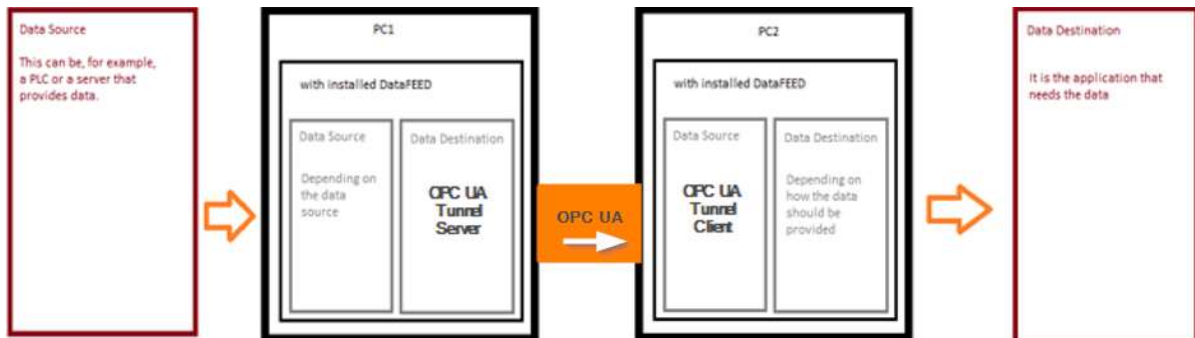


## How to set up an OPC UA Tunnel Connection (High Security Tunnel Communication)

Outline the network.



Before you get started with the configurations, take a moment to consider the data flow: who is sending the data and who needs it?

It's a smart move to create a basic sketch of how things will work before you jump into the actual setup.

As you can see in the sketch, the dataFEED OPC Suite on PC1 provides the data and is therefore the UA Tunnel Server. On the other hand, the dataFEED OPC Suite on the PC2 queries data and represents the UA Tunnel Client.

**OPC UA Tunneling provides a highly secure method for Tunnel communication.** It utilizes the OPC UA protocol to achieve the highest level of security and security policy. To establish secure communication between the Tunnel OPC UA Server and Tunnel OPC UA Client, 'uats' (UA Tunnel Server) and 'uatc' (UA Tunnel Client) files **must be exchanged**.

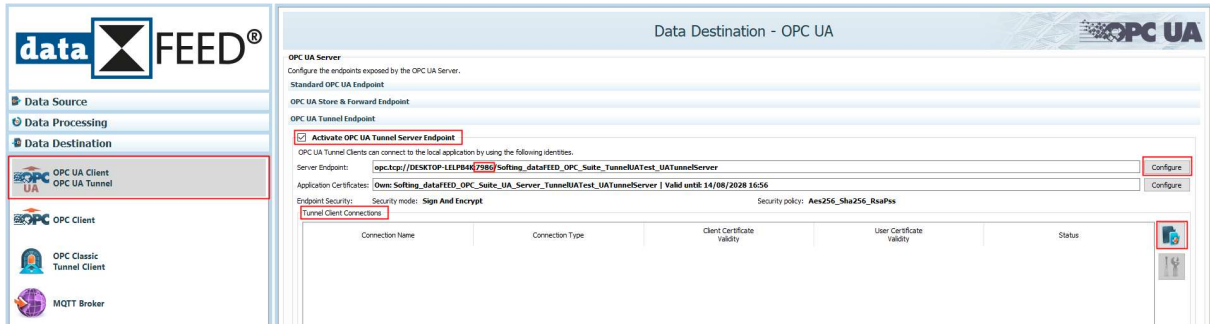
'uats' is a file contains all the necessary information about the **Tunnel Server**, such as the IP address, port number, and certificate.

'uatc' is a file also contains all the required information about the **Tunnel Client**, including the IP address, port number, and certificate.

This exchange ensures that the client possesses all the necessary information about the Server to establish communication, and vice versa, ensuring that the Server has all the required information to establish secure communication.

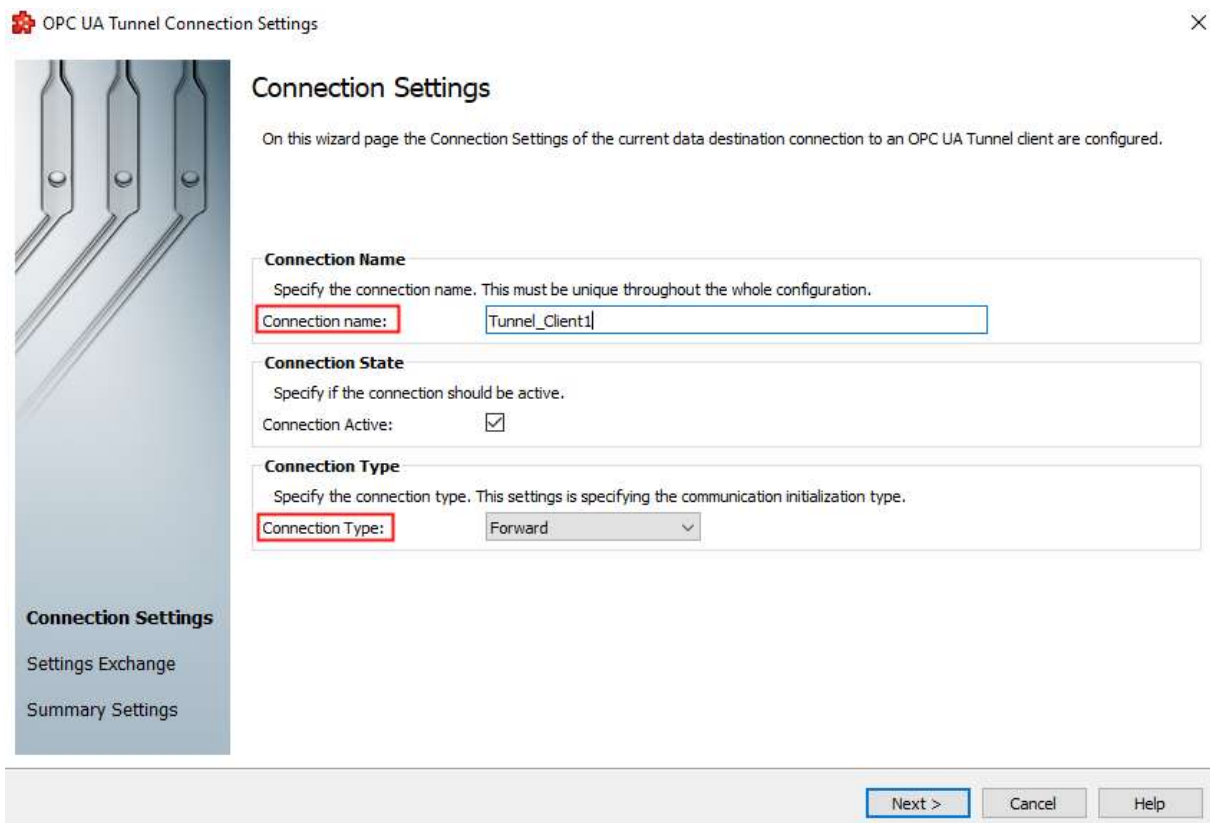
## Step 1: Configure the OPC UA Tunnel Server

- From the data destination list, select "OPC UA Tunnel " and activate the OPC UA Tunnel Server endpoint.
- Configure the port where the Tunnel Server will run and manage client connections.
- > Note: Ensure the selected port is available, not used by other software, and unblocked by the firewall.



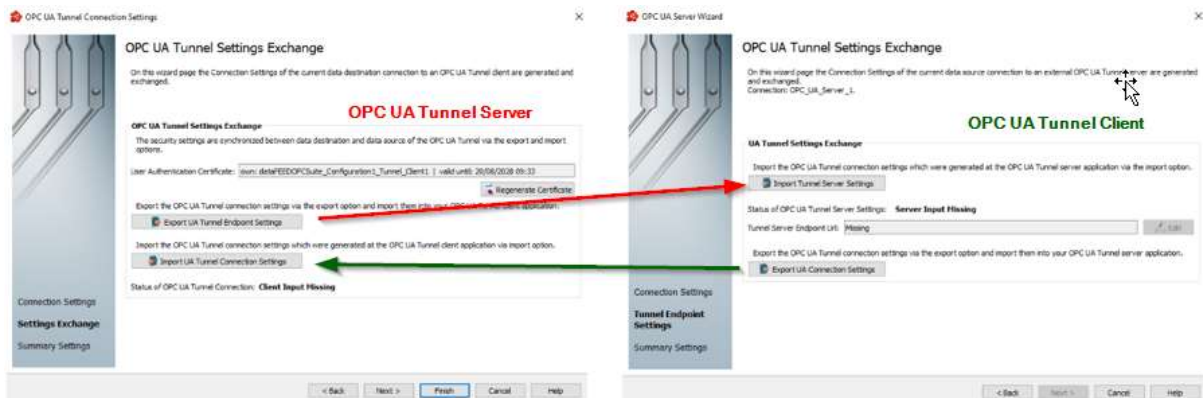
## Step 2: Add Connections to the Tunnel Server

Choose the name and connection type between the Server and Client.



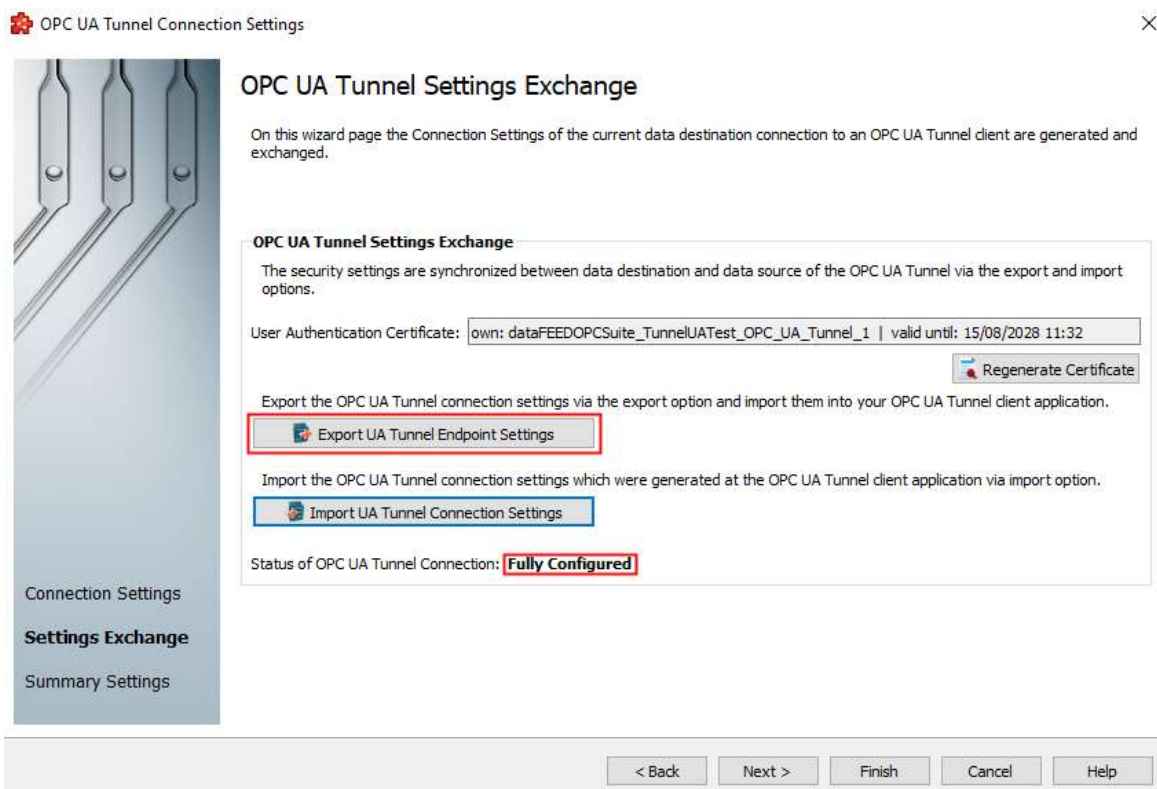
## Step 3: Exchange UA Tunnel Settings between Server and Client

To fully configure the connection, both the UA Tunnel Server and UA Tunnel Client connections settings (uats and uatc) need to be exchanged.



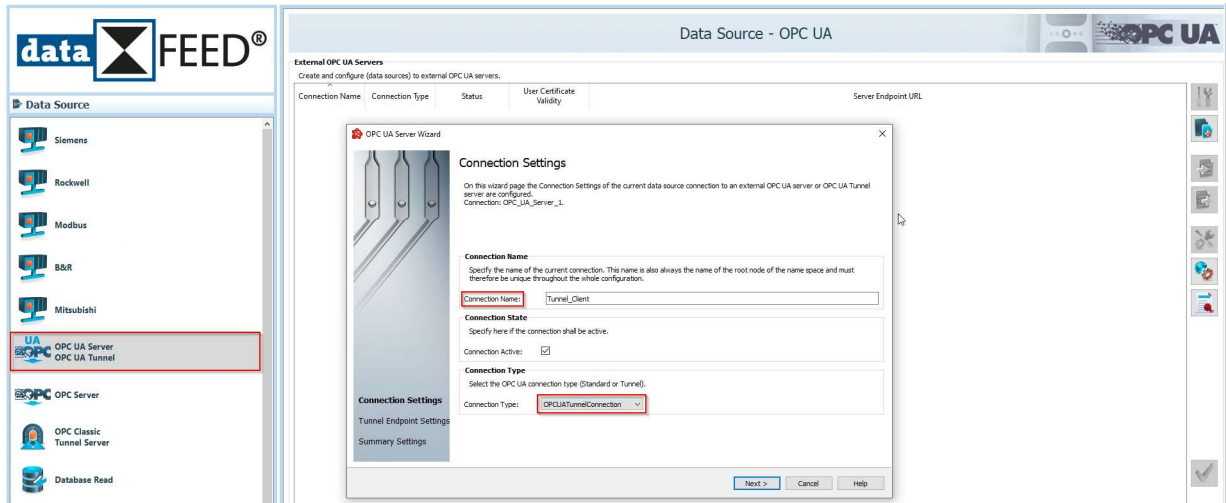
- Export the UA Tunnel connection file (uats) to be used in Step 5 (p.4). This export provides the client with all necessary information about the Tunnel Server.

- Import the UA Tunnel connection file (uatc) that was exported in Step 5 (p.4). This file contains information about the UA Tunnel Client.



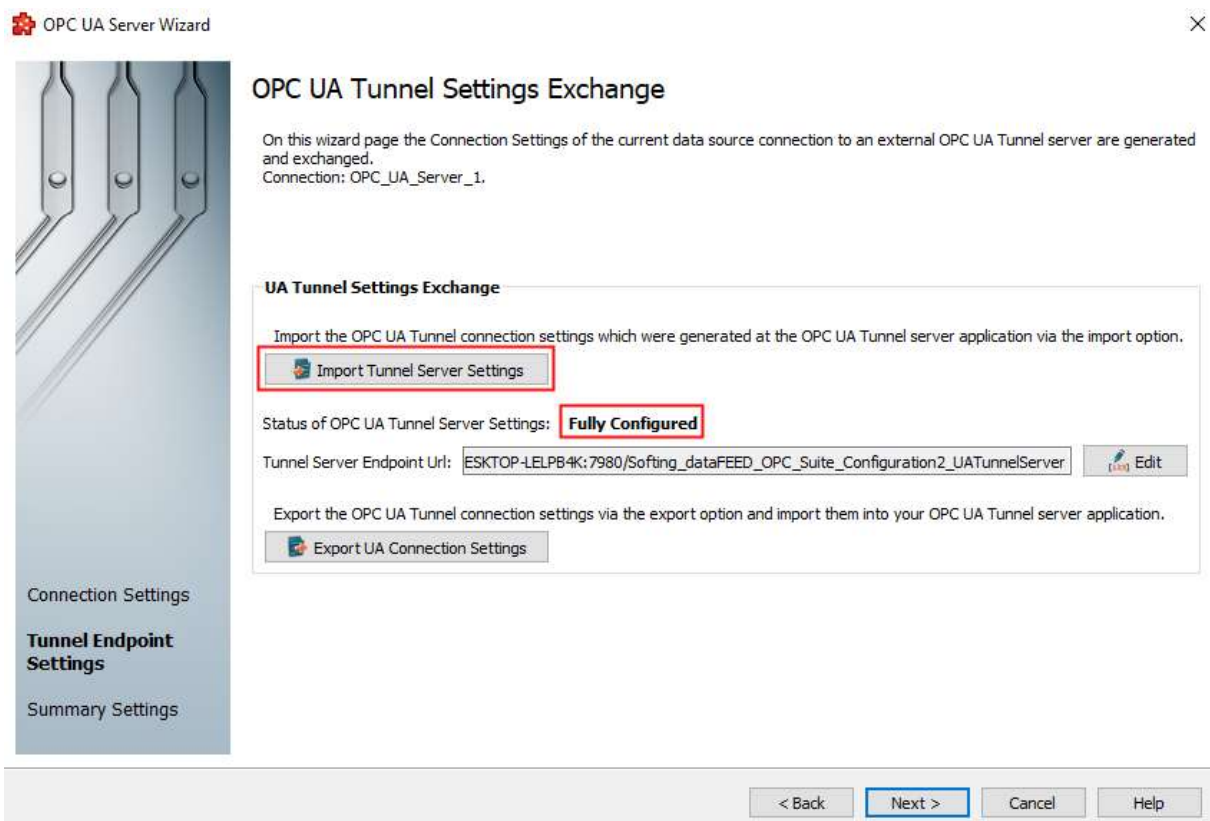
## Step 4: Configure the OPC UA Tunnel Client

- Select "OPC UA Tunnel " from the data source list.
- Choose a connection name and then select the connection type as OPC UA Tunnel connection.



## Step 5: Import and Export UA Tunnel Connections

- Import the UA Tunnel connection file (uats) that was exported in Step 3 (p.3). This file includes all the required information about the Tunnel Server.
- Export the UA Tunnel connection file (uatc) needed for the import in Step 3 (p.3). This export ensures that the Server has all the necessary information about the Tunnel Client.



## Required licenses.

The utilization of OPC UA Tunneling requires either **dataFEED OPC UATunnel (LRL-DY-135101)** or **dataFEED OPC Suite Extended (LRL-DY-135001)** on each system (PC1 and PC2).

