

Typical Configuration Of IMA on AR28、AR46 Series Routers

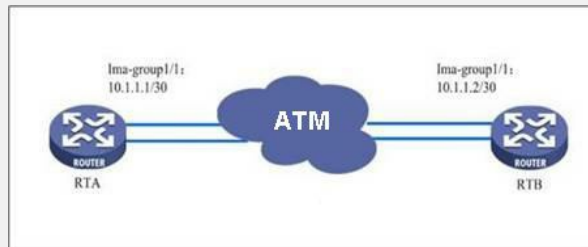
沈杨豪 2007-09-11 发表

Typical Configuration Of IMA on AR28、AR46 Series Routers

[Requirements]

RTA is bound to an IMA-group through two lines, and interworks with RTB through the ATM network. RTB is also bound to an IMA-group through two lines.

[Networking diagram]



[Configuration script]

Configuration script (RTA)

```
#
sysname RTA
#
interface Atm1/0
ima ima-group 1          /Add the ATM1/0 interface to IMA-group 1/
#
interface Atm1/1
ima ima-group 1          /Add the ATM1/1 interface to IMA-group 1/
#
interface Atm1/2
#
interface Atm1/3
#
interface Ima-group1/1
pvc to-rtb 5/32          /Set ATM PVC to 5/32/
map ip 10.1.1.2 broadcast /Mapping of the peer address/
ip address 10.1.1.1 255.255.255.252 /Local IP address/
#
```

Configuration script (RTB)

```
#
sysname RTB
#
interface Atm1/0
ima ima-group 1          /Add the ATM1/0 interface to IMA-group 1/
#
interface Atm1/1
ima ima-group 1          /Add the ATM1/1 interface to IMA-group 1/
#
interface Atm1/2
#
interface Atm1/3
#
interface Ima-group1/1
pvc to-rtb 5/207         /Set ATM PVC to 5/207/
map ip 10.1.1.1 broadcast /Mapping of the peer address/
ip address 10.1.1.2 255.255.255.252 /Local IP address/
#
```

[Verification]

Using the **display atm pvc-info interface Ima-group 1/1** command on RTA, you can see that the PVC of IMA-group interface is up, and the peer is reachable by using the **ping** command.

```
[Quidway]display atm pvc-info interface Ima-group 1/1
VPI/VC|STATE|PVC-NAME    |INDEX|ENCAP|PROT  |INTERFACE
-----|-----|-----|-----|-----|-----|-----
```

```
5/32 |UP   | to-rtb  |0   |SNAP |IP   |Ima-group1/1 (UP)
```

```
[Quidway] ping 10.1.1.2
```

```
PING 10.1.1.2: 56 data bytes, press CTRL_C to break
```

```
Reply from 10.1.1.2: bytes=56 Sequence=1 ttl=255 time=1 ms
```

```
Reply from 10.1.1.2: bytes=56 Sequence=2 ttl=255 time=1 ms
```

```
Reply from 10.1.1.2: bytes=56 Sequence=3 ttl=255 time=1 ms
```

```
Reply from 10.1.1.2: bytes=56 Sequence=4 ttl=255 time=1 ms
```

Reply from 10.1.1.2: bytes=56 Sequence=5 ttl=255 time=1 ms

--- 10.1.1.2 ping statistics ---

5 packet(s) transmitted

5 packet(s) received

0.00% packet loss

round-trip min/avg/max = 1/1/1 ms

[Tip]

1. Inverse Multiplexing for ATM (IMA) is a technology that apportions the cell flow from the ATM layer to multiple E1/T1 links in a certain sequence in the send direction, and then restores the cell flow by demultiplexing at the receive end. These physical links compose one IMA logical link (IMA-group), and its rate is close to the rate sum of all the physical links in the group.
2. To use IMA in China, you must use the IMA-E1 module.
3. There are two kinds of IMA-E1 modules: 75 ohm (BNC coaxial cable) and 120 ohm (shielded twisted pairs) for different lines.
4. Default parameters of the IMA interface:

Parameter	Optional parameter (default value)	Setting command
Clock	Master, slave (slave)	clock master, clock slave
Frame format	CRC4, no-CRC4 (CRC4)	frame-format crc4-adm, frame-format no-crc4-adm
Scramble	Enabled, disabled (enabled)	Scramble, undo scramble
Line CODEC format	AMI, HDB3 (HDB3)	code { ami hdb3 }

To connect a line, **make sure that parameters on the router are the same as those of the line**; otherwise, the line cannot be up, or there are a lot of errors on the port after the line is up, resulting in failure to ping the peer.