INCIDENT MANAGEMENT SYSTEM

A PROJECT REPORT

Submitted By

SHIVANGI SAXENA

University Roll No 1900290140035

Submitted in partial fulfilment of

the Requirements for the Degree

of

MASTER OF COMPUTER APPLICATION

Under the Supervision of

Ms. Vidushi

ASSISTANT PROFESSOR

Submitted to

DEPARTMENT OF COMPUTER APPLICATIONS

KIET Group of Institutions,

Delhi-NCR, Ghaziabad

Uttar Pradesh (201206)

DR.APJ ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

(JUNE,2022)

Declaration

I undersigned hereby declare that the project report ("**INCIDENT MANAGEMENT SYSTEM"**) , submitted for partial fulfillment of the requirements for the requirement for the award of the degree of Master of Computer Applications by the 'KIET GROUP OF INSTITUTIONS GHAZIABAD, DELHI-NCR' is a bonafide work done by me under supervision of (Ms.Vidushi). This submission represents my ideas in my own words and where ideas or words of others have been included, I have adequately and accurately cited and referenced the original sources. I also declare that I have adhered to ethics of academic honesty and integrity and have not misrepresented or fabricated any data or idea or fact or source in my submission.

Name : SHIVANGI SAXENA

Roll No: 1900290140035

Branch: MCA (6th Sem)

(Candidate Signature)

shivangi saxena

Certificate

Certified that **SHIVANGI SAXENA (Enrollment no. 190029014005178)** has carried out the project work having "incident management system" for Master of Computer Applications from Dr. A.P.J. Abdul Kalam Technical University (AKTU) (formerly UPTU), Technical University, Lucknow under my supervision. The project report embodies original work, and studies are carried out by the student herself and the contents of the project report do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

Date:

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

Date:

Ms.Vidushi
Associate Professor
Department of Computer Applications
KIET Group of Institutions, Ghaziabad

Signature of Internal Examiner   **Signature of External Examiner**

BANGMETRIC

BangMetric Services Private
Limited
Unit no -5th floor, Highway Towers -I,
A13/3,4 sector 62 Noida 201309

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Shivangi Saxena** has undergone internship programmed with BangMetric Services Private Limited from 14th February 2022 to 23rd May 2022.

During her internship with BangMetric Services she worked as a **Graduate Engineer Trainee (Software Development).**

During the tenure, we found her sincere, hardworking, and talented.

We wish her well for all her future endeavors.

Sincerely,

For BangMetric Services India Pvt. Ltd.

Meghna Sharma
HR Associate

| INDIA | USA | Australia | South Africa |

Abstract

Incident management system is a web application used as an unplanned interruption or a reduction in the quality of a technical service or a failure of a configuration item (CI) that has not yet impacted a technical service. Incidents can include failures or degradation of services
reported by users, technical staff, third-party suppliers and partners, or automatically from monitoring tools. Normal service operation is defined as an operational state where services and CIs are performing within agreed service and operational levels. Incident management is responsible for managing the lifecycle of all incidents. A temporary workaround to restore service is all that is required in many cases to complete the process. The objectives of Incident Management are to:•Ensure standard methods and procedures are used for efficient and prompt incident response, analysis, documentation, management, and reporting. •Increase visibility and communication of incidents to business and support staff. •Enhance business perception of IT through use of a professional approach in quickly resolving and communicating incidents when they occur. •Align Incident Management activities and priorities with those of the business. •Maintain user satisfaction with the quality of IT services.

ACKNOWLEDGEMENTS

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CHAPTER 1

INTRODUCTION

1.1 PROJECT DESCRIPION

Incident Management system is a web application which is based on servicenow ITSM module.

The primary goal of implementing this application is to improve IT efficiencies and reduce IT operational costs.Additional goals and expected outcomes include:

•Improved overall effectiveness of IT service delivery

•Expanded visibility into operations and performance metrics

•Strong controls and governance

•Superior customer experience

•Enriched communications, both incoming and outgoing

•Increased accountability

1.2 PROJECT SCOPE

Incident management system is a cloud-based ITSM based web application.. It provides higher flexibility relative to functionality, reliability and customization. Presented as an ITSM tool it has now grown and progressed fairly more than being just an ITSM device as it helps in solving incident of many types of programs in the websites of finance, sales, HR etc. It is due to its affectivity that it has got a great hold in the industry and has obtained a huge business. With the execution of ServiceNow, all we got to do is to think running our business and forget about managing the other tools like- infrastructure, database, servers, security, data centres, clustering, load balancing, etc.

ServiceNow is implemented by companies from almost all the fields that provide service and support like the automobile industry, IT industry, medication, insurance, media and enjoyment etc. Few IT companies have fought with an obsolete ITSM system in the past. They felt that this would attract them back in the global industry in terms of service quality. This future insecurity forced IT companies to outsource their management and maintenance issues. It leads to customer dissatisfaction resulting over expenditure and ended up being time-consuming. With ServiceNow, the IT companies are able to work with all the departments on a single platform which helps you to save both time and money.

1.3 Hardware / Software used in Project

1.3.1 Hardware Requirements

The most common set of requirements defined by any operating system or software application is the physical computer resources, also known as hardware.

Memory – All software, when run, resides in the random access memory (RAM) of a computer. Memory requirements are defined after considering demands of the application, operating system, supporting software and files, and other running processes. Optimal performance of other unrelated software running on a multi-tasking computer system is also considered when defining this requirement.

Number	Description
1	PC with any GB of Hard disk
2	Good internet connection.

Table 1.1 Hardware Requirements

1.3.2 Software Requirements

The software requirements are description of features and functionalities of the target system. Requirements convey the expectations of users from the software product. The requirements can be obvious or hidden, known or unknown, expected or unexpected from client's point of view .Every project needs

software. We should try to understand what sort of requirements may arise in the requirement elicitation phase and what kinds of requirements are expected from the software system.

Number	Description	Type
1	Operating System	Windows XP / Windows
2	Language	JavaScript, HTML, CSS
3	Database	MySQL
4	PDI	Service Now
5	Browser	Google Chrome / Internet Explorer

Table 1.2 Software Requirements

CHAPTER 2

Literature Review

2.1 IT Service Management

IT Service Management (ITSM) solution provides scalable workflows to manage and deliver IT services to your users all through a single cloud-based platform. The ITSM solution can help increase your agents' productivity, resolve issues quickly, and improve user satisfaction. Also, powered by platform native AI, you can quickly accelerate technology changes and view recommended actions for incoming tickets or requests and drive self-service and automation through enterprise chat-bot technology. The NOW Platform also provides users access to ITSM via mobile or web-portal interfaces. Transform the impact, speed, and delivery of IT services The Now Platform was built for the cloud and has its own shared data model, AI, and workflow automation that are leveraged by many IT applications. The combination of the ServiceNow platform and applications helps you increase productivity by automatically identifying and resolving issues, which reduces the negative business impacts of unplanned, non-strategic work. Improved IT productivity through chatbots and machine learning Accelerate resolution with built-in machine learning. Chatbots provide immediate resolution to common questions. With ITSM Virtual Agent in action, you 13 can have employees with 24*7 support service. Service desk agents can take advantage of machine-learning automation to resolve incidents and recommend resolutions for agents based on similar incidents solved in the past.

2.2 TECHNICAL FEASIBILITY

This involves questions such as whether the technology needed for the system exists, how difficult it will be to build, and whether the firm has enough experience using that technology. The assessment is based on outline design of system

requirements in terms of input, processes, output, fields, programs and procedures. This can be qualified in terms of volume of data, trends, frequency of updating in order to give an introduction to the technical system. The application is the fact that it has been developed on windows XP platform and a high configuration of 1GB RAM on Intel Pentium Dual core processor. This is technically feasible. The technical feasibility assessment is focused on gaining an understanding of the present technical resources of the organization and their applicability to the expected needs of the proposed system. It is an evaluation of the hardware and software and how it meets the need of the proposed system.

2.3 Technology Description

2.3.1 ServiceNow

`ServiceNow is a cloud based platform, which was mainly developed for workflow and process automation as per the ITIL principles. However, it is highly customisable and also can be used for other purposes. ServiceNow is an American based company and was founded in 2004 by Fred Luddy. It has a unique way for naming its versions. They name the versions based on the major cities of the world. The latest version of ServiceNow is Orlando.

ServiceNow offers many ready to use solutions, workflows and products for an organisation. The organisation can develop the customised applications and modules as per the business requirement using the ServiceNow scripting and existing tools.

2.3.2 Services of ServiceNow

Some of the important offerings and most widely used services of ServiceNow are explained below −

IT Service management

ServiceNow is mainly used as a ticketing tool to manage incidents, problems and changes. It has many advanced features, analytics and insights that impacts the speed and delivery of IT.

HR management

ServiceNow can be used for almost all HR delivery services like leave management, timesheet management, employee document management, new onboarding management, performance management, etc.

IT Asset management

With ServiceNow, we can manage our hardware and software assets to optimise cost and increase efficiency. ServiceNow has features such as licence management, warranty management, CI management, advanced reporting and insights, etc.

Finance operation management

ServiceNow manages all the activities related to finance close and automates the financial processes.

Apart from offerings mentioned above, ServiceNow also offers services for IT business management, security operations, virtual chatbots, etc.

ServiceNow is built using Java and Tomcat web server running on Linux. Although to develop new modules and applications in ServiceNow the JavaScript knowledge is sufficient.

2.3.3 ServiceNow Instance

A ServiceNow instance is a set of databases, applications, virtual machines, libraries grouped together to provide the required services to a specific customer. ServiceNow customer instance is built on multi-instance architecture.

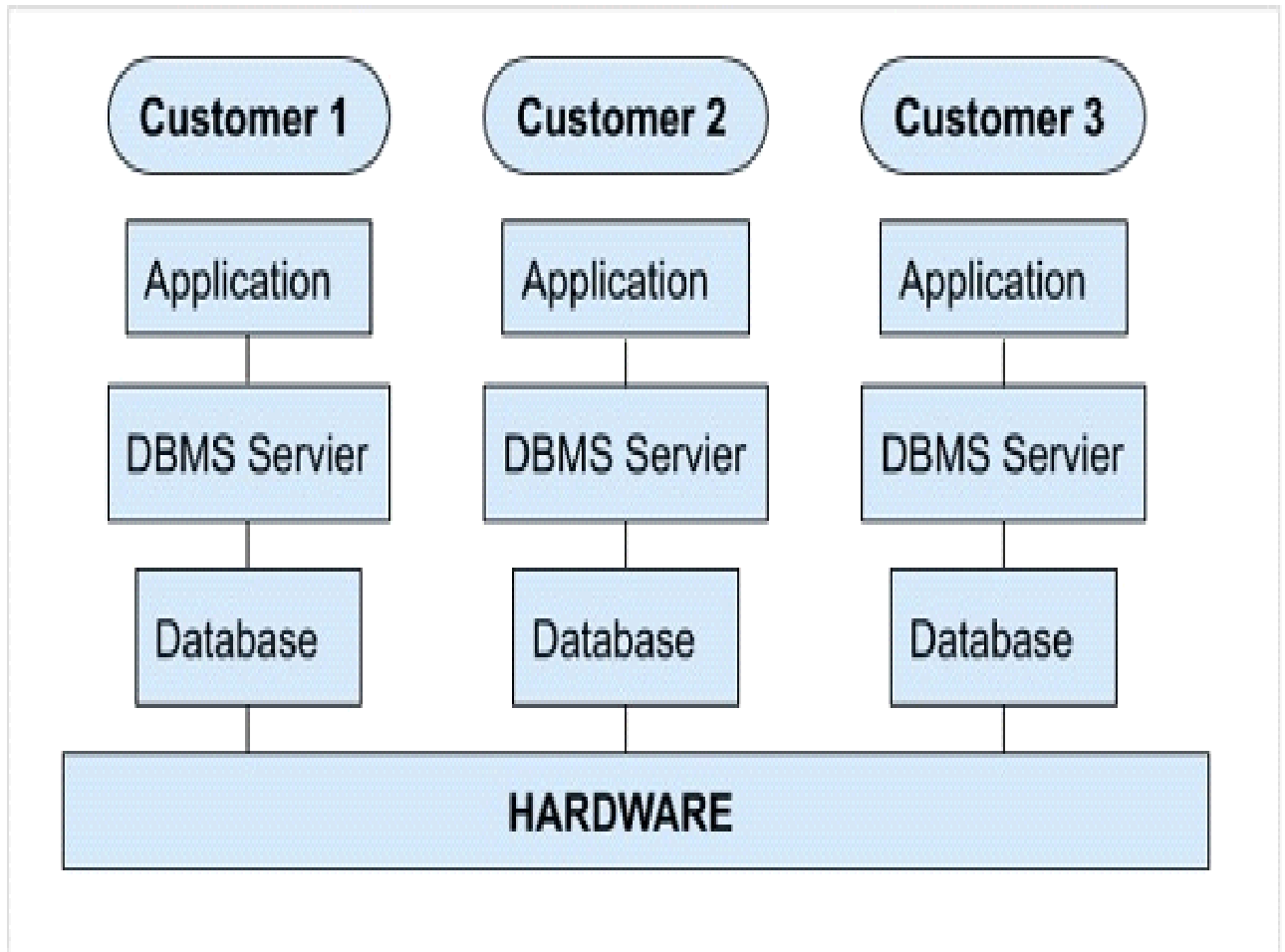The figure given below shows multi-instance architecture

Fig.2.1 Multi-instance architecture

The important point to note here is that, each customer has a separate customised application(s) along with separate database(s) running on shared hardware resources. The customer data is encrypted and therefore, is completely secure. The deployment of ServiceNow is very flexible and it can also be implemented in a private cloud.

ServiceNow also offers developer instance, which is a community edition free of cost. ServiceNow developer instance was launched, to promote the use of ServiceNow and to provide the resources, so that the developers/administrators can learn, build, enhance and customise the applications in ServiceNow.

2.4 Technology used in project

ServiceNow ITSM Module

Improved employee and customer experiences are essential for successful digital

transformation. However, using siloed IT tools for your digital transformation creates information silos. With disparate data, processes and excessive amounts of time and money spent on firefighting, you're left with limited resources to create delightful employee experiences.

ServiceNow IT Service Management (ITSM) is a modern, cloud-based, silo-busting service management solution. With ServiceNow ITSM, you can consolidate on-premises legacy tools to a single cloud platform and stop wasting your money and harness shared data and analytic with automated workflows on the Now Platform® in the Nonstop cloud. Platform-native AI and machine learning along with natural language virtual agent chat-bots unburden your IT staff and boost productivity 30%. ServiceNow ITSM lets you:

- Empower employees to self-solve issues 24/7, raise questions, and get relevant, accurate, and consistent information to improve

- employee satisfaction.

- Make smarter decisions, automate 20%1 of your services, and continually improve your services in role-based workspace.

- Triage, collaborate, and enable agents to resolve incidents, find answers, and stay connected from anywhere to resolve high impact incidents and improve agent productivity by 30%

Performance Analytic

Enable stakeholders—workers, owners, and executives— responsible for service delivery to make smarter, real-time decisions with Performance Analytic. Use data visualizations to anticipate trends, prioritize resources, and drive IT alignment with business goals.

Continual Improvement Management

Collaborate and prioritize data, people, and business goals to manage your

strategic IT road-map investments with the structured framework and workflow of Continual Improvement Management (CIM).

CHAPTER 3

BACKEND DESIGN

3.1 MySQL

MySQL is an open-source, fast reliable, and flexible relational database management system, typically used with PHP. This chapter is an introductory chapter about MySQL, what is MySQL, and the main features of MySQL are described here

3.1.1 What is MySQL

- MySQL is a database system used for developing web-based software applications.

- MySQL used for both small and large applications.

- MySQL is a relational database management system (RDBMS).

- MySQL is fast, reliable, and flexible and easy to use.

- MySQL supports standard SQL (Structured Query Language).

- MySQL is free to download and use.

- MySQL was developed by Michael Widenius and David Axmark in 1994.

- MySQL is presently developed, distributed, and supported by Oracle Corporation.
- MySQL Written in C, C++.

3.1.2Main Feature of MySQL

- MySQL server design is multi-layered with independent modules
.
- MySQL is fully multi-threaded by using kernel threads. It can handle multiple CPUs if they are available.

- MySQL provides transactional and non-transactional storage engines.

- MySQL has a high-speed thread-based memory allocation system
.
- MySQL supports in-memory heap table.

- MySQL Handles large databases.

- MySQL Server works in client/server or embedded systems.

- MySQL Works on many different platforms.

3.2 Database views

A database view defines table joins for reporting purposes.

For example, a database view can join the Incident table to the Metric Definition and Metric Instance tables. This view can be used to report on incident metrics and may include fields from any of these three tables.

Several useful database views are installed with the Database View plugin and the Database Views for Service Management plugin. These database views cover most metric reporting needs and greatly reduce the need to define new ones.

Any user who can create a report can use database views as the report source, but ACLs on the underlying tables are honored.

Note:

- The accumulated impact on performance grows as the number of tables that are included in the view and the number of records that those tables contain increases. To maximize the performance of the database view, ensure that the 'where' clauses that are defined in the database view are based on indexed fields.

- A database view is not treated like a custom table, so there is no licensing impact.

3.3 Data dictionary tables

The system defines data dictionary, data modeling, and entity relationship information in multiple tables.

- Tables [sys_db_object]: Contains a record for each table.

- Dictionary Entries [sys_dictionary]: Contains additional details for each table and the definition for every column on each table. Each row represents either a column on a table or a table.

- Field Labels [sys_documentation]: Contains the human-readable labels and language information.
-
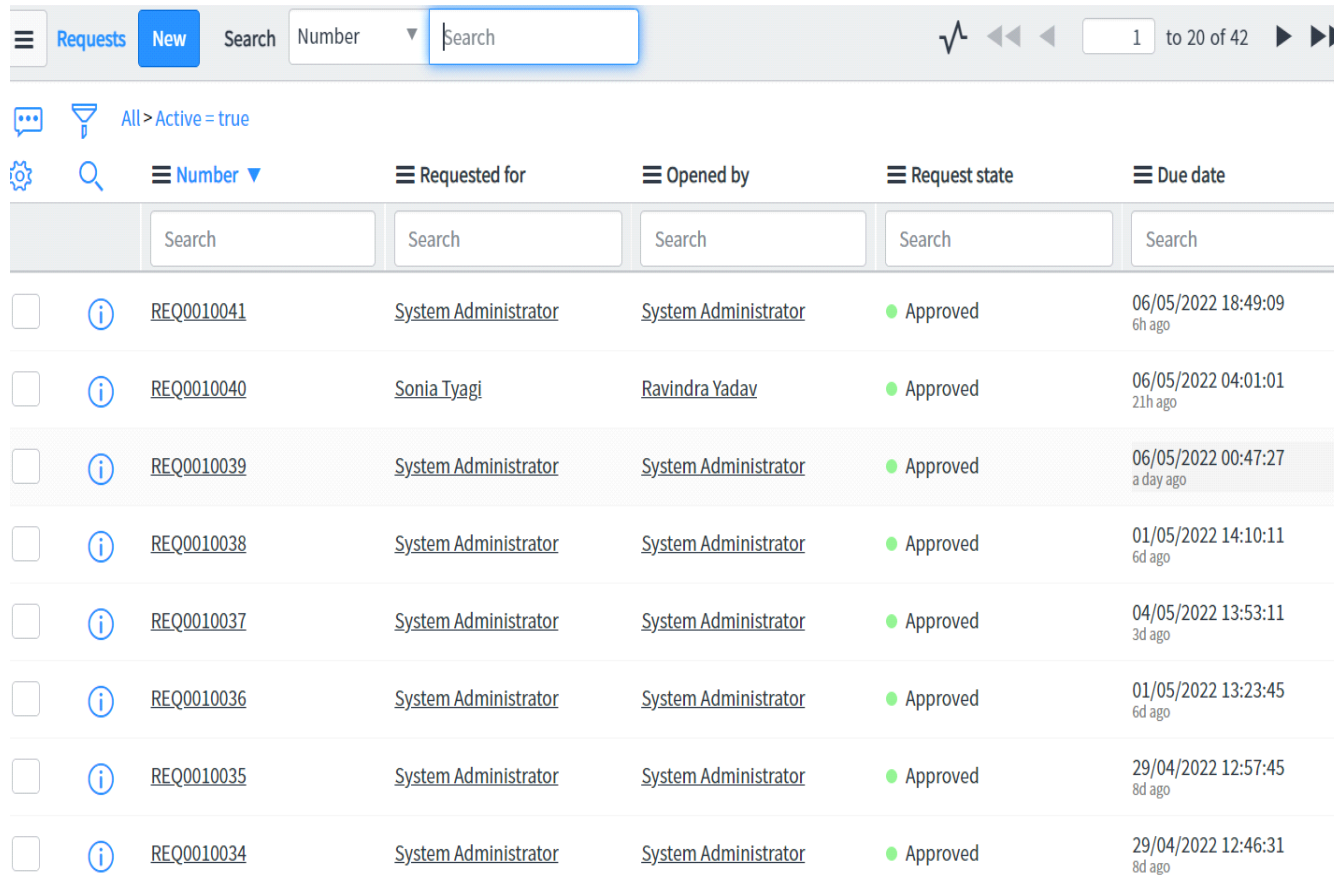
Tables

The Tables [sys_db_object] table contains a record for each table in the database.

Access the Tables list by navigating to System Definition > Tables. Administrators can create a custom table, add or modify columns in a searchable and

sortable embedded list, and define the auto-number format.

The following image shows a list of the tables that extend the Application File table.

Img 3.1 Extended Application File table

CHAPTER 4

INCIDENT MANAGEMENT

4.1 Process flow of incident management
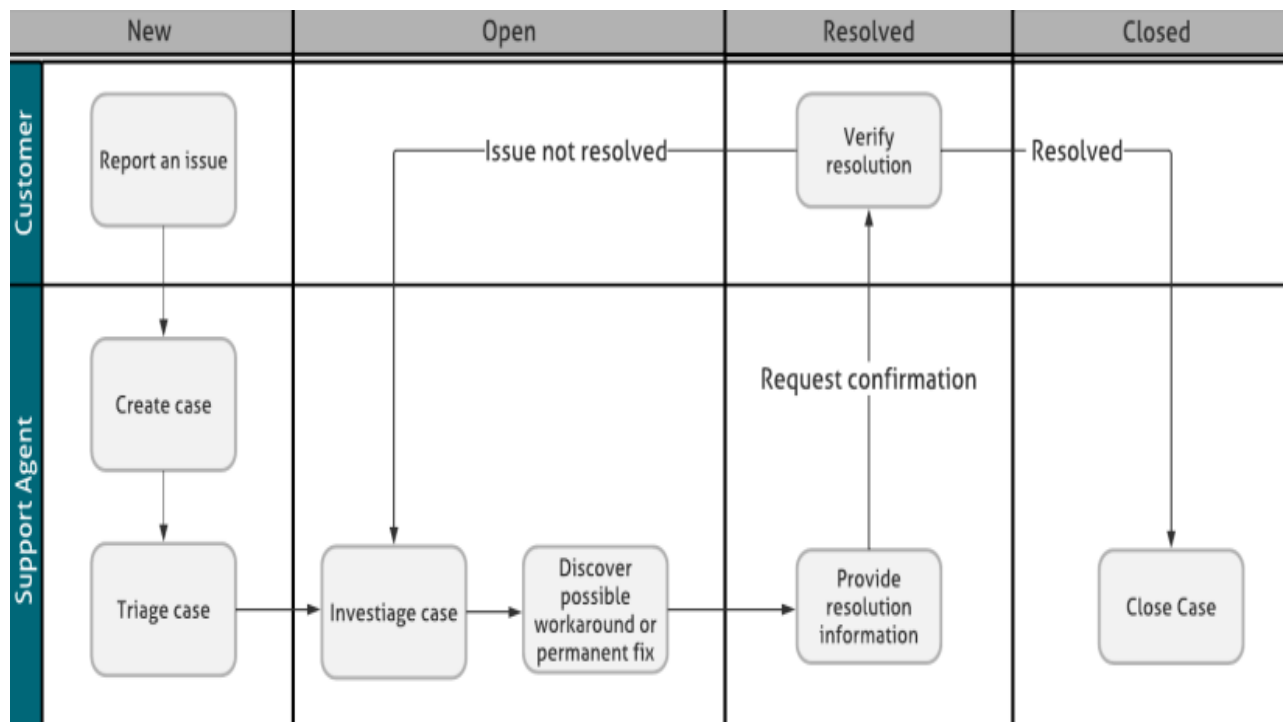
Img-4.1.1 –Incident management flow diagram

4.2 Case resolved with incident management

Use Case Management along with Incident Management to restore service disruptions such as outages that impact one or more customers. Support agent can create an incident from case and assign it to the external department/ team responsible for supporting the impacted service

.
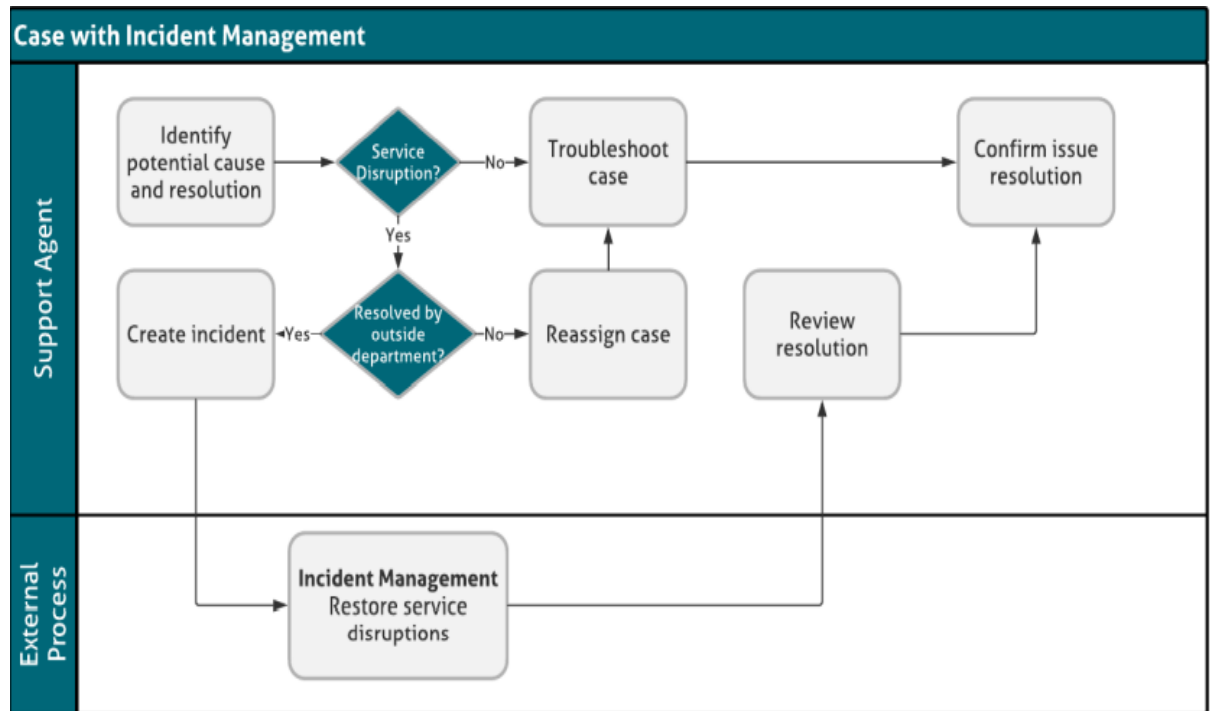
Img-4.2.1 case resolve diagram

4.3 Case resolved with service portal in incident management
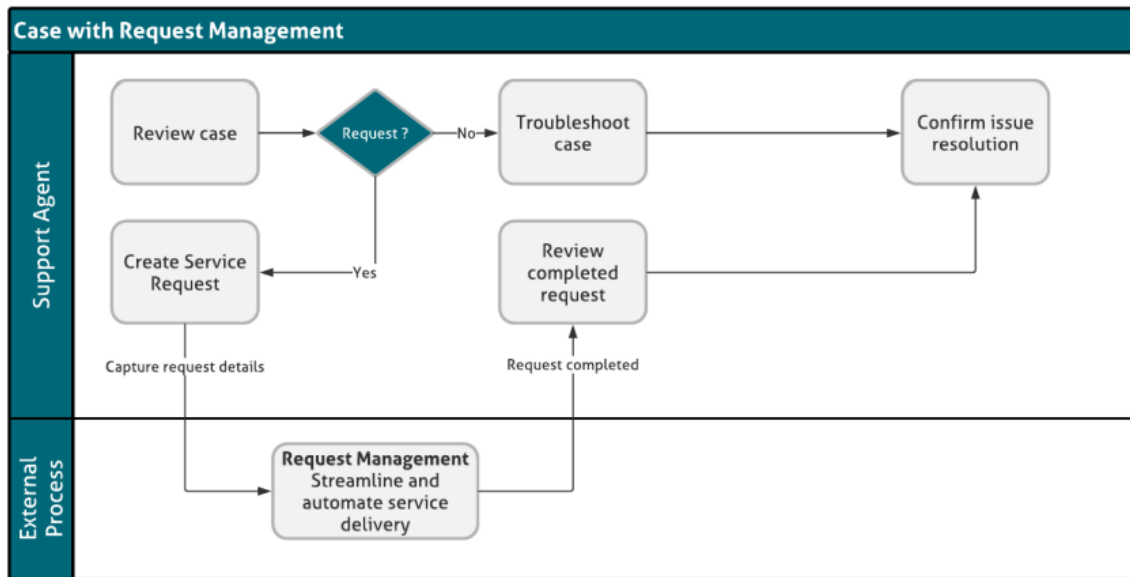
Img-4.3.1 case resolved with request management

• Create one or more requests on behalf of a customer from an existing customer service case

. • Associate an existing request to a case.

 • Remove an associated request from a case.

 • View a list of requests associated with a case in the Requests related list.

 • View the following in the case work notes: o Request state changes. o Additional comments added to the request record.
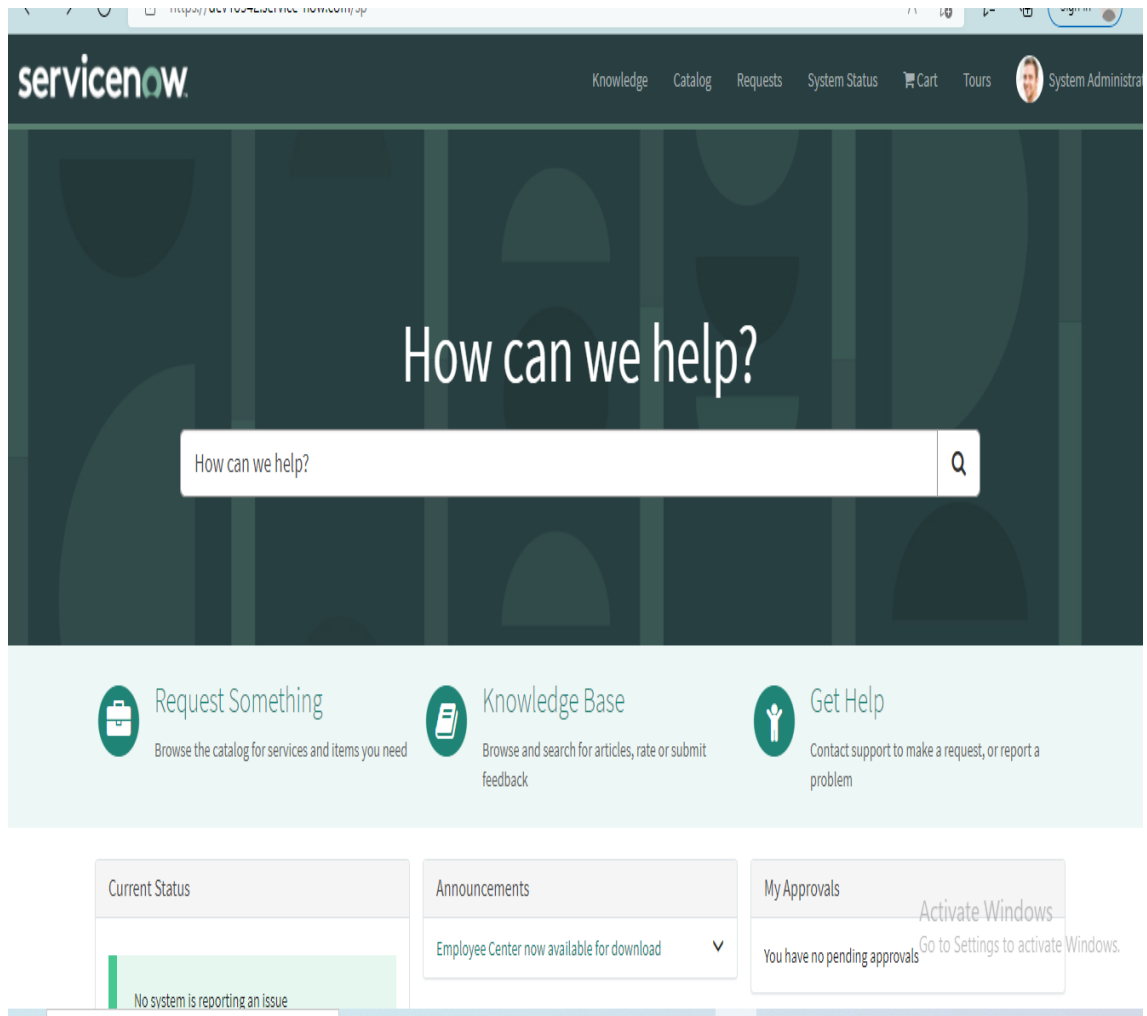
Img- service portal

4.4 Personal Developer Instance(PDI)
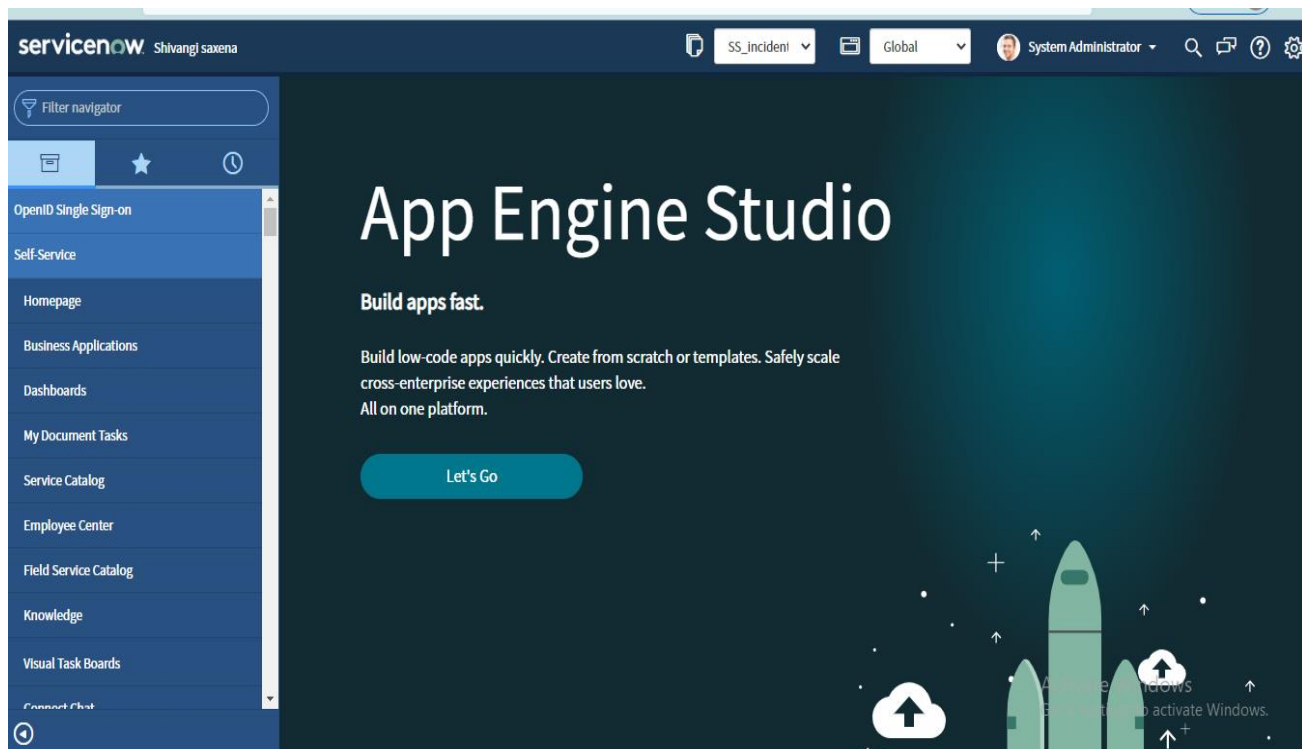
Img-4.4.1 –personal_developer instance

4.5 App Menu:

The Application Menu is composed of a drop-down button control that displays a menu containing Commands that expose functionality related to a complete project, such as an entire document, picture, or movie.
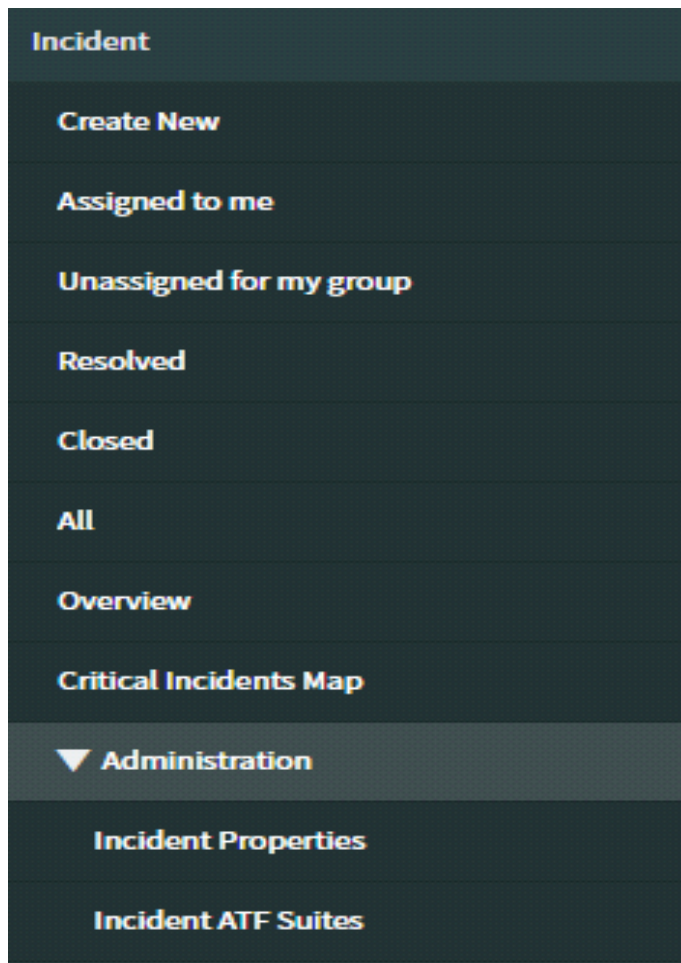
Img-4.5.1 application menu

Incident form layout should be like this:

img-4.5.2 incident new record

The fields which are highlighted in the figure are custom fields:

Related Search | ⑦   🔍

No results to display

Post Incident Report |
u_post_incident_report

Notes | Related Records | Closure Information | Post Incident Review

Watch list | watch_list   🔒 👤   Work notes list | work_notes_list   🔒 👤

Customer comments |
u_comments

Work notes (internal only) |
work_notes

Submit ? Resolve Incident ? Save ? Copy for Telecom ?

Img-4.5.3 representing custom fields

Notes | Related Records | Closure Information | Post Incident Review

Problem | problem_id   🔍   Change Request | rfc

Caused by Change | caused_by

Submit ? Resolve Incident ? Save ? Copy for Telecom ?

img-4.5.4 Incident related records

img-4.5.5 incident closer information

Caller Field:

Img-4.5.6 Dictionary entry of caller field

Img-4.5.7 referance specifications

CHAPTER 5

Configuration Item

A dictionary entry manages how ServiceNow stores data in tables and fields (columns). For new dictionary entries, select a **Table** and the field **Type** of the new column. Also enter a column label, which becomes the field label, and name. If necessary, set a **Max length** for text String type fields, make the field **Mandatory** to save a record, and make the field a <u>Display Value</u> for reference fields so it appears on records that reference this table. <u>More Info</u>

Table	name Task [task]	Application	sys_scope Global
Type	internal_type Reference	Active	active ☑
Column label	column_label Configuration item	Read only	read_only ☐
Column name	element cmdb_ci	Mandatory	mandatory ✓
	Display	display ☐

Reference Specification | Choice List Specification | Default Value

The **Reference** field specifies what table this field displays values from.
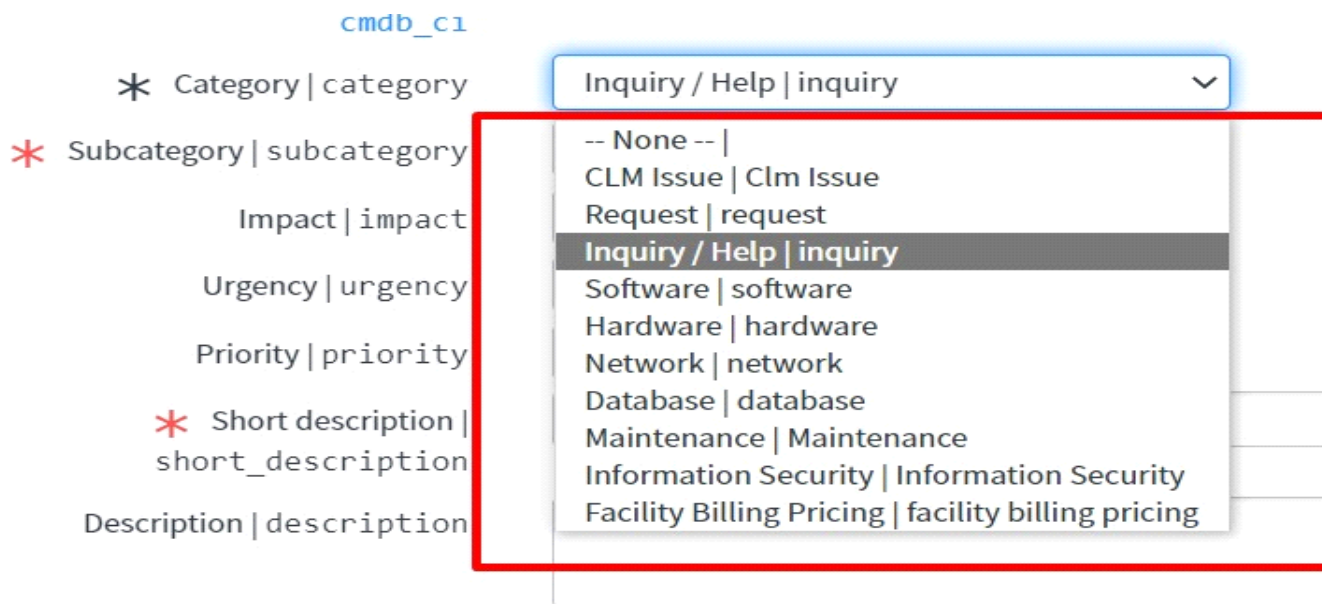
Reference | reference   Configuration Item

Reference qual condition | reference_qual_condition   sys_class_name!=cmdb_ci_spkg^sys_class_name!=cmdb_ci_file_system^sys_class_name!=cmdb_ci_print_queue^install_status!=7^sys_class_name!=cmdb_ci_config_file_tracked^EQ

Img-5.1 dictionary entry of configuration item and reference specification

Category:

Img-5.2 category drop down list view

img-5.3 – dictionary entry of category

Subcategory:

A dictionary entry manages how ServiceNow stores data in tables and fields (columns). For new dictionary entries, select a Table and the field Type of the new column. Also enter a column label, which becomes the field label, and the column name. If necessar make the field Mandatory to save a record, and make the field a Display Value for reference fields so it appears on records that reference this table. More Info

Table | name	Incident [incident]
Type | internal_type	String
Column label | column_label	Subcategory
Column name | element	subcategory
Max length | max_length	40

Application | sys_scope	Global
Active | active	✔
Function field | function_field	☐
Read only | read_only	☐
Mandatory | mandatory	✔
Display | display	☐

Alters the behavior of a field or functionality that depends on the field. More Info

Attributes \| attributes   edge_encryption_enabled=true

Choice List Specification | Dependent Field | Calculated Value | Default Value

Displays a list of suggested values in a Choice list. In the Advanced view you can select the Choice table and the Choice field to take choice values from, plus a Dependent field.

Choice \| choice   Dropdown with -- None -- \| 1

Choice table \| choice_table

Create Choice List   ?

img-5.4 dictionary entry of subcategory

Impact, Urgency, Priority:

Order ▲ order	Impact impact	Urgency urgency
100	3 - Low	1 - High
100	1 - High	1 - High
100	2 - Medium	2 - Medium
100	3 - Low	3 - Low
100	1 - High	2 - Medium
100	2 - Medium	3 - Low
100	2 - Medium	1 - High
100	3 - Low	2 - Medium
100	1 - High	2 - Medium

Img-5.5 priority datalookup list view

CHAPTER 6

UI Policy for Priority:

img-6.1 ui policies

Short Description:

Dictionary Entry | sys_dictionary [scratchpad][toggle label]
Short description

This record is in the Global application, but Contract Management is the current application. To edit this record click here.

A dictionary entry manages how ServiceNow stores data in tables and fields (columns). For new dictionary entries, select a Table and the field Type of the new column. Also enter a column label, which becomes the field label, an make the field Mandatory to save a record, and make the field a Display Value for reference fields so it appears on records that reference this table. More Info

Table	name	Task [task]	Application	sys_scope	Global
Type	internal_type	String	Active	active	☑
Column label	column_label	Short description	Read only	read_only	☐
Column name	element	short_description	Mandatory	mandatory	☑
Max length	max_length	160	Display	display	☐

Choice List Specification | Default Value

Displays a list of suggested values in a Choice list. In the Advanced view you can select the Choice table and the Choice field to take choice values from, plus a Dependent field.

Choice | choice   Suggestion | 2

img-6.2 dictionary entry shoert description

Opened:

A dictionary entry manages how ServiceNow stores data in tables and fields (columns). For new dictionary entries, select a Table and the field Type of the new column. Al and the column name. If necessary, set a Max length for text String type fields, make the field Mandatory to save a record, and make the field a Display Value for reference More Info

Table	name	Task [task]	Application	sys_scope	Global
Type	internal_type	Date/Time	Active	active	☑
Column label	column_label	Opened	Function field	function_field	☐
Column name	element	opened_at	Read only	read_only	☑
			Mandatory	mandatory	☐
			Display	display	☐

Alters the behavior of a field or functionality that depends on the field. More Info

Attributes | attributes   sla_basis=incident,timeDimension=true

hoice List Specification | Calculated Value | Default Value

Displays a list of suggested values in a Choice list. In the Advanced view you can select the Choice table and the Choice field to take choice values from, plus a Dependen

Choice | choice   -- None -- |

img-6.3 dictionary entry opened

Opened By:

img-6.4 dictionary entry opened by

Contact Type:

Img-6.5

Assignment Group:

A dictionary entry manages how ServiceNow stores data in tables and fields (columns). For new dictionary entries, select a **Table** and the field **Type** of the new column. Also enter a column label, which becom **Max length** for text String type fields, make the field **Mandatory** to save a record, and make the field a **Display Value** for reference fields so it appears on records that reference this table. More Info

Table | name	Task [task]		Application | sys_scope	Global	
Type | internal_type	Reference	ⓘ	Active | active	☑	
Column label | column_label	Assignment group		Read only | read_only	☐	
Column name | element	assignment_group		Mandatory | mandatory	☑	
			Display | display	☐	

Reference Specification	Choice List Specification	Default Value

Displays a list of suggested values in a **Choice** list. In the Advanced view you can select the **Choice table** and the **Choice field** to take choice values from, plus a **Dependent** field.

Choice \| choice   -- None -- |

Img-6.6

Business Duration:

A dictionary entry manages how ServiceNow stores data in tables and fields (columns). For new dictionary entries, select a **Table** and the field **Type** of the new column. Also enter a column label, whi **Max length** for text String type fields, make the field **Mandatory** to save a record, and make the field a **Display Value** for reference fields so it appears on records that reference this table. More Info

Table | name	Task [task]		Application | sys_scope	Global	
Type | internal_type	Duration	ⓘ	Active | active	☑	
Column label | column_label	Business duration		Read only | read_only	☑	
Column name | element	business_duration		Mandatory | mandatory	☐	
			Display | display	☐	

Choice List Specification	Default Value

Displays a list of suggested values in a **Choice** list. In the Advanced view you can select the **Choice table** and the **Choice field** to take choice values from, plus a **Dependent** field.

Choice \| choice

img-6.7

State:

State | state

gnment group |
gnment_group

assigned_to

iness duration |
ess_duration

Active | 2

New | 1
Active | 2
Awaiting Problem | 3
Awaiting User Info | 4
Awaiting Evidence | 5
Response from User | 50
Resolved | 6
Closed | 7

Img-6.8

CHAPTER 7

User Interface Actions

UI Actions:

UI Actions are UI elements that can show up on a form or a list as a button, link, or context menu. When these UI elementsare clicked they execute some JavaScript. Most of the time UI Actions are used to perform some server-side update to a record or records.

UI actions can be configured to run either server side, orclient side. It is also possible to configure a UI Action to run some code on the client, and other code on the server.

Resolve Incident:

img-7.1

```
function resolveIncident(){
//Set the 'Incident state' and 'State' values to 'Resolved', and
display mandatory fieldsg_form.setValue('incident_state', 6);
g_form.setValue('state', 6);

//Call the UI Action and skip the 'onclick' function
```

```
gsftSubmit(null, g_form.getFormElement(), 'resolve_incident'); //MUST call the 'Action
name' set in this UIAction
}
//----- Original Code End

//Code that runs without 'onclick'
//Ensure call to server-side function with no browser errors

if (typeof
window ==
'undefined')
serverResolv
e();

functi
on
server
Resolv
e(){
curren
t.incid
ent_st
ate =
6;
curren
t.upda
te();
}
```

Copy for Telecom:

Name | ⚑ name	Copy for Telecom		Application | sys_scope	Global
Table | table	Incident [Incident]		Form button | form_button	✓
Order | order	300		Form context menu | form_context_menu	☐
Action name | action_name	Copy for Telecom		Form link | form_link	☐
Active | active	✓		Form style | form_style	-- None --
Show insert | show_insert	✓		List banner button | list_banner_button	☐
Show update | show_update	✓		List bottom button | list_button	☐
Client | client	☐		List context menu | list_context_menu	☐
Overrides | sys_overrides			List choice | list_choice	☐
			List link | list_link	☐
			List style | list_style	-- None --
Messages | messages				
Comments | comments				
Hint | ⚑ hint				

Img-7.2

var inc = new
GlideRecord("inciden
t"); inc.contact_type
=
current.contact_type;
//inc.u_sour
ce =
"Proactive";
inc.caller_id
=
current.calle
r_id;
//inc.u_user_id =
current.u_user_i
d;inc.location =
current.location;
//inc.cmdb_ci =
current.cmdb_ci;

```
inc.cmdb_ci.setDisplayValue('
Mobile Phone');
//inc.u_application = current.u_application;
//inc.assignment_group = current.assignment_group;
inc.assignment_group.setDisplayValue('Telecomm Support');


inc.assigned_to = 'Brian
Wannemacher';
inc.short_description =
current.short_description;
inc.description = "Incident duplicated from " + current.number + " for Telecomm
use.\n\n" +current.description;
inc.comments = "Incident duplicated from " + current.number + "
for Telecomm use.";inc.category = "hardware";
inc.subcate
gory =
"Purchase"
;
inc.impact
=
current.imp
act;
inc.urgenc
y =
current.urg
ency;
inc.insert();


//Copy any attachments from the incident record to the request record
//Packages.com.glide.ui.SysAttachment.copy("incident", current.sys_id, "incident", inc.sys_id);


//update existing Incident record
```

```
current.work_notes = "This incident has been duplicated to " + inc.number + " for Telcom
purposes.";current.update();


//provide onscreen feedback and set URLs
gs.addInfoMessage("Incident " + inc.number + " duplicated from " +
current.number);action.setRedirectURL(inc);
action.setReturnURL(current);
```

CHAPTER 8

Configuration Items

Flash CI Information:

Related Links

img-8.1

Script:

```
function onChange(control, oldValue, newValue,
isLoading, isTemplate) {if (isLoading || newValue === ") {
return;
}
var ci = g_form.getDisplayBox('cmdb_ci').value;
if (ci == 'Desktop Computer' || ci == 'Laptop Computer') {
g_form.showFieldMsg('cmdb_ci', 'PLEASE READ THE INFORMATION BELOW', 'warning',
true);
}

}
```

Create Child Incident:

Name | name	CreateChildIncident		Application | sys_scope	Global
Table | table	Incident [incident]		Active | active	✓
UI Type | ui_type	Desktop | 0		Inherited | applies_extended	☐
Type | type	onLoad | onLoad		Global | global	✓
			Isolate script | isolate_script	☐
Description | description	This script is used to create a child incident through ui action present on "Child Incidents" related list.			
Messages | messages				

Img-8.2

Script:

```
function onLoad() {
NOW._createChildIncident
= function(srcSysId){ var ga
= new
GlideAjax('IncidentUtils2');
ga.addParam('sysparm_name',
'getIncidentQueryParams');
ga.addParam('sysparm_src_sysid', srcSysId);
ga.addParam('sysparm_ui_action',
"create_child_incident");
ga.setWantSessionMessages(true);
ga.getXMLAnswer(function(queryParam){
i
f

(
q
```

u

e

r

y

P

a

r

a

m

)

{

v

a

r

c

k

;

if (typeof g_ck !=

'undefined' && g_ck !=

"")ck = g_ck;

var gotoUrl = [];
gotoUrl.push('sr

cSysID=' +

srcSysId);
gotoUrl.push('ne

wSysID=$sys_id'

);

```javascript
gotoUrl.push('sysparm_returne
d_action=$action');if (ck)
gotoUrl.push('sysparm_ck=' + ck);


gotoUrl = 'CopyIncidentRelatedLists.do?' + gotoUrl.join('&');


var form =
cel('form',
document.body);
hide(form);
form.me
thod =
"POST";
form.act
ion =
"inciden
t.do";if
(ck)
_addParam(form, 'sysparm_ck', g_ck);
_addParam(form, 'sys_id', '-1');
_addParam(form, 'sysparm_query', queryParam);
_addParam(form,
'sysparm_goto_url',
gotoUrl);form.submit();
}else{
g_form.addErrorMessage("Failed to create child incident");
}
});
};
function
_addParam(form,
```

name, val) {var inp

= cel('textarea',

form); inp.name =

name;

inp.value = val;

}

}

Note:

Create a Child Incident Script Include.

Img-8.3

Script:

```
var IncidentUtils2 = Class.create();

IncidentUtils2.prototype =

    Object.extendsObject(IncidentUtils2SNC, {initialize:

    function(request, responseXML, gc) {

        IncidentUtils2SNC.prototype.initialize.call(this, request, responseXML, gc);

    },


    /***************Custom changes***************/

    type: 'IncidentUtils2'

});
```

CHAPTER 9

CLIENT SCRIPTS:

Client Script means scripts (java script) which runs on clientside or on client browser.

Client Scripts come in four basic types: onLoad , onChange ,onSubmit , and onCellEdit . Each type runs under different conditions, and often has a different use than the others.

Show Replacement Popup:

Name | name	Show replacement popup
Table | table	Incident [incident]
UI Type | ui_type	Desktop | 0
Type | type	onLoad | onLoad

Application | sys_scope	Globa
Active | active	☑
Inherited | applies_extended	☐
Global | global	☑
Isolate script | isolate_script	☑

Description \| description

Messages \| messages

img-9.1

```
function onLoad() {

    var code = g_form.getValue('close_code');
    var ritm =
g_form.getValue('u_requested_item').toString(
) || "";var state =
parseInt(g_form.getValue('state'));

if (code == "Submit replacement request" && ritm == "" && state >= 6)
g_form.getReference('cmdb_ci', createPopup);
function createPopup(ci) {
var caller =
g_form.getValue('caller_id').to
String(),incident =
g_form.getUniqueValue();
var ga = new
GlideAjax('clientTableScrip
```

52

```
ts');

ga.addParam('sysparm_na

me', 'findRecord');

ga.addParam('sysparm_ta

ble', 'sc_req_item');


ga.addParam('sysparm_query',

'variables.fb493150dbb45c1034477a131f961980!=NULL^variables.fb493150dbb45c1

034477a131f96198 0=' + ci.serial_number.toString() + '^stateNOT IN3,4,7');

ga.getXMLAnswer(checkOpenReplacements);

function

checkOpenReplacement

s(answer) {if(answer ===

null) {

if(ci.sys_class_name == 'cmdb_ci_computer' || ci.name == 'Laptop computer' ||
ci.name == 'DesktopComputer') {

createDialog

Window(

'ComputerRe

placementRe

quest','Create

Request',

{ 'sysid': incident, 'caller': caller, 'model': ci.model_id, 'serial':
ci.serial_number, 'tag': ci.asset_tag,'assetname': ci.name }

);

}

el

se

{

cr

ea
```

```
te
Di
al
og
W
in
do
w(
'EquipmentRe
placementReq
uest','Create
Request',
{ 'sysid': incident, 'caller': caller }
);
}
} else
var ritm =
JSON.parse(answer);
createDialogWindow(
'ComputerReplacementReque
stAlreadyExists','Request
Already Exists',
{ 'sysid': ritm.sys_id, 'number': ritm.number }
);
}
}
}
}


function createDialogWindow(ui_page,
title, preferences) {var gdw = new
```

```
GlideDialogWindow(ui_page);

gdw.setTitle(title);

for(var p in

preferences)

gdw.setPreference

(p,

preferences[p]);

gdw.setSize(500,

200);

gdw.render();

}
```

Modify Work Notes Label:

Name | name	Modify Work notes Label
Table | table	Task [task]
UI Type | ui_type	All | 10
Type | type	onLoad | onLoad

Application | sys_scope	Global
Active | active	☑
Inherited | applies_extended	☑
Global | global	☐
View | view	workspace
Isolate script | isolate_script	☑

Description \| description

Messages \| messages   {0} (Private)

Script \| script

```
1   function onLoad() {
2       var translatedMsg;
3       if (typeof GwtMessage !== "undefined") /* For the desktop UI */
4           translatedMsg = new GwtMessage().getMessage('{0} (Private)', g_form.getLabelOf('work_notes'));
5       else /* For agent workspace, service portal, angular mobile app */
6           translatedMsg = getMessage('{0} (Private)', g_form.getLabelOf('work_notes'));
7
8       /* Do interpolation. For service portal and angular mobile app only. */
9       if (translatedMsg.withValues)
10          translatedMsg = translatedMsg.withValues([g_form.getLabelOf('work_notes')]);
11
12      g_form.setLabelOf('work_notes', translatedMsg);
13  }
```

Img-9.2

Script:

```
if (typeof GwtMessage !== "undefined") /* For the desktop UI */

translatedMsg = new GwtMessage().getMessage('{0} (Private)',

g_form.getLabelOf('work_notes'));else /* For agent workspace, service portal,

angular mobile app */

translatedMsg = getMessage('{0} (Private)', g_form.getLabelOf('work_notes'));


/* Do interpolation. For service portal and angular

mobile app only. */if (translatedMsg.withValues)

translatedMsg = translatedMsg.withValues([g_form.getLabelOf('work_notes')]);


g_form.setLabelOf('work_notes', translatedMsg);
}
```

Set Review Trigger Fields:

Img-9.3

```
function onChange(control, oldValue, newValue,

    isLoading, isTemplate) {if (isLoading || newValue

  === '') {

      return;

  }

  if (newValue == 'true') {

    g_form.setValue('u_review_triggered_by',

    g_user.userID);


    var today_date = new Date();

    var today_date_str = formatDate(today_date,

    g_user_date_time_format);var strtDate =

    today_date_str;

g_form.setValue('u_review_trigger_time', strtDate);

  } else {
```

```
    g_form.clearValue('u_review_triggered_by');

g_form.clearValue('u_review_trigger_time');

    }

}
```

(BP) Hide Choice – Closed:

Img-9.4

Script:

// Hide "Closed" Incident state and State from

everyone but adminfunction onLoad() {

var isAdmin =

g_user.hasRole('ad

min');var state =

g_form.getValue('s

tate');

if (!isAdmin

&& (state !=

7)){

g_form.remov

eOption('state'

, '7');

```
}
}
```

(BP) Hide Attachment Link when Closed:

img-9.5

```
function onLoad() {
    if (g_form.getValue('incident_state') == '7' || g_form.getValue('state') == '7')
        g_form.disableAttachments();
}
```

Warranty expiration alert:

Img-9.6

```
function onChange(control, oldValue, newValue,

isLoading, isTemplate) {if (isLoading || newValue ===

'') {

return;

}

g_form.clearMessages();


var ci = new

GlideRecord('cm

db_ci');

ci.get(newValue)

;


if(ci.sys_class_name == 'u_cmdb_ci_dr_panel' || ci.sys_class_name ==

'cmdb_ci_computer') {var d = new Date();

var exp = ci.warranty_expiration;


if(exp.length > 0) {
```

```javascript
var
year =
d.getFu
llYear()
; var
month
=
d.getM
onth();
var day
=
d.getD
ate();
var
warr_year =
exp.slice(0,
4); var
warr_month
= exp.slice(5,
7);var
warr_day =
exp.slice(8,
10);

if(warr_year < year) {
g_form.addErrorMessage(ci.name + " is out of warranty (expired " + exp + ")");
}
else if(warr_year == year) {


if(warr_month < month) {
g_form.addErrorMessage(ci.name + " is out of warranty (expired " + exp + ")");
```

```
}
else
if(warr_mo
nth ==
month) {
if(warr_day
< day)
g_form.addErrorMessage(ci.name + " is out of warranty
(expired " + exp + ")");else
g_form.addInfoMessage(ci.name + ' warranty expiration: ' + exp);
}
else
g_form.addInfoMessage(ci.name + ' warranty expiration: ' + exp);
}
else
g_form.addInfoMessage(ci.name + ' warranty expiration: ' + exp);
}
else
g_form.addInfoMessage(ci.name + " is missing warranty information.");
}
}
```

(BP) Close Mandatory on Close or Resolve:

Name | name	(BP) Close Mandatory on Close or Resolve
Table | table	Incident (incident)
UI Type | ui_type	All | 10
Type | type	onSubmit | onSubmit

Application | sys_scope	Global
Active | active	☑
Inherited | applies_extended	☐
Global | global	☑
Isolate script | isolate_script	☐

Description | description

Messages | messages

Script | script

```
1   function onSubmit() {
2       var action = g_form.getActionName();
3       if (action != 'close_incident' && action != 'resolve_incident')
4           return;
5
6       // Close notes and Close code must be on the form
7       if (!g_form.hasField('close_notes') || !g_form.hasField('close_code'))
8           return;
9
10      var state = '6';
11      if (action == 'close_incident')
12          state = '7';
13
14      g_form.setValue('incident_state', state);
```

img-9.7

```
function onSubmit() {

  var action = g_form.getActionName();

  if (action != 'close_incident' && action

    != 'resolve_incident')return;


  // Close notes and Close code must be on the form

  if (!g_form.hasField('close_notes') ||

    !g_form.hasField('close_code'))return;


  var state = '6';

  if (action

    ==

    'close_i

    ncident

    ')state

    = '7';
```

```
g_form.setValue('incident_st
ate', state);
g_form.setValue('state',
state);
g_form.setDisplay('close_no
tes', true);
g_form.setMandatory('close
_notes', true);




g_form.setDisplay('close_cod
e', true);
g_form.setMandatory('close
_code', true);
if (g_form.getValue('close_notes') == '' ||
    g_form.getValue('close_code') == '')return false;
}
```

(BP) Hide Close Notes and Code:

Name	name	(BP) Hide Close Notes and Code	Application	sys_scope	Global
Table	table	Incident [incident]	Active	active	☑
UI Type	ui_type	All	10	Inherited	applies_extended	☐
Type	type	onLoad	onLoad	Global	global	☑

Isolate script | isolate_script ☐

Description | description

Messages | messages

Script | script

```
1   function onLoad() {
2       var hide = true;
3       if (g_form.hasField('incident_state')) {
4           var incident_state = g_form.getValue('incident_state');
5           if (incident_state == '6' || incident_state == '7')
6               hide = false;
7       }
8       if (g_form.hasField('state')) {
9           var state = g_form.getValue('state');
10          if (state == '6' || state == '7')
11              hide = false;
12      }
13      if (hide) {
```

img-9.8

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```
{

var hide = true;
if (g_form.hasField('incident_state')) {
  var incident_state =
  g_form.getValue('incident_state');if
  (incident_state == '6' ||
  incident_state == '7')
    hide = false;
}
if (g_form.hasField('state')) {
  var state = g_form.getValue('state');

  if (state
    == '6'
    || state
```

```
        == '7')

        hide =

        false;

    }

    if (hide) {

        g_form.setDisplay('close

        _notes',false);

        g_form.setDisplay('close

        _code',false);

    } else {

        g_form.setDisplay('clos

        e_notes',true);

        g_form.setMandatory('

        close_notes',true);

        g_form.setDisplay('clos

        e_code',true);

        g_form.setMandatory(

        'close_code',true);

    }

}
```

Transfer Popup:

Name | name	Transfer Popup		Application | sys_scope	Global
Table | table	Incident [incident]		Active | active	☑
UI Type | ui_type	All | 10		Inherited | applies_extended	☐
Type | type	onChange | onChange		Global | global	☑
Field name | field	cmdb_ci			
			Isolate script | isolate_script	☑
Description | description				
Messages | messages				

Script | script

```
1  function onChange(control, oldValue, newValue, isLoading, isTemplate) {
2      if (isLoading || newValue === '') {
3          return;
4      }
5      if(newValue == '014907851b859010ca6877b51a4bcb95') {
6          var gdw = new GlideDialogWindow('Transfer Popup');
7          gdw.setTitle('Transfer');
8          gdw.setSize(360,226);
9          gdw.removeCloseDecoration();
10         gdw.render();
11     }
12  }
```

Img-9.9

```
function onChange(control, oldValue, newValue,
isLoading, isTemplate) {if (isLoading || newValue ===
'') {


}
if(newValue ==
'014907851b859010ca6877b51a4bcb9
5') {var gdw = new
GlideDialogWindow('Transfer Popup');
gdw.setTitle('Transfer');
gdw.setSize(36
0,226);
gdw.removeClo
seDecoration();
gdw.render();
}
}
```

Modify Comments Label:

Img-9.10

```javascript
function onLoad() {

if

(!g_us

er.has

Role("

itil"))

retur

n;


if (!g_form.hasField('comments'))

var labelText =

g_form.getLabelOf('comme

nts');if

(labelText.substring(labelTe

xt.length-1) == ':')
```

```
labelText = labelText.substring(0, labelText.length -1);


labelText += new GwtMessage().getMessage(' (Customer visible)');

g_form.setLabelOf('comments', labelText);

}
```

Highlight VIP Caller:

img-9.11

```
function onChange(control, oldValue,

newValue, isLoading) {var callerLabel =

$('label.incident.caller_id');

var callerField =

$('sys_display.incident.caller_i

d');if (!callerLabel ||

!callerField)

return;
```

```javascript
if (!newValue) {

callerLabel.setStyle({bac

kgroundImage: ""});


callerField.

setStyle({c

olor: ""});

return;

}

g_form.getReference('caller_id', vipCallerCallback);

}


function vipCallerCallback(caller) {

var callerLabel =

$('label.incident.caller_id').down('label'

);var callerField =

$('sys_display.incident.caller_id');

if

(!callerLa

bel ||

!callerFiel

d)return;


{

var bgPosition = "95% 55%";

if (document.documentElement.getAttribute('data-

doctype') == 'true')bgPosition = "5% 45%";

callerLabel.setStyle({backgroundImage: "url(images/icons/vip.gif)",
backgroundRepeat: "no-repeat",backgroundPosition: bgPosition, paddingLeft:
'30px' });

callerField.setStyle({color: "red"});
```

} else {

callerLabel.setStyle({bac

kgroundImage: ""});

callerField.setStyle({colo

r: ""});

}

}

Highlight VIP Caller (Smartphone):

Img-9.12

function onChange(control, oldValue, newValue, isLoading) {

// if the caller_id field is not present, then we can't add

an icon anywhereif (!g_form.hasField('caller_id'))

return;

i

f

```
(!newValue)

return;

g_form.getReference('caller_id', function(ref) {

g_form.removeDecoration('caller_id', 'icon-star', 'VIP');


if (ref.getValue('vip') == 'true')

g_form.addDecoration('caller_id', 'icon-

star', 'VIP');

});

}
```

Image Routing Popup:

Name | name	Image Routing Popup	Application | sys_scope	Global
Table | table	Incident [incident]	Active | active	☑
UI Type | ui_type	All | 10	Inherited | applies_extended	☐
Type | type	onChange | onChange	Global | global	☑
Field name | field	cmdb_ci		
		Isolate script | isolate_script	☑

Description | description

Messages | messages

Script | script

```
1   function onChange(control, oldValue, newValue, isLoading, isTemplate) {
2       if (isLoading || newValue === '') {
3           return;
4       }
5       if(newValue == 'e64f4ec9db1a00d08742f57e0f9619d7') {
6           var gdw = new GlideDialogWindow('Image Routing Popup');
7           gdw.setTitle('Image Routing');
8           gdw.setSize(360,226);
9           gdw.removeCloseDecoration();
10          gdw.render();
11      }
12  }
```

img-9.13

```
function onChange(control, oldValue, newValue,
isLoading, isTemplate) {if (isLoading || newValue ===
'') {
return;
}
if(newValue ==
'e64f4ec9db1a00d08742f57e0f9619d7')
{ var gdw = new
GlideDialogWindow('Image Routing
Popup');gdw.setTitle('Image Routing');
gdw.setSize(36
0,226);
gdw.removeClo
seDecoration();
gdw.render();
}
}
```

CHAPTER 10

Business Rules

Business rule

Business rules is the server side script which means that it will execute on server or database. Business rule runs fasterthan other script in ServiceNow. The script or code written in business rule area will get executed when record is inserted, displayed, updated, deleted or when table is queried.

The four types of business rule in ServiceNow are:

- Display Business Rule

- Before Business Rule
- After Business Rule
- Async Business Rule

10.1 Display Business Rule in ServiceNow:

Code written in display business rule get executed beforethe form is presented to the user and just after the data is read from the database.

For e.g. you have written the code that when xyz user click on information box then only data related to that user specific country will get displayed to user. It means that user from US can see US specific data and user fromIndia can see India specific data.

10.2 Before Business Rule in ServiceNow:

Code written in before business rule get executed when user submits the form and data is not saved in database.Let's say User click on submit button --> Before business rule code executes --> information will save in database.

For e.g. Let's say you have written the code that when user click on submit button then some extra informationwhich in not filled by user such as user current location, user manager name and user past activities will get save when user click on submit button.

10.3 After Business Rule in ServiceNow:

Code written in after business rule get executed whenuser submits the form and data saved in database.

Let's say User click on submit button --> data savedin database --> Now after business rule code get executed.

For e.g. there is parent incident and child incident andyou want that related child incident will get closed automatically after the parent incident get closed by user.

10.4Async Business Rule in ServiceNow:

Async business rules are like after business rule but it runs in the background simultaneously with other processes. Means async business rule run after the datais saved into the database.
Running on background means that use can proceed withother functionality and code will run on the background which will not impact the user while doing other transitions.

For e.g. Incident ticket is in pending customer action status and will be auto closed after 5 days if user did notprovide any update on incident ticket.

10.5Abort Assignment if CI is Empty:

A business rule is a server-side script that runs when a record is displayed, inserted, deleted, or when a table is queried. Use business rules to automatically change values in form fields when the specified conditions are met. More Info

Name	name	Abort Status Change if no CI
Description	description	
Table	collection	Incident [incident]

Application	sys_scope	Global
Active	active	✓
Advanced	advanced	✓

When to run | Actions | Advanced

Specify whether the business rule should run on **Insert** or **Update**. Use **Filter Conditions** to specify under which conditions the business rule should run.

When	when	before	before
Order	order	55

Insert	action_insert	✓
Update	action_update	✓
Delete	action_delete	☐
Query	action_query	☐

Filter Conditions | filter_condition   stateCHANGESTO6^ORstateCHANGESTO7^cmdb_ciISEMPTY^EQ

Role conditions | role_conditions

When to run | **Actions** | Advanced

Specify field values using the **Set field values** choice lists:
- **To:** a value determined by the options available for that field.
- **Same as:** a value taken from another field.
- **To (dynamic):** A value relative to the user configuring the business rule, or a user with a specific role.

Set field values	template </>	
Add message	add_message	✓
Message	▶ message </>	Configuration item cannot be blank!
Abort action	abort_action	✓

img-10.1

Add manager to watchlist:

Name | name	Add manager to watchlist		Application | sys_scope	Global
Description | description			Active | active	✓
			Advanced | advanced	✓
Table | collection	Incident [incident]			

When to run | Actions | Advanced

Specify whether the business rule should run on **Insert** or **Update**. Use **Filter Conditions** to specify under which conditions the business rule should run.

When | when	before | before	Insert | action_insert	✓
Order | order	100	Update | action_update	✓
		Delete | action_delete	☐
		Query | action_query	☐
Filter Conditions | filter_condition	caller_idVALCHANGES^EQ		
Role conditions | role_conditions			

Img-10.2

Script:

```
(function executeRule(current, previous /*null when async*/) {

var wla = current.watch_list.toString().split(","); //array containing

watch_list membersvar mgr = current.caller_id.manager;

var caller =

current.caller_

id.title;var i;

var chk = 0; //0= false, 1= true


//Loop through the watchlist to see if the user's manager is already a member


for (i = 0; i < wla.length; i++) {
```

```
if (wla[i] == mgr) { chk = 1;
```

```
        break;

    }

}


//If the watchlist is empty, add the manager.

//If the watchlist is not empty, and does contain the manager as a member, add the manager.

//Display a message indicating who was added to the watchlist


if (caller.indexOf('Ultrasound Specialist') > -1 ||
caller.indexOf('Ultrasound Tech') > -1 ||caller.indexOf('Radiologic
Technologist') > -1) {

    if

        (curren

        t.watch

        _list ==

        "") {

        current

        .watch

        _list+=

        mgr;

        gs.addInfoMessage(mgr.getDisplayValue() + " has been added to the watchlist");
```

A business rule is a server-side script that runs when a record is displayed, inserted, deleted, or when a table is queried. Use business rules to automatically change values in form fields when the specified co

Name | name	Abort Assignment if CI is Empty
Description | description	
Table | collection	Incident [incident]

Application \| sys_scope — Global

Active \| active ✓
Advanced \| advanced ✓

When to run | Actions | Advanced

Specify whether the business rule should run on **Insert** or **Update**. Use **Filter Conditions** to specify under which conditions the business rule should run.

When | when	before | before
Order | order	100

Insert \| action_insert ✓
Update \| action_update ✓
Delete \| action_delete ☐
Query \| action_query ☐

Filter Conditions \| filter_condition — assignment_groupCHANGESFROM7c1b1430db0f6200bfd5fb37bf961938^cmdb_ciISEMPTY^EQ

Role conditions \| role_conditions

When to run | **Actions** | Advanced

Specify field values using the **Set field values** choice lists:
- **To:** a value determined by the options available for that field.
- **Same as:** a value taken from another field.
- **To (dynamic):** A value relative to the user configuring the business rule, or a user with a specific role.

Set field values \| template 🔲</>

Add message \| add_message ✓

Message \| 🏳 message 🔲</> — Configuration item cannot be blank!

Abort action \| abort_action ✓

img-10.3

Multiple tickets notification:

img-10.4 notification when to run

Script:

```
(function executeRule(current, previous /*null when async*/) {


var inc = new GlideRecord('incident');

inc.addEncodedQuery('opened_atONToday@javascript:gs.beginningOfToday()@javascript:gs.
endOfTod
ay()^caller_idLIKE'+current.caller_id.name+'^assignment_group=7c1b1430db0f6200bfd5fb37b
f961938')
;

inc.query();

var incidents =

inc.getRowCou

nt();

if(inc.getRowC

ount() > 1) {

gs.eventQueue('incident.second.today', current, String(incidents), gs.getUserName());
```

}

})(current, previous);

Prevent close from list view:

Name | name   Prevent close from list view   Application | sys_scope

Description | description

Active | active

Advanced | advanced

Table | collection   Incident [incident]

When to run   Actions   Advanced

Specify whether the business rule should run on **Insert** or **Update**. Use **Filter Conditions** to specify under which conditions the business rule should run.

When | when   before | before   Insert | action_insert

Order | order   50   Update | action_update

Delete | action_delete

Query | action_query

Filter Conditions | filter_condition   assignment_group!=90b970f5dbad62004991d1fcbf961906^EQ

Role conditions | role_conditions

When to run   Actions   Advanced

Condition | condition   !(gs.hasRole('admin')) && curre

img-10.5 notification advance

Response from User:

State is resolved /comments/close_notes:

Name | name	State is resolved /comments/close_notes	Application | sys_sc
Description | description		Active | act:
		Advanced | advan
Table | collection	Incident [incident]	

When to run   Actions   Advanced

Specify whether the business rule should run on **Insert** or **Update**. Use **Filter Conditions** to specify under which conditions the business rule should run.

When | when	before | before	Insert | action_inse
Order | order	100	Update | action_upda
		Delete | action_dele
		Query | action_que

Filter Conditions | filter_condition	stateCHANGESTO6^EQ
Role conditions | role_conditions	

Img-10.6

Prevent close from list view:

Name | name	Prevent close from list view	Application | sys_scope
Description | description		Active | active
		Advanced | advanced
Table | collection	Incident [incident]	

When to run   Actions   Advanced

Specify whether the business rule should run on **Insert** or **Update**. Use **Filter Conditions** to specify under which conditions the business rule should run.

When | when	before | before	Insert | action_insert
Order | order	50	Update | action_update
		Delete | action_delete
		Query | action_query

Filter Conditions | filter_condition	assignment_group!=90b970f5dbad62004991d1fcbf961906^EQ
Role conditions | role_conditions	

When to run   Actions   Advanced

Condition | condition	!(gs.hasRole('admin')) && curre

Img-10.7

Response from User:

State is resolved /comments/close_notes:

Name | name	State is resolved /comments/close_notes	Application | sys_sc
Description | description		Active | act
		Advanced | advan
Table | collection	Incident [incident]	

When to run	Actions	Advanced

Specify whether the business rule should run on **Insert** or **Update**. Use **Filter Conditions** to specify under which conditions the business rule should run.

When | when	before | before	Insert | action_inse
Order | order	100	Update | action_upda
		Delete | action_dele
		Query | action_que
Filter Conditions | filter_condition	stateCHANGESTO6^EQ	
Role conditions | role_conditions		

script:

```
(function executeRule(current, previous /*null when async*/) {


if(current.close_notes.length == 0) {

var text =

current.getValue('u_co

mments');

current.setValue('close

_notes', text);

}


current.work_notes = 'Close notes: \n' + current.getValue('close_notes');


})(current, previous);
```

Change state on closed Insert:

When to run   Actions

Specify whether the business rule should run on **Insert** or **Update**. Use **Filter Conditions** to specify under which conditions the business rule should run.

Insert | action_insert

Update | action_update

Filter Conditions | incident_state=7^EQ
filter_condition

Role conditions | role_conditions

When to run   Actions

Specify field values using the **Set field values** choice lists:
- **To:** a value determined by the options available for that field.
- **Same as:** a value taken from another field.
- **To (dynamic):** A value relative to the user configuring the business rule

Set field values | template 🖫 </>   state=7^EQ

Add message | add_message

Abort action | abort_action

10.7 notification actions

Notifications:

Template: *Please use this type of template in every notification.

<p></p>

<table style="height: 361px; border-color: #bcd9f0; width: 100%;" border="1">

<tbody>

<tr style="height: 100px;">

<td style="text-align: center; background-color: #bcd9f0; width: 97.5177%; height: 100px;" colspan="2"> </td>

```
</tr>

<tr style="height: 27px;">

<td style="text-align: left; width: 97.5177%; height: 27px;"
colspan="2"><span style="font-size:10pt;">${parent.number} is approved
and enterprise ID created, set up billing configuration.
${parent.client_name.name}(${parent.client_name.corporate_code})<br /><br
/></span></td>

</tr>

<tr style="height: 27px;">

<td style="width: 33.2151%; height:
27px;"><span style="font-size:
13.3333px;"><strong>Number</strong></span
></td>

<td style="width: 64.3026%; height: 27px;"><span style="font-size: 10pt;">${number}<br
/></span></td>

</tr>

<tr style="height: 27px;">

<td style="width: 33.2151%; height: 44px;"><span style="font-size:
10pt;"><strong>ClientName</strong></span></td>

<td style="width: 64.3026%; height:
44px;"><span style="font-size:
10pt;">${parent.client_name.name}</span></t
d>

</tr>

<tr style="height: 16px;">

<td style="width: 33.2151%; height: 16px;"><span style="font-size:
10pt;"><strong>PACCRecord</strong></span></td>


<td style="width: 64.3026%; height: 16px;"><span style="font-size: 10pt;"><a
title="${pacc_number.number}"
href="/x_tusah_contract_m_client_demographic.do?sys_id=${parent}">${parent}</
a><br
/></span></td>

</tr>

<tr style="height: 27px;">

<td style="width: 33.2151%; height: 27px;"><strong><span style="font-size:
10pt;">Client BillingType</span></strong></td>
```

```
<td style="width: 64.3026%; height:
27px;"><span style="font-size:
10pt;">${parent.client_name.client_billing_cod
e}</span></td>

</tr>

<tr style="height: 16px;">

<td style="width: 33.2151%; height: 16px;"><strong><span
style="font-size: 10pt;">CORPCODE</span></strong></td>

<td style="width: 64.3026%; height: 16px;"><span style="font-size: 10pt;">
${parent.client_name.corporate_code}<br /></span></td>

</tr>

<tr style="height: 27px;">

<td style="width: 33.2151%; height: 27px;"><strong><span
style="font-size: 10pt;">POSCode</span></strong></td>

<td style="width: 64.3026%; height:
27px;"><span style="font-size:
10pt;">${parent.client_name.pos_code}</span
></td>

</tr>

<tr style="height: 27px;">

<td style="width: 33.2151%; height:
27px;"><strong><span style="font-size:
10pt;">Region</span></strong></td>

<td style="width: 64.3026%; height:
27px;"><span style="font-size:
10pt;">${parent.client_name.region}</span></
td>

</tr>

<tr style="height: 27px;">

<td style="text-align: left; width: 97.5177%; height: 27px;"
colspan="2"><span style="font-size:10pt;">Click here to view the <a
title="Contract Task"
href="/incident.do?sys_id=${sys_id}"><strong>INCIDENT</strong></a></sp
an></td>


</tr>

<tr style="height: 23px;">
```

<td style="background-color: #bcd9f0; width: 97.5177%; height: 23px;" colspan="2"> </td>

</tr>

</tbody>

</table>

Incident commented:

10.8

Reset Password:

1

When to send	Who will receive	What it will contain

If using an **Email Template** then **Subject** and **Message** will be used from the template unless overridden with a **Subject** and **Message** on this form.

Content type	HTML and plain text | multipart/mixed	Importance -- None -- |
Include attachments	☐	From
Omit watermark	☐	Reply to
Push Message Only	☐	Push Messages Reset Password
Email template🖥️</>		
Subject	Your password has been reset per your request	
Message HTML🖥️</>	`<div>Your new password is ${event.parm2}</div>`	

10.9 creating notification for password reset

Incident Closed:

Name | name	Incident Closed	Application | sys_scope Global
Table | collection	Incident [incident]	Active | active ✓
Category | category	Incident ⓘ	Allow Digest | digestable ☐

When to send	Who will receive	What it will contain

Notifications can be sent (if the specified **Conditions** are met) under one of the following circumstances:

- A record is **Inserted** or **Updated** into the **Table** specified above
- The specified event is fired
- Via a Flow Action

Send when | generation_type	Record inserted or updated | engine	Updated | action_update ✓
Inserted | action_insert	☐	
Conditions | condition	incident_stateCHANGESTO7^caller_id.email!=haservices@service-now.com^EQ	

When to send	Who will receive	What it will contain

Notifications can be sent to specific **Users** and **Groups** or to **User/Groups in fields** on the record that generated this notification.

Users | recipient_users		Groups | recipient_groups
Users/Groups in fields | recipient_fields	caller_id,watch_list	Subscribable | subscribable ☐

Img-10.10 notification when Incident closed

Incident Survey:

When to send | Who will receive | What it will contain

Send when specifies what must occur to send this email notification.

When there are multiple notifications in the Outbox that are from the same notification **Table** and addressed to the same recipients, notifications with the *highest* **Weight** are sent - the default value 0 causes ServiceNow to always **Conditions** are met)

Use an **Advanced condition** to send a notification based on the current email record, changing field values, or system properties. To send the notification, your advanced condition script must set a global answer variable to true.

The **Advanced condition** script has access to the following global variables
- **current** - contains the current record from the table to which the notification is linked
- **event** - contains the event that triggered the notification

Send when | generation_type	Event is fired | event
Event name | event_name	task.send_survey
Conditions | condition	sys_class_name=incident^EQ

Weight | weight	0

When to send | Who will receive | What it will contain

Notifications can be sent to specific **Users** and **Groups** or to **Users/Groups in fields** on the record that generated this notification.

The Notification will not be sent to the User who caused the Notification to be triggered unless **Send to event creator** is checked.

The Notification will also be sent to Delegates of users unless **Exclude Delegates** is checked.

Users | recipient_users		Groups | recipient_groups	
Users/Groups in fields | recipient_fields		Exclude delegates | exclude_delegates	☐
Event parm 1 contains recipient | event_parm_1	☑	Send to event creator | send_self	☑
Subscribable | subscribable	☐	Event parm 2 contains recipient | event_parm_2	☐

Img-10.11 notification for Incident survey

Service Level Agreement:(SLA)

Configure a Service Level Agreement (SLA) to define a set amount of time for a task to reach a certain condition. This ensures that incidents are closed or resolved according to the expectations set for customers.

An SLA definition record defines the timings, conditions, workflows, and other information required to createtask SLAs. This will enable you to use an SLA system for your group's tasks.

This feature is available to those with the dept_admin role only.

CHAPTER 11

ADVANTAGE

➢ **It saves more time:**

It saves time by ordering the bundle of items. It avoid for ordering the same bundle again and again and order the items in simple three click.

➢ **Increase Production**

The primary benefit of automated workflow is that it saves time. The term automation itself refers to mechanization and computerization, which in turn is the process related to saving time to complete a job with accuracy by improving the speed. Saving time for completing a job is directly related to saving the employee time so that she can get involved in other productive tasks rather than doing a job with mechanical repetition of steps.

➢ **Save costs**.

When an employee gets involved in more tasks that generate the most revenue for your business in the same working hours, it leads to more productivity. More productivity means saving more money for the organization as time and money are always interrelated.

➢ User can trace their items:

User can trace their items and it's state. How many items has been ordered and how many time will take to reached item etc.

➢ Process automate:

All Process will be automated by work flow . Here after generating Request item task will be auto generate and notification will be auto fire

CONCLUSION

Deliver a better experience with intuitive omni-channel self-service and two-way communication.

Bring together the right agents to manage work and collaborate using one platform for IT processes.

Reduce call volumes and deflect tickets using the self-service portal and ServiceNow® chatbots.

Assign incidents to the right groups for faster resolution with the help of machine learning.

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