

## Lecture 16- ServiceNow (SNOW) Ticketing Tool

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### Introduction to ServiceNow (SNOW)

**ServiceNow (SNOW)** is an IT Service Management (ITSM) tool used by companies to:

-  Create tickets
-  Track issues
-  Assign work to teams
-  Monitor SLA
-  Manage IT operations

It works like a **digital complaint system** for IT problems.

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### Real-Life Example

Imagine a hospital  :

- Patient = User
- Problem = IT Issue
- Reception = Ticket Creation
- Doctor = IT Engineer
- Treatment = Troubleshooting
- Discharge = Ticket Closure

ServiceNow manages this entire process professionally.

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## L1 Level Process Change

Earlier:

- IT Support team created and assigned tickets.

Now:

- IT Coordinator creates the ticket.
- IT Coordinator assigns the ticket to the correct team.

This improves:

- Proper categorization
- Better tracking
- Accountability

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## 💡 How to Create a Ticket in ServiceNow (Step-by-Step)

Go to:

New → Incident

Now fill the following fields carefully

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### 1 Company

Which company does the user belong to?

Used for:

- Identifying client
  - Applying correct SLA
  - Reporting & billing
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 **2 Caller**

Person who raised the ticket.

Why important?

- For communication
  - For accountability
  - For updates
- 

 **3 Email ID**

User's official email.

Used for:

- Ticket updates
  - Notifications
  - Closure confirmation
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 **4 Phone Number**

For urgent issues or quick clarification.

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 **5 Location**

User's physical or office location.

Why?

- Field engineer dispatch
  - Time zone management
  - Network site identification
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## 6 Category (Very Important !)

This defines issue type.

Common Categories:

-  Database
-  Hardware
-  Network
-  Security
-  Software
-  Storage
-  Inquiry
-  Request

Category helps in:

- Assigning correct team
- Reporting analytics
- SLA calculation



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## 7 Subcategory

More specific classification.

Example:

Category: Hardware

Subcategory: Laptop / Mouse / Printer

This increases accuracy.

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## 8 Configuration Item (CI) – Very Important 🔥

CI means:

Which device/server/router has issue?

Example:

- User Laptop Name
- Router Name
- Firewall ID

This is linked to **CMDB (Configuration Management Database)**.

👉 Helps track:

- Device history
- Past incidents
- Warranty details

## 9 Channel

How user contacted IT:

- 📞 Phone
- 📩 Email
- 🚶 Walk-in
- 💬 Chat
- 🌎 Self-service portal
- 🤖 Virtual Agent
- 🕗 External Event

Used for:

- Reporting
- Performance tracking

## 10 State

Ticket status.

Common States:

-  New
-  Active
-  Awaiting Customer
-  Awaiting Evidence
-  Awaiting Vendor
-  Awaiting Problem
-  Resolved
-  Closed

## 1 1 Assignment Group

Which team should handle it?

Example IT Infra has:

- Cyber Security Team
- Network Team
- IT Support
- DevOps Team

Assignment Group decides:

Where ticket goes.

## 1 2 Assigned To

Specific engineer handling the ticket.



1 3

## Impact, Urgency & Priority (Very Important)

Priority depends on:

Impact + Urgency = Priority

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### Scenario Example

User 1:

Laptop not starting → Work completely stopped.

User 2:

Mouse not working → Work possible via keyboard.



User 1 gets higher priority.

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### Priority Levels

- P1 – Critical
- P2 – High
- P3 – Medium
- P4 – Low



## ⌚ SLA (Service Level Agreement)

Defines resolution time.

General Example:

### Priority SLA

P1      1 Hour

P2      1 Hour

P3      24 Hours

Company-wise standards differ.

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## Cyber Security SLA

In Cyber Security:

- ⚡ MTTR = 5 minutes
  - Must assign quickly
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## MTTR (2 Types)

**1** Minimum Time to Response

Time to acknowledge and assign ticket.

**2** Minimum Time to Resolve

Time to completely fix issue.

Both are critical metrics.

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## Description Field

Detailed explanation of issue.

Should include:

- What happened
- When happened
- Error message
- Steps tried

This helps faster resolution.

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## Work Notes

Used by engineer.

Contains:

- Troubleshooting steps
- Commands used

- Findings
- Root cause

⚠ Work notes are internal.

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### 💬 Additional Comments

Visible to customer.

Used for:

- Updates
- Clarifications
- Closure confirmation

### 📌 After Submission

Once submitted:

- 📜 Ticket number generated
- 📩 Email sent to user
- ⏱️ Updates sent automatically

### 👑 VIP Ticket Rule

If 4 normal tickets + 1 VIP ticket:

👉 Always prioritize VIP ticket.

VIP impact is higher.

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## As Network Engineer – How You Pick Ticket

- 1 Check Assignment Group
  - 2 Open ticket
  - 3 Review Description
  - 4 Check Priority
  - 5 Accept / Assign to yourself
  - 6 Change state to Active
  - 7 Start troubleshooting
- 

## ☒ Router Access Process

⚠ You cannot connect router directly.

Company provides:

- Physical Laptop
- Virtual Machine (VM)
- PuTTY Application



## Steps to Connect Router

- 1 Open VM
  - 2 Open PuTTY
  - 3 Enter Router IP
  - 4 Connect via SSH
- 



## NSD Database

NSD = Network System Database

Contains:

- Router Name
- Public IP

- Device Details
- Site Info

Before connecting:

👉 Get device IP from NSD.

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## How Ticket Appears in List View

After creation, you see:

- 📜 Ticket Number
- 🔥 Priority
- 💬 Assigned To
- 🏢 Company
- 📝 Short Description
- 📁 Configuration Item
- 📅 Updated Date
- 📅 Opened Date
- 📱 Assignment Group
- 🚶 Caller
- 📡 Channel
- 🔄 State
- 🕒 SLA Due
- ⏳ Activity Due
- 📅 Follow-up Date

## Ticket Lifecycle

New → Active → Awaiting → Resolved → Closed

Important:

- Resolved ticket can reopen (within SLA period).
  - Closed ticket cannot reopen.
  - Usually closes after 2–3 days automatically.
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### Why We Don't Close Immediately?

Because:

User may say issue not fixed.

So:

Resolved → Wait → Auto close.

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### How Ticket Assigning Works in Company

Flow:

User → IT Coordinator → Assignment Group → Engineer → Resolution → QA  
→ Closure

This ensures:

- Transparency
  - Documentation
  - SLA compliance
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## Search Bar

You can search:

- Incident number
  - User name
  - CI name
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## Filters

Used to filter:

- My Tickets
  - P1 Tickets
  - Overdue SLA
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## Dashboards

Used by managers to monitor:

- MTTR
  - SLA Breach
  - Team performance
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## CMDB Integration

Each device linked to:

- Owner
  - Location
  - History
  - Change records
-

## Escalation Process

If SLA about to breach:

- Escalate to manager
  - Change priority if needed
  - Notify stakeholders
- 

## Final Summary

ServiceNow is:

-  Ticket Management System
-  SLA Tracking Tool
-  IT Governance Platform
-  Work Documentation System

As Network Engineer you must:

- Understand priority
  - Respect SLA
  - Update work notes properly
  - Communicate clearly
  - Follow ticket lifecycle
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## 1 DETAILED SUMMARY

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### 💡 What is ServiceNow?

**ServiceNow (SNOW)** is an **IT Service Management (ITSM)** tool used to:

- 📈 Create incidents
- 🔧 Track issues
- 💼 Assign tasks
- ⏳ Monitor SLA
- 📊 Measure performance
- 📁 Maintain documentation

It acts as a **digital complaint and workflow system for IT operations**.

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### 📱 L1 Process Change

#### ⌚ Earlier:

IT Support team created & assigned tickets.

#### NEW Now:

- IT Coordinator creates ticket
- IT Coordinator assigns correct team

#### ✓ Benefits:

- Better categorization
- Clear accountability
- Improved SLA tracking
- Better reporting

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### 🎫 Ticket Creation – Important Fields (Very Important for Interview)

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 **1 Company**

Identifies which client/user belongs to which organization.

Used for:

- SLA application
  - Billing
  - Reporting
- 

 **2 Caller**

Person who raised the ticket.

Important for:

- Communication
  - Accountability
  - Updates
- 

 **3 Email ID**

Used for:

- Notifications
  - Closure confirmation
  - Updates
- 

 **4 Phone Number**

Used for urgent clarification.

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 **5 Location**

Helps in:

- Field engineer dispatch
  - Site identification
  - Time zone management
- 

## 6 Category (Very Important)

Defines issue type.

Examples:

-  Network
-  Database
-  Hardware
-  Security
-  Software
-  Storage
-  Inquiry
-  Request



Used for:

- Assigning correct team
  - SLA calculation
  - Reporting
- 

## 7 Subcategory

More specific issue type.

Example:

Category: Hardware

Subcategory: Printer

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## 8 Configuration Item (CI) 🔥

CI = Affected device or asset.

Example:

- Router name
- Firewall ID
- Laptop hostname

Connected to:

 CMDB (Configuration Management Database)

Helps track:

- Device history
- Past incidents
- Warranty



## 9 Channel

How ticket was raised:

- Phone
- Email
- Walk-in
- Chat
- Portal
- Virtual Agent

Used for reporting performance.

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## 10 State

Ticket status lifecycle:

-  New

- ● Active
  - ⌚ Awaiting Customer
  - ⌚ Awaiting Vendor
  - ⌚ Awaiting Evidence
  - ✓ Resolved
  - ✗ Closed
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## 1 1 Assignment Group

Which team handles ticket?

Examples:

- Network Team
- Cyber Security Team
- IT Support
- DevOps



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## 1 2 Assigned To

Specific engineer handling issue.

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## 1 3 Impact + Urgency = Priority (Very Important)

Formula:

Impact + Urgency = Priority

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## Priority Levels

- 🔥 P1 – Critical
- ⚡ P2 – High

-  P3 – Medium
  -  P4 – Low
- 

### Example:

Laptop not working → Work stopped → High Impact → P1

Mouse not working → Work possible → Lower Impact → P3

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### SLA (Service Level Agreement)

Defines resolution time.

Example:

#### Priority SLA

P1      1 Hour

P2      1 Hour

P3      24 Hours



### Cyber Security SLA

-  MTTR = 5 Minutes
  - Immediate assignment required
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### MTTR – Two Types

**1** Minimum Time to Response

Time to acknowledge ticket.

**2** Minimum Time to Resolve

Time to completely fix issue.

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### Description Field

Must include:

- What happened
- When happened
- Error message
- Steps already tried

Clear description = Faster resolution.

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## **Work Notes**

Internal notes.

Includes:

- Commands used
- Troubleshooting steps
- Root cause

 **⚠ Not visible to customer.**

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## **Additional Comments**

Visible to user.

Used for:

- Updates
  - Clarifications
  - Closure confirmation
- 

## **After Submission**

System:

- Generates ticket number
- Sends email notification

- Tracks SLA automatically
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### **VIP Ticket Rule**

If:

4 Normal Tickets + 1 VIP Ticket

 VIP ticket gets priority.

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### **Network Engineer Ticket Handling Process**

- 1** Check Assignment Group
  - 2** Open ticket
  - 3** Review description
  - 4** Check priority
  - 5** Accept ticket
  - 6** Change state to Active
  - 7** Start troubleshooting
- 

### **Router Access Process**

You cannot directly connect to router.

Company provides:

- Physical laptop
  - Virtual Machine (VM)
  - PuTTY software
- 

### **Router Connection Steps**

- 1** Open VM
- 2** Open PuTTY
- 3** Enter router IP
- 4** Connect via SSH

## NSD (Network System Database)

Contains:

- Router name
- Public IP
- Device details
- Site information

Used before accessing router.

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## Ticket Lifecycle

New → Active → Awaiting → Resolved → Closed

Important:

- Resolved ticket can reopen.
  - Closed ticket cannot reopen.
  - Usually auto closes after 2–3 days.
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## Dashboards

Managers monitor:

- MTTR
  - SLA breaches
  - Team performance
  - Open vs closed tickets
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## CMDB Integration

CMDB stores:

- Device owner
- Location

- History
  - Change records
- 

## Escalation Process

If SLA about to breach:

- Escalate to manager
  - Notify stakeholders
  - Increase priority if needed
- 



## Q & A

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### Q 1 What is ServiceNow?

**Answer:**

ServiceNow is an ITSM tool used for ticket management, SLA tracking, and IT operations workflow automation.

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### Q 2 What is an Incident?

An unplanned interruption in IT service.

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### Q 3 What is SLA?

Service Level Agreement defining resolution time for tickets.

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### Q 4 What is MTTR?

Minimum Time to Response or Resolve.

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### Q 5 Difference between Work Notes and Additional Comments?

Work Notes → Internal

Additional Comments → Customer visible

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### Q 6 What is Configuration Item (CI)?

The affected device or asset linked in CMDB.

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### Q 7 What is CMDB?

Configuration Management Database storing asset details and relationships.

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## **Q 8 How is Priority calculated?**

Impact + Urgency = Priority

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## **Q 9 What is VIP Ticket?**

Ticket raised by high-level user. It gets priority.

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## **Q 10 Explain Ticket Lifecycle.**

New → Active → Awaiting → Resolved → Closed

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## **Q 1 1 Can a closed ticket reopen?**

No. Only resolved tickets can reopen.

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## **Q 1 2 What is Assignment Group?**

Team responsible for resolving issue.

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## **Q 1 3 What happens if SLA breaches?**

Escalation to manager and reporting impact.

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## **Q 1 4 Why category is important?**

It ensures correct team assignment and accurate reporting.

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## **Q 1 5 How do you handle a P1 ticket?**

Immediately acknowledge, assign, start troubleshooting, update regularly, resolve within SLA.

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**Q 1 6 What is NSD?**

Network System Database containing router IP and site details.

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**Q 1 7 How do you connect to router in corporate environment?**

Using VM → PuTTY → SSH connection.

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**Q 1 8 Why don't we close ticket immediately?**

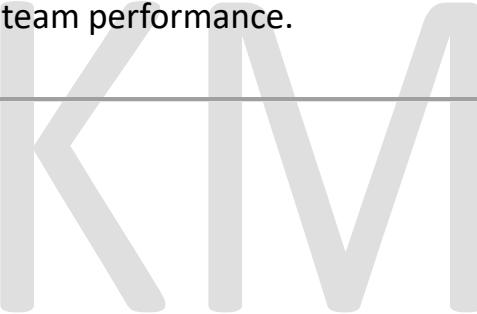
Because user may report issue not fixed. We wait before closure.

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**Q 1 9 What dashboards show?**

SLA compliance, MTTR, team performance.

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A large, light gray watermark or background graphic consisting of the letters 'K', 'I', 'N', and 'V' arranged vertically. The 'K' is on the left, 'I' is in the center, 'N' is to the right of 'I', and 'V' is at the bottom right. They are rendered in a bold, sans-serif font and are semi-transparent.