

## Grandstream Networks, Inc.

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Internal Network and External Network – Typical Network Solutions



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# TYPICAL NETWORK SOLUTIONS - Internal Network and External Network

## Scenario

The server is deployed on the internal network. The users could access and use the service via either internal network or external network. In this case, users need to configure both internal network and external network in the server, and routing rules. Users need to configure both Internal Network Adapter and External Network Adapter.

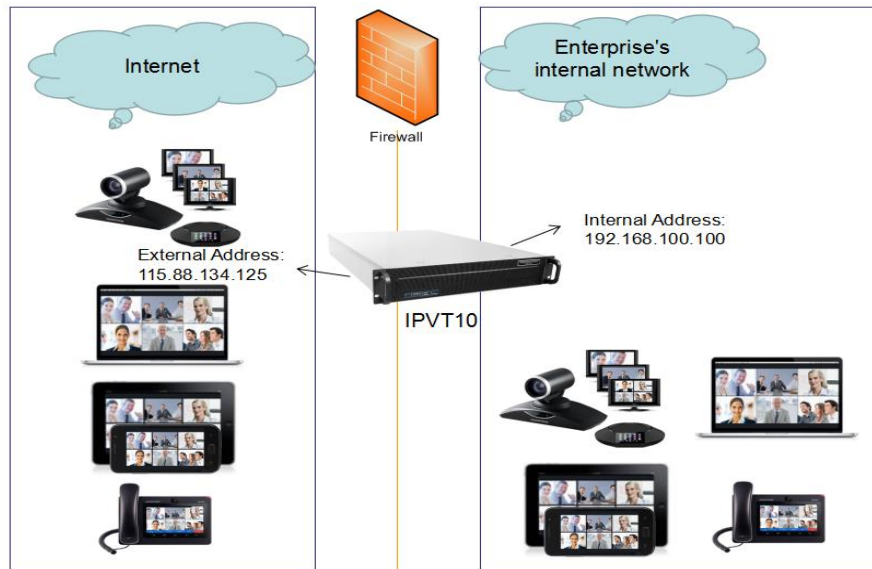


Figure 1: Network Deployment Diagram – Internal Network and External Network

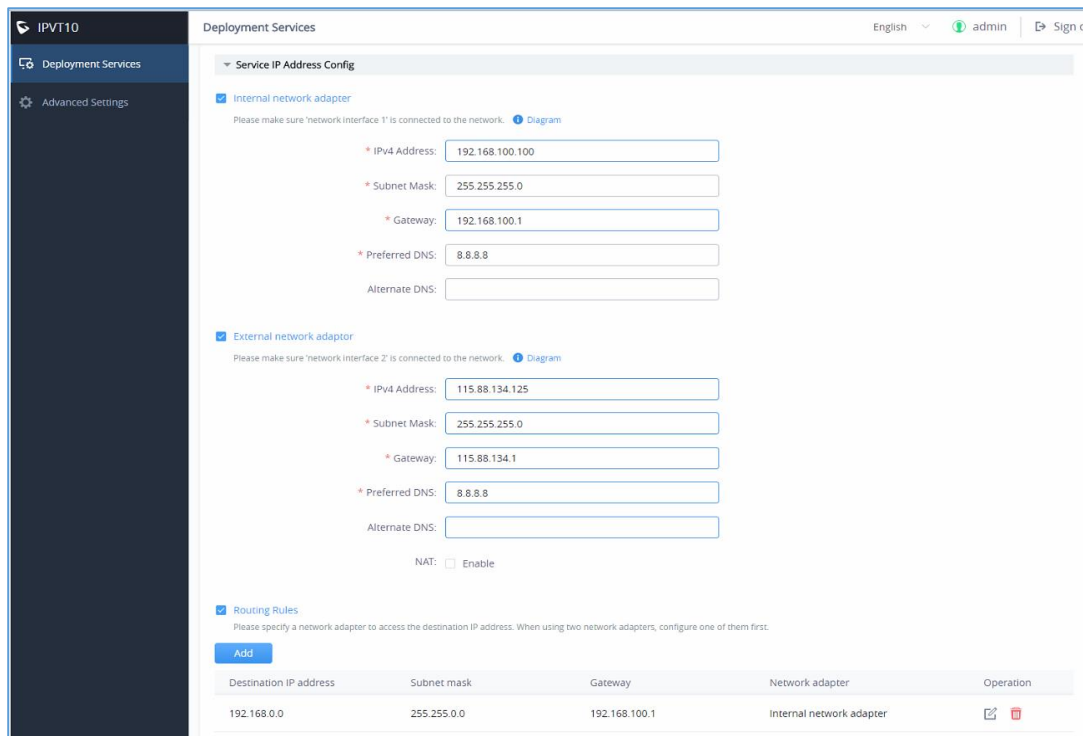


Figure 2: Configure External Network Adapter and Internal Network Adapter



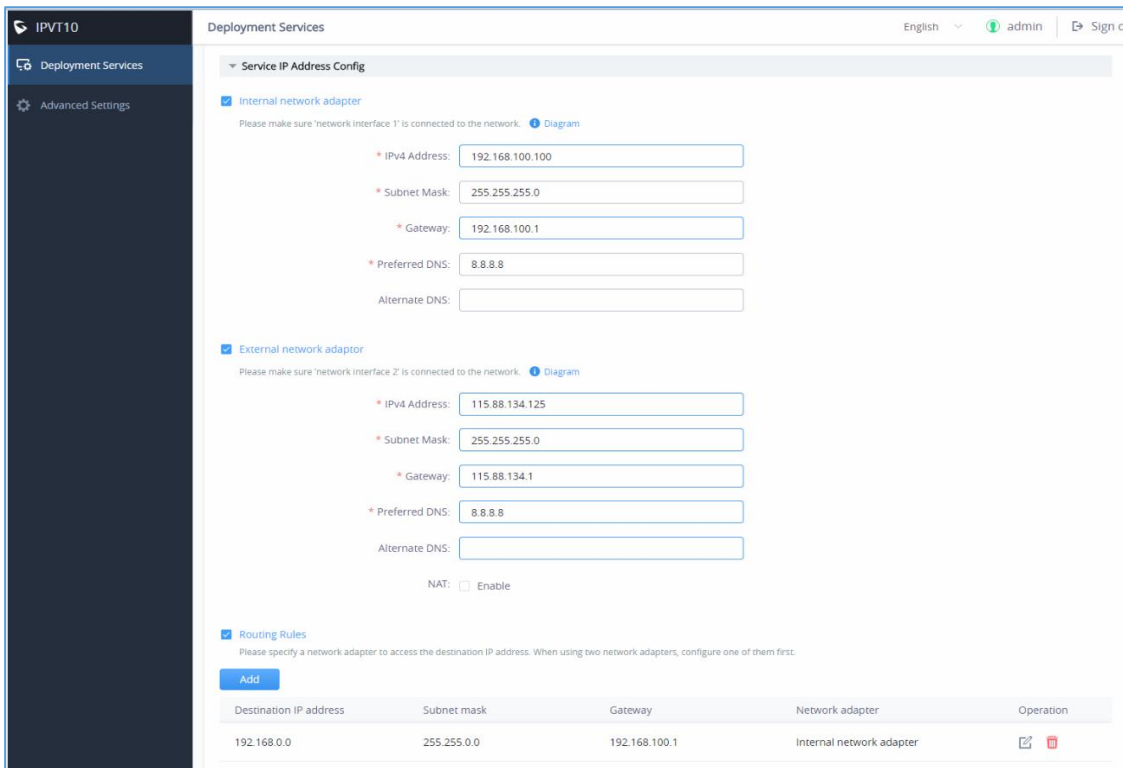
## Options Descriptions

**Table 1: Parameters Descriptions**



Parameters	Description
<b>Internal Network Adapter</b>	Configures Internal Network Adapter's parameters.
<b>External Network Adapter</b>	Configures External Network Adapter's parameters.
<b>IPv4 Address</b>	Configures the IP Address for IPVideoTalk Portal.
<b>Subnet Mask</b>	Configures the Subnet Mask.
<b>Gateway</b>	Configures the default Gateway.
<b>Preferred DNS</b>	Set the Preferred DNS.
<b>Alternative DNS</b>	Set the Alternative DNS.
<b>NAT</b>	Enable/Disable NAT, and set the NAT IP address.
<b>Routing Rules</b>	Set the advanced configuration Routing Rules to ensure accessing the destination IP address when using two Network Adapters.

Please, refer to the following steps:

1. Login IPVT10 Web UI.
2. Go to **"Deployment Services"**, and configure **"Service IP Address Config"** options, as the figure shown below:



The screenshot shows the 'Service IP Address Config' page in the IPVT10 Web UI. The page is divided into two main sections: 'Internal network adaptor' and 'External network adaptor'. Each section has a 'Diagram' link and a note: 'Please make sure 'network interface 1' is connected to the network.' (for internal) and 'Please make sure 'network interface 2' is connected to the network.' (for external). The 'Internal network adaptor' section has the following fields: IPv4 Address (192.168.100.100), Subnet Mask (255.255.255.0), Gateway (192.168.100.1), Preferred DNS (8.8.8.8), and Alternate DNS. The 'External network adaptor' section has the following fields: IPv4 Address (115.88.134.125), Subnet Mask (255.255.255.0), Gateway (115.88.134.1), Preferred DNS (8.8.8.8), and Alternate DNS. Below these sections is a 'NAT' checkbox (unchecked) and a 'Routing Rules' section with an 'Add' button and a table of routing rules.

Destination IP address	Subnet mask	Gateway	Network adaptor	Operation
192.168.0.0	255.255.0.0	192.168.100.1	Internal network adaptor	 

**Figure 3: Service IP Address Config**



3. According to the actual requirements, users could configure Internal Network Adapter and External Network Adapter.
4. Users need to configure “IPv4 Address”, “Subnet Mask”, “Gateway”, “Preferred DNS”, “Alternative DNS” (optional) for the network adapter.

**Note:** Please make sure that there should be no conflict in the IP address. Otherwise, the service will be unavailable.

5. When two network adapters are configured, users have to configure the routing rules based on the actual requirements by clicking on **+ Add**. Multiple routing rules can be configured in the IPVT10 server. Users can also edit and delete a certain routing rule.

**Note:** Routing rules must be specified for the external network and all network segments in the enterprise.

Routing Rules  
 Routing rules specify network adapter when access to the destination IP address. When using two network adapters, configure one of them first. (take effect after deployment)

Destination IP address	Subnet mask	Gateway	Network adapter	Operation
0.0.0.0	255.255.255.0	0.0.0.0	Internal network adapter	<span style="color: blue; font-size: 1.2em;">✎</span> <span style="color: red; font-size: 1.2em;">✖</span>

+ Add

**Figure 4: Configure Network Routing Rules**

**Table 2: Configure Network Routing Rules**

Parameters	Description
<b>Destination IP Address</b>	This is used to configure the destination IP address for the network. This option has to be configured with the Subnet Mask option.
<b>Subnet Mask</b>	This is used to configure the subnet mask.
<b>Gateway</b>	This is used to configure the gateway of the destination network.
<b>Network Adapter</b>	This is used to select the server network adapter for destination network.

6. Continue to fill in the other configuration options. For the first deployment, users have to fill in all required fields.
7. Click on “Deploy to Server Now” to apply the entire configurations of this page to the server. When the deployment is complete, it will take effect immediately.



**Note:**

- When the deployment is complete, users need to check whether all network interfaces of the server are all connected. For a single network, only one network interface needs to be connected to the network (Internal Network – Network Interface 1, External Network – Network Interface 2).
- If users modify the IP address of the server during the conferences, it may cause the abnormal issues for the ongoing conferences, and the scheduled conferences will be inaccessible.
- When users modify the parameters of the server, the server will restart the service automatically.

