

A black NETDUMA R2 router is shown from a low angle, resting on a red surface against a dark red background. The router has four black antennas and a red and black design on its front panel. The text "2.4 GHz" and "5 GHz" is visible on the panel.

NETDUMA R2

Powered by DUMA**OS 3.0**



User Guide



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For more in-depth guides, please visit: <http://support.netduma.com/en/support/solutions>



Get Unfair

Designed to be the competitive edge in your setup, the Netduma R2 is built by gamers to minimise lag. Focusing your gameplay and empowering your home network, you'll feel the advantage from day one.

Built for DumaOS 3.0 from day one, the R2 will be the first to support upcoming DumaOS features. With bleeding-edge design alongside unprecedented features and unparalleled support, the R2 is the last word in network control.

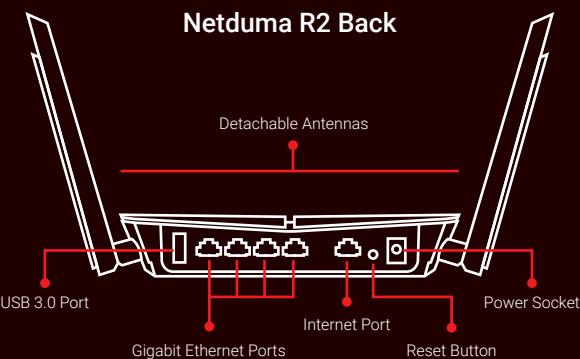
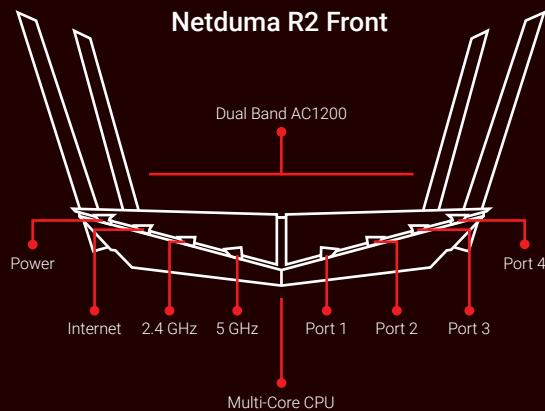
Welcome to DUMAOS 3.0

The future of gaming software starts here. DumaOS contains cutting edge features designed to crush lag in games and give you full control over your home's connection.

This guide will help you to set up and get the most out of DumaOS.



Your Netduma R2



Package Contents



Netduma R2 Router



User Guide



4 Detachable Antennas



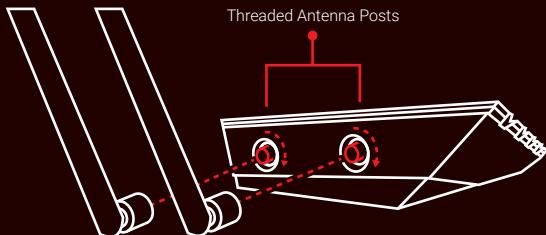
1 CAT-6 Ethernet Cable



Power Adapter

Quickstart Guide (1 of 3)

Step 1: Attaching Antennas

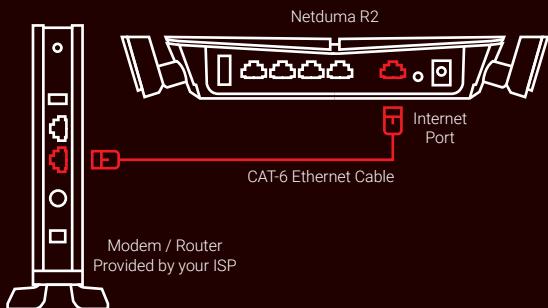


A) Screw the four antennas onto the threaded antenna posts.

B) For the best Wi-Fi performance, position the antennas vertically. Screw the antenna tightly to achieve this.

TIP : For the best Wi-Fi signal, position your router in the open.

Step 2: Plugging In



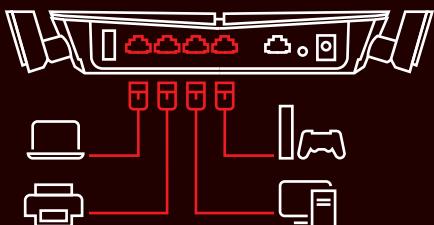
A) Turn off the Modem / Router provided by your Internet Service Provider (ISP).

B) Connect one end of the Ethernet cable into the **Internet Port** of the Netduma R2, which is located on the back of the router.

C) Connect the other end of the Ethernet cable to your ISP's Modem / Router.

Quickstart Guide (2 of 3)

Step 3: Connecting Wired Devices

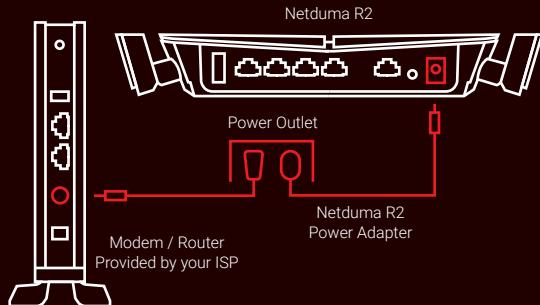


A) Disconnect any other wired devices that are connected to the ISP Modem / Router (or any other router you own) and connect them instead to the Netduma R2.

B) Now the only device wired into your ISP modem / router should be your Netduma R2.

TIP : For the best results, connect your gaming device(s) via wired Ethernet (if possible).

Step 4: Powering On



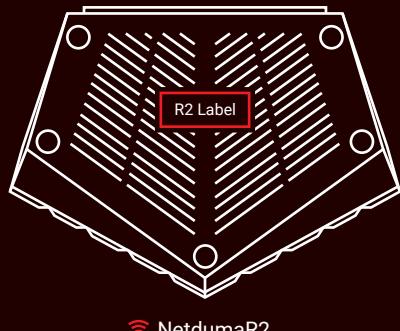
A) Turn on the Modem / Router provided by your Internet Service Provider (ISP).

B) Connect your Netduma R2 power adapter into the power socket of the Netduma R2, and connect the other end into your Power Outlet.

C) Turn your power on. Wait for ~45 seconds for the R2 to complete booting up.

Quickstart Guide (3 of 3)

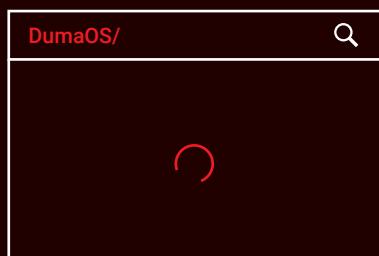
Step 5: Connecting Wireless Devices



- A) On your wireless laptop or PC, access your computer's **Wi-Fi settings**.
- B) Search for available Wi-Fi networks and select **NetdumaR2**.
- C) The router **Password** can be found on the label on the bottom of the router.
- D) If you ever factory reset your router, the Wi-Fi password will always revert back to the router default password.

TIP : To factory reset the router, hold down the Reset Button (see page 2) for ~30 seconds.

Step 6: Accessing DumaOS



- A) Open a web browser on a PC or Laptop that is connected to the Netduma R2 and type **dumaos/** into the URL bar, or type in the router IP address (**192.168.77.1**)
- B) If setting up for the first time, follow the **Setup Wizard** to gain access to your router and the Internet.
- C) The **Welcome Tour** will now walk you through the main features of DumaOS.

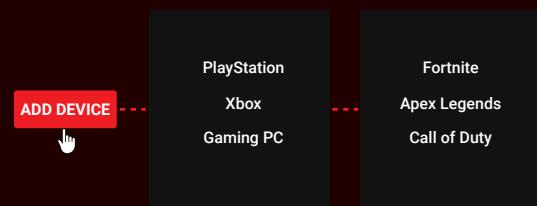
📍 Geo-Filter (1 of 3)



The Geo-Filter

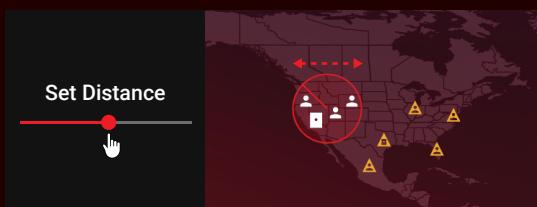
The main cause of lag in online games is the **distance** from you to the host or server of your game.

The **Geo-Filter** is unique because it filters servers based on distance. The effect on your game will be very noticeable, with improved response time and fairer gameplay.



Getting Started

- A) Click **Add Device** and select your device.
- B) For consoles, select **Recommend a Mode For My Game**. On PC, move on to step C.
- C) Choose which game you will be playing to learn which mode is best for your device.



Set Your Home

- A) Click on the **Home Pin** icon.
- B) Click on where you are located on the map.
- C) The radius blocks all hosts outside its range. Set the size using the **Distance** slider.

📍 Geo-Filter (2 of 3)



Polygon Mode

- A) Alternatively, you can draw filter shapes on the map by enabling **Polygon Mode**.
- B) Click the **Pencil** 🖍 icon to draw shapes.
- C) Click the **Delete** ✖ icon to remove shapes.



Start Gaming

Blocked connections outside of your radius will appear as warning triangles (see the [Geo-Filter Legend](#) below).

The host of your game will be the largest, most consistently shown icon.

Geo-Filter Legend



Player



Server



Allowed Player



Blocked Player



Blocked Server



Ping Assist Player



Ping Assist Server



Allowed Server

📍 Geo-Filter (3 of 3)



Ping Graph

Ping shows the connection quality (the ping) from you to the connection you have selected on the map. This is measured in milliseconds.

With **Auto Ping Host** enabled in the Geo-filter submenu, you can automatically ping your game's host and unlock advanced connection statistics like **Tickrate**.

A ping of **<50ms** is considered to be good for gaming online.

Name	Allowed/Denied	Host Type	Ping
Laggy Host	Denied	Peer	✗
Sydney Server	Allowed	Server	✗
Perth Server	Denied	Server	✗

 Allow  Deny

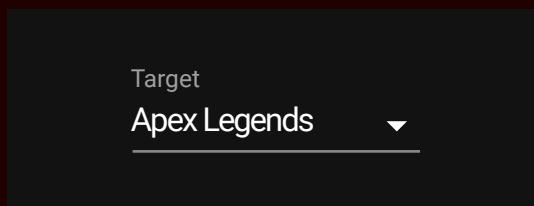
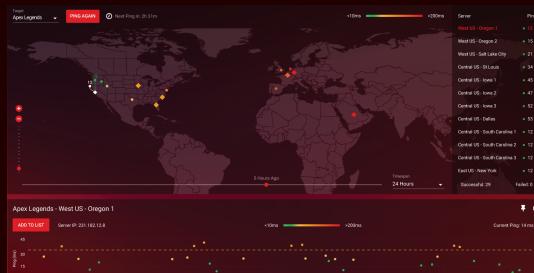
Allow and Deny

Click on a connection's icon on your Geo-Filter Map and in the **Ping** panel that opens, give it a name and choose either Allow or Deny.

Allow your game to connect with another player or server when they are outside your Geo-Filter radius. This can be used to play with distant friends.

Deny your game from connecting to another player or server when they are inside your Geo-Filter radius. Use this to avoid nearby laggy hosts.

Ping Heatmap



Monitor Server Quality

Ping Heatmap pings your favourite game's servers, displaying your connection quality to each server on a world map.

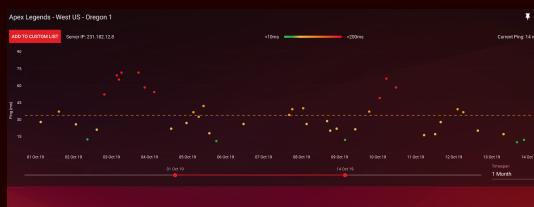
You can build a **Ping History** for your favourite servers to monitor the quality of the hosts you play on over time.

Ping Heatmap

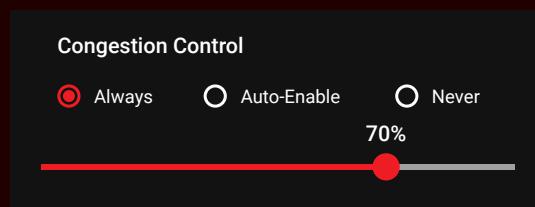
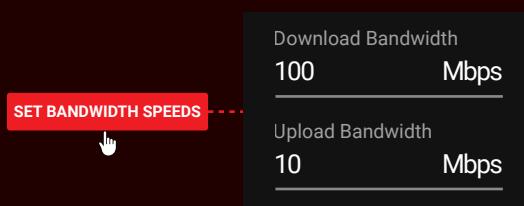
- Select a game using the **Target** drop-down.
- The map will display your ping to all servers for that game. **New Games** will be added constantly through cloud updates.
- After selecting a game, click the  icon to schedule pings for that target.

Ping History

- Click on a server on the map to open the **Ping History** feature, which tracks ping data over time for any server you choose.
- Click **Add To List** to make your own ping target. You can ping all added servers at the same time using the Target selector.



🏡 QoS (1 of 3)



QoS

When devices in your home are using all the bandwidth, it creates congestion. This causes lag, especially for online games.

QoS gives you the complete toolset to solve this problem.

Getting Started

- A) Open the **Congestion Control** submenu.
- B) Click **Set Bandwidth Speeds**, then enter the speeds you receive from a wired speed test. If you completed the setup wizard step will already be complete.
- C) Click **Always** to enable Congestion Control. If you only want it to activate when you are playing games, select **Auto-Enable**.
- D) Click **Auto-Setup** to find the best settings automatically. This will temporarily take down the Internet to ensure accuracy.

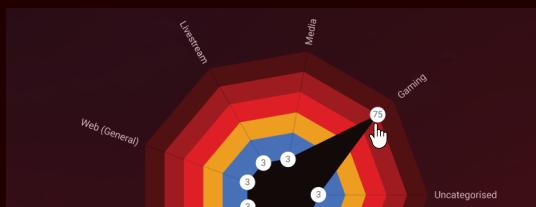
🏡 QoS (2 of 3)



Bandwidth Allocation

Some devices need more bandwidth than others, such as a PC streaming videos.

With **Bandwidth Allocation**, you can control how your bandwidth is shared across all of your applications or devices.



Set Your Allocation

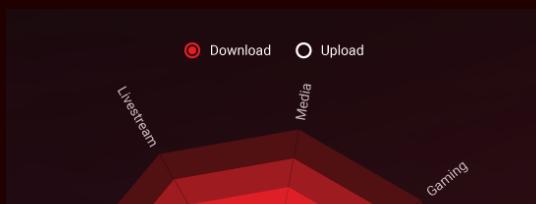
A) In the Bandwidth Allocation submenu, you can choose to allocate bandwidth to either **Devices** or **Applications**.

B) Drag the percentage node next to a device to give it access to more or less bandwidth.

C) Click **Update Distribution** to save your changes to Bandwidth Allocation.

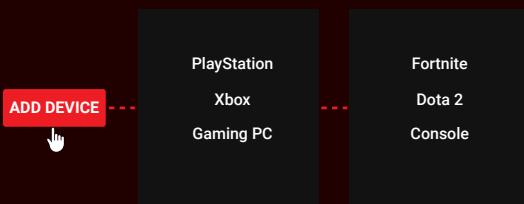
D) Use the **Download / Upload** radio button to set your bandwidth allocation for Upload.

Click **Reset Distribution** if you want to reset your Bandwidth Allocation to default.



🏡 QoS (3 of 3)

Target	Service	Download Packets	Upload Packets
All Devices	DumaOS Classified Games	84,219	12,132
PlayStation	Console	29,525	2394
Xbox	Console	15,928	5192
Smart TV	Netflix	1029	102
Family PC	YouTube	29,922	49,282



Traffic Prioritization

Network congestion creates a queue, which forces games and other fast applications to wait.

Traffic Prioritization guarantees that these fast applications will always be placed at the front of the queue, reducing lag.

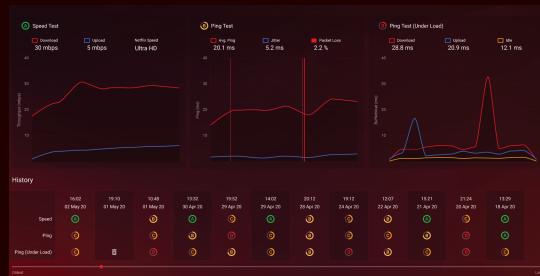
Traffic Prioritization Setup

By default, all console games and most PC games are detected and prioritized. Red circles indicate when this is taking effect.

You can monitor how much data is being prioritized in **Traffic Overview**.

- To add a service that has not automatically been detected, click **Add Device**.
- Select a device from the **Device Selector**.
- Select a **Service** or **Ports** to prioritize.

⌚ Connection Benchmark



Test Network Performance

Connection Benchmark runs a full connection test from your Modem, checking throughput (speeds), ping quality and performance under congestion (bloat).

You can **Schedule Tests** and store them in **Test History** to see how your network is performing over time.



Connection Test

A) Click Run Test. Each test will run in a set order and provide real-time results until the test is complete.

B) After running a test, your results will be stored in **Test History and graded from A+ to D.**

Add Scheduled Test

One Time

Time: 19:00 Date: 26 Month: March

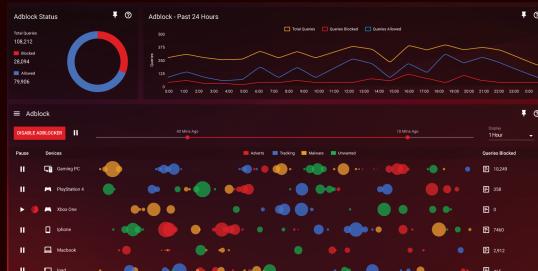
Allow Test While Internet Is In Use

Scheduling Tests

A) Click the **Schedule button in the submenu to make a new test.**

B) Input the time / date / month for the test to take place, or set it to repeat.

Adblocker



Block Ads Everywhere

Adblocker applies to all devices in your home in one click, including Smart TVs and phones.

By default, Adblocker will block most online advertising and telemetry domains with no extra steps needed.



Adblock Bubble Chart

A) Click **Enable Adblocker** to get started. Blocked adverts will appear as bubbles in real-time. Click a bubble to see the domains within.

B) Click **Pause** to temporarily disable Adblocker per device, or disable Adblocker on a device entirely.

Creating Lists

A) If the website you want to access is blocked, add the website domain to a **Whitelist**.

B) Find more advert lists online and add their URL to a **Blacklist** to improve blocking, or manually add your own domains to block.

BLACKLISTS		WHITELISTS			
Blacklist Name	List Type	Domains	Total Hits	Edit	Delete
<input checked="" type="checkbox"/> Ads	Adverts	50,219	121,391		
<input checked="" type="checkbox"/> Tracking	Tracking	31,015	29,536		
<input checked="" type="checkbox"/> Malware	Malware	20,600	15,285		
<input checked="" type="checkbox"/> Adult	Unwanted	20,600	8,120		

Device Manager



Network Map

The **Network Map** displays your connected devices, how they are connected and which devices are currently offline in a simple tree.

Alternatively, enable **Table Mode** to view your network in more detail. This can be found in the Network Map submenu.

Click on a device to access its settings.

This screenshot shows the 'Device Settings' dialog for a 'Gaming PC'. The device is identified as a 'Computer'. Key details shown include:

Name	Gaming PC	Device Type	Computer
MAC Address	AC:E0:10:60:2B:AF	IP Addresses	192.168.54.10
Connection Type	LAN		

At the bottom are three buttons: **SAVE** (highlighted in red), **BLOCK**, and **DELETE**.

Device Settings

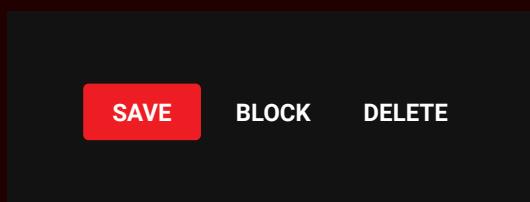
A) Rename the device by typing a new name into the **Name** text box.

B) Select which type of device it is using the **Device Type** drop-down menu.

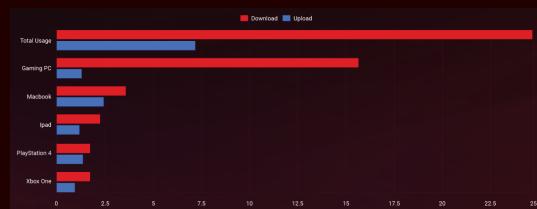
C) Click **Save** to save your changes.

D) Click **Block** to prevent an unwanted device from accessing your network.

E) Click **Delete** to remove an offline device from your Device Tree.



Network Monitor



Analyze Network Usage

The **Network Monitor** helps you to identify who, or what, is using your network thanks to enterprise level **Deep Packet Inspection** (DPI).

You can then use this information to apply the best QoS settings.

Network Snapshot

Network Snapshot shows the bandwidth being used by all of your devices, and is measured in megabits per second (Mbps).

Clicking on a bar will open the **Category Breakdown**. Clicking on a segment will open the **Application Breakdown**.

Network Overview

The **Network Overview** shows your network's current, total bandwidth usage. This graph is measured in megabits per second (Mbps).

_traffic Controller

The screenshot shows the main interface of the Traffic Controller. At the top, there's a search bar and a 'Create All Rules' button. Below is a table of rules:

#	Enabled	Rule Name	Devices	Target	Schedule	Action	Track	Edit	Delete
1	●	Game Limiter	Xbox One PlayStation 4 Nintendo Switch	Gaming	MON-FRI 18:00-22:00	Block	✓	<input type="checkbox"/>	<input type="checkbox"/>
2	●	Netflix Block	Smart TV	Netflix	MON-FRI 18:00-22:00	Block	✓	<input type="checkbox"/>	<input type="checkbox"/>
3	●	Tracking Block	All Devices	TCP Port 443 TCP Port 1020	MON-FRI 18:00-22:00	Block	✓	<input type="checkbox"/>	<input type="checkbox"/>
4	●	Social Media	All Devices	Social Media	MON-FRI 18:00-22:00	Allow	✓	<input type="checkbox"/>	<input type="checkbox"/>
5	●	Network Block	All Devices	All Traffic	MON-FRI 18:00-22:00	Block	✓	<input type="checkbox"/>	<input type="checkbox"/>
6	●	Kids Messenger	iPhone	Chat & Messaging	MON-FRI 18:00-22:00	Allow	✓	<input type="checkbox"/>	<input type="checkbox"/>
7	●	Remote Access Block	Family PC	Remote Access	MON-FRI 18:00-22:00	Block	✓	<input type="checkbox"/>	<input type="checkbox"/>

Below the rules is an 'Event Capture' section with a table of events:

Timestamp	Rule Name	Event
18/07/18 18:00:00	Game Limiter	Blocked Game Limiter from Gaming
18/07/18 18:00:00	Game Limiter	Blocked Game Limiter from Gaming
18/07/18 18:00:00	Netflix Block	Blocked Netflix Block from Netflix
18/07/18 18:00:00	Tracking Block	Blocked Tracking Block from Remote Access
18/07/18 18:00:00	Tracking Block	Blocked Tracking Block from Remote Access
18/07/18 18:00:00	Network Block	In new action
18/07/18 18:00:00	Network Block	In new action

Next Generation Firewall

Traffic Controller blocks traffic by device or application on a schedule.

Making **Rules** lets you manage every aspect of your home network, from freezing your kids Internet to preventing security risks to your smart devices.

This screenshot shows a modal dialog for creating a new rule. It has three tabs: 'Port', 'Category', and 'Application'. The 'Port' tab is selected, showing a pie chart with segments for different ports. A red 'ADD RULE' button is visible on the left.

Create Rule

- A) Click **Add Rule** to get started. Select the type of rule you are creating and the target(s) for it.
- B) Select the hours and days you want the rule to apply for, and click **Done**.

The screenshot shows a table of rules:

#	Enabled	Rule Name	Devices	Target	Schedule	Action	Track	Edit	Delete
1	●	Game Limiter	Xbox One PlayStation 4 Nintendo Switch	Gaming	MON-FRI 18:00-22:00	Block	✓	<input type="checkbox"/>	<input type="checkbox"/>
2	●	Netflix Block	Smart TV	Netflix	MON-FRI 18:00-22:00	Block	✓	<input type="checkbox"/>	<input type="checkbox"/>
3	●	Tracking Block	All Devices	TCP Port 443 TCP Port 1020	MON-FRI 18:00-22:00	Block	✓	<input type="checkbox"/>	<input type="checkbox"/>
4	●	Social Media	All Devices	Social Media	MON-FRI 18:00-22:00	Allow	✓	<input type="checkbox"/>	<input type="checkbox"/>
5	●	Network Block	All Devices	All Traffic	MON-FRI 18:00-22:00	Block	✓	<input type="checkbox"/>	<input type="checkbox"/>
6	●	Kids Messenger	iPhone	Chat & Messaging	MON-FRI 18:00-22:00	Allow	✓	<input type="checkbox"/>	<input type="checkbox"/>

Rule Table

Created rules are ordered by priority, and can be reordered using the **Drag Handle**. Each rule can be edited, deleted, and turned on or off.

Toggle **Track** to see when a rule is triggered on the **Event Capture** panel.

⌚ Other Features



Rapp Store

The feature list in DumaOS 3.0 is always growing. Welcome to the Rapp Store: your gateway to installing bleeding-edge features from the moment they're available.



System Information displays hardware statistics such as router Wi-Fi Information, CPU usage, and router memory.



Network Settings contains your Wi-Fi password settings as well as other standard router tools such as UPnP, Port Forwarding, and DHCP.



To **Reboot** the router, click on the **Global Settings** ⚙️ menu in the header bar and click Reboot. Remember that your password will reset to default.



To **Factory Reset** the router, click on the **Global Settings** ⚙️ menu in the header bar, then click **Advanced > Factory Reset**. This will reset your password to default, which can be found on the label on the base of your router.

Support

For technical support you can contact Netduma at: forum.netduma.com

For more in-depth guides, please visit the knowledge base at: support.netduma.com



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