Configuring 802.1X Authentication Client for Windows 10

1. Type Control Panel on the search window. Click **Control Panel** 



1.1 In the Control Panel window, click on "Network and Sharing Center".



1.2 In Network and Sharing Center, click on "Setup a new connection or network".



1.3 In Setup, a connection or network, click on "Manually connect to a wireless network" and click Next.

		—		×
← ₫	Set Up a Connection or Network			
C	Choose a connection option			
	Connect to the Internet Set up a broadband or dial-up connection to the Internet.			
	Set up a new network Set up a new router or access point.			
	Manually connect to a wireless network Connect to a hidden network or create a new wireless profile.			
	Connect to a workplace Set up a dial-up or VPN connection to your workplace.			
	r	Net		
	L	INEXt	Car	icei

- 1.4 When prompted to enter the wireless network information:
  - Enter the correct Network name/SSID. (See Table 1 below)
  - Select "WPA2-Enterprise" as the Security type. Encryption type will default to AES.
  - Enable the "Start this connection automatically" checkbox.
  - Enable the "Connect even if the network is not broadcasting" checkbox.
  - Click the "Next" button

The SSID to be used are as follows:

User Group	SSID
All Students	NYP-Student
All Staff	STAFF
All Adjunct Lecturers/IOT Devices	NYP-Account

Table 1

For Student, please see below configuration settings:

÷	👰 Manually connect to a wi	reless network	_		×
	Enter information for	the wireless network you want to add			
	Network name:	NYP-Student			
	Security type:	WPA2-Enterprise ~			
	Encryption type:	AES $\lor$			
	Security Key:	Hide characte	rs		
	Start this connection a	automatically			
	Connect even if the new Warning: If you select	etwork is not broadcasting this option, your computer's privacy might be at risk.			
			Next	Can	cel

For Staff, please see below configuration settings:

<ul> <li>Manually connection</li> </ul>	t to a wireless network for the wireless network you want to a	add
Network name:	STAFF	
Security type:	WPA2-Enterprise	
Encryption type:	AES 🗸	
Security Key:	Hid	le characters
Start this connect Connect even if Warning: If you	ion automatically he network is not broadcasting elect this option, your computer's privacy might	be at risk.
		Next Cancel

For Adjunct Lecturers / IOT Devices, please see below configuration settings:

				_		×
←	👰 Manually connect to a wi	reless network				
	Enter information for t	the wireless network you war	nt to add			
	Network name:	NYP-Account				
	Security type:	WPA2-Enterprise ~				
	Encryption type:	AES $\sim$				
	Security Key:		Hide character	S		
	Start this connection a	utomatically				
	Connect even if the new Warning: If you select	etwork is not broadcasting this option, your computer's privacy	might be at risk.			
			_			
			Ν	lext	Cano	:el

1.5 After adding the wireless network profile successfully, click on the "**Change Connection settings**". Pop-up window will appear. (For example, connecting to NYP-Student SSID)

<ul> <li>Manually connect to a wireless network</li> </ul>	_	×
Successfully added NYP-Student		
→ Change connection settings Open the connection properties so that I can change the settings.		

Close

- 1.6 In the pop-up window, Wireless Network Properties:
  - Ensure the checkboxes for "Connect automatically when this network is in range" and "Connect even if the network is not broadcasting its name (SSID)" are checked.
  - Click on the "**Security**" tab.

NYP-Student Wireless	Network Properties	$\times$	
Connection Security			
Name:	NYP-Student		
SSID:	NYP-Student		
Network type:	Access point		
Network availability:	All users		
Network availability: All users  Connect automatically when this network is in range  Look for other wireless networks while connected to this network  Connect even if the network is not broadcasting its name (SSID)  Enable Intel connection settings  Configure			
	01		
	OK Cancel		

- 1.7 Under the **Security** options:
  - Ensure Security type is set to WPA2-Enterprise.
  - Ensure Encryption type is set to AES.
  - Select "Microsoft: Protected EAP (PEAP)" for network authentication method.
  - Uncheck the "Remember my credentials for this connection each time I'm logged on" checkbox.
  - Click on "Settings" button.

STAFF Wireless Network	k Properties		×	
Connection Security				
Security type:	WPA2-Enterprise	~		
Encryption type:	AES	~		
Choose a network aut	hentication method:			
Microsoft: Protected B	EAP (PEAP) 🛛 🗸	Settings		
Remember my creative Time Time Time Time Time Time Time Tim	lentials for this connect	ion each		
une im logged on				
	_			
Advanced settings				
		OK Cano	ter	

- 1.8 In the Protected EAP Properties page:
  - Uncheck "Verify the server's identity by validating the certificate". •

  - Check "Enable Fast Reconnect".
    Select "Secured password (EAP-MSCHAP v2)" for authentication method.
  - Click on the "**Configure...**" button. •

Protected EAP Properties	×
When connecting:	
Derify the server's identity by validating the certificate	
Connect to these servers (examples:srv1;srv2;.*\.srv3\.com):	
Trusted Root Certification Authorities:	
AddTrust External CA Root	^
Baltimore CyberTrust Root	
bitlocker.nyp.edu.sg	
Class 3 Public Primary Certification Authority	
DigiCert Global Root CA	
DigiCert High Assurance EV Root CA	×
Notifications before connecting:	_
Tell user if the server's identity can't be verified	$\sim$
Select Authentication Method:	
Secured password (EAP-MSCHAP v2)  V Configure	e
Dable Fast Reconnect	
Disconnect if server does not present cryptobinding TLV	
Enable Identity Privacy	
OK Cance	el 🛛

- Uncheck the "Automatically use my Windows logon name and password".
- Click on OK button.

EAP MSCHAPv2 Propertie	s X		
When connecting:			
Automatically use my Windows logon name and			
<ul> <li>password (and domain</li> </ul>	ii any).		
ОК	Cancel		

# 1.9 Under the Security options:

Click on the "Advanced settings" option from the followings:

NYP-Student Wireless	Network Properties		×
Connection Security			
Security type:	WPA2-Enterprise	~	
Encryption type:	AES	~	
Choose a network aut	hentication method:		
Microsoft: Protected	EAP (PEAP) 🛛 🗸	Settings	
Remember my creative I'm logged on	dentials for this connecti	ion each	
Advanced settings			
	(	ОК С	ancel

• Ensure the checkbox for "Specify authentication mode" is checked. Select "User authentication" under the Specify authentication mode.

Advanced setting	gs	×
802.1X settings	802.11 settings	
Secify a	uthentication mode:	
User aut	thentication $\checkmark$ Save credent	ials
Delete	e credentials for all users	
Enable sir	ngle sign on for this network	
Performed Per	rm immediately before user logon	
O Perform immediately after user logon		
	adelay (seconds): 10	*
sign o	n	
This n and u	etwork uses separate virtual LANs for machine ser authentication	
		ancel
	OK C	anneen

1.10 Click the "**OK**" button twice to return to the below screen. Click on "**Close**" button.



1.11 You have successfully created a wireless network profile.

# **Connection to NYP wireless LAN**

- 2. When you are within range of the wireless Access Point and your wireless network radio enabled, Windows will display a pop-up message on your taskbar.
  - 2.1 When you click on the pop-up message, the below screen will appear. Enter your username and password to login to the wireless network.

Sign in						
Sign in						
8						
Jser name						
Password						
Domain:						
	OK Cancel					

## For Student Wireless Login to "NYP-Student" SSID

Use Student Portal username and password

### For Staff Login to "STAFF" SSID

Use Windows Login name and password

### For adjunct lecturer login to "NYP-Account" SSID

Use Office 365 username and password.

2.2 If the logon does not appears, type settings on the search window. Click **Settings**.



### 2.3 Click on Network & Internet



2.4 Click on the SSID that you have configured previously and connect as shown below.



2.5 Key-in your username and password.

Sig	Sign in					
	Sign in					
	8					
	Jser name					
	Password					
	Domain:					
			ОК	Cancel		

2.6 Click on "**Network and Sharing Center**" under Control Panel and you will see Access type Connections "Internet" as highlighted.

View your basic network information and se	et up connectio	ns				
View your active networks						
NYP-Student Public network	Access type: Connections: 📶	Internet Wi-Fi (NYP-Student)				

2.7 Click on "Wi-Fi (NYP-Student)" and you can check the SSID, signal quality.

ഫ്പി Wi-Fi Status	×
General	
Connection	-
IPv4 Connectivity: Internet	
IPv6 Connectivity: No network access	
Media State: Enabled	
SSID: NYP-Student	
Duration: 00:40:22	
Speed: 400.0 Mbps	
Signal Quality:	
Details <u>W</u> ireless Properties	
Activity	-
Sent — 💭 — Received	
Bytes: 347,038 243,584	
Properties Diagnose Diagnose	
Close	

End of Procedure