

## Day 24 – Easily adding Protocols to Access/Authenticate Technologies

### Testing Challenge:

In Access or Authenticate testing, QA engineers want the flexibility to add/subtract protocols on the fly to test different capabilities of their DUT. With conventional test solutions, they would have to go through a relatively long process of reconfiguring their test configuration in order to qualify a slightly different test case.

### IxNetwork 5.40 Solution:

In IxNetwork 5.40, adding or modifying protocol components is a one-click operation. This allows the user to quickly add on protocols to a setup to test multiple protocols.

- With any protocol under Auth/Access Hosts/DCB, you can click on “Add Extensions” and see what other protocols can be added to the stack.

The screenshot displays the IxNetwork 5.40 interface. On the left, the 'Test Configuration' tree shows the 'Auth/Access Hosts/DCB' folder selected. On the right, the 'Auth/Access Hosts/DCB' configuration window is open, with the 'Add Extension' dropdown menu expanded to show a list of protocols: 802.1x, EAPoUDP, WebAuth, RADIUS, ANCP, TWAMP Server, and TWAMP. A red box highlights the 'Add Extension' button and the dropdown menu. Below the menu, a table shows the configuration for the selected 'IP-1' extension.

	Enabled	Name	Status	IP Type	Address	Mask
I 1	<input checked="" type="checkbox"/>	IP-R1	Unconfigured	IPv4	10.10.0.1	24

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- In this example, we just added EAPoUDP protocol to IP. EAPoUDP will show up as an extension to IP in the Stack Diagram as well as in the configuration tree.

The screenshot displays the IxNetwork configuration interface. On the left, the 'Test Configuration' tree shows the hierarchy: 1. Port Manager, 2. Protocols, Routing/Switching/Interfaces, Auth/Access Hosts/DCB, Traffic Groups, 3. Traffic, Options, 4. Event Scheduler, 5. Statistic Setup, 6. Capture. Under 'Auth/Access Hosts/DCB', the configuration tree includes: Broadband Access, MAC/IP w/ Auth, DHCP/PD w/ Auth, Static IP w/ Auth, Global Settings, Port Group Settings, 10.200.134.45:02:09-Ethernet - Uncor, MAC/VLAN-5, IP-1, and Extensions. The 'Extensions' folder under 'IP-1' is highlighted with a red box, showing 'EAPoUDP-4'.

On the right, the 'Auth/Access Hosts/DCB' configuration pane shows an 'Add Extension' button and a diagram. The diagram illustrates the stack: MAC/VLAN-5 (blue box) is connected to IP-1 (green box), which is connected to EAPoUDP-4 (red box).

Below the diagram is a table with the following data:

	Enabled	Name	Status	Protocols	User Name
▶ 1	<input checked="" type="checkbox"/>	EOU-R4	Unconfigured	PEAPv1	username_...

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- You can add more protocols, depending on the technology being tested.

The screenshot displays the IxNetwork 5.40 interface. On the left, the 'Test Configuration' tree shows a hierarchy: 1. Port Manager, 2. Protocols (Routing/Switching/Interfaces, Auth/Access Hosts/DCB), 3. Traffic, 4. Event Scheduler, 5. Statistic Setup, 6. Capture. Under 'Auth/Access Hosts/DCB', the tree is expanded to show '10.200.134.45:02:09-Ethernet - Packe' with sub-items: MAC/VLAN-5, IP-1, and 802-1X-1. The 'MAC/VLAN-5' item is selected. On the right, the 'Auth/Access Hosts/DCB' configuration pane shows an 'Add Extension' button and a diagram with four protocol components: MAC/VLAN-5 (blue), IP-1 (green), 802-1X-1 (red), and EAPoUDP-6 (green). Below this is a table with columns 'Enabled', 'Name', and 'Status'.

	Enabled	Name	Status
1	<input checked="" type="checkbox"/>	802-1X-R1	Validated

### **Conclusion:**

**IxNetwork 5.40 allows test engineers to easily add or remove protocol components in their Access or Authenticate tests which allows for easy and quick testing of different test configurations within a few mouse-clicks.**