

# Entra ID Integration with OmniVista for Secure Wired and Wi-Fi Authentication



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# Introduction

This application note provides a guide for integrating Entra ID (formerly Azure AD) authentication with the OmniVista 10 network management platform. It covers the configuration process for Entra ID authentication across wired and wireless networks, using OV10 for managing network settings, including SSID configurations.

Entra ID, a cloud-based identity management solution, combined with the OmniVista 10 platform, optimizes and secures user authentication procedures. This integration removes the need for on-premises authentication systems, offering a fully cloud-based and efficient alternative. OV10 enables centralized network access management, simplifies SSID configuration, and securely integrates with Entra ID.

# **Prerequisites**

**Entra ID and Entra ID Account:** Entra ID is a cloud-based identity and access management solution that centralizes and secures user authentication. Each Entra ID account provides access to specific network resources.

For this project, Entra ID retrieves authorized users for Wi-Fi and wired network authentication, facilitating seamless integration via OV10

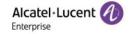
**OV10 cloud management access:** OV10, or OmniVista 10, is a network management platform that allows for the configuration and oversight of network settings, including both wired and wireless networks.

• In this project, OV10 configures the SSID and specifies "Cloud Identity" (Entra ID) as the authentication source, enhancing network security and user management.

**Required Tools and Devices:** An OV10-compatible Stellar access point and a valid Entra ID account are required. Supported models exclude AP1101 and AP1201L/H/HL. These elements ensure seamless SSID configuration and integration with OV10.

#### Important Consideration:

This integration leverages Entra ID for centralized identity management and OV10 for cloud-based network access control, supporting both wired and wireless authentication securely.



For this guide, Stellar access points (excluding AP1101 and AP1201L/H/HL) are used to demonstrate practical deployment and authentication in a controlled environment.

#### **Use Case**

#### Entra ID Integration with OV10 for Secure Wired and Wi-Fi Authentication:

- OmniAccess Stellar Access Points: OV10-compatible access points are used to connect users to the wireless network.
- Entra ID: A centralized identity management platform that authenticates users and manages secure network access through "Cloud Identity."
- OmniVista (OmniVista Cirrus 10): The network management platform that configures the SSID and integrates Entra ID as the authentication source, simplifying the process of managing authorized users and enhancing security.

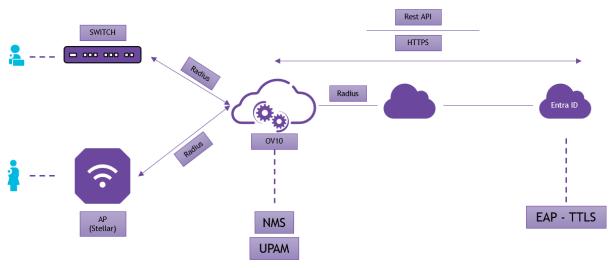


Fig. 1: Use Case

# **Network Setup**

#### **Entra ID:**

The steps below are designed to gather the key information (Tenant ID, Client ID, and client secret) required to create a Cloud Identity in OV10.

#### Step 1: Generate and Save the Client Secret



The client secret is a crucial credential used for secure authentication between your registered application and Azure services. <u>You will need this client secret to create</u> the cloud identity in UPAM later in the process.

#### 1. Access Your Account:

Log in to your Azure portal: <a href="https://portal.azure.com/">https://portal.azure.com/</a>

- 2. Navigate to App Registrations:
  - ✓ Go to Microsoft Entra ID (formerly Azure AD).
  - ✓ Select App registrations from the left-hand menu.

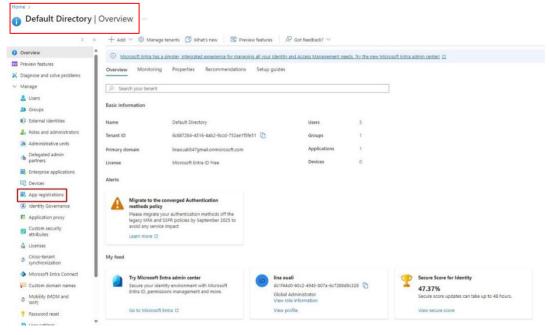


Fig. 2: Access to Entra ID > App Registrations

- 3. Select Your Application:
  - ✓ Choose All Applications and locate your application.
  - ✓ Click on your application to open its details.

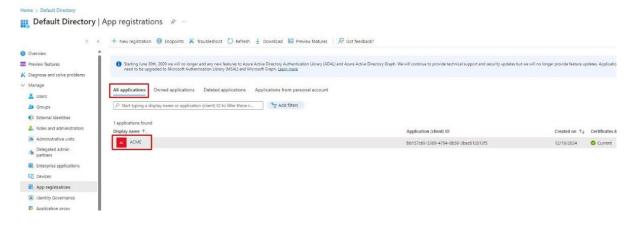


Fig. 3: View of Application Registrations in Entra ID





#### 4. Generate the Client Secret:

- ✓ Go to Certificates & Secrets under your application settings.
- ✓ Click on New client secret to create a new secret.
- ✓ Copy the Value Immediately: The secret value is displayed only once. Save it securely, as you cannot retrieve it later.



Fig. 4: Create a client secret in Entra ID

#### Step 2: Retrieve Tenant ID and Client ID

The Tenant ID and Client ID are essential identifiers for your application in Azure AD. These values will also be required later to configure your application for secure access to Azure resources.

#### 1. Access Your Application Overview:

✓ In the Overview tab of your application, you will find the Tenant ID and Client ID.

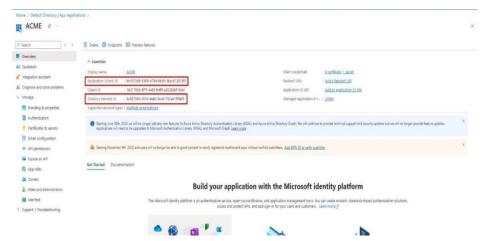


Fig. 5: Retrieve Client ID and Tenant ID for the REST API



✓ you can retrieve the domain name (Email suffix) under "Custom domain names"

# Step 3: Example of Registering an application to Connect OV10 to Entra ID for User Authentication (I will change the title)

These steps guide you through connecting OV10 to Microsoft Entra ID for efficient user authentication. By registering an application (or using an existing one, with a detailed example provided), and configuring the necessary API permissions, OV10 ensures secure authentication for Azure users.

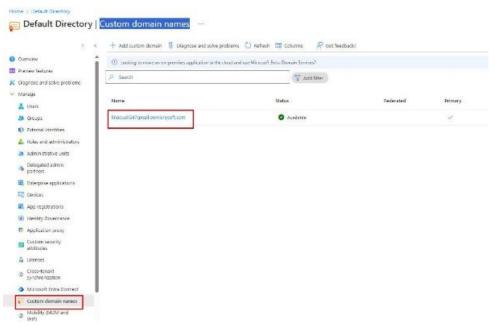


Fig. 6: Retrieve the domain name

Follow these steps to complete the registration:

- 1. Add an application:
  - ✓ Navigate to App registrations.

✓ Add a new application as shown in the figures below:

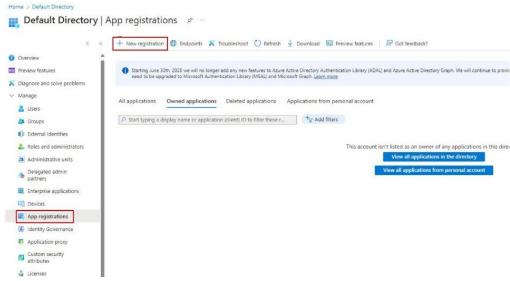


Fig. 7: Add a new application

#### 2. Provide API Permissions:

This step is crucial to grant OV10 the necessary permissions to securely interact with Microsoft Entra ID

✓ Assign the necessary API permissions for ACME

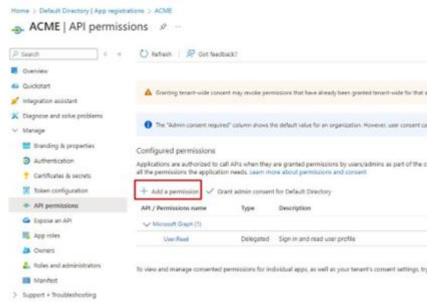


Fig. 8: Assign the necessary API permissions

✓ And then choose Microsoft graph to select the required permissions

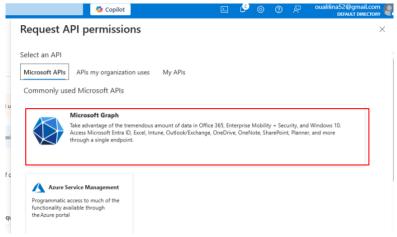


Fig. 9: Assign the necessary API permissions (Microsoft graph)

✓ Ensure the following delegated API permissions are granted

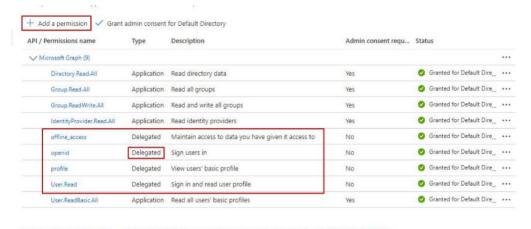


Fig. 10: delegated API

- ✓ Verify Authentication with a REST API To verify that authentication is functioning correctly, we can use a REST API application for confirmation.
- ✓ Copy the URL <your application> → <endpoints> → OAuth 2.0 token endpoint (v2)

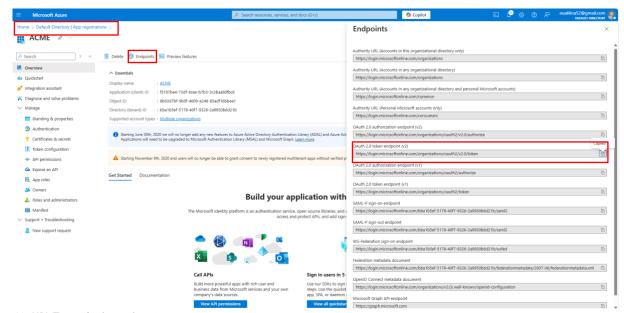


Fig. 11: URL To verify the authentication



Execute an API to Validate Credentials

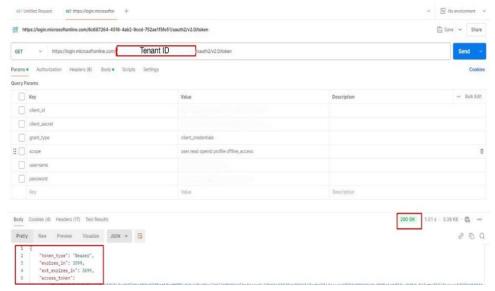


Fig. 12: Execute an API to Validate Credentials

If everything is working up to this point, you can now proceed to create Cloud Identity in UPAM.

# Creation of cloud identity on UPAM:

- 1. Navigate to **Network Access** in OV10 interface.
- 2. Go to UPAM NAC and select External Source.
- 3. Choose Cloud Identity from the options.
- 4. Click on Create a Cloud Identity to proceed.

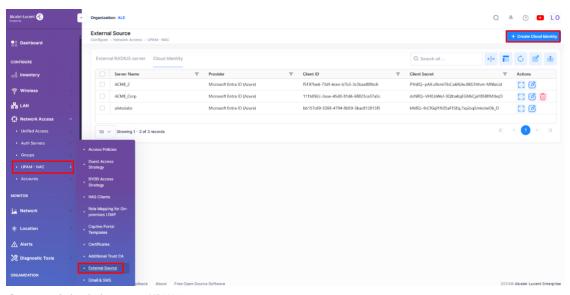


Fig. 13: Creation of cloud identity on UPAM 1  $\,$ 



5. Enter the retrieved values as explained in section I in step 1 and 2, and this will successfully create your authentication source.

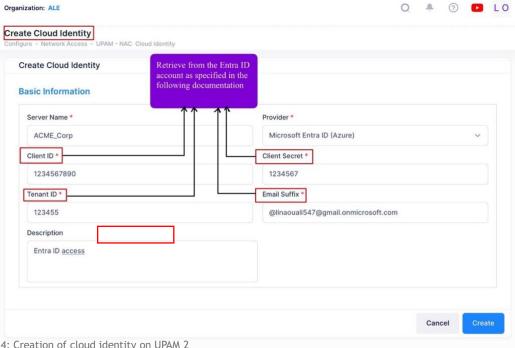


Fig. 14: Creation of cloud identity on UPAM 2

## Wired Connection Setup:

The following steps outline the process for configuring Entra ID authentication in a wired network environment with OV10:

1. Configuring an AAA Server Profile:

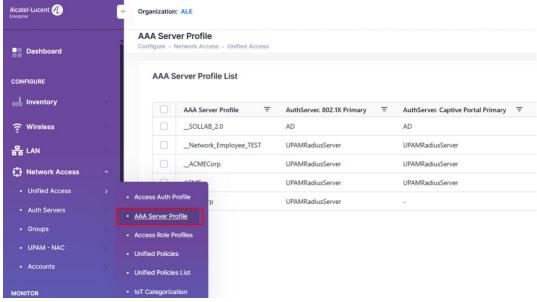


Fig. 15: Configuring an AAA Server Profile 1

Choose the primary authentication server: **UPAMRadiusServer** AND use it for: 802.1X, MAC and Captive Portal

 Select Primary Accounting Server: UPAMRadiusServer AND use it for: 802.1X, MAC and Captive Portal

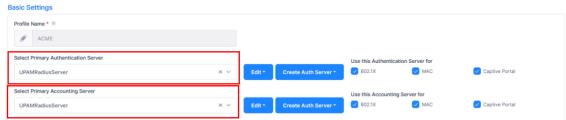


Fig. 16: Configuring an AAA Server Profile 2

• MAC as the Calling Station ID type option for 802.1X, MAC, and Captive Portal authentication is selected by default.

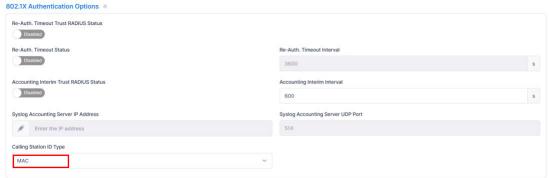


Fig. 17: Configuring an AAA Server Profile 3

2. Access Auth Profile Configuration:

#### a. <u>Step 1:</u>

 Choose your AAA server profile that you created in the previous setup AND enable the 802.1X Authentication.

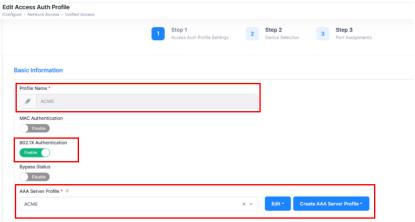
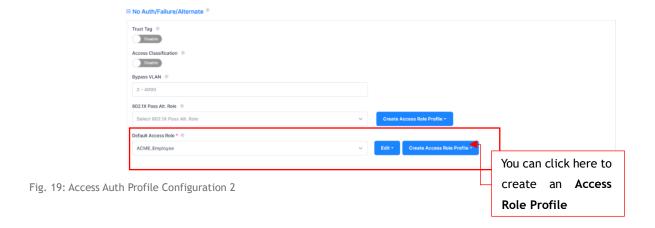


Fig. 18: Access Auth Profile Configuration 1

And define your Default Access Role: (ex: ACME-Employee) In which you
have the ability to create in

Network Access → Unified Access → Access Role Profile



#### b. <u>Step 2:</u>

• In the second setup, select your device assignment.

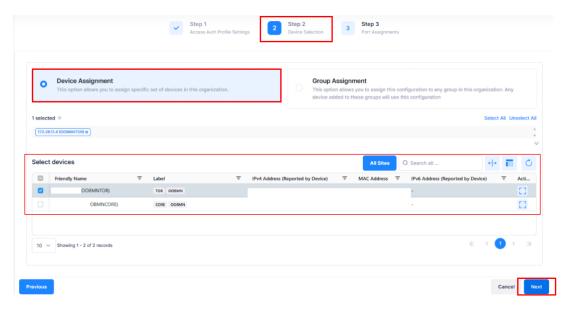


Fig. 20: Access Auth Profile Configuration 3

#### c. <u>Step 3:</u>

• Please select the appropriate port for the wired connection to ensure proper access authentication configuration.



Fig. 21: Access Auth Profile Configuration 4

#### 3. Access Policy Configuration:

Choose a name for the access policy you want to create, and the precedence defaults to 1.



Fig. 22: Access Policy Configuration 1

#### **Mapping Condition:**

✓ Attribute: Network Type

✓ Operator: Equal

√ Value: wired



Fig. 24: Mapping Condition of Access Policy

**Authentication Method:** 



Fig. 25: Authentication Method 1

Allowed methods: EAP-TTLS

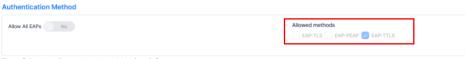


Fig. 26: Authentication Method 2

- Authentication Strategy:
  - Authentication Source: Cloud Identity and choose your cloud identity created.

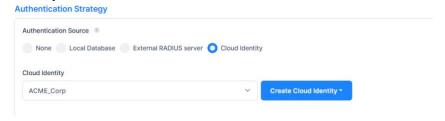


Fig. 26: Authentication Strategy

#### 4. Let's test the connection:

- 1- Connect your computer to the switch port you previously defined.
- 2- In the **Network** → **Ethernet** tab on your computer, click **Connect**.



3- Enter your credentials (an initial login is required, along with a password reset).

Reminder: During your first login to your Microsoft account, a password reset is mandatory.

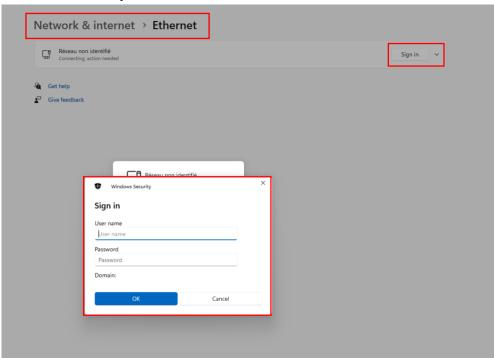
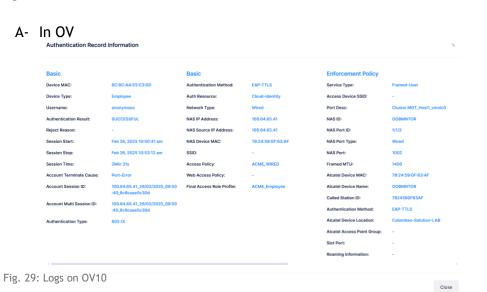


Fig. 27: test connection

We are now connected, as confirmed in the logs for OV10 and Entra ID.



Fig. 28: Successful Connection



#### B- In Entra ID,

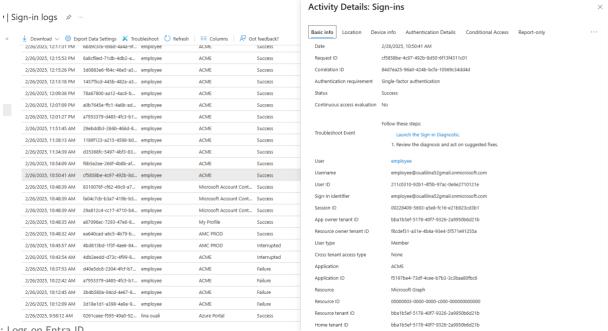


Fig. 30: Logs on Entra ID

# Configure SSID on OV10:

#### How to create a new SSID?

From the main menu, select **Wireless > SSIDs. This** will direct you to the SSID management page, where you can view and configure your SSIDs.

On the SSIDs management page, click the **Create SSID** button to begin creating a new SSID. This action will open the "**Add new SSID**" window.

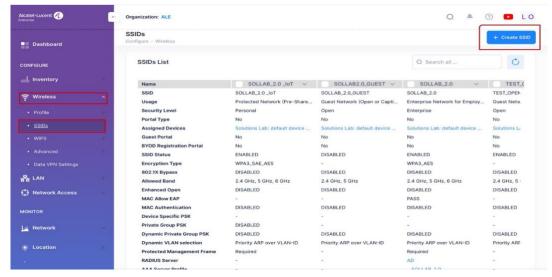


Fig. 31: Create SSID

#### Step 1:

1. **Profile Name:** A unique name to identify a wireless service, with multiple SSID services able to share the same profile name.



- 2. SSID: Unique SSID name broadcasted in the air.
- 3. Usage: In SSID usage, select "Enterprise network for employees (802.1X)".

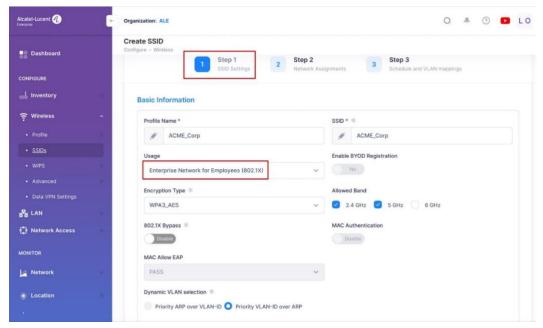


Fig. 32: Create SSID - Usage

- 4. Authentication Strategy: RADIUS Server: UPAMRadiusServer
- 5. Authentication Strategy->Access Policy: Choose configure access policy.

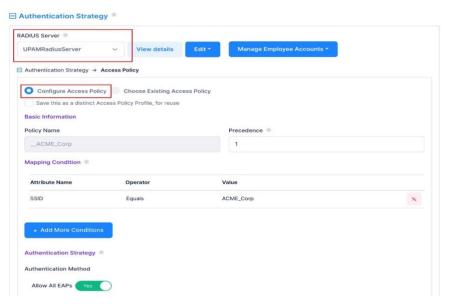


Fig. 33: Authentication Strategy

- 6. Authentication Source:
  - ✓ Cloud Identity.

✓ Select the Cloud Identity you created.

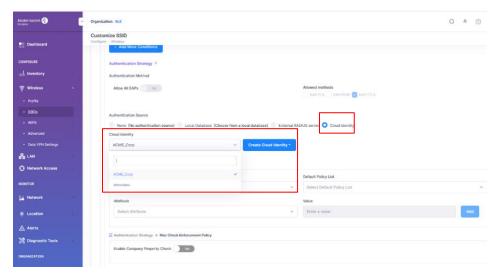


Fig. 34: Authentication Source  $\rightarrow$  Cloud Identity

- 7. In the Default VLAN/Network section, select "Configure Access Role Attributes".
- 8. click "Next"

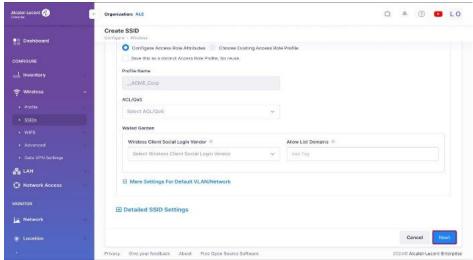


Fig. 35: Configure Access Role Attributes

#### Step 2:

Apply the SSID to one site:

Select your 'site' and all the 'AP groups' you want, then click "Next".



Fig. 36: Create SSID - Step 2

#### Step 3:

Schedule and VLAN mappings:

- Select your 'VLAN' (tagged/untagged). And click create.

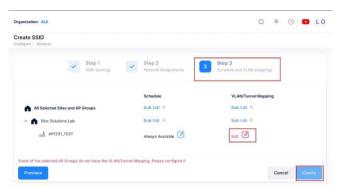


Fig. 37: Create SSID - Step 3- VLAN

- If you have completed the steps up to this point, your SSID has been successfully created. You can now proceed to test the connection.

### III. Connection Testing

#### **Example of Client-Side Configuration:**

- ✓ If the user has recently been added to your organization, they must perform an initial login to their Microsoft account
  - Access this site to log in to your account: <a href="https://login.microsoftonline.com/">https://login.microsoftonline.com/</a>
  - Change your password

If this is your first login, you may see this window after entering your username and temporary password.

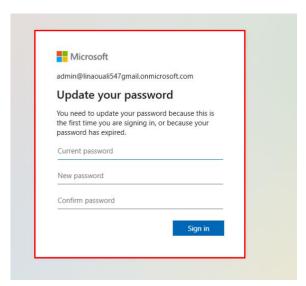


Fig. 38: Change your password in first login

✓ If not, enter your account username and password, and you will be connected to Wi-Fi.

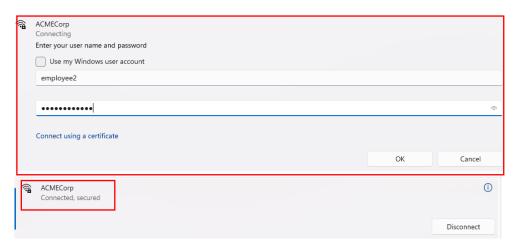
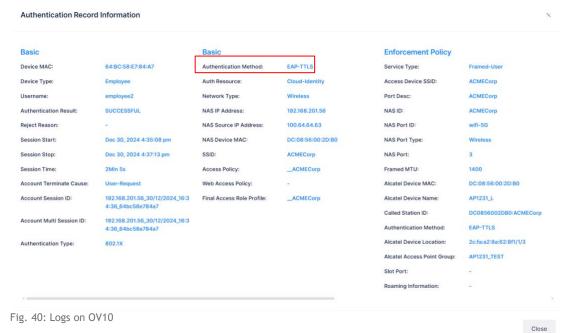


Fig. 39: Successful Connection

- ✓ To view the authentication logs, go to: Network  $\rightarrow$  Access Records  $\rightarrow$  Authentication Record.
- ✓ It can be seen in the logs that the user was authenticated using EAP-TTLS.



# Conclusion

In this application note, we have provided a comprehensive approach to integrating Entra ID, a cloud-based identity management solution, with the OV10 platform, a robust enterprise network management solution, for secure authentication across wired and Wi-Fi networks. By leveraging Entra ID's centralized identity management capabilities and OV10's network configuration tools, organizations can streamline access management, enhance security, and eliminate the complexities associated with on-premises authentication systems.

Key takeaways from this integration include:

- ✓ <u>Centralization and Efficiency:</u> Simplified user management through a cloud-based integration.
- ✓ <u>Enhanced Security:</u> Improved network protection through modern protocols and optimized configurations.
- ✓ <u>Fully Cloud-Based Solution:</u> Improved operational efficiency and cost-effectiveness by reducing the need for physical infrastructure and enabling seamless remote management.

By implementing the steps detailed in this guide, enterprises can optimize network authentication processes, enhance security, and provide a user-friendly experience. This integration highlights the synergy between cloud identity management and enterprise network management tools to meet evolving connectivity and security needs.