

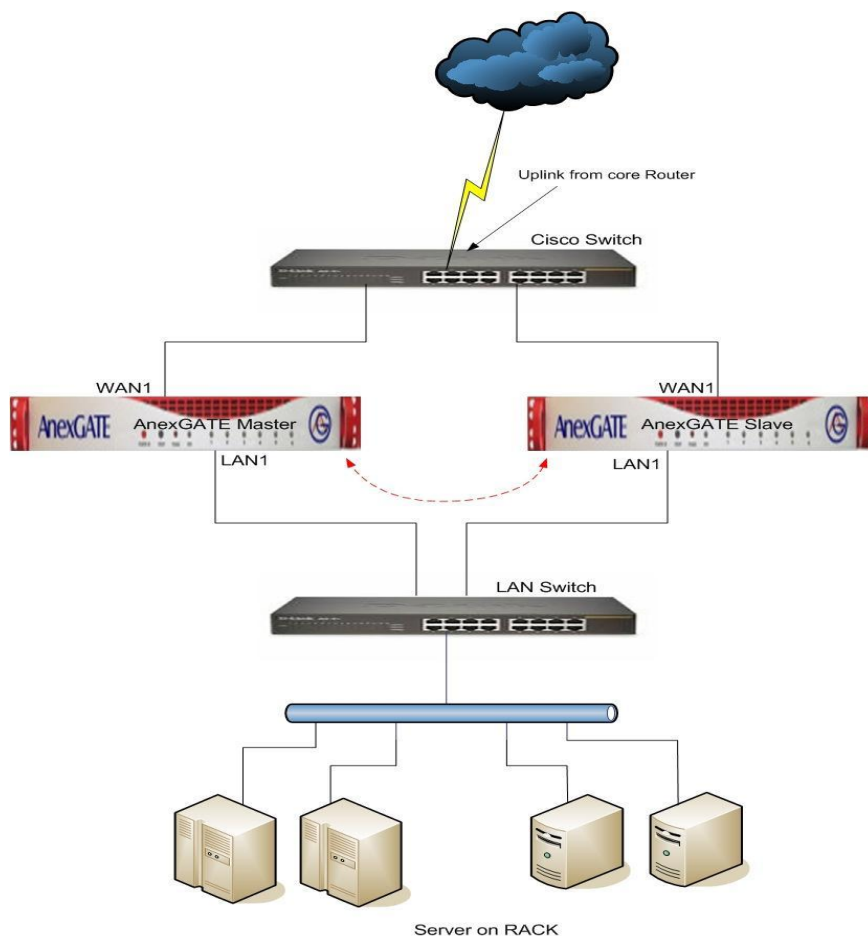
VRRP Configuration Document

Pre-Requisite:

1. 2 Nos of USG Appliances (one as master & second as slave)
2. Minimum of 2 Switches (one for WAN & second for LAN Segments)

In VRRP setup out of two USG appliances one will be configured as MASTER through which the traffic flows by default and the other configured as SLAVE through which the traffic flows during master appliance failure or link(s) failure based on the configured settings.

Below is a sample VRRP based network setup



Note: The switches can be managed or unmanaged. Different switches for WAN and LAN is the only requirement.

High Availability - VRRP (Virtual Router Redundancy Protocol) fields & description

Tacitine/AnexGATE USG appliance supports High Availability mode in Active-Passive Mode. The failover to slave box is based on master box failure or based on interface failures.

VRRP Instance:

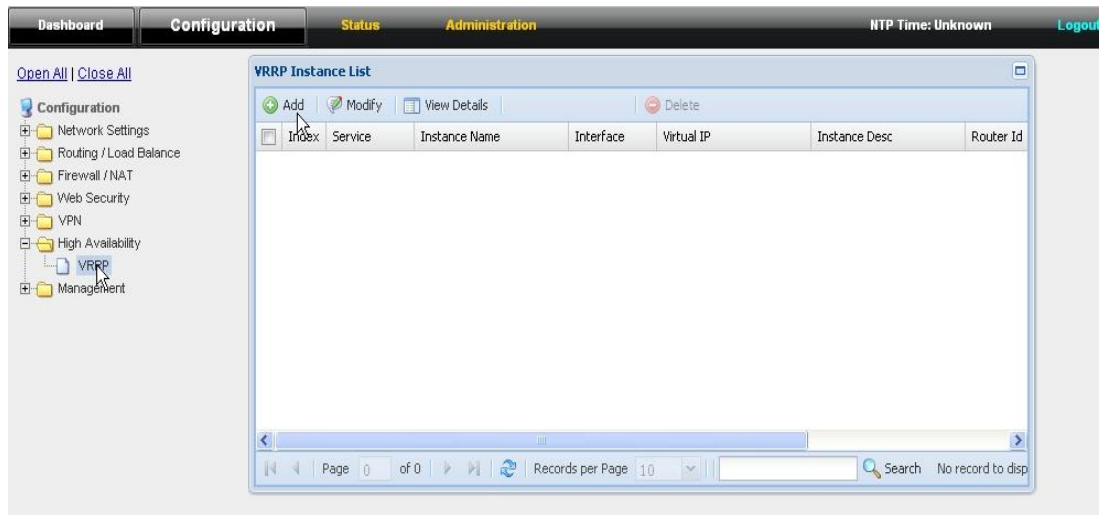
First to create is the VRRP instance. In the configuration tab choose “High Availability” and then click on “VRRP” tab. Click “Add” to create a configuration

Field	Description
Service	Check the box to enable or disable the VRRP instance. This option is enabled by default.
Instance Name	This is a Mandatory field. A unique name for the VRRP instance is being configured. This field can take alpha-numeric characters but only small letters
Initial State	Select the VRRP instance startup state/mode of operation. When configured as the Master, the VRRP instance performs the routing functions for the Virtual Router. There can be only one VRRP instance functioning as the master at a given point in time. VRRP instances configured to function as the Backup instances can take-over as masters in the event of a failure of the current master VRRP instance based on the Virtual Instance Priority
Default	Backup Values: Backup, Master
VRRP Interface	Select the interface being configured for the VRRP instance configuration. Values: lan1, lan2, lan3, lan4, wan1, wan2, wan3 For example choose “LAN1”
Virtual IP (VRIP)	The IP address associated with the interface that other hosts can use to obtain network service from. The VRIP is managed by the VRRP instances belonging to a VRID. Virtual IP address must be in the IP/Subnet format. We have given 192.168.10.1/24. This IP acts as a gateway for the LAN Interface for which VRRP is configured
Router ID (VRID)	Unique identifiers on a network segment for the virtual routers running VRRP for the instance. Note that the Virtual Router ID (VRID) of VRRP instances on the same segment must match for these instances to inter-operate as Masters and Back-up. Default: 10 Range: 1-254

Instance Priority	<p>The priority assigned to the VRRP instance. This is used to choose the Master VRRP instance among the Backup instances in the event of failure of the current Master. Greater the number higher is the priority of the instance.</p> <p>Default: 75, Range: 1-254</p>
Password	<p>Password for VRRP authentication</p>
Heartbeat Interval	<p>This determines the switch-over time in case of a failure of the current designated Master instance. In case of master failure all the access will be through Slave machine.</p> <p>Default: 5</p> <p>Range: 1-254</p> <p>For ex. If the heartbeat interval is configures as 5, then at 11th sec, slave machine will come up and allows all the traffic.</p> <p>In case of 1, then at 3rd sec, slave machine will come up and allows all the traffic.</p>
Preempt mode	<p>This determines whether to switch back to the master server from slave server when master server is up or when configured tracked link is active.</p> <p>Default : Disable</p> <p>Values; Enable and Disable</p> <p>If enabled - the VRRP will keep continue to be in the slave server until the current server fails even if the master node has highest priority then the current. For this condition to work, the “<i>Initial state</i>” of both the USG should be chosen as “<i>Backup</i>”</p> <p>If disabled - the VRRP will switch back to the master server where priority is set to highest</p>
Track Additional Interfaces	<p>This is used to add other interfaces to be either assigned a virtual IP and/or tracked.</p> <p>Values: Enable and Disable</p>
Enable Tracking	<p>If enabled “Track Additional interface” a popup window will open for configuration.</p> <ol style="list-style-type: none"> 1. IP Migration only : When enabled tracking and selected “IP Migration only” then any interface configured under this tracker is down, VRRP will switch to slave node 2. Member of Tracker1 : When enabled tracking and selected “Member of Tracker1” then all the interfaces configured under this tracker is down, then only VRRP will switch to slave node

Configuration:

Click on Configuration → High Availability → VRRP
Click on Add to add new VRRP instance



Provide the configurable values in master node as shown in the below snapshot.

VRRP Instance: New Instance

VRRP Service: <input type="text" value="Enable"/> Instance Name: <input type="text" value="vrrp-master"/> Description: <input type="text" value="VRRP-Master"/> Initial State: <input type="text" value="Master"/> VRRP Interface: <input type="text" value="LAN-1"/> Virtual IP Address: <input type="text" value="192.168.10.1"/>		VRRP2 Router Id (VRID): <input type="text" value="10"/> Instance Priority: <input type="text" value="75"/> Protocol Password: <input type="text" value="....."/> Heartbeat Interval (seconds): <input type="text" value="5"/> Preempt Mode: <input type="text" value="Disable"/> Track Additional Interfaces: <input type="text" value="Disable"/>	
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Upon the Requirement, Enable the “Track additional Interfaces” in order to have link redundancy. Select “IP Migration Only” if VRRP to switch to slave node in case of any one of the chosen interface is down

VRRP Instance: New Instance

VRRP Service: Enable Instance Name: vrrp-master Description: VRRP-Master Initial State: Master VRRP Interface: LAN-1 Virtual IP Address: 192.168.10.1		VRRP2 Router Id (VRID): 10 Instance Priority: 75 Protocol Password: ***** Heartbeat Interval (seconds): 5 Preempt Mode: Disable Track Additional Interfaces: Enable																					
Migration / Tracked Interfaces <table border="1"> <thead> <tr> <th>State</th> <th>Interface</th> <th>Virtual IP</th> <th>Tracker</th> </tr> </thead> <tbody> <tr> <td>Enable</td> <td>WAN-1</td> <td>122.1.1.1</td> <td>IP Migration Only</td> </tr> <tr> <td>Enable</td> <td>LAN-2</td> <td>172.2.2.2</td> <td>IP Migration Only</td> </tr> <tr> <td>Disable</td> <td>Select</td> <td>Optional</td> <td>IP Migration Only</td> </tr> <tr> <td>Disable</td> <td>Select</td> <td>Optional</td> <td>IP Migration Only</td> </tr> </tbody> </table>				State	Interface	Virtual IP	Tracker	Enable	WAN-1	122.1.1.1	IP Migration Only	Enable	LAN-2	172.2.2.2	IP Migration Only	Disable	Select	Optional	IP Migration Only	Disable	Select	Optional	IP Migration Only
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<div> Save Cancel </div>																							

Select “Member of Tracker” if VRRP to switch to slave node in case of all the interfaces chosen under the tracker group is down

VRRP Instance: New Instance

VRRP Service: Enable Instance Name: vrrp-master Description: VRRP-Master Initial State: Master VRRP Interface: LAN-1 Virtual IP Address: 192.168.10.1		VRRP2 Router Id (VRID): 10 Instance Priority: 75 Protocol Password: ***** Heartbeat Interval (seconds): 5 Preempt Mode: Disable Track Additional Interfaces: Enable																					
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Select “Member of Tracker” if VRRP to switch to slave node in case of all the interfaces chosen under the tracker group is down

VRRP Instance: New Instance

VRRP		VRRP2	
Service:	Enable	Router Id (VRID):	10
Instance Name:	vrrp-master	Instance Priority:	75
Description:	VRRP-Master	Protocol Password:	*****
Initial State:	Master	Heartbeat Interval (seconds):	5
VRRP Interface:	LAN-1	Preempt Mode:	Disable
Virtual IP Address:	192.168.10.1	Track Additional Interfaces:	Enable

Migration / Tracked Interfaces

State	Interface	Virtual IP	Tracker
Enable	WAN-1	122.1.1.1	Member of Tracker-1
Enable	LAN-2	172.2.2.2	Member of Tracker-2
Disable	Select	Optional	IP Migration Only
Disable	Select	Optional	IP Migration Only

Save   Cancel