



App User Guide

QoS

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Revision History

Updates between document versions are cumulative. Therefore, the latest document version contains all updates made to previous versions.

Release Date	App Version	Doc Version	Details
2016-06-06	2.0.0	v.1.0.0	First Release

Chapter 1 Overview

QoS (Quality of Service) is a network security mechanism. To quantitatively measure quality of service, several related aspects of the network service are often considered, such as error rates, bit rate, throughput, transmission delay, availability, jitter, etc. QoS is designed for solve these problem mention above. QoS is particularly important for the transport of traffic with special requirements.

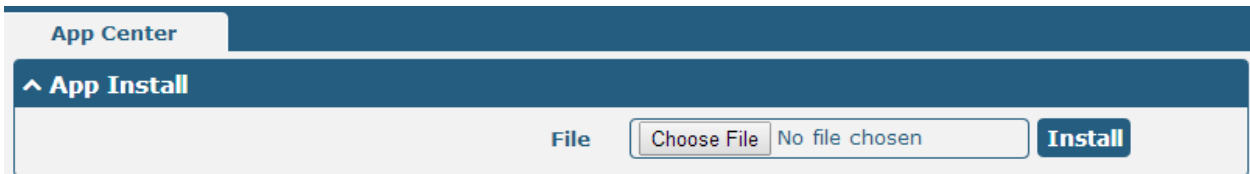
QoS function is an App which needs to install into router in **System->App Center** unit.

Chapter 2 App Installation

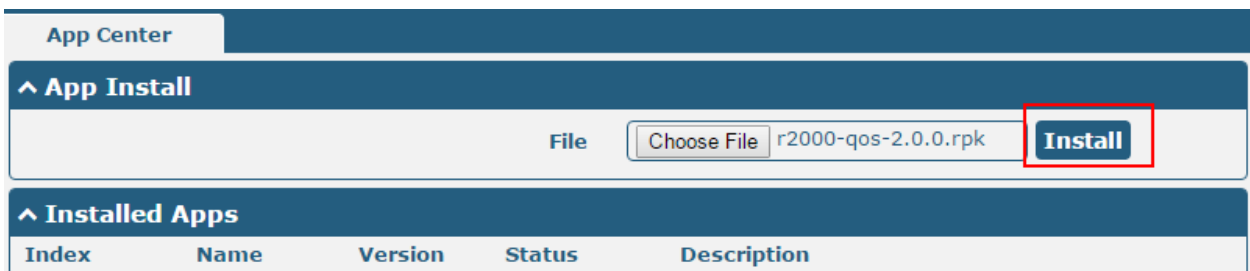
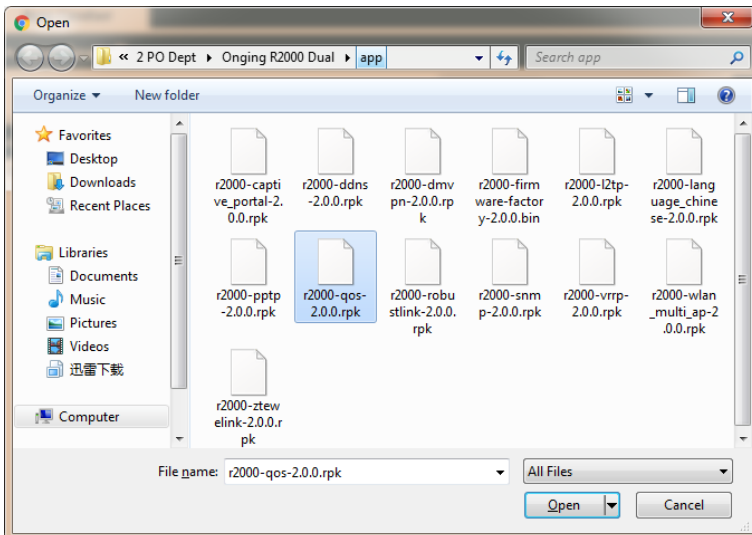
2.1 Installation

Path: **System->App**

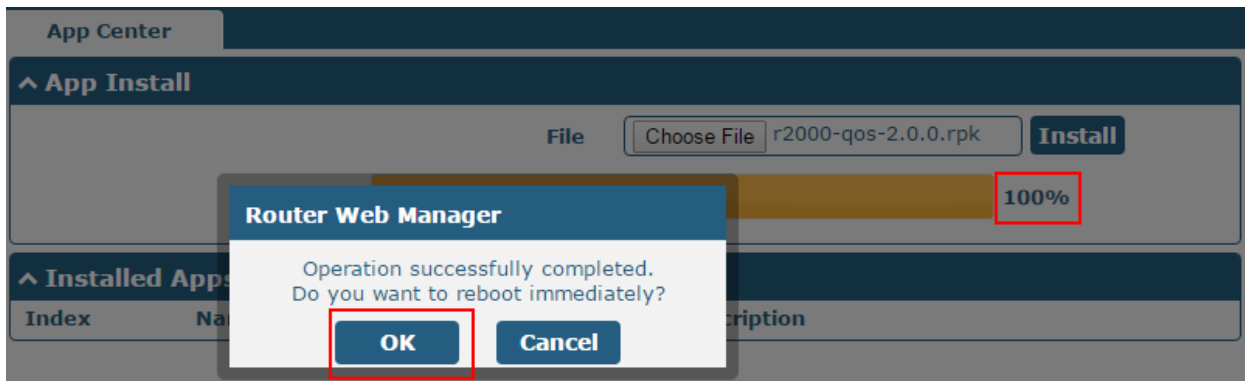
- 1 Please place QoS App .rpk file (e.g. r2000-qos-2.0.0.rpk) into a free disk of PC. And then log in router configuration page; go to **System->App** as the following screenshot show.



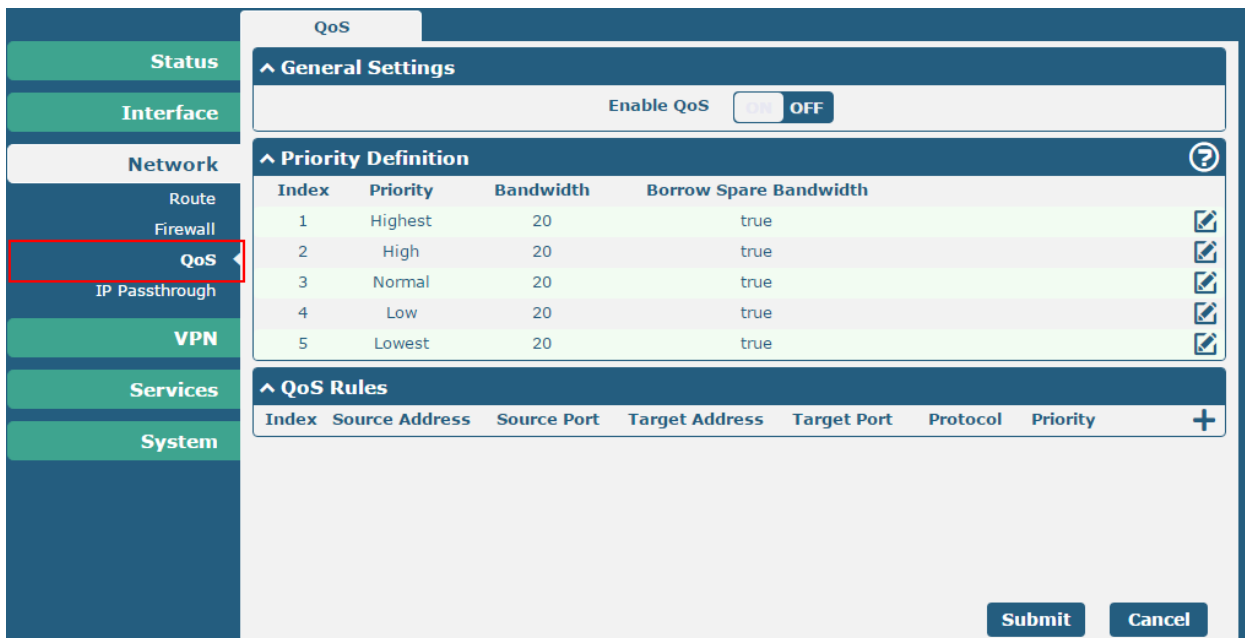
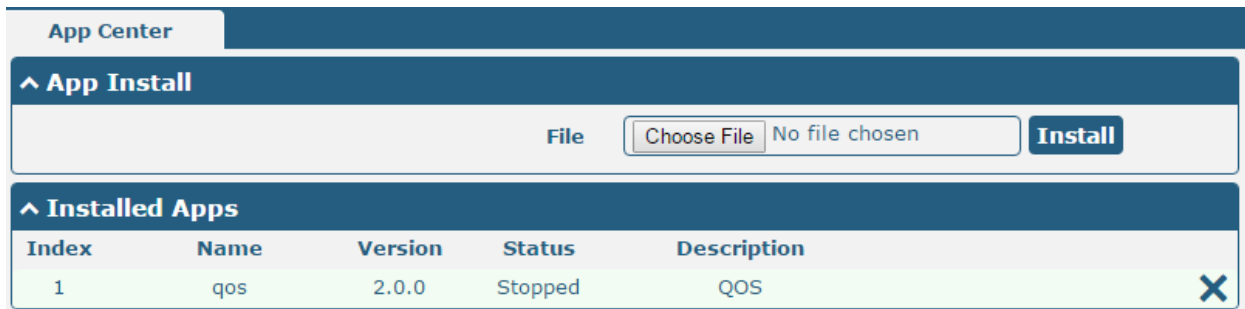
- 2 Click "Choose File" button, select QoS App .rpk file from the PC, then click "Install" button of router configuration page.



- When the rate of installation progress reach 100%, the system will pop up a reboot router reminder window. Please click “OK” to make router reboot.



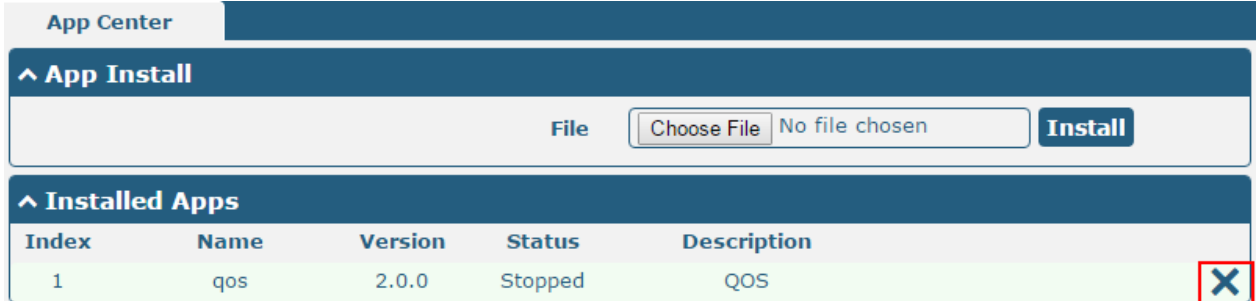
- After router power on again, log in configuration page, QoS will be include in App Center’s “Installed Apps” list, and the function configuration will display in **Network** part.



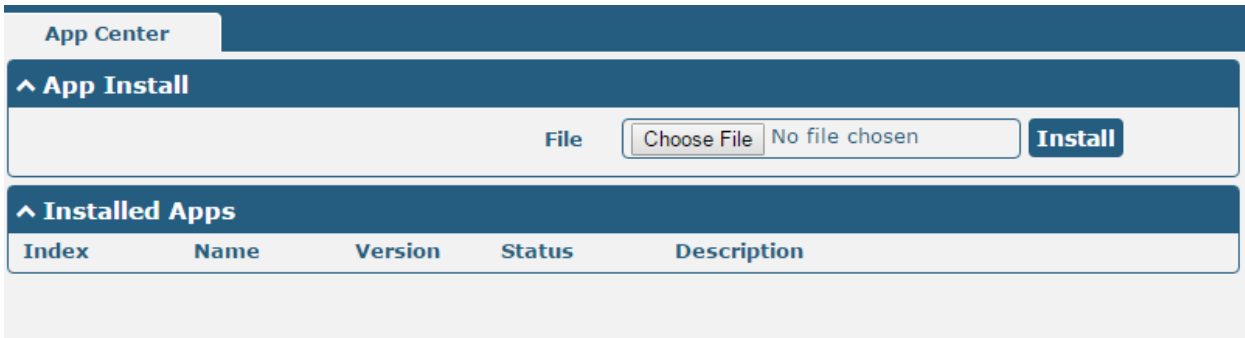
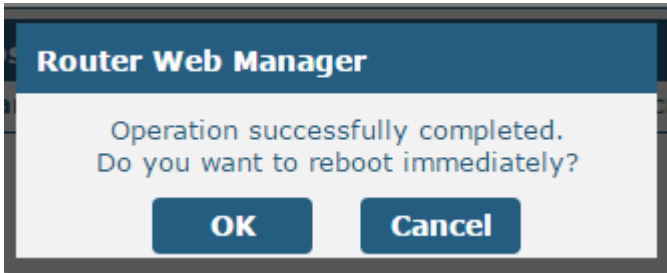
2.2 Uninstallation

Path: **System->App Center**

- 1 Go to “**Installed Apps**”, find QoS App and then click “**X**”.



- 2 Click “OK” in the router reboot reminder popup window. When router finish restart, QoS had been uninstalled.



Chapter 3 Parameters Description

This section allows users to set the QoS parameters.

Please remember to set QoS upload and download bandwidth in the **Interface->Link Manager WWAN/WAN** before Configure QoS parameters.

The screenshot shows the QoS configuration interface. At the top, there is a 'QoS' header. Below it is the 'General Settings' section, which includes a toggle for 'Enable QoS' currently set to 'ON'. The 'Priority Definition' section is expanded, showing a table with five rows. Each row represents a priority level with its index, name, bandwidth, and whether it borrows spare bandwidth. Each row has an edit icon on the right.

Index	Priority	Bandwidth	Borrow Spare Bandwidth
1	Highest	20	true
2	High	20	true
3	Normal	20	true
4	Low	20	true
5	Lowest	20	true

Select the priority, click to enter the priority definition configuration window.

The screenshot shows the 'Priority Definition' configuration window. It contains four fields: 'Index' (text input with value '1'), 'Priority' (dropdown menu with 'Highest' selected), 'Bandwidth' (text input with value '20'), and 'Borrow Spare Bandwidth' (toggle switch set to 'ON').

QoS		
Item	Description	Default
Enable QoS	Click to enable “QoS” function.	Disable
Index	Show the index of priority.	/
Priority	Select from “Highest”, “High”, “Normal”, “Low”, “Lowest”. User can select the priority level according to the requirement.	/
Bandwidth	Define bandwidth percent of “Highest”, “High”, “Normal”, “Low” and “Lowest”. All the bandwidth percent of priority are defaulted to 20%. User can configure the bandwidth percent of priority according to the requirement. The sum of bandwidth of all the priorities cannot be greater than 100%.	20
Borrow Spare Bandwidth	The traffic associated with this priority will borrow unused bandwidth from other priorities when this function is enabled, and will be limited to the specified bandwidth when this function is disabled. Limited specified bandwidth algorithm: priority defined percent upload/download bandwidth set in Interface->Link Manager WWAN/WAN .	ON

^ QoS Rules

Index Source Address Source Port Target Address Target Port Protocol Priority **+**

Click **+** to add a new QoS rule.

QoS

^ QoS Rules

Index

Source Address ?

Source Port ?

Source MAC ?

Target Address ?

Target Port ?

Protocol v

Priority v

QoS		
Item	Description	Default
Source Address	Enter the IP address of the source host. format: x.x.x.x, x.x.x.x/xx, x.x.x.x-x.x.x.x, empty means anywhere	Null
Source Port	Enter the port number of the source host.	Null
Source MAC	Enter MAC address of the source host. Router supports up to 20 users set with QoS MAC Control. Priority of QoS MAC Control is higher than that of QoS IP control.	Null
Target Address	Enter the IP address of the target host.	
Target Port	Enter the port number of the target host.	
Protocol	Select from "All", "TCP", "UDP", "ICMP" and "TCP&UDP".	All
Priority	Select from "Highest", "High", "Normal", "Low", "Lowest". Those priorities had been defined in Network->QoS->Priority Definition .	Normal

Note:

1. If services are in the same priority level, router will automatically start Stochastic Fairness Queueing (SFQ) strategy to make a fair bandwidth allocation.
2. If the link between a source host and target host had set QoS 3 rules. At this time it won't consider the priority but will only choose the ranked first one to take effect.