

Importing & Securing Data in ServiceNow

1.Introduction:

- **Project Name :** Importing & Securing Data in ServiceNow
- **Team ID :** LTVIP2025TMID31063
- **Team Leader :** V.Balu
- **Team Members:**
 - **Ramireddy Durga Srilakshmi**
 - **Pyla Thulasi Ram**
 - **Sada Satya Surya Srinivas**

2.Project overview:

- **Objective:**

To design, implement, and secure a reliable process for importing data into ServiceNow, ensuring data accuracy, integrity, and confidentiality. The objective is to enable timely and automated data synchronization from external sources into ServiceNow while enforcing robust security controls aligned with organizational and regulatory requirements.
- **Description:**

This project involves importing data from identified source systems into ServiceNow using Import Sets, Transform Maps, and secure integration methods (e.g., APIs, MID Server). The imported data may include user accounts, assets, incidents, contracts, or other business-critical information.

The project will define data mappings and transformations to ensure consistency with ServiceNow's data model. It will implement security measures, including Access Control Lists (ACLs), field-level encryption, and auditing, to protect sensitive information and restrict access to authorized users only. Testing will be conducted in non-production environments to validate data accuracy and security configurations before production rollout. Documentation will be provided to support ongoing data import processes and compliance needs.
- **Key features:**

Features	Description
Data Import & Mapping	Imports employee data from external sources using Import Sets & Transform Maps.
Dot-Walking	Automatically pulls related fields like Department from linked user records.

Access Control (ACL)	Restricts field/table-level access based on user roles.
Role-Based Access Management	Defines different permissions for admin, HR, and IT users.
Custom Tables and Fields	Creates tailored data structures to store employee and training data.
Dynamic Reporting	Enables filtered and department-wise reporting using imported data.
Testing with User Impersonation	Verifies data visibility/editability using impersonated user sessions.
Scalability and Performance	Designed to handle large datasets with fast loading and secure operations.

3. Project ideation phase:

- **Project Title:** Importing & Securing Data in ServiceNow
- **Problem Statement:** Linking each record to an employee and pulling some employee details (like department) into the record for easier reporting.

4. Requirement Analysis Phase:

- **Tables:** Define custom table to store employee data.
- **Import Data:** Load data via Import Sets.
- **Dot-Walking:** Auto-pull department using reference field.
- **Access Control List (ACL):** Secure fields based on roles.
- **Roles:** Create HR Manager role
- **Results:** Test outcome—verify links and field population.
- **Conclusion:** Evaluate success and readiness for deployment.

5. Project planning phase:

1. Project Timeline:

- Break your project into phases:

- Ideation ○ Requirement Analysis
- Design
- Development (Import, ACL, Roles setup)
- Testing ○ Report generation ○ Review & Conclusion

2. Risk Management:

Risk	Probability	Impact	Mitigation Strategy
Data import fails due to format	Medium	High	Validate CSV before import
ACLs restrict legitimate access	Low	Medium	Test roles thoroughly before deploy
Dot-walking does not auto populate	Medium	High	Script include fallback logic

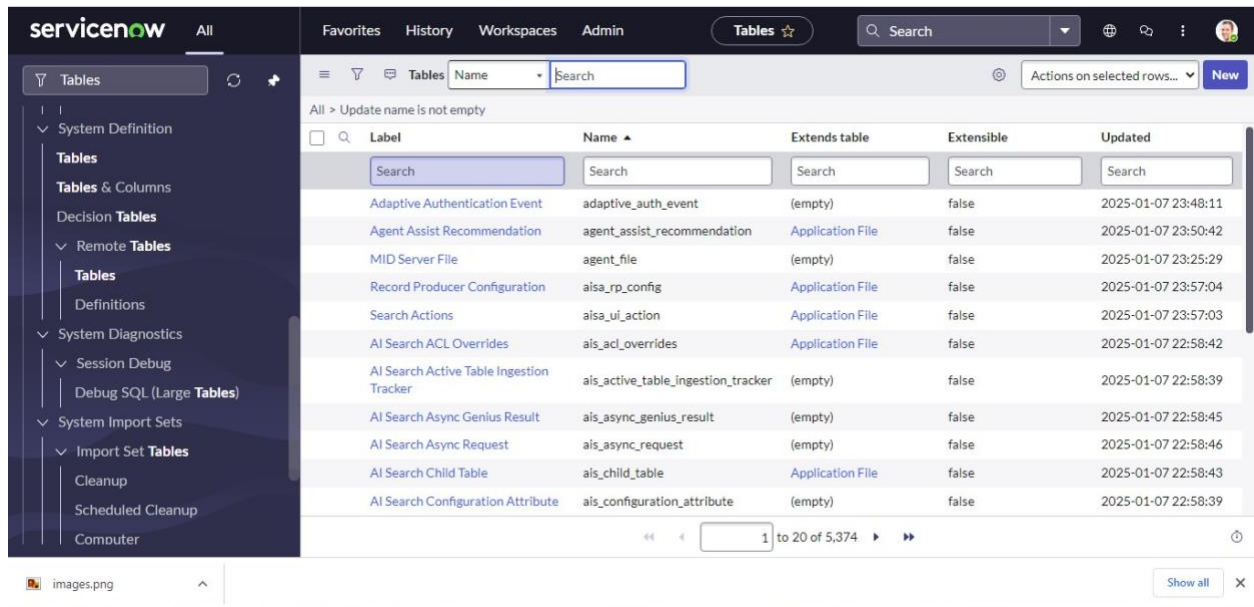
3. Task Allocation:

Task	Assigned To	Time Estimate	Tools Required
Import Table Setup	Developer	2 Days	ServiceNow Studio
Transform Map Configuration	Developer	2 Days	Import Set, Map Script
ACL Creation	Admin	1 Days	ACL Editor
Dot-walking Setup	Developer	1 Days	Dictionary Field Config
Reporting Dashboard	Analyst	1 Days	Report Builder

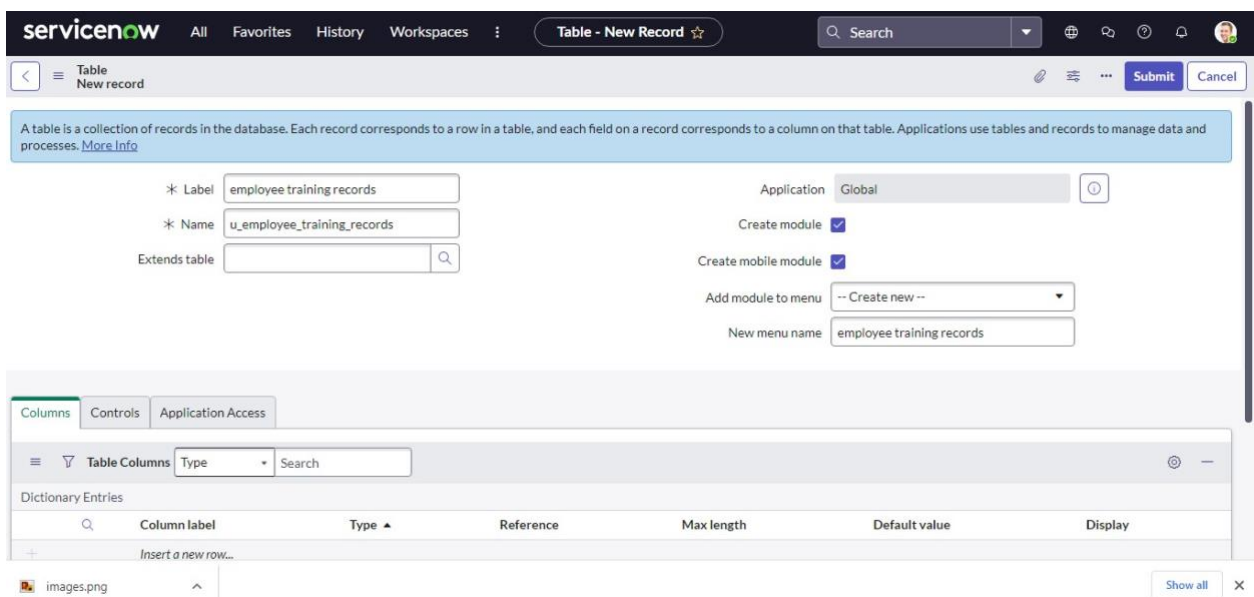
6. Project designing phase:

1. Create Table

- Open service now.
- Click on **All** >> search for **Tables**
- Select **Tables** under **system security**
- Click on **New**



- Fill the following details to create a new Table



- Add the following fields:
- **Training Name** (Type: **String**)
- **Completion Date** (Type: **Date**)
- **Status** (Type: **Choice**)
- **Employee**(Type: **Reference**), (Reference field to **sys_user** table)

servicenow All Favorites History Admin Table - Employee Training Records Search

Table Employee Training Records

Columns Controls Application Access

Table Columns Type Search

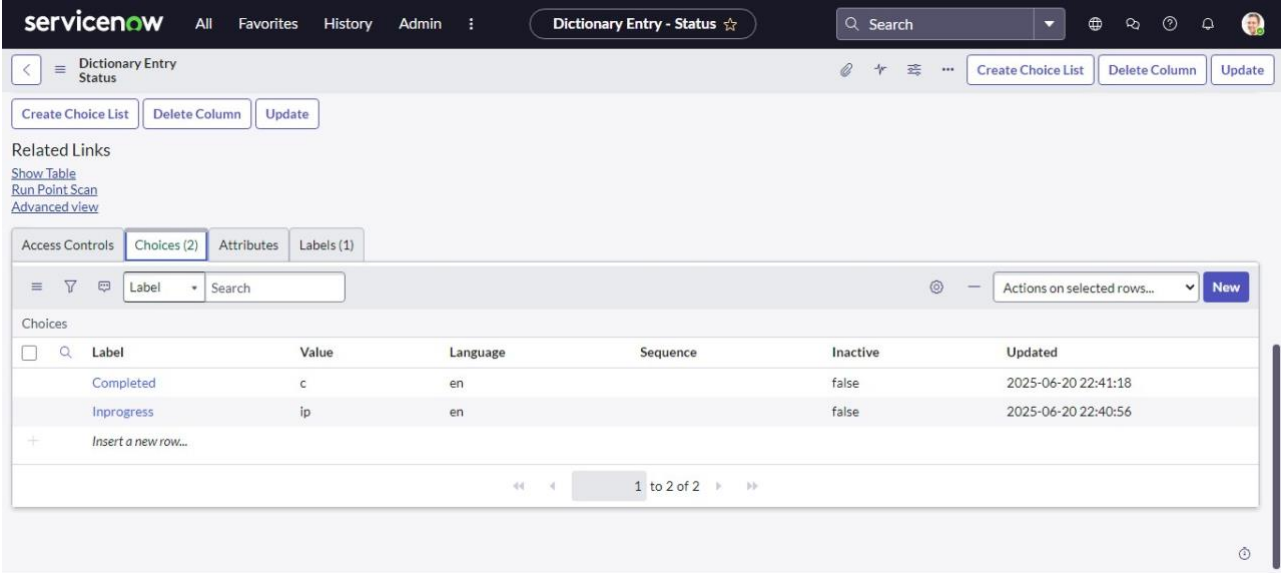
1 to 10 of 10 New

Dictionary Entries

	Column label	Type	Reference	Max length	Default value	Display
X	Status	Choice	(empty)		40	false
X	Completion Date	Date	(empty)		40	false
	Updated	Date/Time	(empty)		40	false
	Created	Date/Time	(empty)		40	false
	Updates	Integer	(empty)		40	false
X	Employee	Reference	User		32	false
X	Training Name	String	(empty)		40	false
	Created by	String	(empty)		40	false
	Updated by	String	(empty)		40	false
	Sys ID	Sys ID (GUID)	(empty)		32	false
+	Insert a new row...					

images.png Show all X

- Click on **submit**
- Click on Choice and Add to choices in the **Dictionary Entry Status**
- **Right click** on **Status** Field
- Select **Configure Dictionary**
- Enter **choices** under **Related list**(choices)



2. Create Data

- Create XLSX sheet for Training Employee table
- Sheet fields will be:

Training Name

Completion Date

Status

Employee

employee training - Microsoft Excel

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	Training Name	Completion Date	Status	Employee															
2	python	12/10/2004	completed	manonga															
3	java	25/10/2024	in progress	manasa															
4	MERN	4/11/2023	completed	poojitha															
5	HTML	14/06/2022	in progress	poojitha valli															
6	DSA	13/20/2023	completed	Aswini															
7																			
8																			
9																			
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3. Importing Data

- Open service now.
- Click on **All >>** search for **System Import Sets**
- Select **Load Data** and **Upload File** that you have already created.
- **Label:** Employee Training
- **Name:** u_employee_training

dev220069.service-now.com/now/nav/ui/classic/params/target/create_import_set.do

service-now All

system i

Load Data

FAVORITES

No Results

ALL RESULTS

System Import Sets

- Load Data
- Create Transform Map
- Run Transform
- Administration
 - Data Sources
 - Robust Import Set Transfor...
 - ETL Definitions
 - Transform Maps
 - Scheduled Imports
 - Execution Contexts
- Advanced

Import set table

Create table

Existing table

* Label employee training

Name u_employee_training

Source of the import

File

Data source

Choose File employee...ning.xlsx

Sheet number 1

Header row 1

Submit

- Click on **Submit**.

service-now All

system i

Load Data

FAVORITES

No Results

ALL RESULTS

System Import Sets

- Load Data
- Create Transform Map
- Run Transform
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 - Data Sources
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 - Scheduled Imports
 - Execution Contexts
- Advanced

Progress

Name	ImportProcessor
State	Complete
Completion code	Success
Message	Processed: 5, inserts 5, updates 0, errors 0, empty and ignored 0, ignored errors 0 (0:00:01.221)

Next steps...

- Import sets Go to the import sets for this data load
- Loaded data Go to the newly imported data inside the staging table: u_employees_training
- Create transform map Create a transform map for the newly staged data
- Import log View the import log

- Click on **Create Transform Map**

servicenow All Favorites History Admin Table Transform Map - New Record

system i

FAVORITES
No Results

ALL RESULTS

- System Import Sets
 - Load Data
 - Create Transform Map
 - Run Transform
- Administration
 - Data Sources
 - Robust Import Set Transform
 - ETL Definitions
 - Transform Maps
 - Scheduled Imports
 - Execution Contexts
- Advanced

Table Transform Map - New Record

Name

Source table

Active ☒

Run business rules ☒

Enforce mandatory fields

Copy empty fields ☐

Create new record on empty coalesce fields ☐

Application

Created

Target table

Order

Run script ☐

Submit

Related Links

- [Auto Map Matching Fields](#)
- [Mapping Assist](#)

- Give **Name** and **Target Table** Name to store the sheet data

servicenow All Favorites History Admin Table Transform Map - employees tr...

system im

FAVORITES
No Results

ALL RESULTS

- System Import Sets
 - Load Data
 - Create Transform Map
 - Run Transform
- Administration
 - Data Sources
 - Robust Import Set Transform
 - ETL Definitions
 - Transform Maps
 - Scheduled Imports
 - Execution Contexts
- Advanced

Table Transform Map - employees training

Related Links

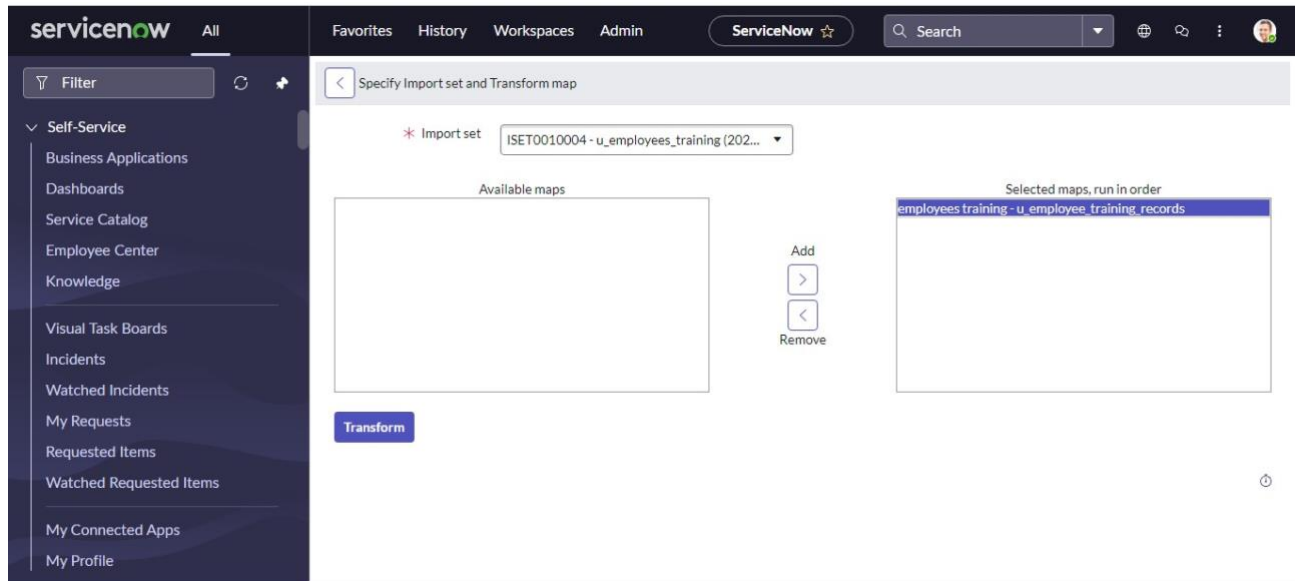
- [Auto Map Matching Fields](#)
- [Mapping Assist](#)
- [Validate Coalesce Fields](#)
- [Transform](#)
- [Index Coalesce Fields](#)
- [Run Point Scan](#)

Field Maps (4) Transform Scripts Empty reference fields (1)

Source field	Target field	Coalesce
u_training_name	u_training_name	false
u_status	u_status	false
u_employee	u_employee	false
u_completion_date	u_completion_date	false

1 to 4 of 4

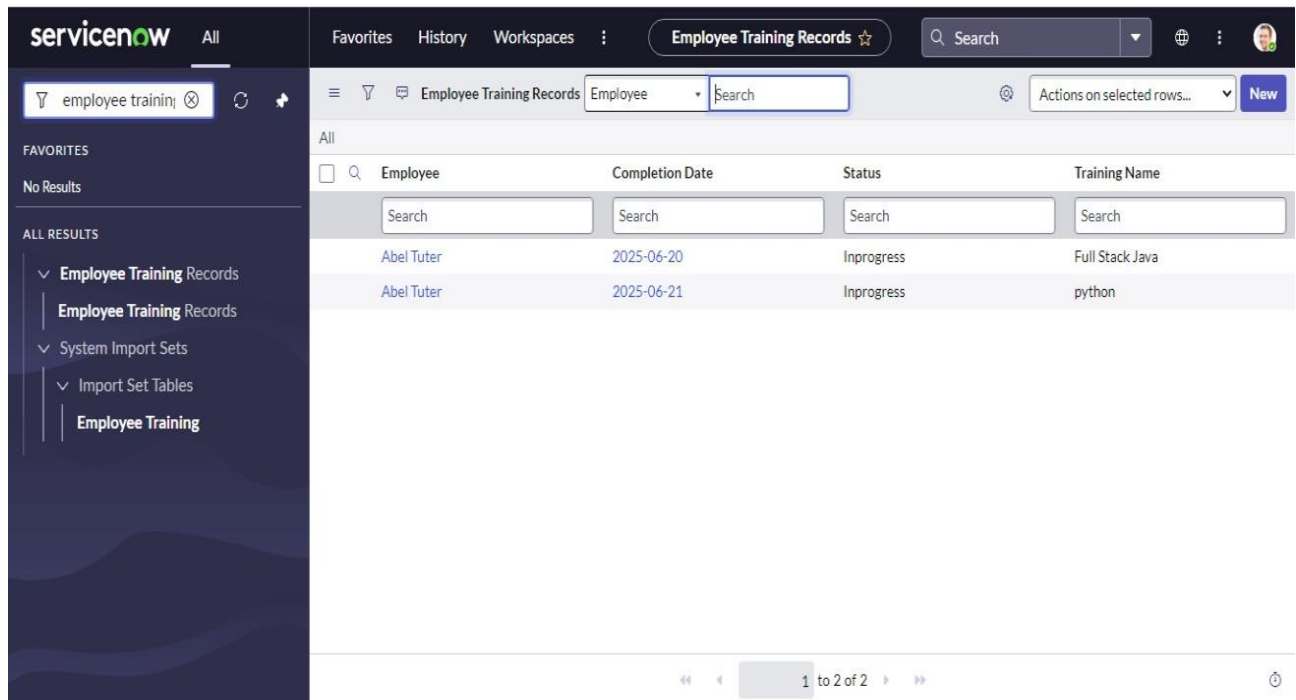
- Click On **Submit**
- Click on **Run Transform**



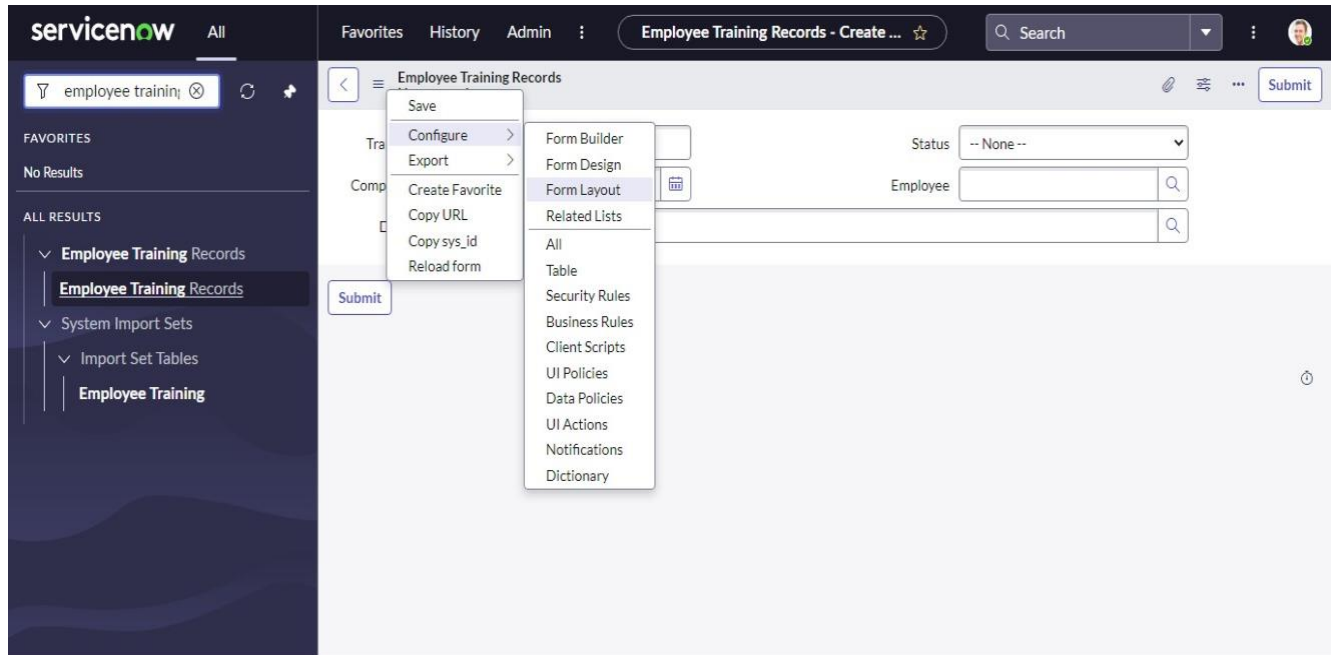
- Click on **Transform**

4. Dot-Walking

- Using “**Dot Walking**” To Access Employee Department Information.
- Click on **All** >> **Search** the **employee training records** table.
- Click on **New**, the form will open



- Go to the **Form Context Menu>>Configure>>Form Layout**



- Search for customer orders
- Add the “**Employee Department**” field by using dot walking • Select the field and **Save** changes

ServiceNow All Favorites History Workspaces Admin ServiceNow Search

employee trai Configuring Employee Training Records form Cancel Save

FAVORITES No Results

ALL RESULTS

- Employee Training Records
 - Employee Training Records
- System Import Sets
 - Import Set Tables
 - Employee Training

Available

- Employee Training Records fields
- Employee-->User fields
- Department-->Department fields
- Business unit [+]
- Company [+]
- Cost center [+]
- Created
- Created by
- Department head [+]
- Description
- Head count
- ID
- Name
- Parent [+]
- Primary contact [+]
- Updated

Selected

- begin_split -
- Training Name
- Completion Date
- split -
- Status
- Employee
- end_split -
- Employee.Department

Form view and section

View name: Default view

Section: Employee Training Re New...

Create new field

Name:

Type: String

- Now you can see the field in the **Form view**.

ServiceNow All Favorites History Admin Employee Training Records - Create ... Search

Filter Employee Training Records New record Submit

Self-Service

- Business Applications
- Dashboards
- Service Catalog
- Employee Center
- Knowledge
- Visual Task Boards
- Incidents
- Watched Incidents
- My Requests
- Requested Items
- Watched Requested Items
- My Connected Apps
- My Profile

Training Name:

Completion Date:

Status: -- None --

Employee:

Department:

Submit

5. Access Control List (ACL)

- To add ACL we have to do **Elevate Role** to the “security_admin”
- Click on **All>>ACL>>Create New ACL**
- Define ACL (Employees)

- **Operation: Read**

The screenshot shows the ServiceNow interface for configuring an Access Control rule. The left sidebar contains navigation links for Self-Service, Business Applications, Dashboards, Service Catalog, Employee Center, Knowledge, Visual Task Boards, Incidents, Watched Incidents, My Requests, Requested Items, Watched Requested Items, My Connected Apps, and My Profile. The main content area is titled 'Access Control - u_employee_training_records'. It includes fields for Type (record), Operation (read), Decision Type (Allow If), Application (Global), Active (checked), Admin overrides (checked), and Protection policy (None). The Name field is 'Employee Training Records [u_employee_training_r...]' and the Description is 'Allow read for records in u_employee_training_records, for users with role admin.' The Applies To section shows 'No. of records matching the condition: 2' and buttons for 'Add Filter Condition' and 'Add "OR" Clause'.

6. Roles

- Click on **All>>Roles>>** create a **New**
- **Role : HR Manager**

The screenshot shows the ServiceNow interface for configuring a Role. The left sidebar contains navigation links for System Security, Users and Groups, Roles, User Administration, Time-Limited User Roles, Role Delegation, Delegate Roles in Group, User Roles, and Group Roles. The main content area is titled 'Role - Hr Manager'. It includes fields for Name (Hr Manager), Application (Global), and Elevated privilege (unchecked). The Description field is empty. There are buttons for 'Update' and 'Delete'. Below the Description field is a 'Related Links' section with a link to 'Run Point Scan'. At the bottom, there is a 'Contains Roles' section with a search bar and buttons for 'New' and 'Edit...'.

- **Add that Role in the sys_user(User) table**

servicenow

All

user

System Logs

Transactions (All user)

System Security

Users and Groups

Users

Groups

Roles

Access Role Detail View

Reports

Users

Identity and Access Audit

User Trails

System User Guide

User Guide

Administration

FavoritesHistoryWorkspaces

Module - Users

Search

UpdateDelete

ModuleUsers

TitleUsers

ApplicationGlobal

Application menuSystem Security

Order410

Hint

Display nameUsers

VisibilityLink Type

RolesHr Manager

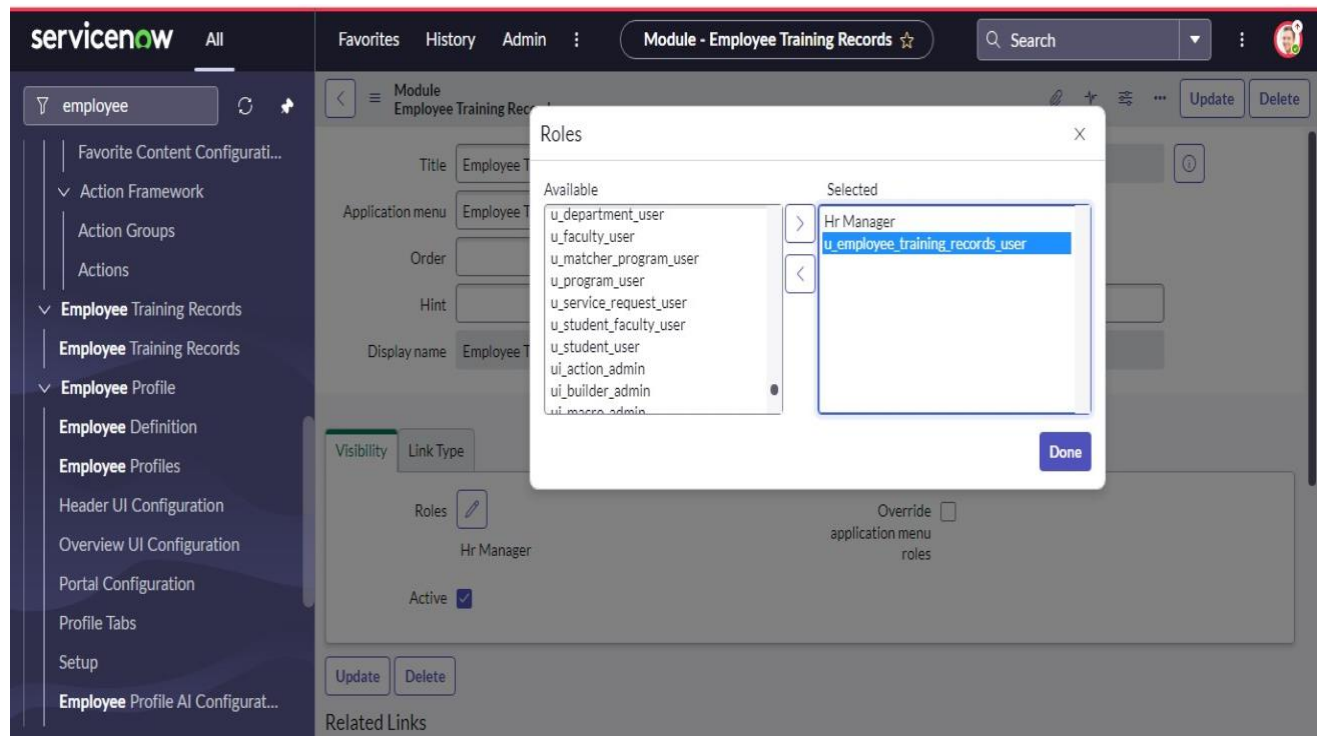
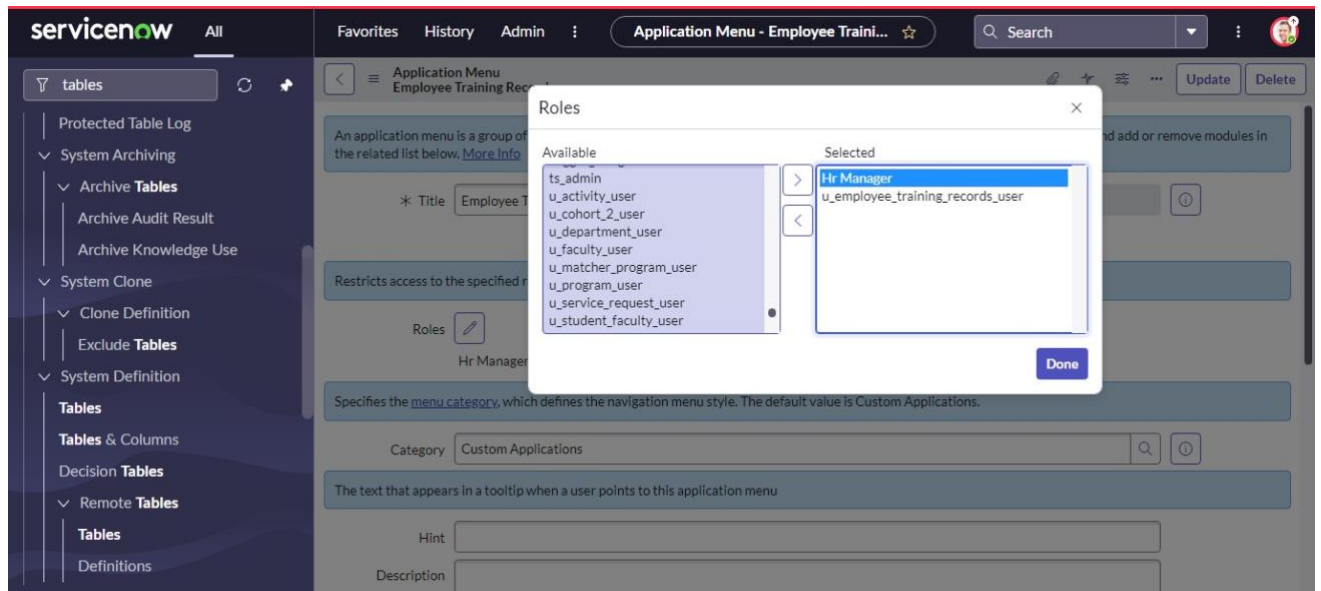
Active

Overrideapplication menu roles

UpdateDelete

Related Links

• Add this **Role** to the **Tables Application** and **Module**



-

Add the **HR Manager** Role to the **sys_user**(table)

The screenshot shows the ServiceNow interface for configuring the 'Users' module. The left sidebar contains a navigation menu with categories like System Logs, System Security, Reports, Identity and Access Audit, and System User Guide. The 'Users' option is selected under System Security. The main configuration area has fields for Title, Application, Application menu, Order, Hint, and Display name. Below these are tabs for 'Visibility' and 'Link Type'. The 'Link Type' tab is active, showing a 'Roles' field set to 'Hr Manager' and an 'Active' checkbox that is checked. There is also an 'Override application menu roles' checkbox which is unchecked. 'Update' and 'Delete' buttons are located at the bottom of the configuration area.

- Now, you can view each employee's department information directly in the **Employee Training Records list view**

servicenow

AllFavoritesHistory

Access Control - u_employee_trainin... ☆

Search

<≡Access Controlu_employee_training_records

UpdateDelete↑↓

Applies To

No. of records matching the condition: 2

Add Filter ConditionAdd "OR" Clause

-- choose field -- -- oper -- -- value --

Conditions

Access Control Rules have two decision types, and these types will behave differently depending on conditions.
1. Allow Access: Allows access to a resource if all conditions are met.
2. Deny Access: Denies access to a resource unless all conditions are met.
[More Info](#)

Requires role

1 to 1 of 1

Role	
×	u_employee_training_records_user
×	Hr Manager
+	Insert a new row...

- Give **HR Manager** Role to the **ACL**

The screenshot shows the ServiceNow interface for configuring an Access Control rule. The breadcrumb trail is "Access Control - u_employee_trainin...". The page title is "Access Control u_employee_training_records".

Applies To: No. of records matching the condition: 2. Buttons: "Add Filter Condition", "Add 'OR' Clause". Fields: "-- choose field --", "-- oper --", "-- value --".

Conditions: Access Control Rules have two decision types, and these types will behave differently depending on conditions.
 1. Allow Access: Allows access to a resource if all conditions are met.
 2. Deny Access: Denies access to a resource unless all conditions are met.
[More Info](#)

Requires role: 1 to 1 of 1. Table with columns: Role. Rows: u_employee_training_records_user, Hr Manager (highlighted), Insert a new row...

- Create Another New ACL and Repeat the same Process to the **Write** Access

The screenshot shows the ServiceNow interface for configuring an Access Control rule. The breadcrumb trail is "Access Control - u_employee_trainin...". The page title is "Access Control u_employee_training_records".

*** Type:** record. **Application:** Global. *** Operation:** write. **Active:** ☒. **Decision Type:** Allow If. **Advanced:** ☐.

Admin overrides: ☒. **Protection policy:** -- None --.

*** Name:** Employee Training Records [u_employee_training_records]. **Description:** Default access control on u_employee_training_records.

Applies To: No. of records matching the condition: 2. Buttons: "Add Filter Condition", "Add 'OR' Clause". Fields: "-- choose field --", "-- oper --", "-- value --".

Conditions:

7. Performance and functional Testing Phase:

- **Impersonate the sys_user and Search Employee Training Records** • Now you can see and edit the Fields

The screenshot shows the ServiceNow interface for the 'Employee Training Records' table. The left sidebar contains a navigation menu with 'employee training' selected. The main area displays a list of records with columns: Employee, Completion Date, Status, and Training Name. Two records are visible, both for 'Abel Tuter'.

Employee	Completion Date	Status	Training Name
Abel Tuter	2025-06-20	Inprogress	Full Stack Java
Abel Tuter	2025-06-21	Inprogress	python

The screenshot shows the 'Employee Training Records - Create ...' form. The form has fields for Training Name, Status (set to '-- None --'), Completion Date, Employee, and Department. A 'Submit' button is at the bottom left.

Training Name:

Status: -- None --

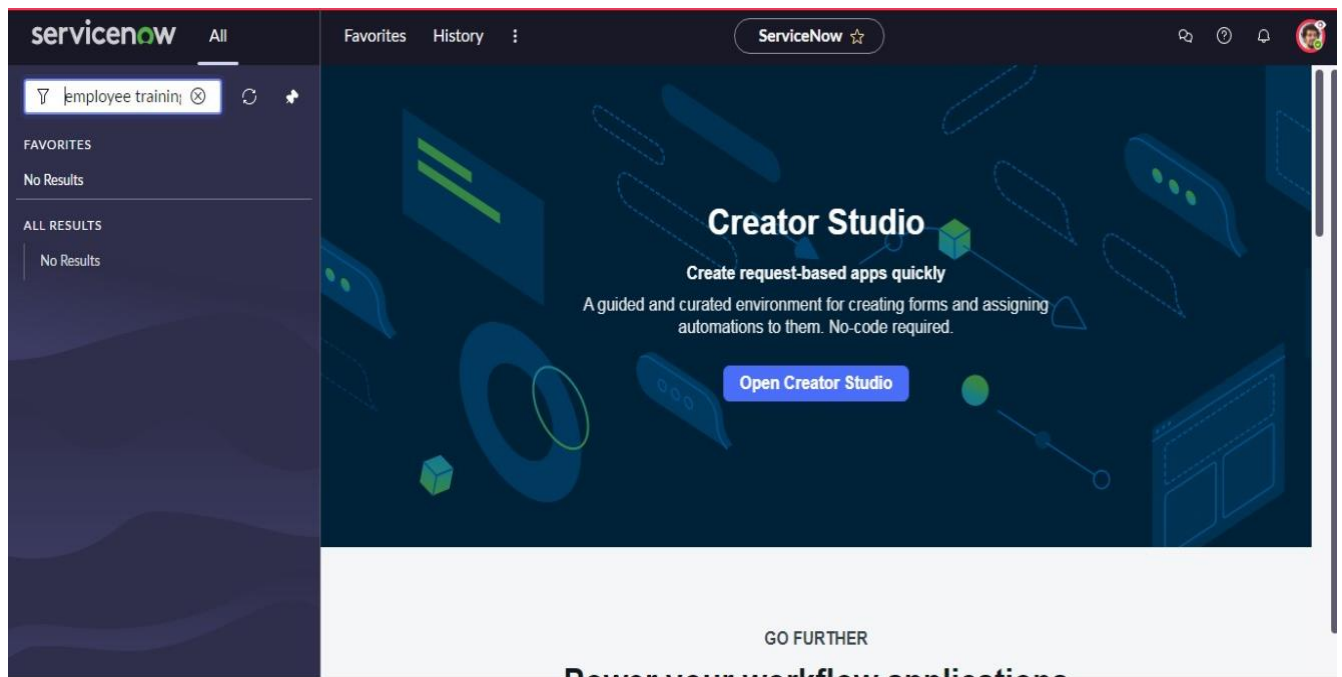
Completion Date:

Employee:

Department:

Submit

- **Impersonate the other User you CANNOT See the Table**



- Successful linking of employee records
- Dot-walking retrieves department info accurately
- ACLs protect sensitive fields
- Role-based access is enforced properly

8.Final conclusion:

The ServiceNow project successfully demonstrates how to **import, link, secure, and display** employee-related data using best practices including **dot-walking** and **ACLs**. This setup ensures secure, efficient, and scalable reporting for real-world enterprise needs.