



CHAPTER 8

Configuring Reliable Packet Delivery Overlay Network Protocol

This chapter describes how to configure the Reliable Packet Delivery Overlay Network (RPDON) protocol on the Cisco 1000 Series Connected Grid Routers (Cisco CG-OS router or CGR 1000) and the required supporting systems to provide reliable transfer of UDP application packets between Connected Grid Endpoints and the Utility Network.

This chapter includes the following sections:

- [Information About RPDON, page 8-1](#)
- [Prerequisites, page 8-6](#)
- [Guidelines and Limitations, page 8-6](#)
- [Default Settings, page 8-6](#)
- [Configuring RPDON in the Network, page 8-6](#)
- [Verifying Configuration, page 8-14](#)
- [Configuration Example, page 8-15](#)
- [Feature History, page 8-15](#)

Information About RPDON

The RPDON protocol provides reliable transfer of UDP application packets between peer networks by providing buffering and acknowledgement services. The protocol provides buffering for packet retransmission when the peer does not acknowledge receipt of a packet.

A typical application of RPDON is within an Automatic Metering Infrastructure (AMI) deployment where data exchanges between remote meters (endpoints) and the Utility Network data collection systems occur. RPDON provides enhanced reliability of data transfer when intermittent failures happen.

RPDON Components

To implement RPDON within the network, you must install and configure the following systems:

- RPDON router—A Cisco CG-OS router that provides connectivity to an IPv6 over Low power Wireless Personal Area Network (6LoWPAN) through its IEEE 802.15.4g/e WPAN module.
- Head-end router—A Cisco router that supports the Encapsulated Remote Switched Port Analyzer (ERSPAN) feature to allow mirroring of all RPDON traffic to the head-end RPDON server.


Note

We recommend the Cisco ASR 1000 Series Router (Cisco ASR) for the RPDON implementation. Cisco ASR represents the head-end router throughout the balance of this document.

- Head-end RPDON server—A Cisco UCS server that acknowledges the receipt of the packets to the RPDON router.
- Connected Grid Endpoints (CGEs)—Endpoints such as meters that transmit and receive data between the Utility network over RPDON.


Tip

See [Cisco 1000 Series Connected Grid Routers for Cisco CG-OS Release CG3\(1\)Release Notes](#) or later for minimum system requirements of the RPDON components.

Reliability Services

To provide the reliable transfer of application packets between the two peer networks, the CGEs connected to a Cisco CG-OS router and the management and control systems within the Utility network, you configure RPDON on systems at both ends of the link.

At one end of the link, the Cisco CG-OS router provides connectivity to the 6LoWPAN network through its WPAN module; and, at the other end of the link, the RPDON server, connected to the Cisco ASR, provides connectivity to the Utility network.

RPDON provides the following reliability services for packets on the network:

- Buffering service – RPDON buffers all packets that originate in the local network. When the peer acknowledges receipt of these packets, the software deletes the buffered packets. If the peer does not acknowledge receipt of the packet, it is assumed that the buffered packets or the peer acknowledgement is lost in transit. The software retransmits the buffered packets to the peer.
 - In AMI deployments, the Cisco CG-OS router applies the buffering service for those packets that originate from the meters and are destined for the Utility network.
 - For packets that originate from the Utility network that are destined for the meters, the RPDON server applies the buffering service.
- Acknowledgement (ACK) service – All packets that originate from a peer network and destined for a local network are acknowledged to the peer through RPDON.
 - In AMI deployments, the packets originated from meters and destined to utility network are applied ACK service at the RPDON server.
 - The packets originated from the Utility network and destined to meters are applied ACK service at the Cisco CG-OS router.

**Note**

All control messages related to buffering, acknowledgement, and the heartbeat (see [Backhaul Availability Check](#)), which monitors the backhaul status use UDP port 720.

RPDON Default Reliable Map Policy

When you enable and configure RPDON on both the Cisco CG-OS router and on the RPDON server, the software creates a default reliability map that applies reliability services to only those UDP packets that originate or terminate on the meters within the 6LoWPAN and fall within the range of the WPAN prefix address.

Encapsulated Remote Switched Port Analyzer (ERSPAN)

In support of the RPDON feature, you enable ERSPAN on a port on the Cisco ASR (Head-end router) to allow forwarding of packets to a RPDON server, which analyzes the packets to determine whether or not the packets should be accepted from or transferred over the reliable RPDON path illustrated in [Figure 8-1](#).

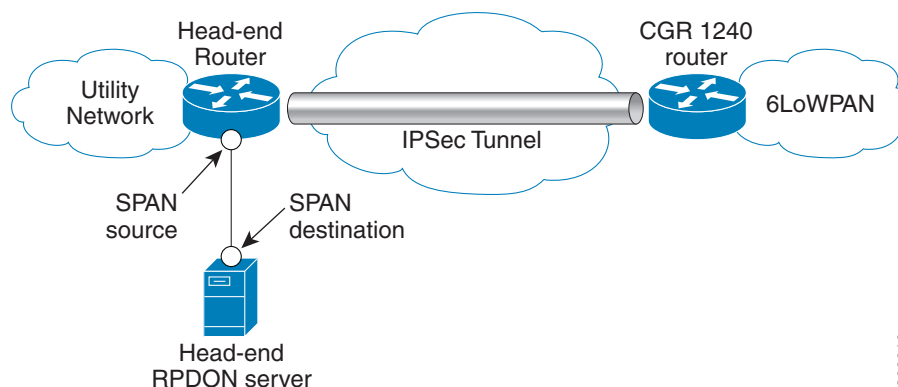
To use ERSPAN to monitor traffic through one or more ports on the Cisco ASR, you must create both an ERSPAN source and an ERSPAN destination session.

You can create the two sessions either on the same router or on different routers. If you create two sessions on two different routers, then ERSPAN monitors the traffic and forwards traffic from the source router to the destination router. However, when you create two sessions on the same router, data flow takes place inside the router, which is similar to that in a local SPAN.

The following factors are applicable while using ERSPAN as a local SPAN:

- Both sessions have the same ERSPAN ID.
- Both sessions have the same IP address, which is that of the router—either the loopback IP address or the IP address configured on any port.

Figure 8-1 Packet Flow Between the Head-end Router and the RPDON Server



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Application

In [Figure 8-2](#), IPv6 traffic from the meters within the 6LoWPAN transits the WPAN module of the CGR 1240 router. The router encapsulates the IPv6 traffic (UDP transport) in a Generic Routing Encapsulation (GRE) tunnel to allow it to be transmitted as IPv4 traffic across the wide area network (WAN) to the head-end router (Cisco ASR). Virtual IPSec tunnels encapsulate traffic passing through the interfaces between the Cisco CG-OS router and the Cisco ASR to further protect the peer-to-peer communication across the WAN backhaul.

Flow of RPDON Traffic from Meters to Utility Network

When the Cisco CG-OS router, configured with RPDON, receives a packet from a meter, it confirms that its source address is within the prefix address range of the WPAN module. If the source address matches, then the router buffers a copy of the packet and forwards the original packet to the head-end router and a retransmission timer begins.

The head-end router, configured with ERSPAN, mirrors all RPDON traffic to the head-end RPDON server. The RPDON server is responsible for acknowledging the receipt of the packets to the router.

- When the router receives the acknowledgement, it removes the copy of the forwarded packet from its buffer.
- When the router does not receive an acknowledgement before the retransmission timer period expires, it retransmits the packet from its buffer.

Flow of RPDON Traffic from Utility Network to Meters

When the Utility network sends traffic towards the meters, the head-end router (configured with ERSPAN) mirrors that traffic flow to the RPDON server for it to examine.

At the RPDON Server

- When the RPDON server does not recognize the peer information (destination address of the WPAN interface prefix) within the packet or the packet does not match the buffer action within the default reliable map policy, the server drops the packet.
- When the RPDON server does recognize the packet, the server adds the packet to its buffer and forwards the original towards its destination and then the server starts a retransmission timer for the packet.
 - If the RPDON server receives an acknowledgement message from the Cisco CG-OS router before the retransmission timer expires, the server clears the packet from the buffer and stops the retransmission timer.
 - If the RPDON server does not receive an acknowledgement message back before the timer expires, the server retransmits the packet. When the maximum retransmit attempts for the packet is met, the server drops the packet.

The RPDON server has a buffer for each peer (WPAN interface address/prefix) that has sent a SYNC message. The server allocates 20MB for the buffer database. If the buffer database reaches 95% of its full capacity, then it will drop packets and report a message to the syslog.

At the Cisco CG-OS Router

The Cisco CG-OS router captures packets sent from the Utility network and employs RPDON to examine the packets.

- When the packet does not match either the default reliable map policy or a peer address known by the Cisco CG-OS router, the router drops the packet and does not send an acknowledgement to the RPDON server. In some cases, the peer address is not known because the user has not configured the peer address on the router.
- When the packet does match the default reliable map policy, the router creates an RPDON flow and buffers a flow for each peer. These router collects these RPDON flows as a batch, which is later sent as single acknowledgement to the RPDON server. These router sends these batches every 500 msec.

When you enable RPDON on the Cisco CG-OS router, it allocates a buffer of 20MB for the feature. You cannot modify the buffer value.

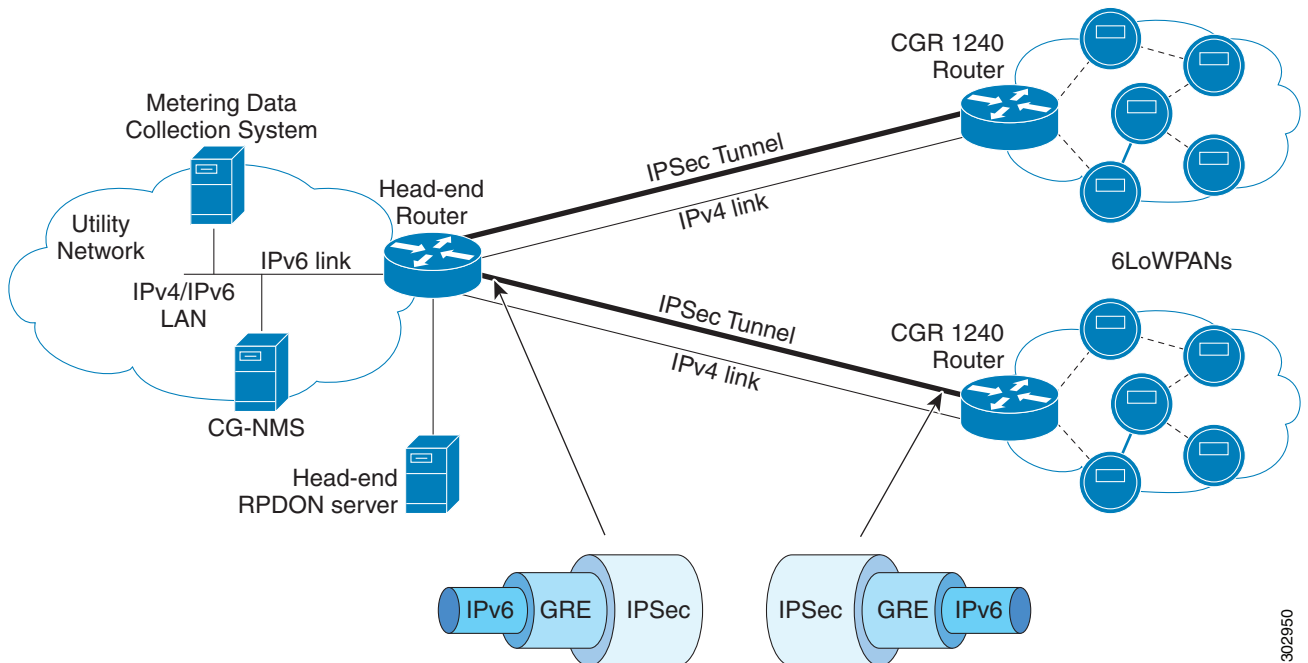
Backhaul Availability Check

RPDON sends out a heartbeat message every minute from the Cisco CG-OS router to the RPDON server to check for the availability of the WAN backhaul.

A loss of three heartbeats marks the backhaul as down and stops the RPDON retransmission timers on the Cisco CG-OS router and the RPDON server.

When the backhaul comes back up, the retransmission timers restart on both the Cisco CG-OS router and the RPDON server; and, both systems resend all their respective buffered packets regardless of the remaining time of the retransmission timers. When a packet retransmission occurs by one of the systems, the system resets its transmission timer.

Figure 8-2 AMI Network Exchanging Metering Data and Updates



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Prerequisites

Install the Cisco CG-OS router and configure IPv4 and IPv6 routing on the router.

See [Cisco 1240 Connected Grid Router Hardware Installation Guide](#)

See [Cisco 1000 Series Connected Grid Routers Unicast Routing Software Configuration Guide](#)

Install either or both the 3G Cellular and WiMAX module in the Cisco CG-OS router to serve as the backhaul.

See [Modules for Cisco 1000 Series Connected Grid Routers](#)

Install the WPAN module in the Cisco CG-OS router to communicate with the meters in the 6LoWPAN.

See [Modules for Cisco 1000 Series Connected Grid Routers](#)

Install the Cisco ASR 1002 as a head-end router and configure IPv4 and IPv6 routing on the router.

See [Cisco ASR 1000 Series Aggregation Services Routers](#)

Please confirm the system requirements for all the systems and modules in the latest release notes.

See [Cisco CG-OS CG3\(1\) Release Notes for Cisco 1000 Series Connected Grid Routers](#) or later

Guidelines and Limitations

- The RPDON feature can result in duplicate packets on the meters and assumes that the meters or Utility network can address this duplication.
- The RPDON feature can result in an out-of-order packet delivery and assumes that the meters and the Utility software can address this duplication.

Default Settings

[Table 8-1](#) lists the default settings for RPDON and its parameters.

Table 8-1 Default Settings for RPDON and its Parameters

Parameter	Default
feature rpdon	Disabled.

Configuring RPDON in the Network

This section addresses configuring RPDON across multiple systems to support RPDON processing of the traffic between the meters and Utility Network and includes the following sections:

- [Installing and Configuring the RPDON Server, page 8-7](#)
- [Configuring the Cisco ASR, page 8-10](#)
- [Configuring the Cisco CG-OS Router, page 8-13](#)

Installing and Configuring the RPDON Server

Within this RPDON configuration, we employ the Cisco UCS C200 M2 server as the RPDON server.

This section includes the following topics:

- [Setting Up the RPDON Server](#)
- [Configuring an IP Address on the RPDON Server](#)
- [Removing a Cisco RPDON RPM Package](#)
- [Installing the Cisco RPDON RPM Package](#)

Setting Up the RPDON Server

BEFORE YOU BEGIN

Refer to the latest release note for details on required software packages and their versions for the RPDON server. *See* [Prerequisites](#)

DETAILED STEPS

-
- | | |
|---------------|---|
| Step 1 | Install VMware vSphere ESXi on the UCS server.
<i>See</i> Cisco UCS C-Series Servers VMware Installation Guide |
| Step 2 | Install Red Hat Linux version 5.7 on the ESXi virtual machine.
Refer to the users guide for that product. |
| Step 3 | Disable the firewall on Linux. |
-

Configuring an IP Address on the RPDON Server

Here is a sample configuration.

```
[root@rpdon-vm-linux sysconfig]# more /etc/sysconfig/network
NETWORKING=yes
NETWORKING_IPV6=yes
HOSTNAME=rpdon-vm-linux
IPV6_DEFAULTGW=2001:64::c0a8:6402

[root@rpdon-vm-linux network-scripts]# pwd
/etc/sysconfig/network-scripts
[root@rpdon-vm-linux network-scripts]# more ifcfg-eth1
# Intel Corporation 82545EM Gigabit Ethernet Controller (Copper)
DEVICE=eth1
BOOTPROTO=static
ONBOOT=yes
HWADDR=00:0c:29:5a:57:73
IPADDR=192.168.100.242 <---RPDON server address (Employed by Cisco ASR and CG-OS router)
NETMASK=255.255.255.0
GATEWAY=192.168.100.1
IPV6INIT=yes
IPV6_AUTOCONF=yes
ONBOOT=yes
TYPE=Ethernet
PEERDNS=yes
USERCTL=yesd
```

Removing a Cisco RPDON RPM Package

You must remove any previous instance of an RPDON image before installing a new version.

To remove a previous version, enter the following command at the root:

```
[root@username ~]# rpm -e -v rpdon-2.0
[ OK ] rpdon: [ OK ]
[root@username ~]# ps -ef | grep rpdon
root      17016 16774  0 10:09 pts/2    00:00:00 grep rpdon
```

Installing the Cisco RPDON RPM Package

BEFORE YOU BEGIN

Refer to the latest release note for details on the required software and RPM packages and their versions for the RPDON server. *See* [Prerequisites](#)

Set up the RPDON server. *See* [Setting Up the RPDON Server](#)

Configure an IP address on the RPDON server. *See* [Configuring an IP Address on the RPDON Server](#)

Remove any previous instances of the RPDON RPM package before installing a new version.

See [Removing a Cisco RPDON RPM Package](#)

DETAILED STEPS

Step 1 Copy the rpdon.rpm package onto the RPDON server.

```
[root@username ~]# scp root@172.27.166.28:/ws/sgbu4/RPDONS/rpdons_milan_22_milan/
rpdon-2.0-22.x86_64.rpm
```

Step 2 Install the rpdon.rpm on the server by entering the following command at the server prompt:

```
[root@username ~]# rpm -i -v rpdon-2.0-12.x86_64.rpm
Preparing packages for installation...
rpdon-2.0-12[ OK ]
rpdon: [ OK ]
```

Step 3 To verify that the RPDON service is active on the server, enter:

```
[root@username ~]# ps -ef | grep rpdon
root      17031      1  0 10:10 ?          00:00:00 rpdon
root      17035      1  0 10:10 pts/2      00:00:00 /bin/bash /usr/bin/rpdon_monitor
root      17040 16774   0 10:10 pts/2      00:00:00 grep rpdon
[root@username ~]#
[root@username ~]# service rpdon status
rpdon (pid 17031) is running...
[root@username ~]#
```

Step 4 To verify the version of the RPDON software, enter:

```
[root@username tmp]# rpm -q -i -l rpdon
Name           : rpdon                               Relocations: (not relocatable)
Version        : 2.0                               Vendor: (none)
Release        : 18                                Build Date: Thu 31 May 2012 09:50:10 AM PDT
Install Date:  Thu 31 May 2012 10:01:36 AM PDT    Build Host: sjc-ads-117
Group          : Applications/Communications       Source RPM: rpdon-2.0-18.src.rpm
Size           : 107909                             License: Cisco
Signature      : (none)
URL            : http://www.cisco.com/
Summary        : rpdon rpm package
Description    :
Reliable Packet Delivery with Overlay Network (RPDON).
rpdon rpm package
Built from milan/18
/etc/init.d/rpdon
/etc/rpdon/rpdon.conf
/usr/bin/rpdon
/usr/bin/rpdon_monitor
```

Step 5 To verify that the RPDON file has the correct Ethernet interface defined, enter:

```
[root@username ~]# more /etc/rpdon/rpdon.conf
# RPDON conf file
INTERFACE=eth1
```

Step 6 To view the RPDON log file, go to the following directory:

```
/var/log
```

There are two log files located in this directory: *rpdonlog* and *rpdonlog.1*. *rpdonlog* always represents the latest file.

The server reserves 20MB for each log file. The size of the RPDON log file and buffer are set values.

Configuring the Cisco ASR

This section includes the following topics:

- [Configuring a Gigabit Ethernet Interface](#)
- [Configuring ERSPAN](#)

Configuring a Gigabit Ethernet Interface

This section defines the Cisco ASR interface that connects to the Utility network.

BEFORE YOU BEGIN

Install the Cisco ASR and ensure IPv4 and IPv6 routing are operational. See [Prerequisites](#)

DETAILED STEPS

	Command	Purpose
Step 1	configure terminal	Enters global configuration mode.
Step 2	interface GigabitEthernet <i>slot/subslot/port</i>	Specifies the Gigabit Ethernet interface that connects to the RPDON server.
Step 3	ip address <i>ip-address mask</i>	Defines the IP address and mask for the Cisco ASR that provides connectivity to IPV4 systems in the Utility network.
Step 4	negotiation auto	Enables the auto-negotiation protocol to configure the speed, duplex, and automatic flow control of the Gigabit Ethernet interface.
Step 5	ipv6 enable	Enables IPv6 on the router.
Step 6	ipv6 address <i>ipv6-address/prefix-length</i>	Defined on the 0/0/0 Gigabit Ethernet interface of the Cisco ASR to provide IPv6 connectivity to the systems within the Utility network.
Step 7	end	Ends the current configuration session.

EXAMPLE

This example shows how to a configure a Gigabit Ethernet interface, 0/0/0, to connect to the RPDON server.

```
router-asr# configure terminal
router-asr (config)# interface GigabitEthernet 0/0/0
router-asr (config-if)# ip address 10.0.2.8 255.255.255.0
router-asr (config-if)# negotiation auto
router-asr (config-if)# ipv6 enable
router-asr (config-if)# ipv6 address 2001:F:F:ADCD::1/64
router-asr (config-if)# end
```

Configuring ERSPAN

You must configure the ERSPAN feature on the Cisco ASR to allow it to mirror RPDON packets (that it receives from the Cisco CG-OS router) to the RPDON server.

You configure ERSPAN on the Cisco ASR interface as the ERSPAN-source that connects to the RPDON server, the destination.

BEFORE YOU BEGIN

Install and configure the Cisco ASR. *See* [Prerequisites](#)

Install and configure the RPDON server.

See [Installing and Configuring the RPDON Server](#)

Configure a connection between the Cisco ASR and the RPDON server.

See [Configuring a Gigabit Ethernet Interface](#)

DETAILED STEPS

	Command	Purpose
Step 1	configure terminal	Enters global configuration mode.
Step 2	monitor session <i>span-session-number</i> type { erspan-destination erspan-source }	<p>Defines an ERSPAN source or destination session and enters the ERSPAN monitor source session configuration mode.</p> <p><i>span-session-number</i>—Value from 1 to 1024.</p> <ul style="list-style-type: none"> The same session number cannot be used more than once. The session IDs for source sessions or destination sessions are in the same global ID space, so each session ID is globally unique for both session types. You cannot change the session ID (configured by the <i>span-session-number</i> argument) and the session type (configured by the erspan-destination or erspan-source keyword) after you define these values. <p>Use the no form of this command to remove the session and then re-create the session, with a new session ID or a new session type.</p>
Step 3	description <i>string</i>	<p>(Optional) Describes the ERSPAN source session.</p> <p><i>string</i>—Includes up to 240 characters excluding special characters or spaces.</p>

	Command	Purpose
Step 4	source interface { gigabitethernet <i>interface-number/port/interface-number:</i> <i>interface-number</i> multilink <i>interface-number/port/interface-number:</i> <i>interface-number</i> pos <i>interface-number/port/interface-number:</i> <i>interface-number</i> [both rx tx] port-channel <i>interface-number/port/interface-number:</i> <i>interface-number</i> serial <i>interface-number/port/interface-number:</i> <i>interface-number</i> tunnel <i>interface-number/port/interface-number:</i> <i>interface-number</i> }	Defines the source interface.
Step 5	destination	Enters ERSPAN source session destination configuration mode.
Step 6	erspan-id <i>erspan-flow-id</i>	Configures the ERSPAN ID that the source and destination sessions use to identify the ERSPAN traffic.
Step 7	ip address <i>ip-address</i>	Defines the IP address of the destination system (RPDON server).
Step 8	origin ip address <i>ip-address</i>	Configures the IP address of the Cisco ASR port (GigE port 0/0/0), that is the source of the ERSPAN traffic for the destination system (RPDON server).
Step 9	end	Exits ERSPAN source session destination configuration mode, and returns to privileged EXEC mode.

EXAMPLE

This example shows how to define a session ID of 1, configure ERSPAN on the source interface, Gi0/0/0, and IP address (10.0.2.8) of the Cisco ASR, and define the destination IP address of the RPDON server (192.168.100.242).

```
router-asr# configure terminal
router-asr (config)# monitor session 1 type erspan-source
router-asr (config-mon-erspan-src)# description source interface
router-asr (config-mon-erspan-src)# source interface gigabitethernet 0/0/0
router-asr (config-mon-erspan-src)# destination
router-asr (config-mon-erspan-src-dst)# erspan-id 100
router-asr (config-mon-erspan-src-dst)# ip address 192.168.100.242
router-asr (config-mon-erspan-src-dst)# origin ip address 10.0.2.8
router-asr (config-mon-erspan-src-dst)# end
router-asr#
```

Configuring Virtual Tunnels (Optional)**Tip**

When you configure virtual tunnels between the Cisco ASR and the Cisco CG-OS router for additional security, you **must** configure these tunnels at both ends before configuring RPDON on the Cisco CG-OS router. The RPDON server receives mirrored traffic from the Cisco ASR configured with ERSPAN.

You can configure IPsec and GRE tunnels and WAN backhaul redundancy between the Cisco ASR and Cisco CG-OS router.

- For details on configuring WAN backhaul redundancy by employing IPsec and GRE tunnelling on the Cisco CG-OS router and Cisco ASR:

See [Cisco 1000 Series Connected Grid Routers Unicast Routing Software Configuration Guide](#)

- For details on Configuring IKEv2 and IPsec on the Cisco CG-OS router and the Cisco ASR:

See [Cisco 1000 Series Connected Grid Routers Security Software Configuration Guide](#)

Configuring the Cisco CG-OS Router

This section includes the following topics:

- [Enabling RPDON](#)
- [Configuring RPDON Parameters](#)

Enabling RPDON

You must enable RPDON on the Cisco CG-OS router to provide buffering and acknowledgement of the IPv6 UDP packets between the Cisco ASR and Cisco CG-OS router.

When you enable RPDON, the router allocates a buffer of 20MB (set value) for the feature.

BEFORE YOU BEGIN

Install and configure the RPDON server. *See [Installing and Configuring the RPDON Server](#)*

Install and configure the Cisco ASR to support RPDON. *See [Configuring the Cisco ASR](#)*

Install and configure the WPAN module in the Cisco CG-OS router.

See [Cisco Connected Grid WPAN Module for CGR 1000 Series Installation and CG-Mesh Configuration Guide](#)

Configure the virtual GRE and IPsec tunnels and the corresponding interfaces (if applicable to your application).

See [Configuring Virtual Tunnels \(Optional\)](#)

DETAILED STEPS

	Command	Purpose
Step 1	<code>configure terminal</code>	Enters global configuration mode.
Step 2	<code>feature rpdon</code>	Enables RPDON on the router. Note The no form of the command disables the feature.

EXAMPLE

This example shows how to enable RPDON on the Cisco CG-OS router.

```
router-cgr# configure terminal
router-cgr(config)# feature rpdon
```

Configuring RPDON Parameters

After enabling RPDON on the Cisco CG-OS router, you must define the peer address of the head-end router with which the Cisco CG-OS router communicates. The peer address is the IP address that you configured for the RPDON server within the [Installing and Configuring the RPDON Server](#) section.

You must also define the WPAN interface prefix that connects to the 6LoWPAN. All meters within the prefix range can transport traffic over RPDON between the Cisco CG-OS router and Cisco ASR.

BEFORE YOU BEGIN

Enable the RPDON on the Cisco CG-OS router. See [Enabling RPDON](#)

DETAILED STEPS

	Command	Purpose
Step 1	configure terminal	Enters global configuration mode.
Step 1	[no] rpdon peer-address <i>ip-address</i>	Identifies the IP address of the RPDON server (Cisco UCS server) that terminates RPDON traffic sent from the Cisco CG-OS router. <i>ip-address</i> —IPv4 address of format x.x.x.x.
Step 2	rpdon prefix <i>ipv6-address</i>	Defines the IPv6 address prefix of the WPAN module. <i>ipv6-address</i> —IPv6 address prefix.

EXAMPLE

This example shows how to configure the peer address of the RPDON server and the WPAN IPv6 address prefix on the Cisco CG-OS router.

```
router-cgr# configure terminal
router-cgr(config)# rpdon peer-address 192.168.100.242
router-cgr(config)# rpdon prefix 2001:c:c:cccc::/64
```

Verifying Configuration

To display RPDON configuration information on the Cisco CG-OS router, enter the following command.

Command	Purpose
show rpdon info [ack-entries buffered-packets instances peers]	Displays configuration information on acknowledged packets, buffered packets, defined instances, and peers.

Configuration Example

This example shows how to configure a Cisco ASR with Gigabit Ethernet interface, 0/0/0, to connect to the RPDON server; and, to configure ERSPAN on the Cisco ASR to mirror that traffic received from the Cisco CG-OS router to the RPDON server.

```
router-asr# configure terminal
router-asr (config)# interface GigabitEthernet 0/0/0
router-asr (config-if)# ip address 10.0.2.8 255.255.255.0
router-asr (config-if)# negotiation auto
router-asr (config-if)# ipv6 enable
router-asr (config-if)# ipv6 address 2001:F:F:ADCD::1/64
router-asr (config-if)# end
router-asr# configure terminal
router-asr (config)# monitor session 1 type erspan-source
router-asr (config-mon-erspan-src)# description source interface
router-asr (config-mon-erspan-src)# source interface gigabitethernet 0/0/0
router-asr (config-mon-erspan-src)# destination
router-asr (config-mon-erspan-src-dst)# erspan-id 100
router-asr (config-mon-erspan-src-dst)# ip address 192.168.100.242
router-asr (config-mon-erspan-src-dst)# origin ip address 10.0.2.8
router-asr (config-mon-erspan-src-dst)# end
router-asr#
```

This example shows how to enable RPDON and configure the peer address of the RPDON server and the WPAN IPv6 address prefix on the Cisco CG-OS router.

```
router-cgr# configure terminal
router-cgr(config)# feature rpdon
router-cgr(config)# rpdon peer-address 192.168.100.242
router-cgr(config)# rpdon prefix 2001:c:c:cccc::/64
```

Feature History

Feature Name	Release	Feature Information
Reliable Packet Delivery Overlay Network protocol	Cisco CG-OS Release CG3(1)	Initial support of the feature on the CGR 1000 Series Routers.

