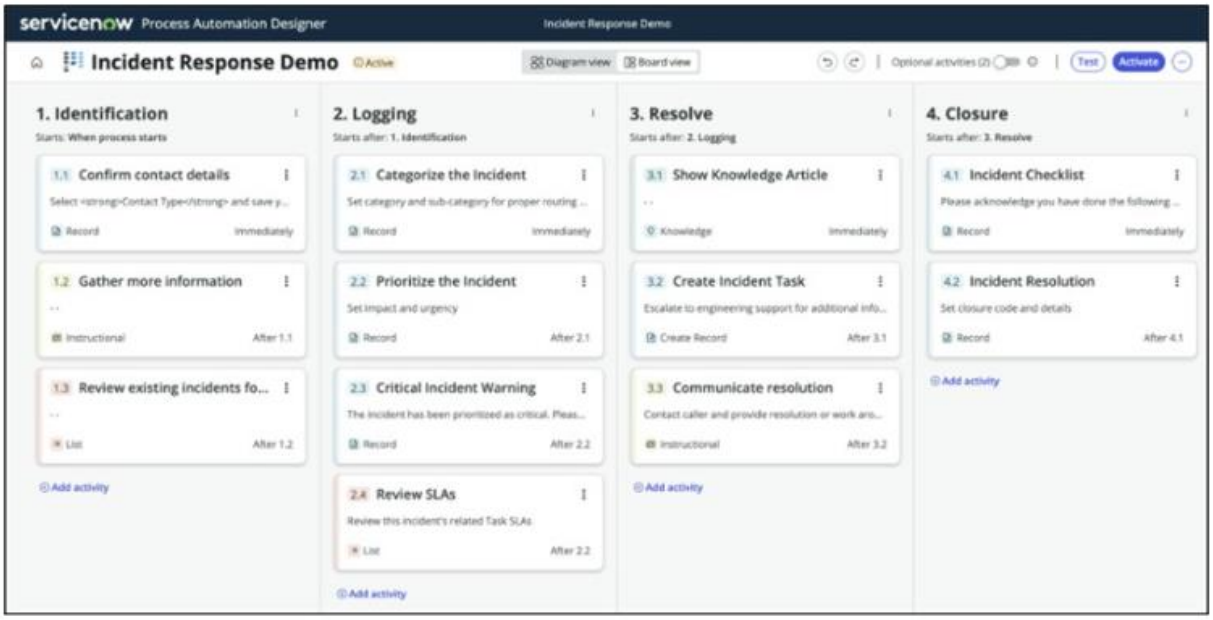
Integration Hub

Integration Hub offers several pre-built sets of integration actions to interact with common third-party applications.
These sets of integration actions are referred to as spokes.
Automate integration tasks using servicenow compoments for Flow Designer or develop custom integrations.

Process Automation Designer

Process Automation Designer enables owners to author cross-enterprise workflows and create a single unified process.

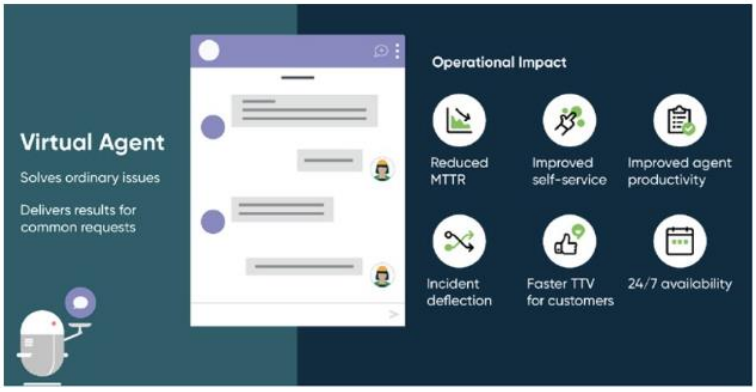
It can also be used to provide end users with a simplified, task-oriented view of your process.



Using PAD, citizen developers and process owners can automate existing servicenow platform capabilities (send notifications, create new records, submit approvals, etc.) PAD is based on the technology of Flow Designer and can be used to create flows, actions and manage flow executions.

<u>Virtual Agent</u>

Virtual Agent is a conversational platform that helps users obtain information, make decisions, and perform common work tasks within a messaging interface.



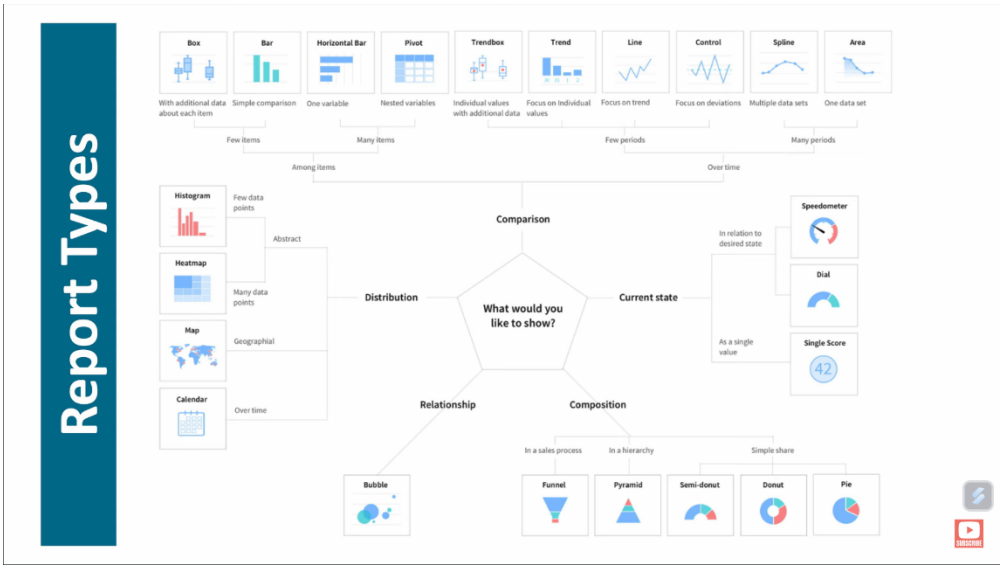
Through live agent support, users have the option to switch to a human agent for assistance at any time, ensuring they receive the help they need.
It's an intelligent conversational experience for your users that gives them answers to common questions and helps them resolve routine issues faster. It uses natural-language understanding-artificial intelligence- to figure out what people are saying.

Reporting

Reports, prepared on an ad-hoc basis, show results by allowing users to view and analyze servicenow data.
Run predefined reports or create new custom reports with the report designer.
Reports can be visually represented in many ways, including bar graphs, pie charts, dials, lists, pivot tables, donuts and more.

Report types

The servicenow base instance comes with over 25 standard report types



The All>Reports>View/Run module contains a library of reports which you can run and use to create your own custom reports. Many of these reports came with the platform and others were created by your reporting administrators specifically for your company.

Report Designer

Using the built-in Report Designer, anyone can easily create reports by following guided flows to configure, preview, edit and share reports.

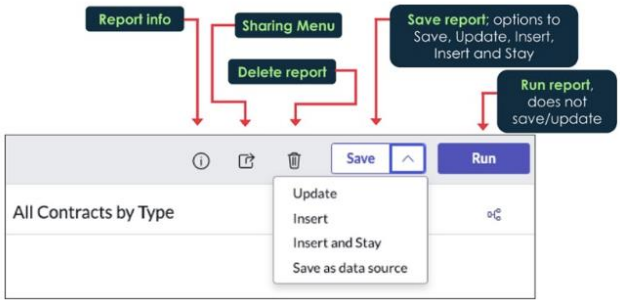
You can also:

- **Schedule** reports, so they are run and distributed on a regular basis.
- **Integrate** reports into intuitive dashboards with interactive filters and widgets that let you visualize data in the most effective way.

Each section of the report designer provides different configuration options:

- **Data:** Provide a name for the report, as well as select the source from where your data comes from. You can choose a data source, which is a predefined data set used for creating reports
- **Type:** Select the visualization of your report by choosing a report type. There are 28 different types to choose from
- **Style:** Adjust the look of your report, from coloring to titles, as well as making adjustments to the report legend.

Report Actions and Options



Report actions become available once the report has been saved and they depend on your role.

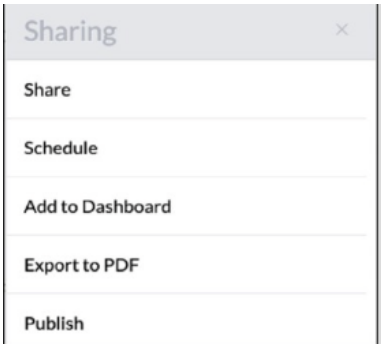
- **Update**: Overwrite report, return to the report list
- **Insert**: Save a duplicate copy of the report, return to the report list
- **Insert and Stay**: Save a duplicate copy of the report, remaining on the report
- **Save as report source**: Allows you to create a prefiltered data set that can be used for creating reports (role reqd: report_admin)

Report Distribution

To make a report visible to a particular group or user, use the **Share** option to select Groups and/or Users.

Steps to publish a report:

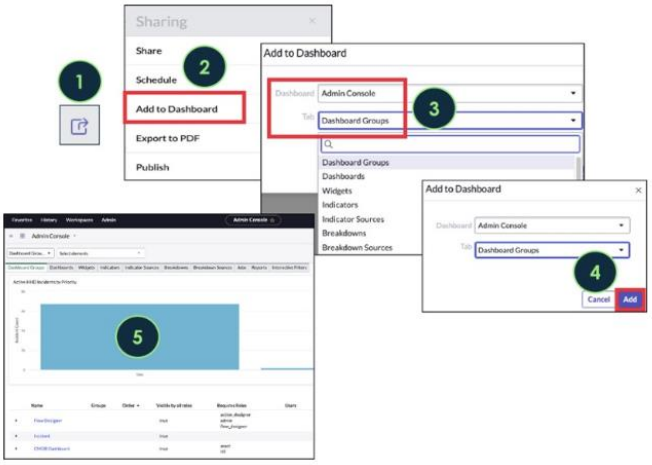
1. With desired report displayed click the **Sharing** menu icon, then click **Publish**.
2. Click the **Copy report link** icon from the report header to copy the URL to your clipboard.
3. **Open URL** in browser.



When distributing a report, sharing makes the report visible to authenticated users within servicenow.
From the **Sharing** menu, the following options are available:

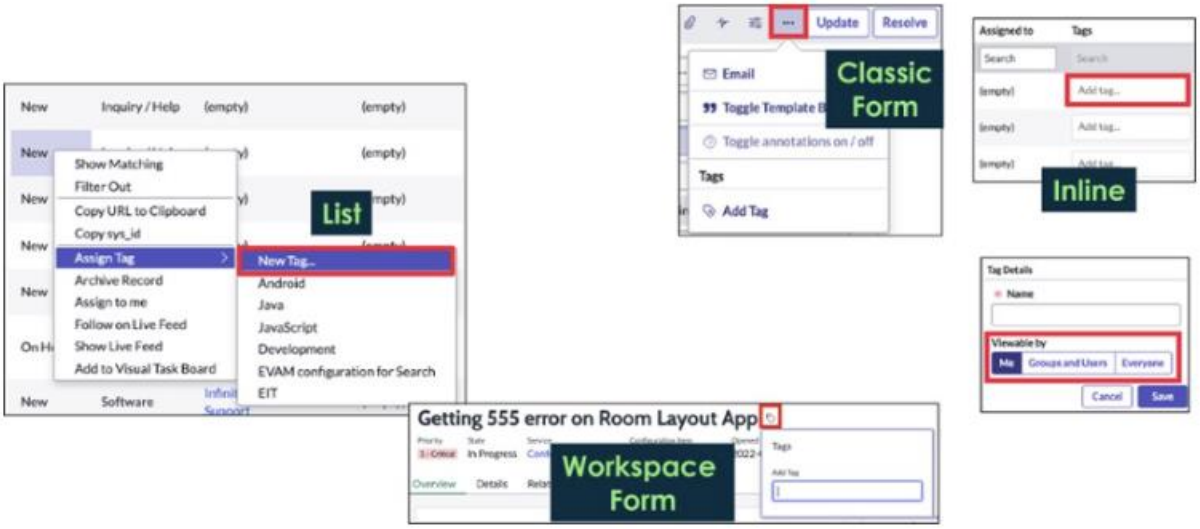
- **Share**: Specifies who can see the report. Options include:
    - Me (the user who created the report)
    - Everyone (all servicenow users)
    - Groups and Users (specific groups and/or specific users)
- **Schedule**: Creates a scheduled email of the report as an attachment
- **Add to Dashboard**: Adds directly to a Dashboard you choose. If the dashboard has multiple tabs, you can select a specific tab.
- **Export to PDF**: Converts the report to a PDF which can be generated immediately or sent as an email.
- **Publish**: Creates a URL for the report which can be used by internal and external audiences. However, users may need to log into servicenow to view all of the data. Published reports can be unpublished and no longer accessible.

Add Report to a Dashboard



Tags – Personalize or Configure

Tags provide an easy way to categorize, flag, and locate records. Tags can be created against any record from a list or form view.



Use the **viewable by** field to control how it is shared.

New tags can be made visible to:

- The current logged in user (Me)
- Groups and Users
- Everyone

In the workspace view, the tag icon appears next to the primary value in the form header. An unfilled tag icon means that no tags have been assigned to the record. When tags are assigned and they are visible to you, the tag icon is filled.

<u>Reporting Compared to Performance Analytics</u>

When you **report** on a table (for example, Incident or Problem), information about the **current state of platform data** displays.

Performance Analytics provides information about performance **iteratively, over time.**

Performance Analytics (PA) allows users to create dashboards with widgets to visualize data over time in order to identify areas of improvement.

The performance analytics architecture:

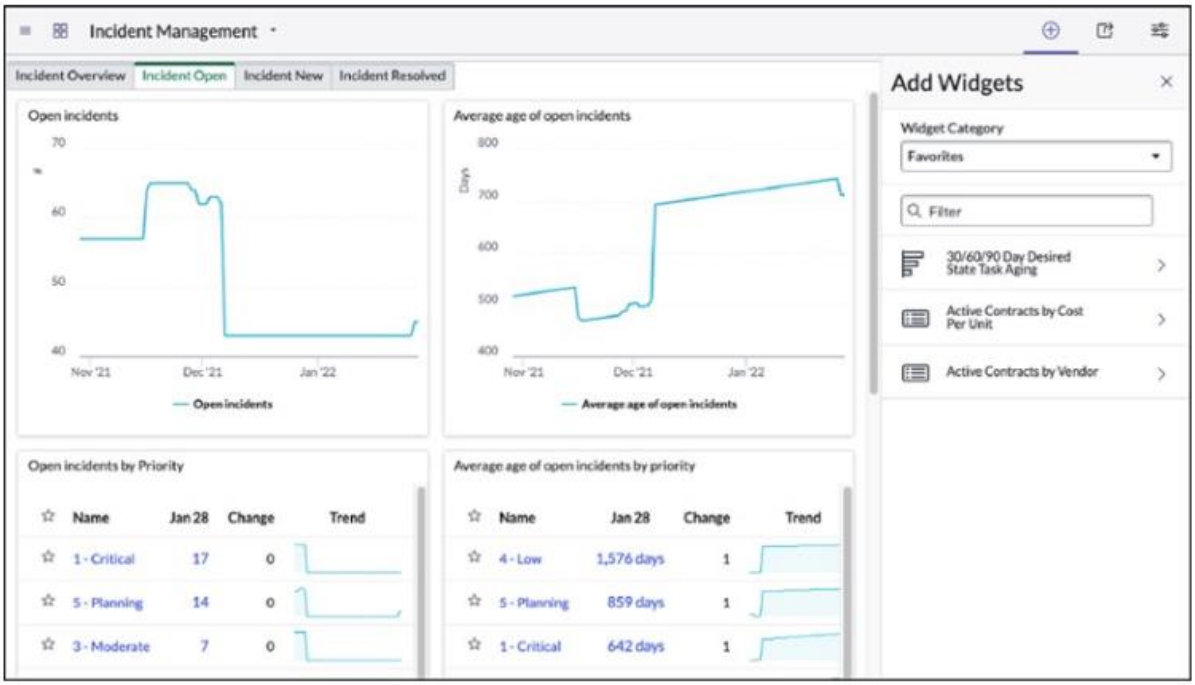
- Widget-Saved view of indicator or breakdown
- Tables: Indicator Source-calculates scores
- Data Collector-recurring jobs taking data snapshots
- Dashboard-Custom arrangement of widgets

Reporting answers the question of “Where are we today?” while Performance Analytics answers what is happening over time.

<u>Dashboards</u>

Dashboards enable you to display multiple Performance Analytics, reports, and other widgets on a single screen.

Use dashboards to **create a story with data** that can be shared.



Dashboards may be responsive or nonresponsive. Responsive dashboard functionality is enabled by default. Non-responsive dashboards have limitations including who can create, view, and edit them.

If your instance requires dashboards by navigating to All>System Properties>Dashboard Properties and clearing the Enable responsive dashboard.