

将Catalyst SD-WAN与服务集成Now

目录

[简介](#)

[先决条件](#)

[要求](#)

[使用的组件](#)

[网络图](#)

[配置](#)

[ServiceNow配置](#)

[创建实例](#)

[创建应用](#)

[SD-WAN管理器配置](#)

[SD-WAN Webhook](#)

[SD-WAN警报通知](#)

[验证](#)

[ServiceNow票证页面](#)

[修复身份验证错误的步骤](#)

[生成警报](#)

[故障排除](#)

[相关信息](#)

简介

本文档介绍将Catalyst SD-WAN与ServiceNow集成以生成基于事件的票证的逐步过程。

先决条件

要求

思科建议：

- Cisco Catalyst SD-WAN解决方案知识。
- ServiceNow中具有管理员权限的活动帐户。
- 从SD-WAN Manager传输虚拟专用网络(VPN)的Internet可达性。
 - 如果ServiceNow在本地托管，则确保从VPN 0中的SD-WAN Manager与其连接。

使用的组件

本文档中的信息基于以下软件和硬件版本：

- 运行20.15.3.1版本的Cisco Catalyst SD-WAN Manager。
- 运行Cisco IOS® XE Catalyst SD-WAN 17.15.3版的C8000v。

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您的网络处于活动状态，请确保您了解所有命令的潜在影响。

网络图



连接图

配置



提示：对于此集成，我们使用从SD-WAN Manager直接到ServiceNow的Webhook。

此配置包含两个部分：

1. 配置ServiceNow API并使其准备好接受和处理来自SD-WAN Manager的HTTP POST消息。
2. 配置SD-WAN Manager Webhook。

ServiceNow配置

创建实例

1. 使用您的ServiceNow凭据登录ServiceNow开发人员门户
<https://developer.servicenow.com/dev.do>。
2. 在“欢迎”页面上，单击“请求您的实例”，并选择任何版本（苏黎世、横滨或夏纳都）。



Start building

Get your personal developer instance and explore the latest platform features

Request your instance

Learn about PDIs

图-1

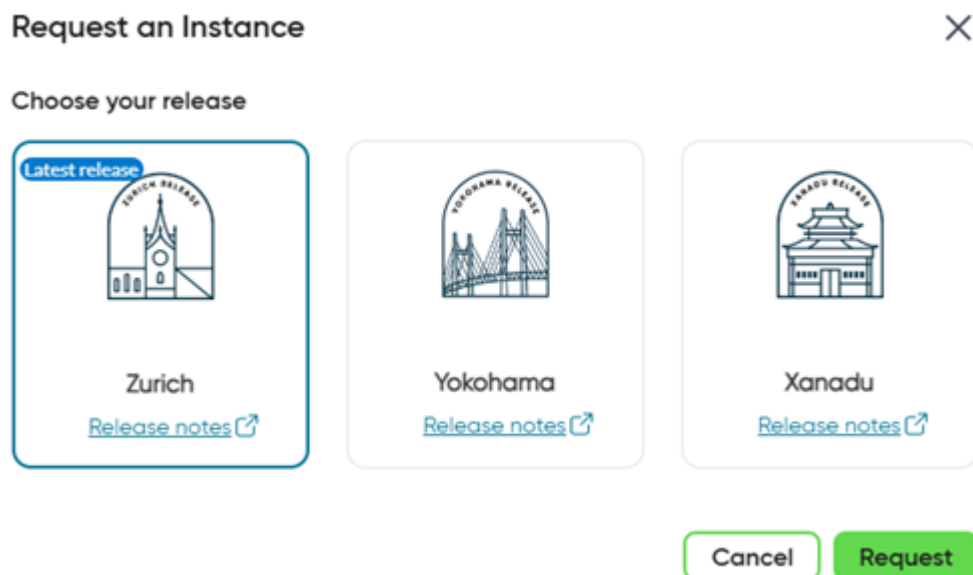


图-2

3.等待几分钟，等待实例准备就绪。

4.几分钟后刷新页面，然后创建个人开发人员实例(PDI)。

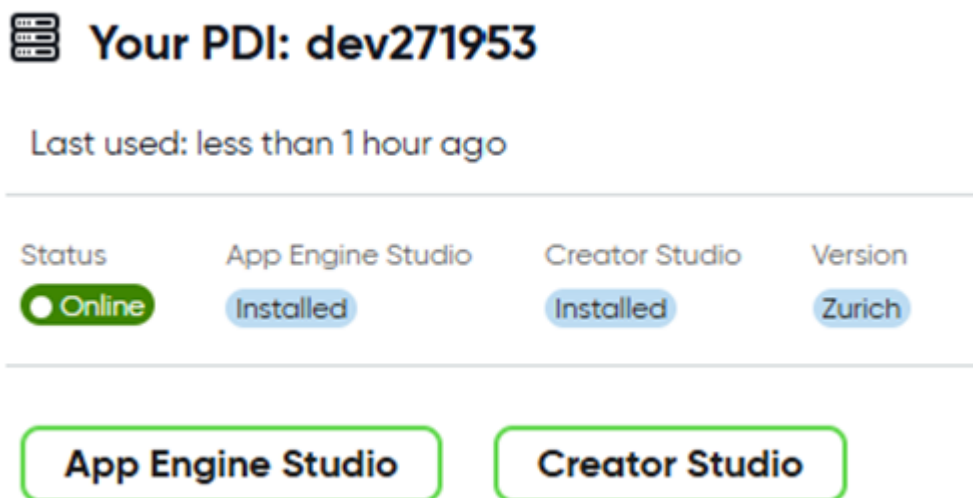


图 -3

创建应用

5.单击App Engine Studio。

6.关闭欢迎对话框。

7.单击Create app。

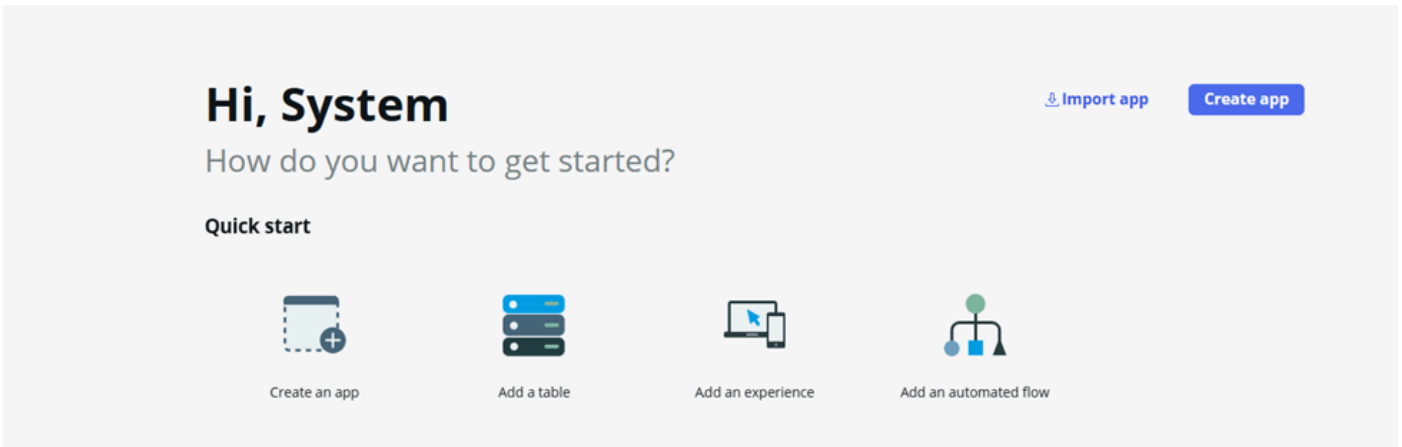


图 -4

8.为此应用指定一个名称，然后单击Continue。

The screenshot shows a form titled "CREATE APP" with the heading "Let's get started on your new app." Below the heading, it says "Add a name and description that define the purpose of your app. You can also add a thumbnail image." The form has two input fields: "Name *" with the value "ud-vmanage" and "Description" with the placeholder text "Describe this app". To the right of the input fields is a dashed box for a thumbnail image with the text "Browse or drag to upload" and an upload icon. Below the dashed box, it lists supported image formats: "BMP, GIF, ICO, JPEG, JPG, PNG, SVG". At the bottom right, there are two buttons: "Cancel" and "Continue" (in blue).

图 -5

9.将角色保留为默认值，然后单击Continue。

CREATE APP

Let's add roles to your new app.

Default roles have already been added based on popular roles for apps. You can add or remove roles, later.

⊕ Add a role

Role name * ⓘ	Description ⓘ	
admin	Default admin role	
Role name * ⓘ	Description ⓘ	
user	Default user role	

图 -6

10.等待几分钟，以便创建此应用。

11.转到应用控制面板。

CREATE APP

Great! Let's add more to your app.

You can increase your app's functionality by adding data, experiences, automation, or security. Go to the app dashboard to add them before submitting this app to your administrator for review.


Data


Experience


Automation


Security

创建应用

12.在App Home中，单击“Try it out”以打开ServiceNow Studio。

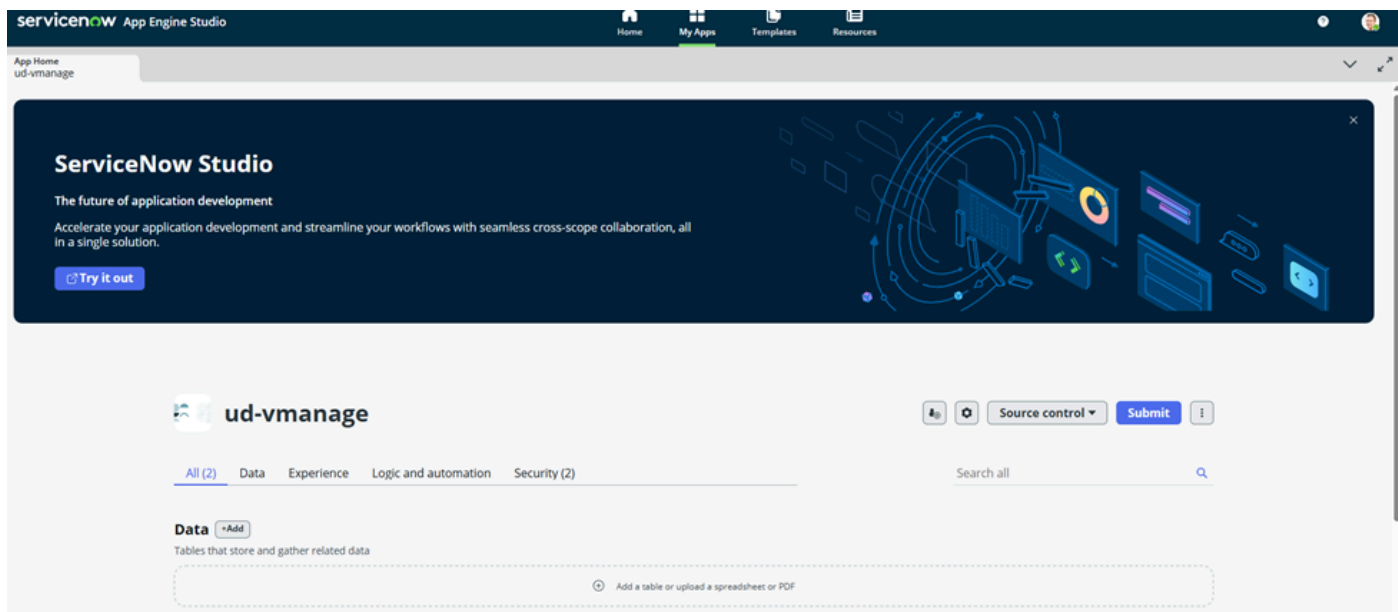


图 -7

13.注意URL。它类似于PDI-ID.service-now.com。

14.在左侧导航窗格中，点击应用名称。在这种情况下：ud-vmanage。

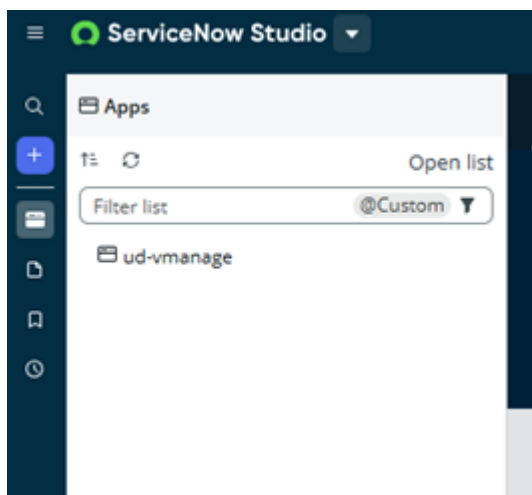
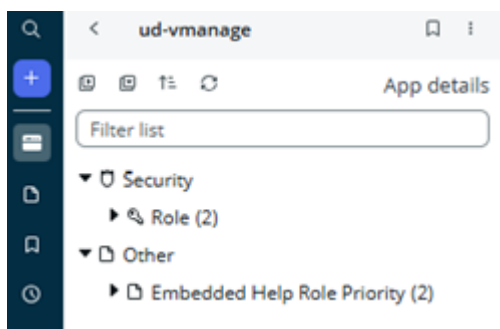


图 -8

15.点击(+)图标，然后点击创建文件。



创建文件

16.搜索并选择脚本REST API。

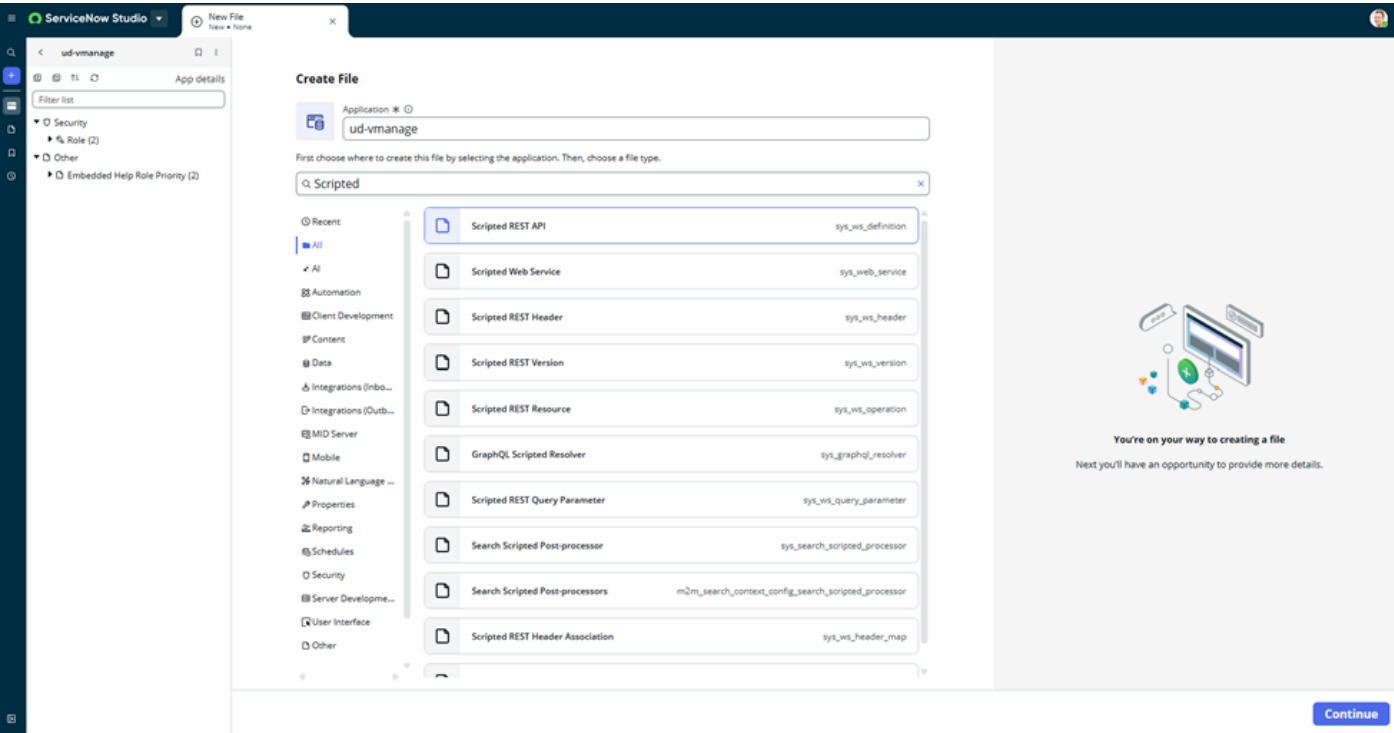


图 -9

17.单击继续。

18.为脚本化REST服务创建新记录。

- 1. 输入API名称
- 2. API ID
- 3. 单击Default ACLs lock图标：
 - 1. 单击搜索按钮选择目标记录。
 - 2. 在访问控制搜索中，搜索并点击“Scripted REST External Default”。

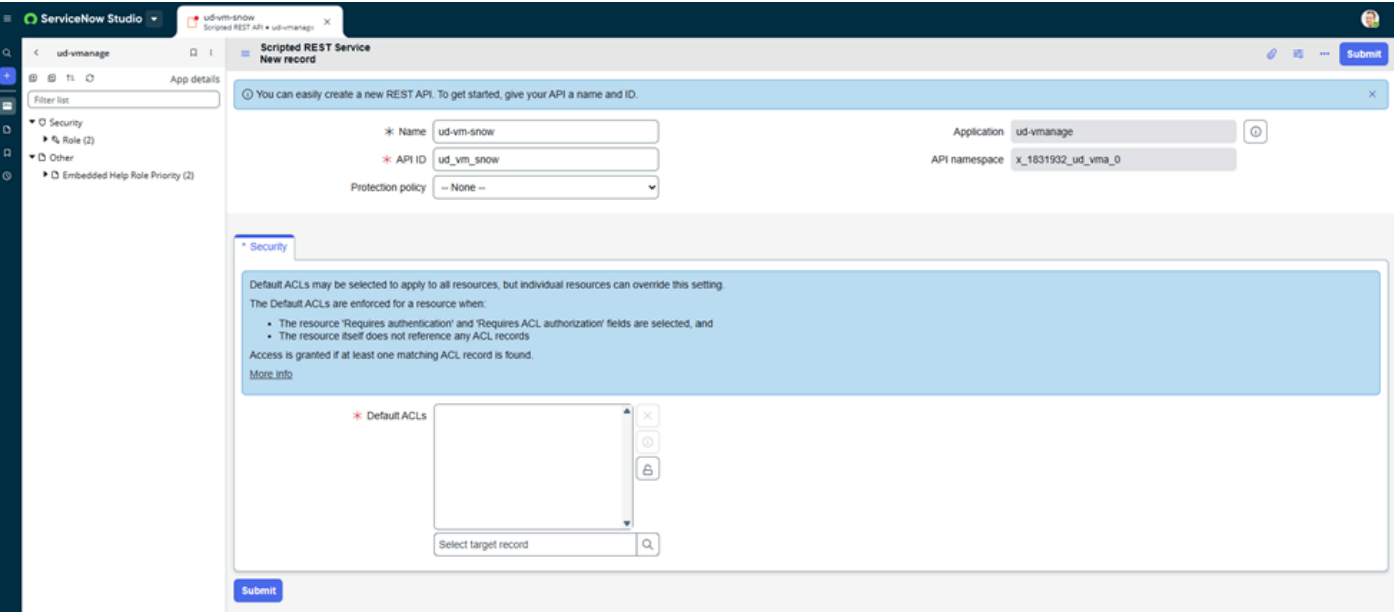


图 -10

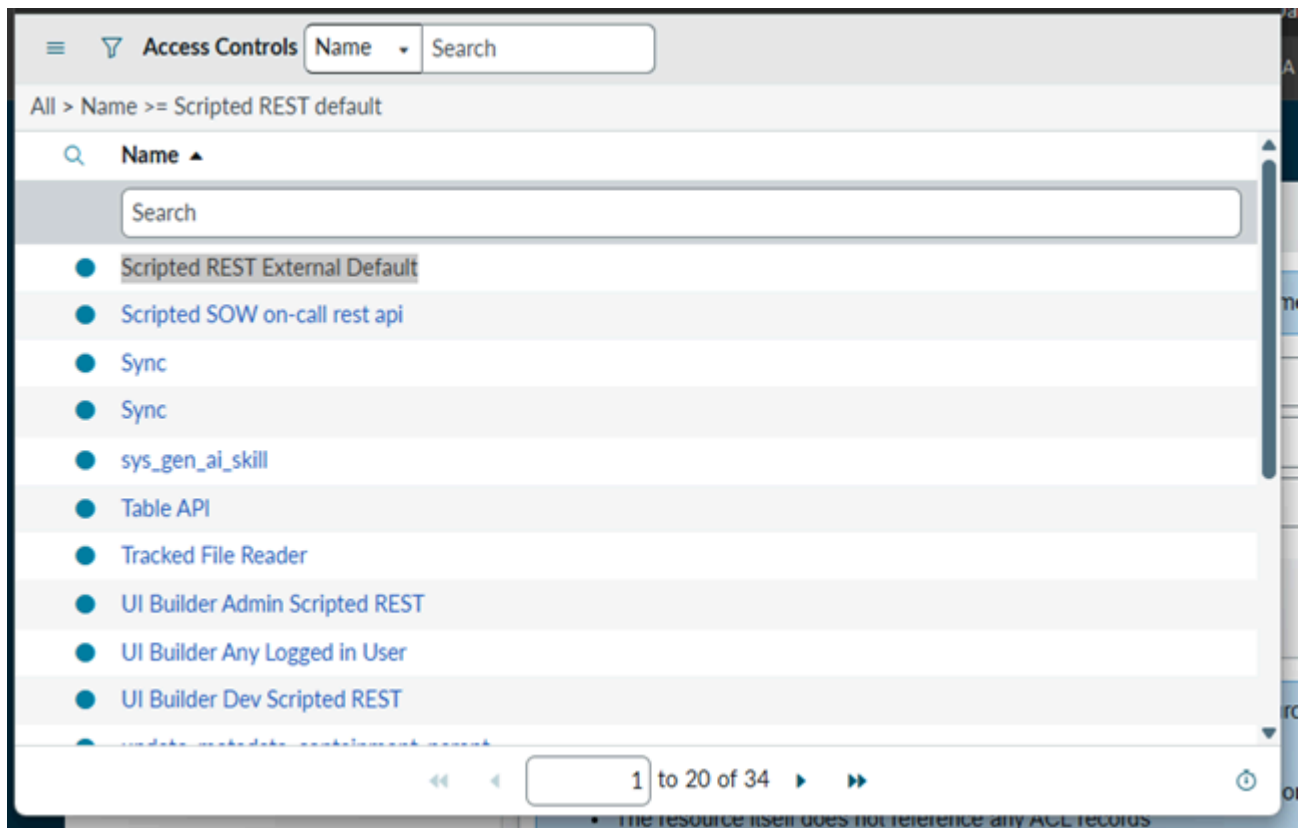
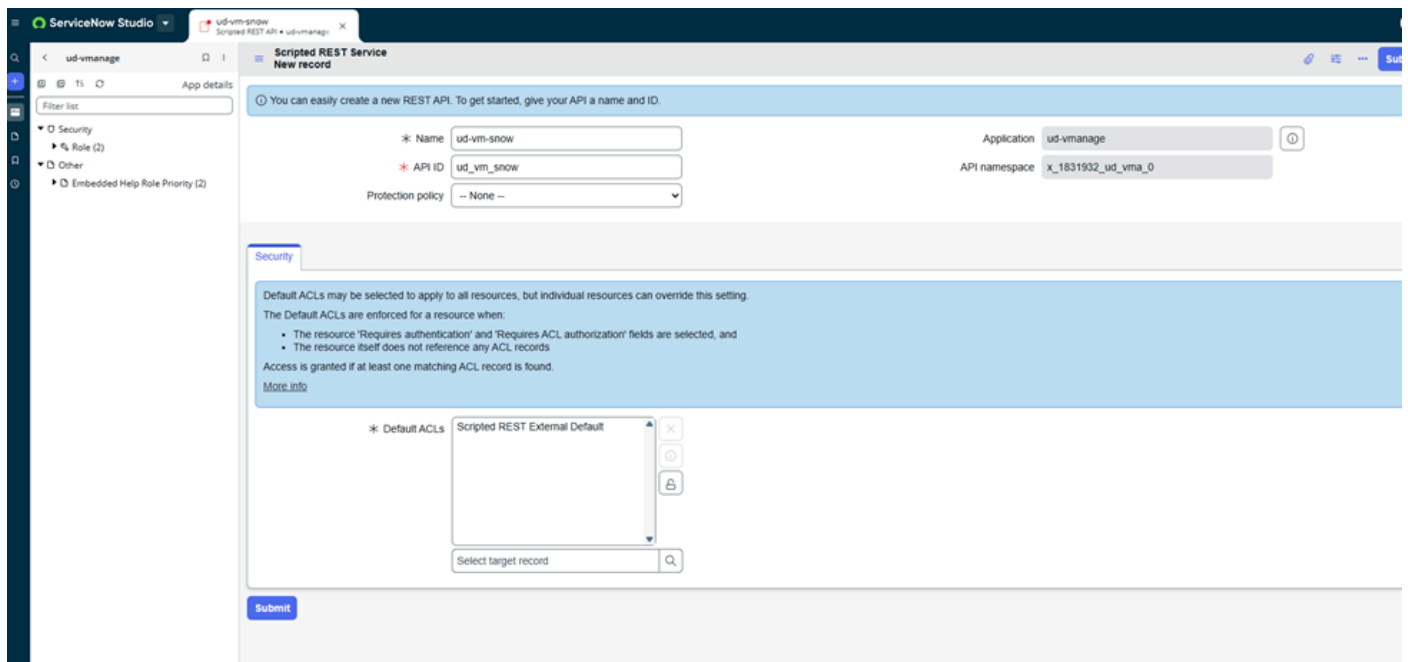


图 -11

19.单击Submit。



脚本REST服务新记录

20.创建新资源。

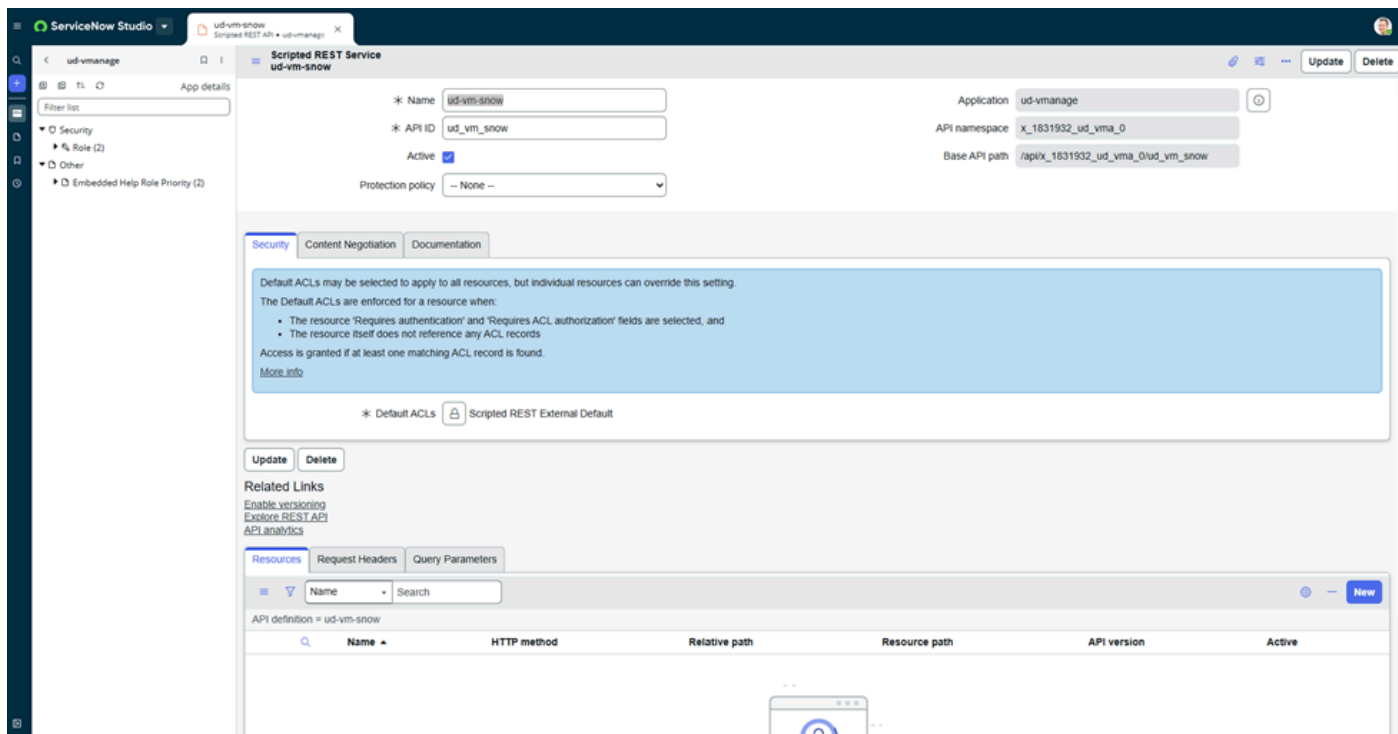


图 -12

21.指定此新资源的名称，选择HTTP方法作为POST。

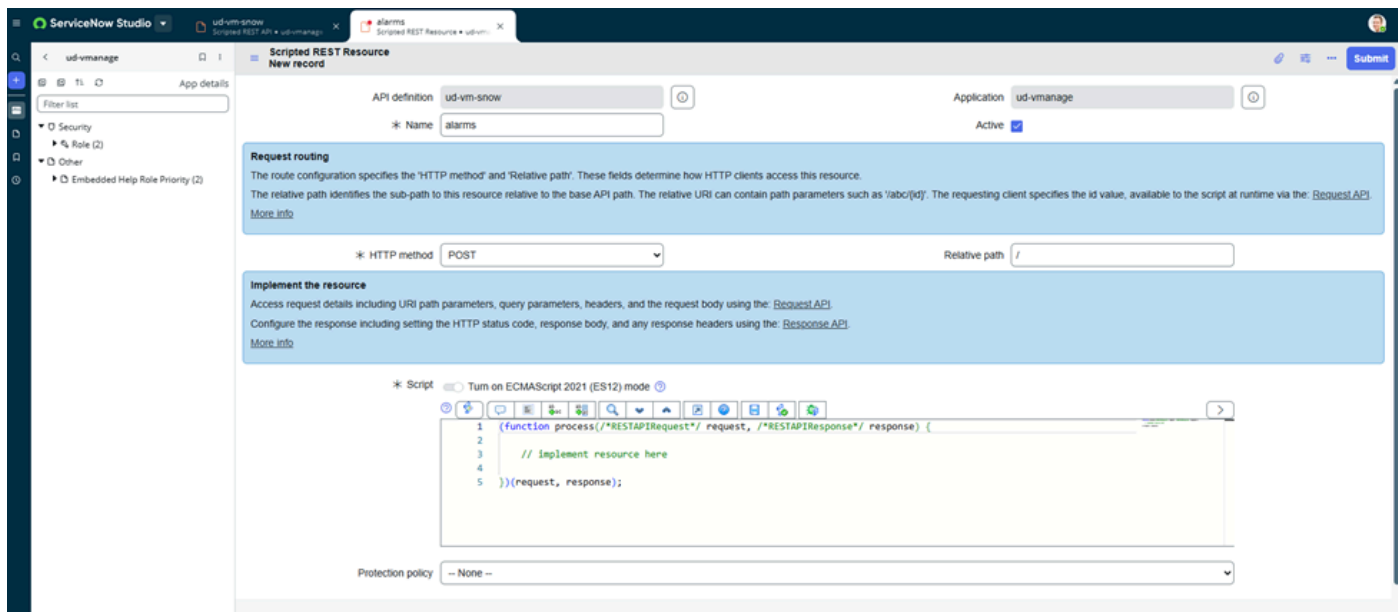


图 -13

22.在脚本部分，创建一个javascript以处理SD-WAN Manager中的JSON，并在ServiceNow中创建票证。

示例脚本:

```
(function process(request, response) {
  try {
    var payload = request.body.data;
```

```

gs.info("💡💡 vManage Webhook Received: " + JSON.stringify(payload));

var alertMessage = payload.message || 'No message';
var alertSeverity = payload.severity || 'medium';
var deviceId = payload.deviceId || 'Unknown device';

var inc = new GlideRecord('incident');
inc.initialize();
inc.short_description = "vManage Alert: " + alertMessage;
inc.description = "Device ID: " + deviceId + "\nSeverity: " + alertSeverity + "\n\n" + JSON.stringify(payload);
inc.urgency = (alertSeverity === 'critical') ? 1 : 2;
inc.impact = 2;
inc.insert();

response.setStatus(201);
response.setBody({ message: "Webhook received and processed." });

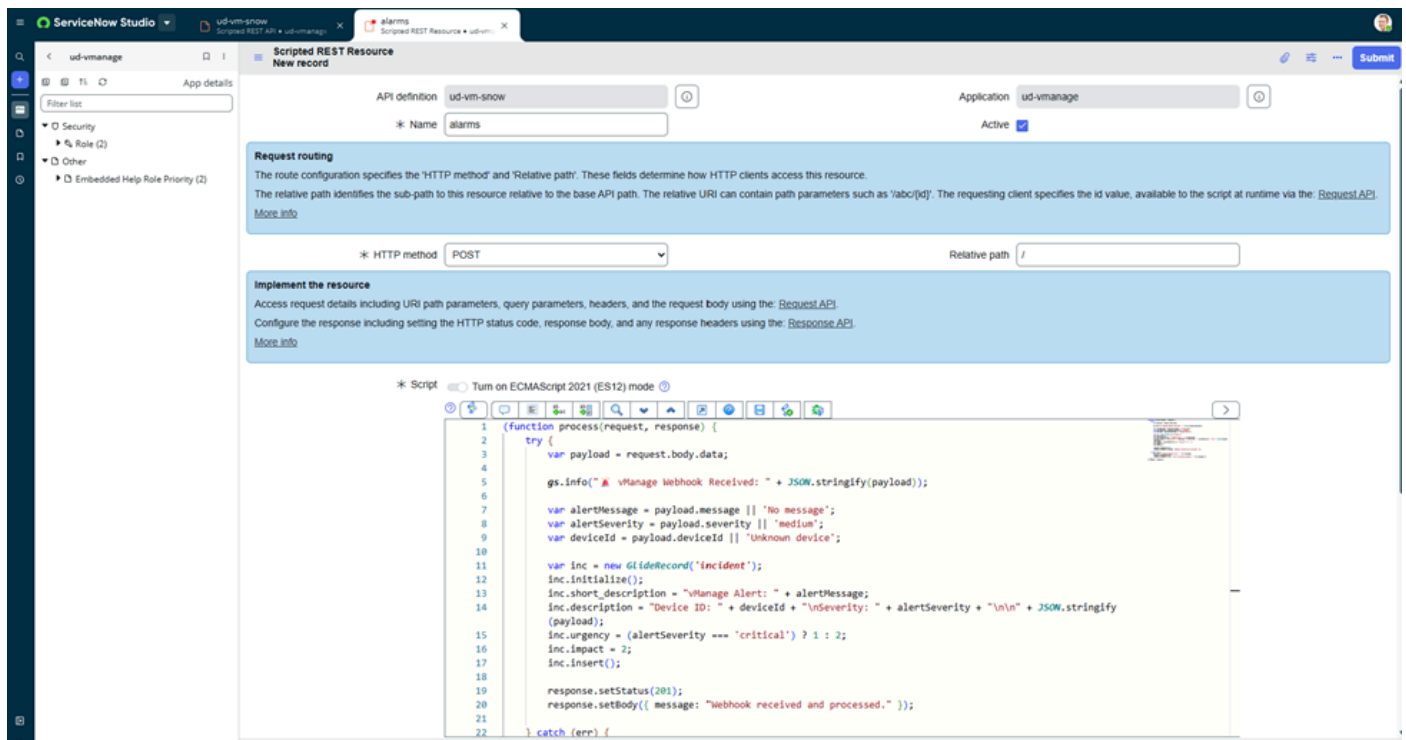
} catch (err) {
    gs.error("❌ vManage Webhook Error: " + err.message);
    response.setStatus(500);
    response.setBody({ error: "Error processing webhook: " + err.message });
}
})(request, response);

```



警告：这是一个示例脚本。在实验室或生产环境中使用之前，请彻底验证脚本。

23.单击Submit。



脚本REST资源新记录

24.记下资源路径。这是我们需要在SD-WAN Manager Webhook配置中输入的URL。

25. Webhook URL:https://PDI.service-now.com/Resource_path。

本配置指南中的示例URL: https://dev271953.service-now.com/api/x_1831932_ud_vma_0/ud_vm_snow

SD-WAN管理器配置

在本节中，我们将SD-WAN Manager Webhook配置为向ServiceNow API发送警报：https://dev271953.service-now.com/api/x_1831932_ud_vma_0/ud_vm_snow



提示：对于多租户SD-WAN管理器，请在租户视图中应用各自的配置，为该租户发送Webhook事件。也可以在提供商视图中应用此配置，以接收来自提供商域设备的警报。

SD-WAN Webhook

1. 登录SD-WAN Manager并导航到Monitor > Logs > Alarm Notifications。

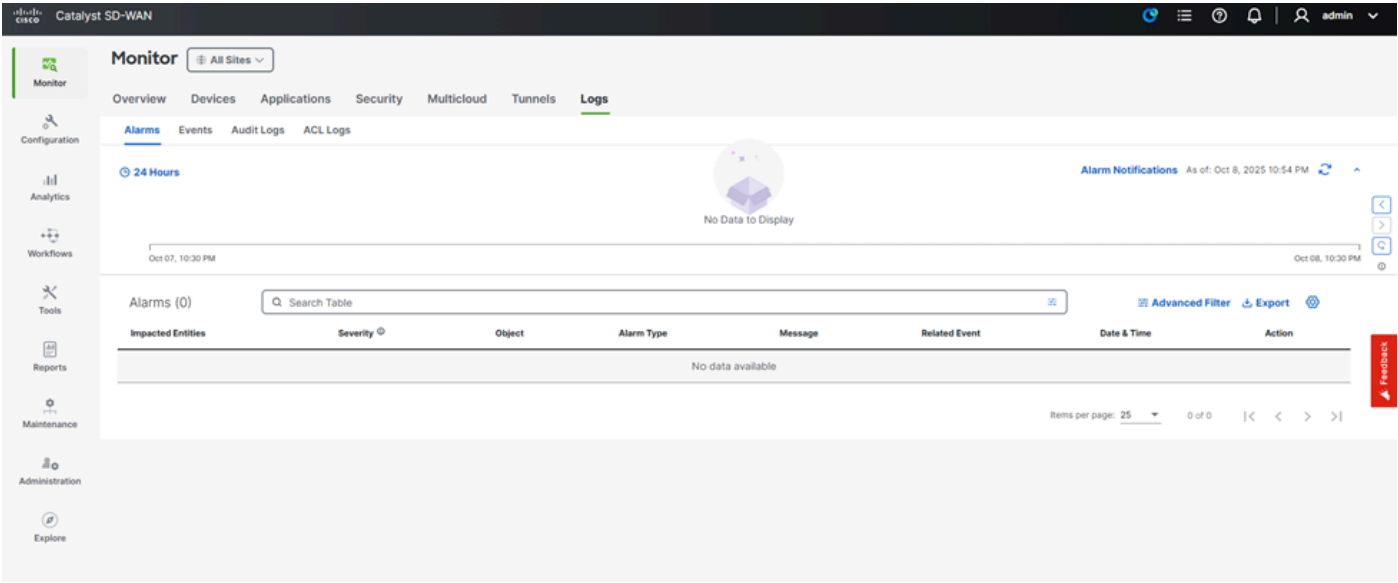


图 -14

SD-WAN警报通知

2.单击添加警报通知。

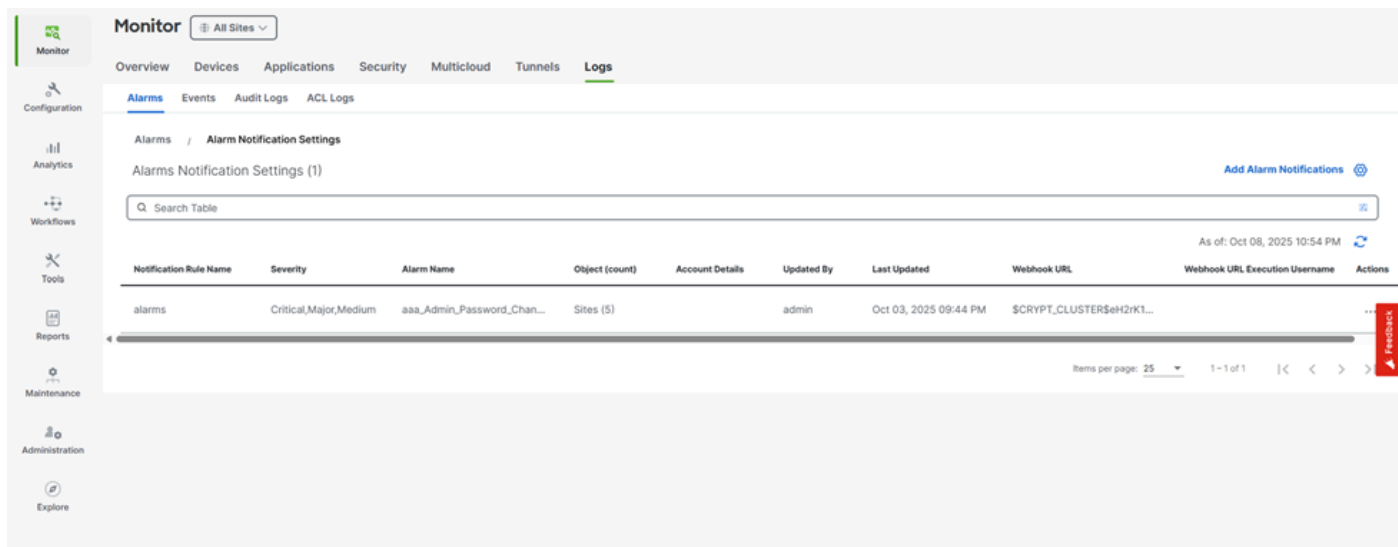


图 -15

3.输入相应的字段以设置警报通知。

1. 通知名称
2. 警报类型
3. 交付方式：WebHook

1. 为Webhook选择通道：自定义
2. WebHook URL（在ServiceNow端配置中的步骤24中创建的API）：
https://dev271953.service-now.com/api/x_1831932_ud_vma_0/ud_vm_snow
3. WebHook阈值：100
4. 将用户名和密码留空。



警告：在生产中将用户名和密码字段留空存在安全风险。小心行动。

4.单击添加通知。

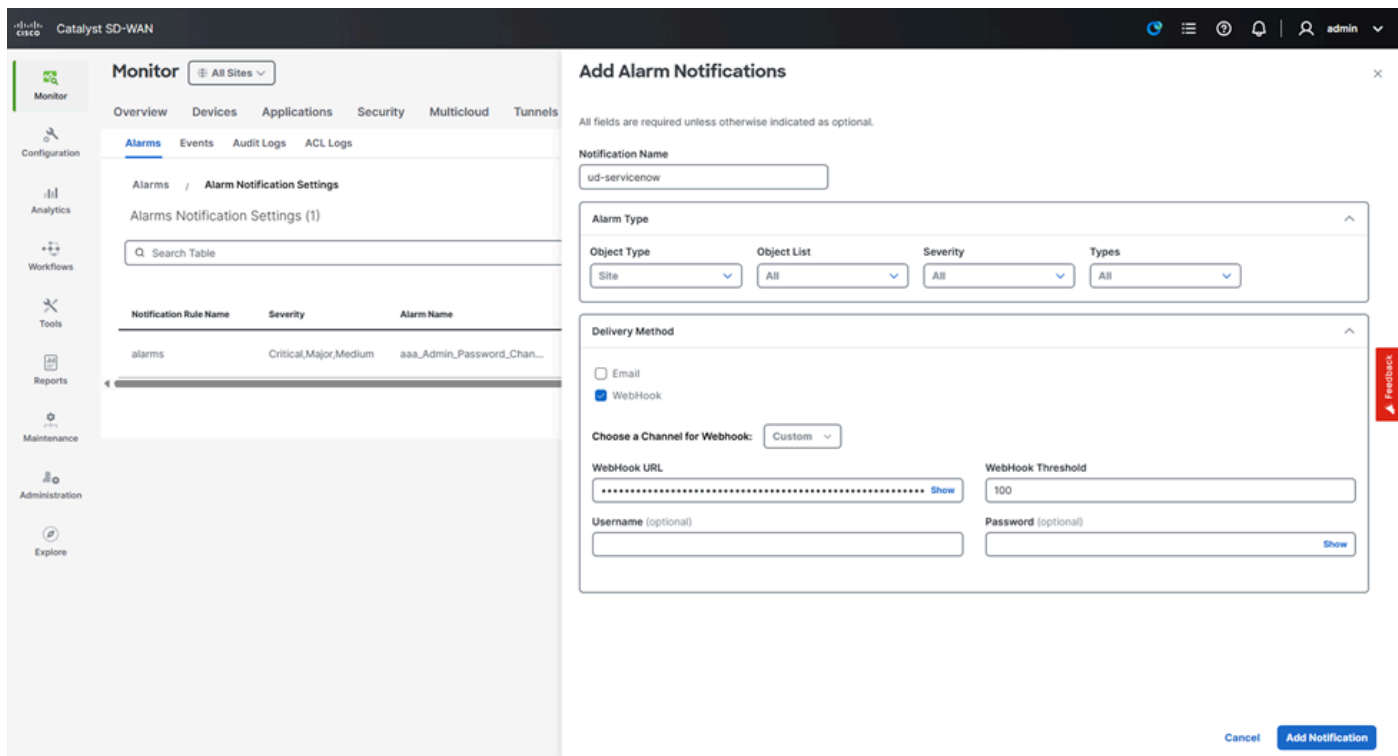
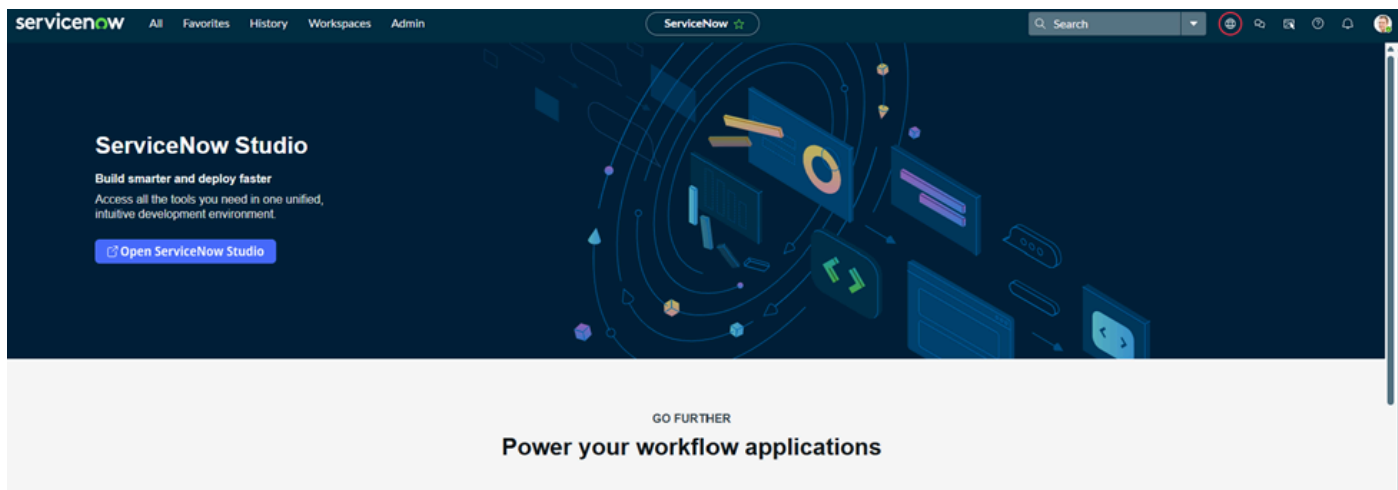


图 -16

验证

ServiceNow票证页面

1. 让我们导航到ServiceNow票证页面。
 1. 为此，请使用此URL访问ServiceNow主工作区。它是您的PDI.service-now.com/nav_to.do。
 1. 示例：https://dev271953.service-now.com/nav_to.do



ServiceNow工作区

2. 单击All，然后搜索并点击Incidents。

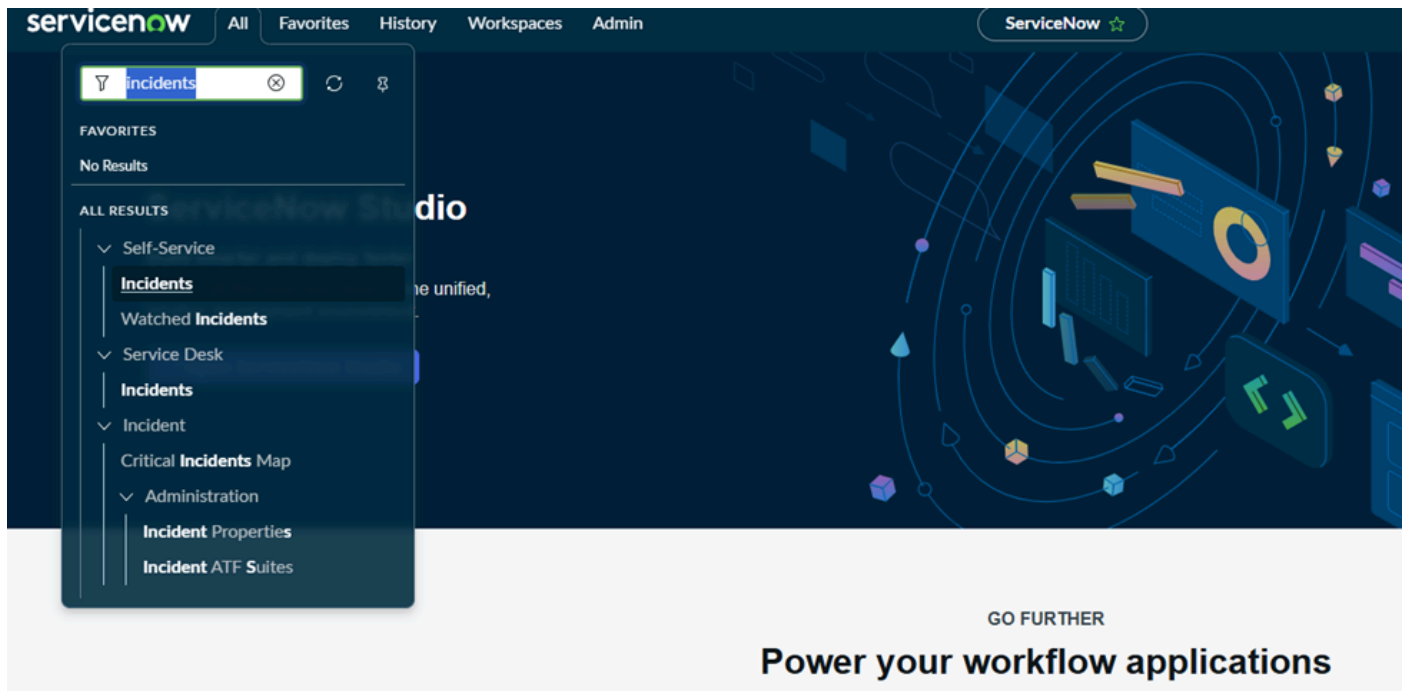


图 -17

3.事件页面打开。



事件页面

4.从SD-WAN Manager CLI vshell , 对ServiceNow执行CURL命令 :

```
curl -X POST "<your_webhook_url_aining_servicenow>"
```

成功消息 :

```
udutt-krk-dmz-vmanage:~$ curl -X POST "https://dev271953.service-now.com/api/x_1831932_ud_vma_0/ud_vm_s
{"result":{"message":"Webhook received and processed."}}
```

5.注意ServiceNow上创建的事件。

Incidents View: Self Service			for text	Search
All > Active = true				
Number	Opened	Short description		
INC0010038	2025-10-09 00:29:25	vManage Alert: No message		

图 -18

如果您发现CURL中存在身份验证错误，如下所示：

```
udutt-krk-dmz-vmanage:~$ curl -X POST "https://dev271953.service-now.com/api/x_1831932_ud_vma_0/ud_vm_s
{"error":{"message":"User is not authenticated","detail":"Required to provide Auth information"},"statu
```

修复身份验证错误的步骤

1. 导航回ServiceNow Studio页面，访问您的应用(例如：ud-vmanage)，然后选择您的脚本 REST API (例如ud-vm-snow)。

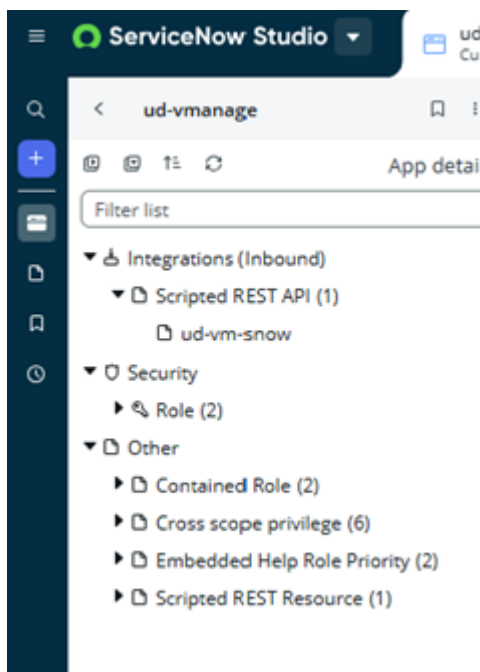


图 -19

2. 向下滚动到“资源”并单击资源(例如：警报)。

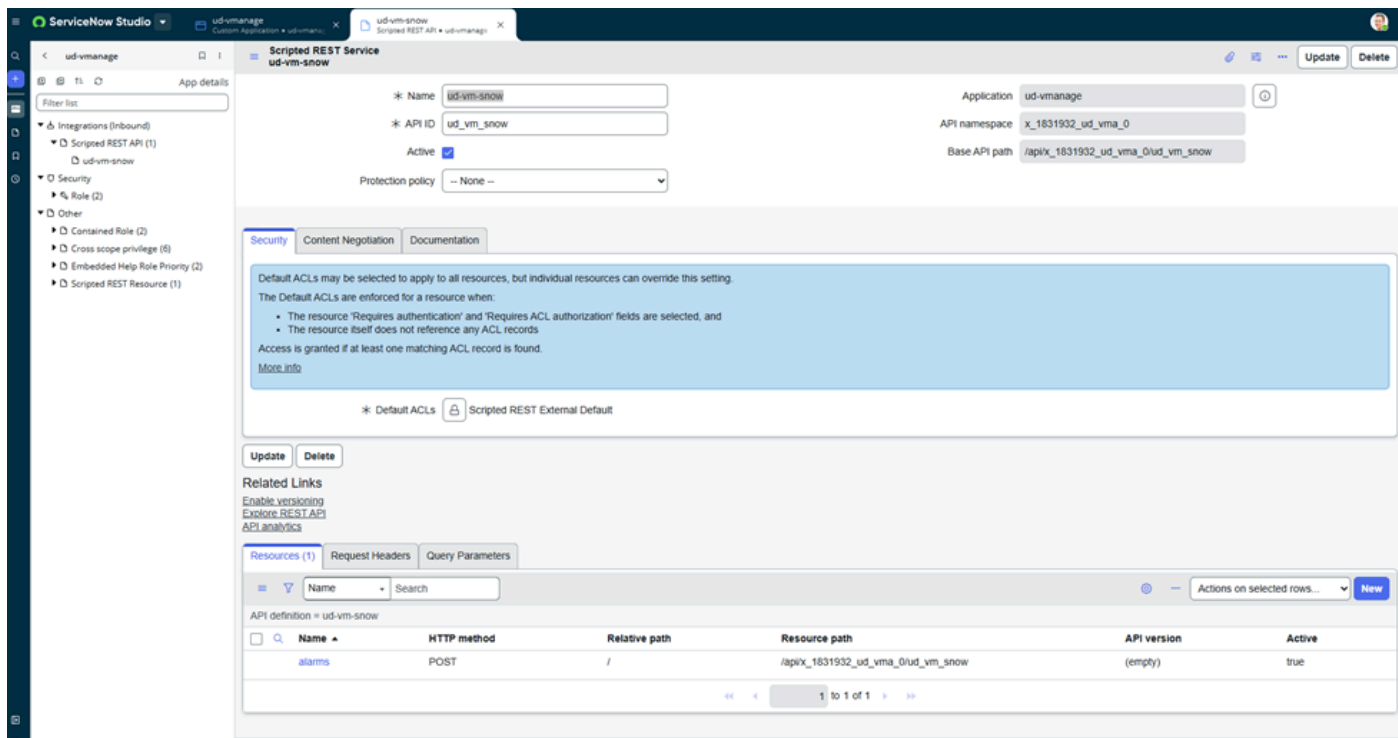


图 -20

3.向下滚动到Security并取消选中authentication和ACL authorization，如下所示。

a.需要身份验证

b.需要ACL授权

c.点击更新

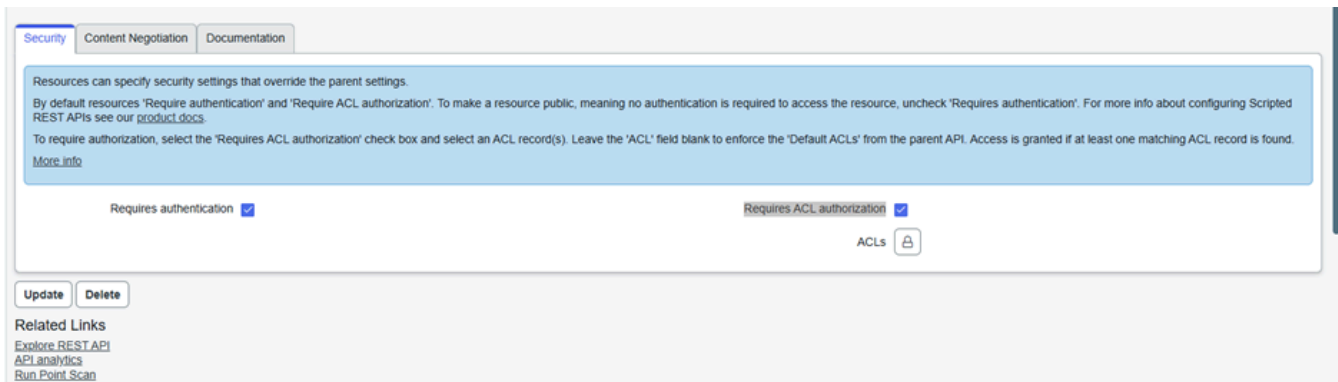


图 -21

4.再次从SD-WAN Manager vshell执行CURL命令，这次成功。

生成警报

5.现在在SD-WAN Manager中生成警报，例如：

a.关闭SD-WAN重叠网络中的一个广域网边缘路由器的接口。

b.清除来自任何SD-WAN Manager或任何WAN Edge路由器的控制连接。

c.执行端口跳跃。



请在Webhook配置期间检查要生成警报的目标站点。

6.注意ServiceNow页面上创建的突发事件。

servicenow											
Incidents											
Incidents Updated											
All											
	Number	Opened	Short description	Caller	Priority	State	Category	Assignment group	Assigned to	Updated	Updated by
	INC0010008	2025-10-08 15:26:40	vManage Alert: The interface oper-state changed to up	Guest	3 - Moderate	New	Inquiry / Help	(empty)	(empty)	2025-10-08 15:26:40	guest
	INC0010007	2025-10-08 15:26:40	vManage Alert: The interface admin-state changed to up	Guest	3 - Moderate	New	Inquiry / Help	(empty)	(empty)	2025-10-08 15:26:40	guest
	INC0010004	2025-10-08 15:26:37	vManage Alert: vBond state changed	Guest	3 - Moderate	New	Inquiry / Help	(empty)	(empty)	2025-10-08 15:26:37	guest
	INC0010005	2025-10-08 15:26:37	vManage Alert: The interface oper-state changed to down	Guest	3 - Moderate	New	Inquiry / Help	(empty)	(empty)	2025-10-08 15:26:37	guest
	INC0010006	2025-10-08 15:26:37	vManage Alert: No active control vBond	Guest	3 - Moderate	New	Inquiry / Help	(empty)	(empty)	2025-10-08 15:26:37	guest
	INC0010003	2025-10-08 15:26:37	vManage Alert: The interface admin-state changed to down	Guest	3 - Moderate	New	Inquiry / Help	(empty)	(empty)	2025-10-08 15:26:37	guest
	INC0010002	2025-10-08 15:23:15	vManage Alert: No message	Guest	3 - Moderate	New	Inquiry / Help	(empty)	(empty)	2025-10-08 15:23:15	guest
	INC0010001	2025-10-08 14:56:53	vManage Alert: No message	Guest	3 - Moderate	New	Inquiry / Help	(empty)	(empty)	2025-10-08 14:56:53	guest

图 -22

servicenow

All Favorites History Workspaces Admin

Incident - INC0010005

Search

Incident INC0010005

Discuss Follow Update Resolve Delete

NumberINC0010005

* CallerGuest

CategoryInquiry / Help

Subcategory-- None --

Service

Service offering

Configuration item

* Short descriptionvManage Alert: The interface oper-state changed to down

Description

Device ID: Unknown device
Severity: Critical
[{"suppressed":false,"devices":[{"system_ip":"10.1.1.1"}],"eventname":"interface-state-change","type":"interface-state-change","rulename":"interface-state-change","component":"VPN","update_time":1759962378052,"entry_time":1759962378052,"statcyclotime":1759962378052,"message":"The interface oper-state changed to down","severity":"Critical","severity_number":1,"uuid":"616c4fe-52cd-4863-a9a7-c2a7c56b7a05","values":{"host_name":"udutt-krk-dmz-vmanage","system_ip":"10.1.1.1","if_name":"eth0","new-state":"down","vpn-id":"0"},"rule_name_display":"Interface_State_Change","receive_time":1759962378710,"values_short_display":{"host_name":"udutt-krk-dmz-vmanage","system_ip":"10.1.1.1","if_name":"eth0","new-state":"down"},"system_ip":"10.1.1.1","host_name":"udutt-krk-dmz-vmanage","acknowledged":false,"active":true}]

Channel-- None --

StateNew

Impact2 - Medium

Urgency2 - Medium

Priority3 - Moderate

Assignment group

Assigned to

Related Search Results

Notes

Related Records

Resolution Information

Watch list

Work notes list

Work notes

Comments (Customer visible) Post

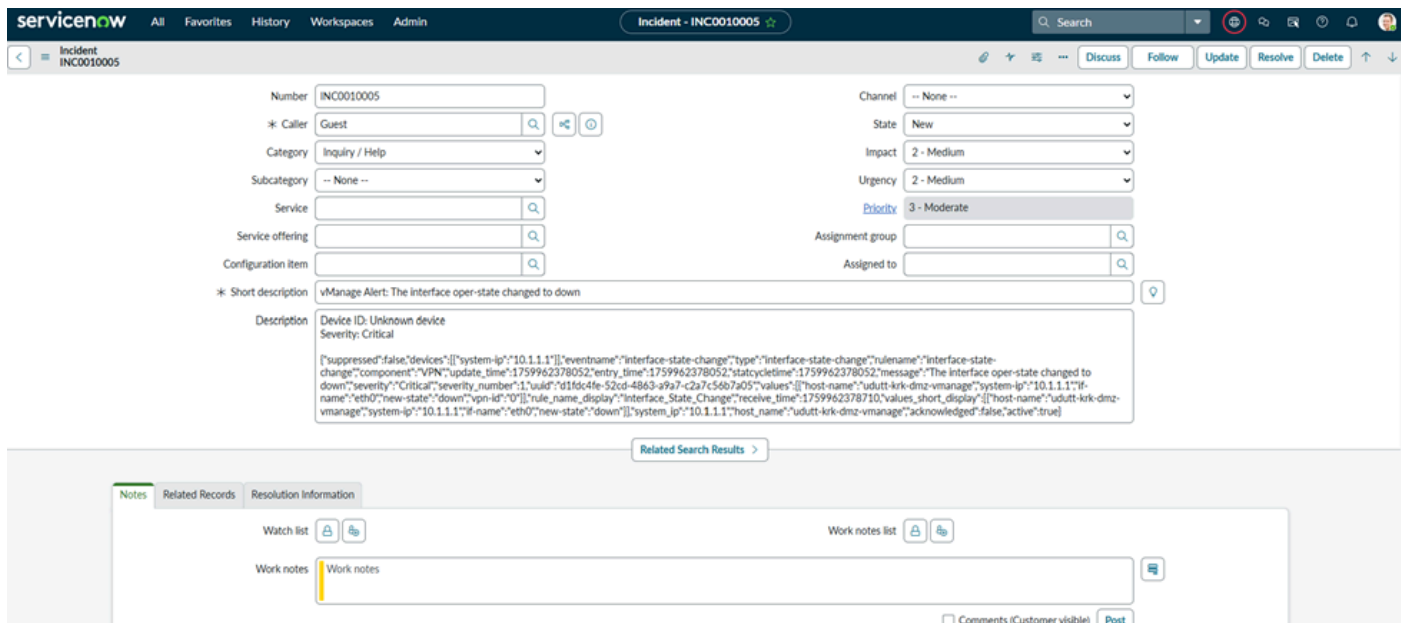


图 -24

故障排除

1.从SD-WAN Manager端，检查/var/log/nms/vmanage-server.log的内容，查找与HTTP POST消息相关的任何错误。

成功的Webhook示例：

```
03-Oct-2025 12:21:05,394 UTC INFO [] [udutt-krk-vmanage] [DataCollectionManager] (Thread-157) || *****
03-Oct-2025 12:21:05,677 UTC INFO [] [udutt-krk-vmanage] [EventDataCollector] (device-event-processing) || *****
03-Oct-2025 12:21:05,677 UTC INFO [] [udutt-krk-vmanage] [DataCollectionManager] (Thread-157) || *****
03-Oct-2025 12:21:06,745 UTC INFO [] [udutt-krk-vmanage] [DeviceHistoryConfigurationDAO] (device-confi) || *****
03-Oct-2025 12:21:07,192 UTC INFO [] [udutt-krk-vmanage] [NotificationsConsumer] (pool-59-thread-9) || *****
03-Oct-2025 12:21:07,196 UTC INFO [] [udutt-krk-vmanage] [NotificationsConsumer] (pool-59-thread-1) || *****
```

未成功的Webhook请求示例：

```
03-Oct-2025 12:24:46,949 UTC INFO [] [udutt-krk-vmanage] [DataCollectionManager] (Thread-157) || *****
03-Oct-2025 12:24:48,065 UTC INFO [] [udutt-krk-vmanage] [DeviceHistoryConfigurationDAO] (device-confi) || *****
03-Oct-2025 12:24:48,305 UTC INFO [] [udutt-krk-vmanage] [NotificationsConsumer] (pool-59-thread-15) || *****
03-Oct-2025 12:24:48,305 UTC INFO [] [udutt-krk-vmanage] [NotificationsConsumer] (pool-59-thread-14) || *****
```

2.我们还可以执行数据包捕获，以确认SD-WAN Manager和服务Now之间的会话是否正常。

5	3.160694	172.19.34.6	8.8.8.8	DNS	85	Standard query 0xf3cd AAAA dev271953.service-now.com
6	3.204792	8.8.8.8	172.19.34.6	DNS	143	Standard query response 0xf3cd AAAA dev271953.service-now.com SOA edns140.ultradns.com
7	3.208661	8.8.8.8	172.19.34.6	DNS	101	Standard query response 0xffff2 A dev271953.service-now.com A
8	3.209253	172.19.34.6		TCP	66	46872 → 443 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_PERM WS=128
9	3.352225		172.19.34.6	TCP	66	443 → 46872 [SYN, ACK] Seq=0 Ack=1 Win=29200 Len=0 MSS=1300 SACK_PERM WS=512
10	3.352693	172.19.34.6		TCP	54	46872 → 443 [ACK] Seq=1 Ack=1 Win=64256 Len=0

使用隐藏公有IP的数据包捕获

相关信息

- [SD-WAN Manager Webhook故障排除](#)
- [技术支持和文档 - Cisco Systems](#)

关于此翻译

思科采用人工翻译与机器翻译相结合的方式将此文档翻译成不同语言，希望全球的用户都能通过各自的语言得到支持性的内容。

请注意：即使是最好的机器翻译，其准确度也不及专业翻译人员的水平。

Cisco Systems, Inc. 对于翻译的准确性不承担任何责任，并建议您总是参考英文原始文档（已提供链接）。