

# Automate Lifecycle Management with SCIM

## Course overview

Learn how to integrate your application user management with Okta or other Identity Providers leveraging the System for Cross-domain Identity Management (SCIM) standard.

This intensive course starts with an introduction to lifecycle management, SCIM, and hands-on labs where you implement SCIM endpoints in a custom app while maintaining backwards compatibility to an existing user management APIs. Next you integrate your custom app with Okta to provision users and groups.

We will discuss common business and technical use cases, workflows, testing, troubleshooting, and best practices.

### Who should attend

- Developers
- Architects
- Technical Project Managers
- ISV and Okta Partners

### Prerequisites

- Understanding of REST API concepts, such as HTTP and JSON
- Experience with Java or another object-oriented programming language

### Format

- Instructor-led with hands-on labs
- Duration: 1 day
- Delivery: Virtual (public or private); Onsite (private)

### Setup requirements

- Students use their own computers.
- Okta provides access to an Okta tenant + virtual machine to complete the labs.

## Learn how to:

- Define SCIM and when to use it.
- Compare SCIM APIs and REST APIs.
- Leverage the SCIM standard to automate the user lifecycle in your applications.
- Design a SCIM Server and add support to Create, Read, Update, and Delete (CRUD) users and groups.
- Support SCIM metadata, custom attributes, and custom schemas.
- Recognize best practices when integrating SCIM applications with identity management solutions like Okta.
- Describe how to integrate your SCIM server with Okta to import users (Application as Master).
- Integrate your SCIM server with Okta to provision and manage app users and groups.
- Test and publish your SCIM server in Okta Integration Network (OIN) for public consumption.

## Course outline

### 1: Introduction to Lifecycle Management and SCIM

Describe the SCIM Standard and Capabilities  
Describe the Provisioning Options supported by Okta

### 2: Read Users with SCIM

Recognize the User Data Model  
Compare a User Payload in SCIM vs REST  
Describe SCIM URLs, Identifiers, Meta information, Authorization, query parameters, and List Responses  
Use the SCIM User Core and Custom Schemas and Attributes  
Return users in SCIM format

### 4: Write Users with SCIM

Compare Create User in SCIM vs REST  
Describe the Logic for creating, updating, and deleting Users in SCIM  
Compare a Patch operation in SCIM vs REST  
Describe and Implement the SCIM PatchOp  
Implement code to Create, Update, and Delete users with SCIM

### 6: Configure Account and Group Provisioning with Okta and a Custom App

Describe Application Mastering and Provisioning  
Implement Provisioning with Okta and SCIM  
Customize Provisioning Attributes and Mappings  
Import accounts and groups  
Manage accounts, groups, and membership  
List resources to publish your app on OIN  
Test your app for publishing on OIN

### 3: Read Groups with SCIM

Recognize the Group Data Model  
Compare a Group Payload in SCIM vs REST  
Compare SCIM Group and SCIM User  
Return groups in SCIM format

### 5: Write Groups with SCIM

Compare Create Group in SCIM vs REST  
Describe the Logic for creating, updating, and deleting Groups in SCIM  
Compare write SCIM Groups and Users  
Implement code to Create, Update, and Delete Groups with SCIM  
Describe SCIM Error Handling and Configuration endpoints

### Bonus: Configure Profile Mastering with Okta and a Custom App

Describe Application Profile Mastering  
Implement Profile Mastering with Okta and SCIM