



Reuse MAC for ATM Route-Bridge Encapsulation

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The Reuse MAC for ATM Route-Bridge Encapsulation feature provides for a configurable MAC address for ATM point-to-point sub-interfaces, with the single VC on each sub-interface that connects each subscriber to the ISP.

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Finding Feature Information

Your software release may not support all the features documented in this module. For the latest feature information and caveats, see the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the [Feature Information for Reuse MAC for ATM Route-Bridge Encapsulation, page 5](#).

Use Cisco Feature Navigator to find information about platform support and Cisco IOS and Catalyst OS software image support. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.

Information About Reuse MAC for ATM Route-Bridge Encapsulation

When multiple hosts are connected to the Customer Premises Equipment (CPE) that in turn communicate to the Internet Service Provider (ISP) through the Broadband Remote Access Server (BRAS), the hosts are connected to the CPE through Ethernet and legacy ATM between the CPE and the BRAS, and aggregation using DSL Access Multiplexer (DSLAM).

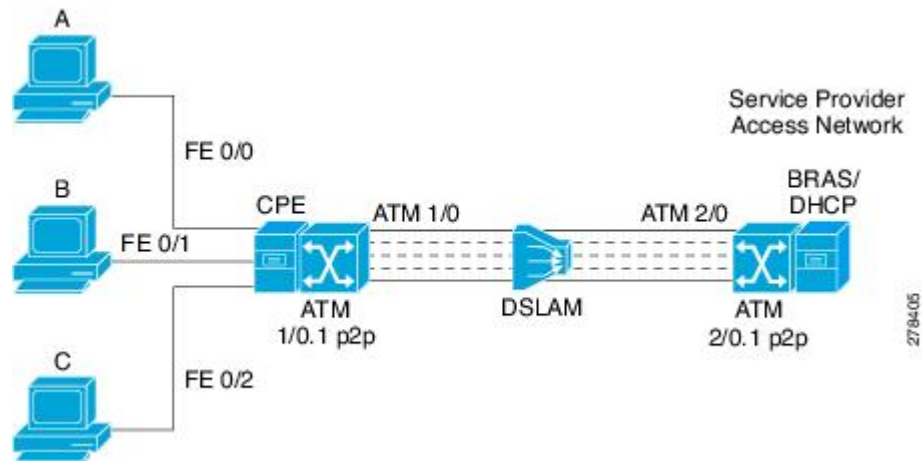
In a standard setup, hosts are connected to the BRAS through sub-interfaces. A host sends a DHCP request to get its IP address from the DHCP server (can be the BRAS), and when the IP address is assigned, the



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packets start flowing with the IP. The ATM interface in the CPE is configured with Route-Bridge Encapsulation (RBE) to enable packets from the hosts to be bridged across the ATM connection as shown in the figure below.

Figure 1 Sample Topology for Reuse MAC for ATM Route-Bridge Encapsulation



The Reuse MAC for ATM Route-Bridge Encapsulation feature provides for a configurable MAC address for ATM point-to-point sub-interfaces, with the single virtual circuit (VC) on each sub-interface that connects each subscriber to the ISP.

How to Configure Reuse MAC for ATM Route-Bridge Encapsulation

The Reuse MAC for ATM Route-Bridge Encapsulation configuration is available only in the ATM point-to-point sub-interface mode. Only physical Ethernet interfaces can be used as client interfaces whose MAC address can be used for the ATM P2P sub-interface.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **interface atm slot/port**
4. **atm ether-mac-address interface-name**
5. **atm ether-mac-address mac-address**
6. **end**
7. **show running interface atm slot /port**

DETAILED STEPS

Command or Action	Purpose
Step 1 enable Example: Router> enable	Enables privileged EXEC mode. Enter your password if prompted.
Step 2 configure terminal Example: Router# configure terminal	Enters global configuration mode.
Step 3 interface atm slot/port Example: Router(config)# interface atm 1/0.1	Specifies the ATM interface to be configured and enters ATM point-to-point sub-interface mode, where: slot/port--Specifies the location of the interface
Step 4 atm ether-mac-address interface-name Example: Router(config-subif)# atm ether-mac-address interface fastEthernet 0/0	Specifies the interface name whose MAC address can be used to configure the ATM point-to-point sub-interfaces. This is option 1, skip step 5 if you prefer to specify the interface name and not the MAC address. Note Step 4 and step 5 are exclusive of each other.
Step 5 atm ether-mac-address mac-address Example: Router(config-subif)# atm ether-mac-address 00a1.0b65.87bc	Specifies the user defined or explicit MAC address that can be used to configure the ATM point-to-point sub-interfaces. This is option 2, skip step 4 if you prefer to specify the MAC address and not the interface name. Note Step 4 and step 5 are exclusive of each other.
Step 6 end Example: Router(config-subif)# end	Returns to the privileged EXEC mode.
Step 7 show running interface atm slot /port Example: Router# show running interface atm0/0.000	Displays the configuration.

Configuration Examples for Reuse MAC for ATM Route-Bridge Encapsulation

The following example shows how to configure the Reuse MAC for ATM Route-Bridge Encapsulation feature using an interface:

```
Router> enable
Router# configure terminal
Router(config)# interface atm 3/0.100 point-to-point
Router(config-subif)# atm ether-mac-address interface fastEthernet 0/0
Router(config-subif)# end
```

The following example shows how to configure the Reuse MAC for ATM Route-Bridge Encapsulation feature using a MAC address for the ATM point-to-point sub-interface:

```
Router> enable
Router# configure terminal
Router(config)# interface atm 3/0.100 point-to-point
Router(config-subif)# atm ether-mac-address 00a1.0b65.87bc
Router(config-subif)# end
```

3. You can use the show run interface atm slot/port command to display the configuration:

```
Router# show run interface atm0/0.000
Current configuration : 188 bytes
!
interface ATM3/0.100 point-to-point
 atm route-bridged ip
 atm ether-mac-address interface FastEthernet0/0
 no atm enable-ilmi-trap
 pvc 1/100
!
end
```

Additional References

The following sections provide references related to the Reuse MAC for ATM Route-Bridge Encapsulation feature.

Related Documents

Related Topic	Document Title
Configuring ATM	"Configuring ATM"
ATM commands	<i>Cisco IOS Asynchronous Transfer Mode Command Reference</i>

Standards

Standard	Title
No new or modified standards are supported by this feature.	--

MIBs

MIB	MIBs Link
None	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

RFCs

RFC	Title
No new or modified RFCs are supported by this feature.	--

Technical Assistance

Description	Link
The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies. To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds. Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for Reuse MAC for ATM Route-Bridge Encapsulation

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Table 1 *Feature Information for Reuse MAC for ATM Route-Bridge Encapsulation*

Feature Name	Releases	Feature Information
Reuse MAC for ATM Route-Bridge Encapsulation	15.1(1)T	The Reuse MAC for ATM Route-Bridge Encapsulation feature provides for a configurable MAC address for ATM point-to-point sub-interfaces, with the single VC on each sub-interface that connects each subscriber to the ISP. This feature was introduced in Cisco IOS RElease 15.1(1)T. The following commands were introduced: atm ether-mac-address.

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