

ZTE SEC IPv4 instructions

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Equipments for Certification

The certified equipments are ZTE two types of Switches: ZXR10 5900E and ZXR10 8900 series.

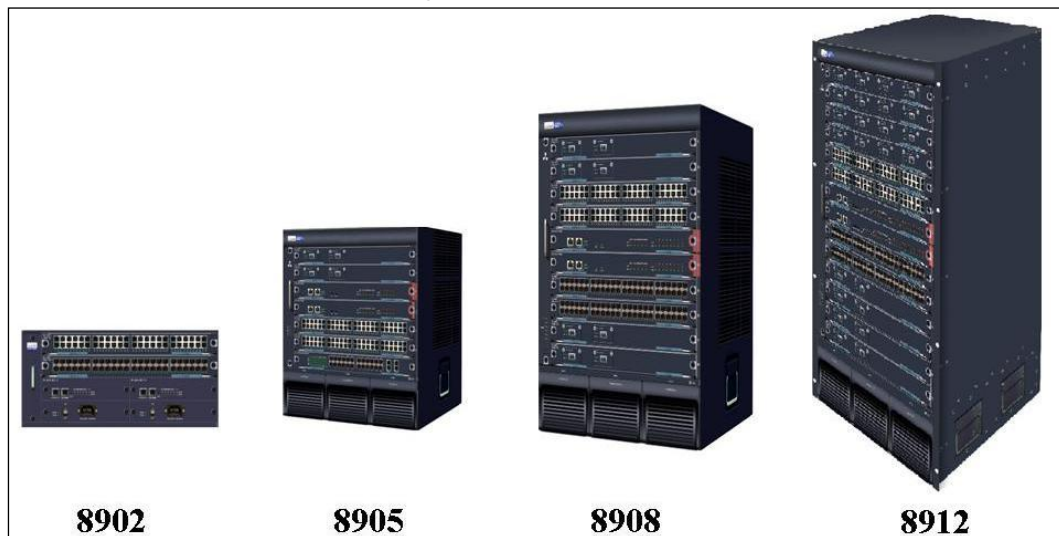
ZXR10 5900E series MPLS Easy-Maintenance switch adopts high-speed ASIC forwarding chips. It supports complete family of Ethernet protocols, complete L3/MPLS protocols, efficient QOS priority mechanisms and flexible management mechanisms. Providing high-density GE ports, it provides the required access and aggregation features of GE interface for IP MAN or campus networks or IP RAN.

Figure 1 ZXR10 5900E series



ZXR10 8900 series Terabit MPLS routing switches are the latest introduced products by ZTE with high capacity and performance for the core/aggregation layer of the network. The series has the following models: ZXR10 8912, 8908, 8905 and 8902 among which ZXR10 8912 reaches up to 2.88Tbps for the bandwidth of the backplane, 1152Gbps switching capacity, 857Mpps packet forwarding rate. ZXR10 8900 family supports L2/L3/L4 wire speed switching capability, mainly positioned at the core/aggregation layer of carrier's IP MAN, campus, e-government and corporate network.

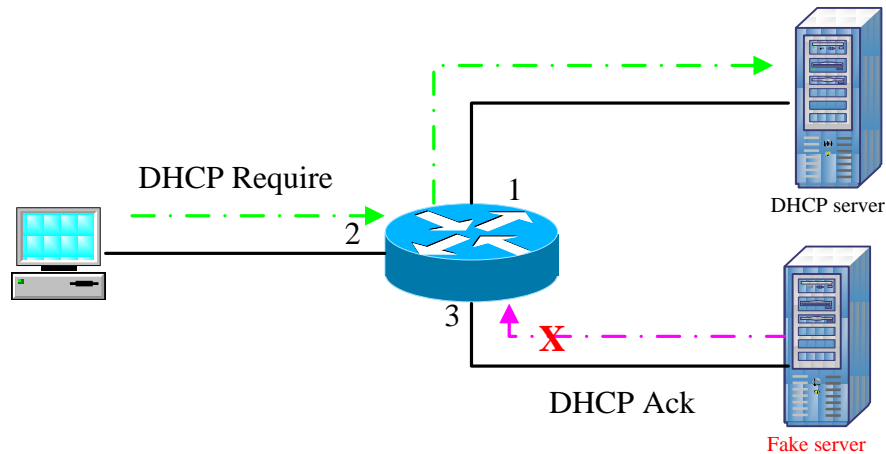
Figure 2 ZXR10 8900 series



Test instruction for 5900E

A.DHCP Snooping Configuration Procedure

_ Topology



_ Setup

Step1: configure vlan

```
ZXR10(config)#interface gei_1/1  
  
ZXR10(config-gei_1/1)#switch access vlan 100  
  
ZXR10(config-gei_1/1)#exit  
  
ZXR10(config)#interface gei_1/2  
  
ZXR10(config-gei_1/2)#switch access vlan 100  
  
ZXR10(config-gei_1/2)#exit
```

Step2 : Enable dhcp-snooping on global

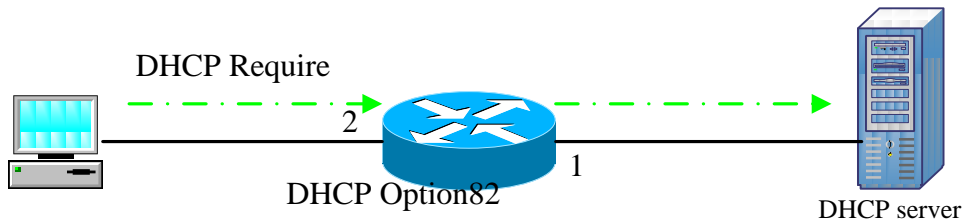
```
ZXR10(config)#ip dhcp snooping enable
```

Step3 : Enable DHCP snooping on vlan and assign Uplink port as trusted port

```
ZXR10(config)#ip dhcp snooping vlan 100  
  
ZXR10(config)#ip dhcp snooping trust gei_1/1
```

B. DHCP option82 Configuration Procedure

_ Topology



_ Setup

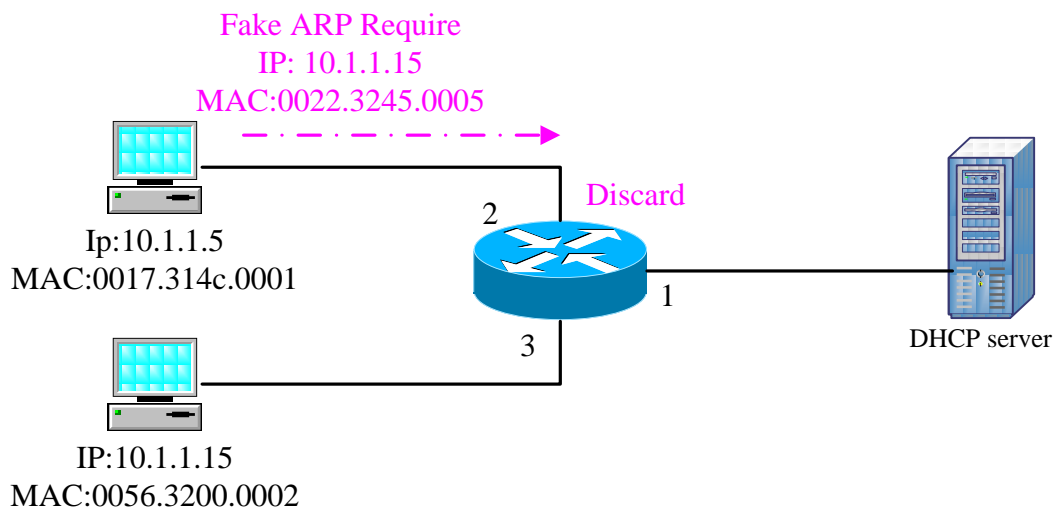
Step1 enable DHCP snooping function same as Case A

Step2 : enable option 82 on global

```
ZXR10(config)#ip dhcp snooping information option
```

C. ARP source check Configuration Procedure

_ Topology



_ Setup

Step1 :Enable DHCP Snooping function same as case A

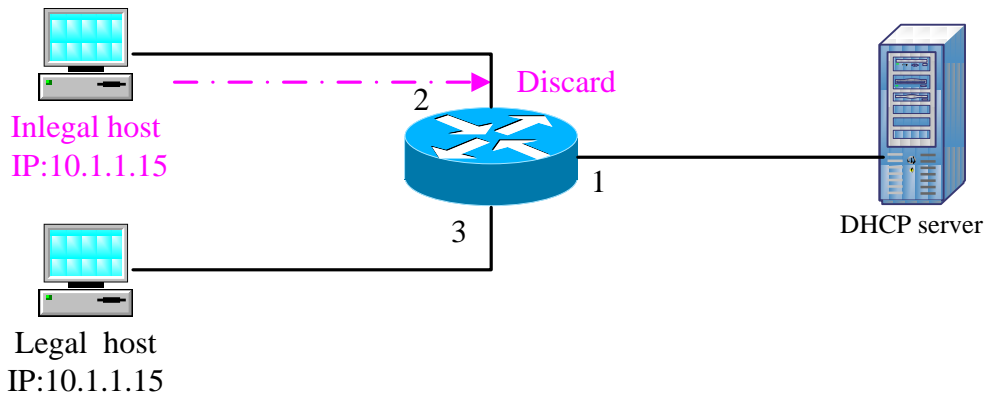
Step2: Enable ARP inspection on vlan

```
ZXR10(config)#vlan 100
```

```
ZXR10(config-vlan100)#ip arp inspection
```

D. IP source check Configuration Procedure

_ Topology



_ Setup

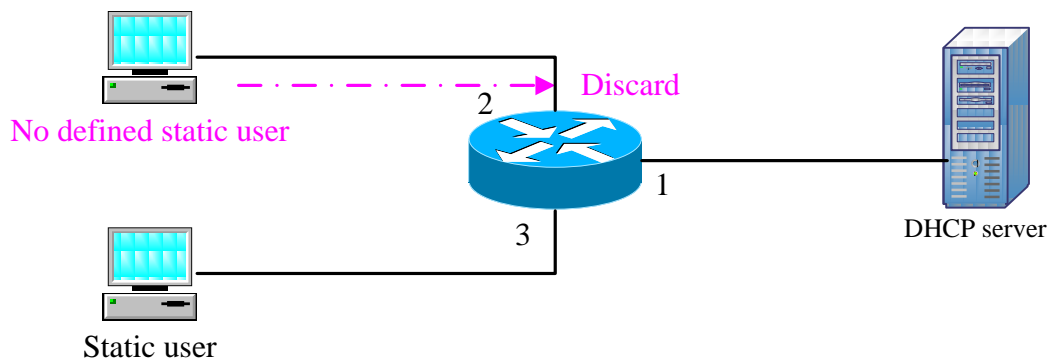
Step1:Enable DHCP snooping function same as Case A

Step2: Enable IP Souce guard on port

```
ZXR10(config-gei_1/2)#ip dhcp snooping ip-source-guard ip-base
```

E. Static user binding Configuration Procedure

_ Topology



_ Setup

Step1 : Enable DHCP snooping function same as case A.

Step2: Enable IP Souce guard on port

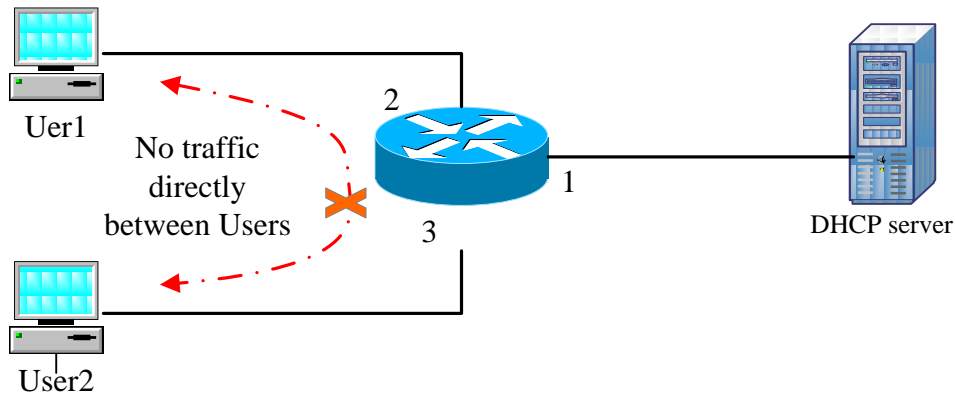
```
ZXR10(config-gei_1/2)#ip dhcp snoopng ip-source-guard mac-ip-base
```

Step3: Configure Static user binding table entry on vlan

```
ZXR10(config)#ip dhcp snooping binding 001f.c674.15a8 vlan 10  
10.10.40.100 gei_1/3 expiry 3600
```

F. Port isolation Configuration Procedure

_ Topology



_ Setup

Step1: Configure port isolation session on global

```
ZXR10(config)#vlan private-map session-id 1  
isolate gei_1/1, gei_1/3
```

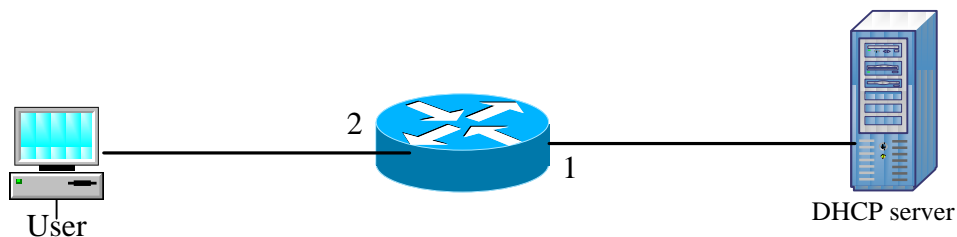
G. ACLs

The ZTE Series has full support port-based advanced ipv4/ipv6/L2 header

ACLs

The following example describes how to utilize on acl to block inbound special Source ip address;

_ Topology



_ Setup

Step1 : configure ACL

```
ZXR10(config)#acl standard number 10
```

```
ZXR10(config-std-acl)#rule 1 deny 192.168.1.100 0.0.0.0
```

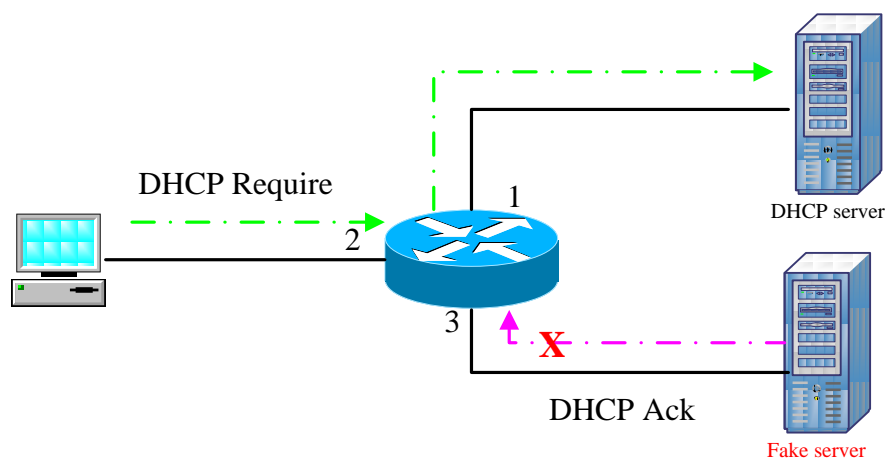
Step2 : enable ACL on port inbind

```
ZXR10 (config-fei_1/2)#ip access-group 1 in
```

Test Instruction for ZXR10 8900

A.DHCP Snooping Configuration Procedure

_ Topology



_ Setup

Step1: configure vlan

```
ZXR10(config)#interface gei_1/1
```

```
ZXR10(config)#ipv4 protocol-protect mode dhcp enable
```

```
ZXR10(config-gei_1/1)#switch access vlan 100
```

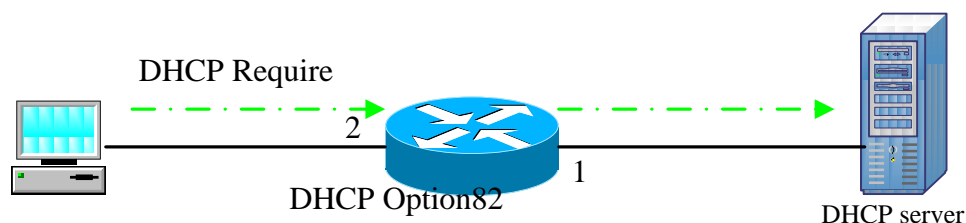
```
ZXR10(config-gei_1/1)#exit  
ZXR10(config)#interface gei_1/2  
ZXR10(config)#ipv4 protocol-protect mode dhcp enable  
ZXR10(config-gei_1/2)#switch access vlan 100  
ZXR10(config-gei_1/2)#exit
```

Step2 : Enable dhcp-snooping on global

```
ZXR10(config)#ip dhcp snooping enable
```

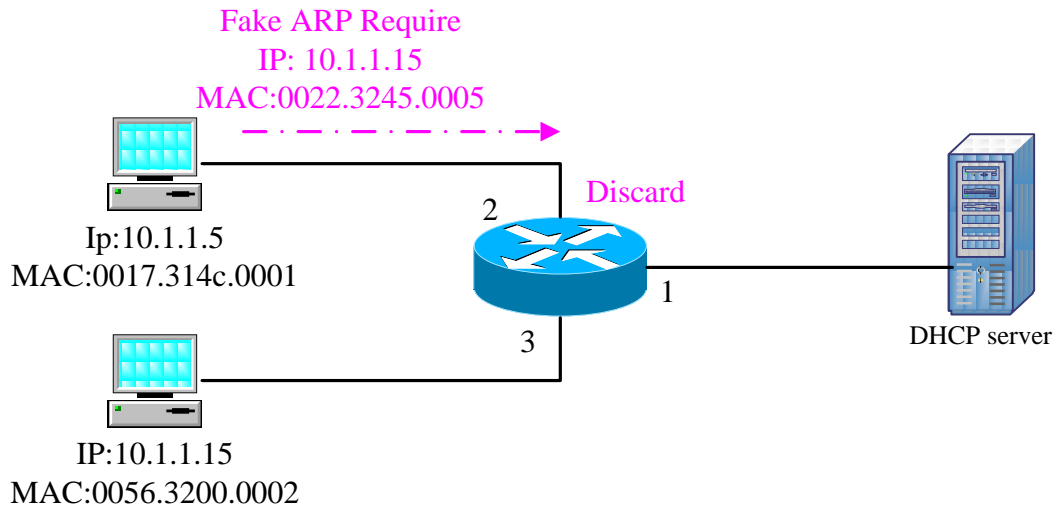
Step3 : Enable DHCP snooping on vlan and assign Uplink port as trusted port

```
ZXR10(config)#ip dhcp snooping vlan 100  
ZXR10(config)#ip dhcp snooping trust gei_1/1
```

B. DHCP option82 Configuration Procedure**_ Topology****_ Setup****Step1 enable DHCP snooping function same as Case A****Step2 : enable option 82 on global**

```
ZXR10(config)#ip dhcp snooping information option
```

C. ARP source check Configuration Procedure**_ Topology**



_ Setup

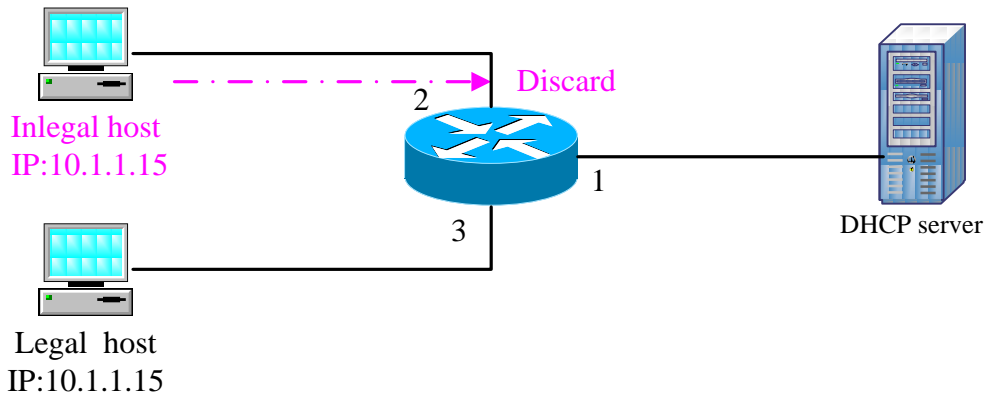
Step1 :Enable DHCP Snooping function same as case A

Step2: Enable ARP inspection on vlan

```
ZXR10(config)#vlan 100  
  
ZXR10(config-vlan100)#ip arp inspection  
  
ZXR10(config)#interface gei_1/1  
  
ZXR10(config-gei_1/1)#ip arp inspection trust  
  
ZXR10(config)#ip arp inspection validate dst-mac  
  
ZXR10(config)#ip arp inspection validate ip  
  
ZXR10(config)#ip arp inspection validate src-mac
```

D. IP source check Configuration Procedure

_ Topology



_ Setup

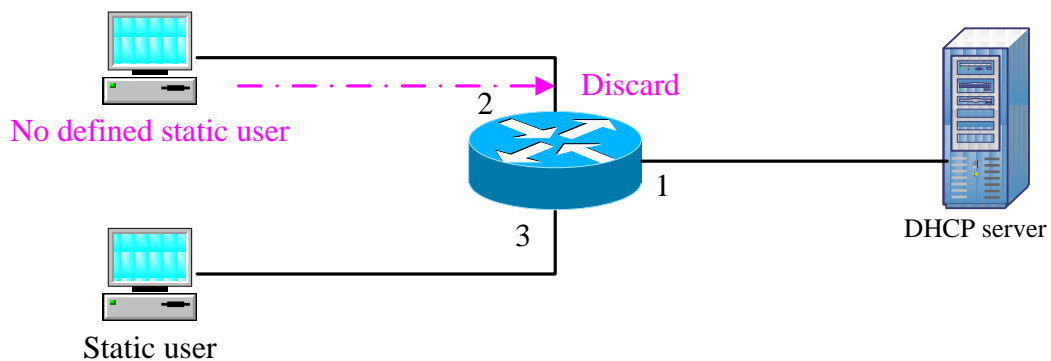
Step1:Enable DHCP snooping function same as Case A

Step2: Enable IP Source guard on port

```
ZXR10(config-gei_1/2)#ip dhcp snooping ip-source-guard ip-base
```

E. Static user binding Configuration Procedure

_ Topology



_ Setup

Step1 : Enable DHCP snooping function same as case A.

Step2: Enable IP Source guard on port

```
ZXR10(config-gei_1/2)#ip dhcp snoopng ip-source-guard mac-ip-base
```

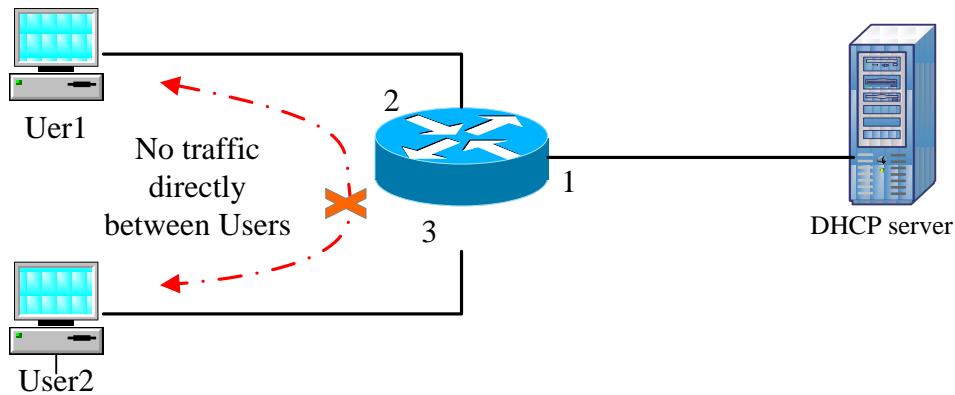
Step3: Configure Static user binding table entry on vlan

```
ZXR10(config)#ip dhcp snooping binding 001f.c674.15a8 vlan 10
```

```
10.10.40.100 gei_1/3 expiry 3600
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F. Port isolation Configuration Procedure

_ Topology



_ Setup

Step1: Configure port isolation session on global

```
ZXR10(config)#vlan private-map session-id 1
```

```
isolate gei_1/1, gei_1/3
```

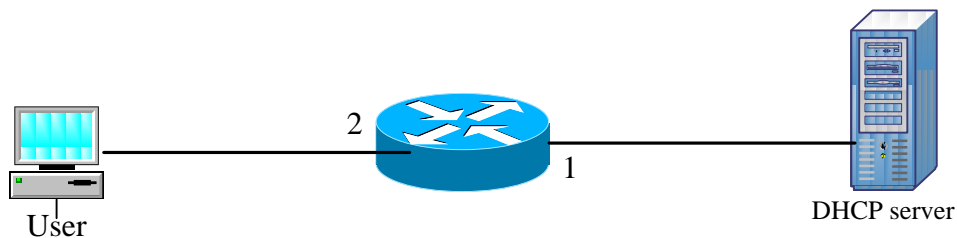
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Step1 : configure ACL

```
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```

```
ZXR10(config-std-acl)#rule 1 deny 192.168.1.100 0.0.0.0
```

Step2 : enable ACL on port inbind

```
ZXR10 (config-fei_1/2)#ip access-group 1 in
```