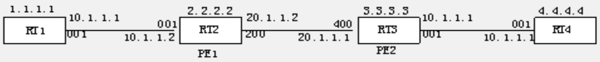
AR系列路由器debugging bgp all命令

赵刚 2007-09-26 发表

AR系列路由器debugging bgp all命令详解



BGP/MBGP组网示意图

【命令】
debugging bgp all
【视图】
用户视图
【参数】
无
【描述】
debugging bgp all命令打开BGP所有调试信息。
<RT1>display debugging
BGP event debugging is on
BGP normal debugging is on
BGP open debugging is on
BGP update debugging is on
BGP keepalive debugging is on
BGP route-refresh debugging is on
BGP mp-update debugging is on
该命令会打开所有和BGP相关的调试信息，包括：各种event信息、普通debugging信息、OPEN报文信息、UPDATE报文信息、KEEPALIVE报文信息、路由刷新信息以及mp-update报文信息等全部信息。信息量会比较大，可能影响系统应用，建议少用。
【举例】
例1：当RT2和RT3建立IBGP邻居关系过程中，打开此调试信息显示如下：
配置信息：
[RT2-bgp]display this
#
bgp 100
 undo synchronization
 group as100 internal
 peer 20.1.1.1 group as100
#
=======================
[RT3-bgp] display this
#
bgp 100
 undo synchronization
 group as100 internal
 peer 20.1.1.2 group as100
#
＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝
调试信息如下：
[RT2]bgp 100
[RT2-bgp]group as100 internal
*0.2633109 RT2 RM/7/RTDBG:bgp: initializing group as100
\\配置好group后会有配置指定的group初始化提示信息；

[RT2-bgp]peer 20.1.1.1 group as100
*0.2633562 RT2 RM/7/RTDBG:bgp event: peer 20.1.1.1 (Internal AS 100) old state Idle event Start new state Active
\\配置指定好邻居后会有状态进入Active提示信息，并指定邻居ip地址以及as号

[RT2-bgp]
*0.2645656 RT2 RM/7/RTDBG:bgp: BGP_100_Connect connect timeout

\\连接超时提示

*0.2645656 RT2 RM/7/RTDBG:bgp: peer 20.1.1.1 (Internal AS 100) start connecting
\\重新向对端建立连接

*0.2645656 RT2 RM/7/RTDBG:bgp event: peer 20.1.1.1 (Internal AS 100) old state A
ctive event ConnectRetry new state Connect
\\BGP状态机进入Connect状态

*0.2645672 RT2 RM/7/RTDBG:bgp: connection established with 20.1.1.1 (Internal A
S 100)
\\TCP连接正常建立

*0.2645672 RT2 RM/7/RTDBG:bgp: peer 20.1.1.1 (Internal AS 100) socket 4 set for r
eading
*0.2645672 RT2 RM/7/RTDBG:bgp event: peer 20.1.1.1 (Internal AS 100) old state
Connect event Open new state OpenSent
\\BGP状态机从Connect状态进入OpenSent状态

*0.2645672 RT2 RM/7/RTDBG:BGP SEND 20.1.1.2+1026 -> 20.1.1.1+179
*0.2645672 RT2 RM/7/RTDBG:BGP SEND message type 1 (Open) length 39
*0.2645672 RT2 RM/7/RTDBG:BGP SEND Capabilities:
*0.2645672 RT2 RM/7/RTDBG:multi-protocol afi(1), safi(1) route-refresh
*0.2645672 RT2 RM/7/RTDBG:BGP SEND version 4 as 100 holdtime 180 id 10.1.1.2
authcode 0
*0.2645672 RT2 RM/7/RTDBG:bgp send: sending 39 bytes to 20.1.1.1 (Internal AS 1
00)
\\向邻居20.1.1.1发送Open报文，并有open报文的各个参数；

*0.2645672 RT2 RM/7/RTDBG:bgp: recv open from peer 20.1.1.1 (Internal AS 100)
*0.2645672 RT2 RM/7/RTDBG:BGP RECV 20.1.1.1+179 -> 20.1.1.2+1026
*0.2645672 RT2 RM/7/RTDBG:BGP RECV message type 1 (Open) length 39
*0.2645687 RT2 RM/7/RTDBG:BGP RECV Capabilities:
*0.2645687 RT2 RM/7/RTDBG:multi-protocol afi(1), safi(1) route-refresh
*0.2645687 RT2 RM/7/RTDBG:BGP RECV version 4 as 100 holdtime 180 id 20.1.1.1
authcode 0
\\从邻居20.1.1.1接收Open报文，并有open报文的各个参数；

*0.2645687 RT2 RM/7/RTDBG:bgp event: peer 20.1.1.1 (Internal AS 100) old state
OpenSent event RecvOpen new state OpenConfirm
\\BGP状态机从OpengSent状态进入OpenConfirm状态

*0.2645687 RT2 RM/7/RTDBG:BGP SEND 20.1.1.2+1026 -> 20.1.1.1+179
*0.2645687 RT2 RM/7/RTDBG:BGP SEND message type 4 (KeepAlive) length 19
*0.2645687 RT2 RM/7/RTDBG:bgp send: sending 19 bytes to 20.1.1.1 (Internal AS 1
00)
\\向邻居20.1.1.1发送KeepAlive报文，并有KeepAlive报文的各个参数；

*0.2645703 RT2 RM/7/RTDBG:bgp read: 20.1.1.1 (Internal AS 100): 0 bytes buffered
*0.2645703 RT2 RM/7/RTDBG:bgp: recv open from peer 20.1.1.1 (Internal AS 100)
\\再次从邻居20.1.1.1接收Open报文信息

*0.2645703 RT2 RM/7/RTDBG:BGP RECV 20.1.1.1+179 -> 20.1.1.2+1026
*0.2645703 RT2 RM/7/RTDBG:BGP RECV message type 4 (KeepAlive) length 19
\\从邻居20.1.1.1接收KeepAlive报文，并有KeepAlive报文的各个参数；

*0.2645703 RT2 RM/7/RTDBG:bgp event: peer 20.1.1.1 (Internal AS 100) old state
OpenConfirm event RecvKeepAlive new state Established
\\BGP状态机接收KeepAlive报文后从OpenConfirm状态进入Established状态

*0.2645703 RT2 RM/7/RTDBG:bgp: setting flash/new policy routines for BGP group
as100
\\向对等体AS100设定各种路由策略；

*0.2645703 RT2 RM/7/RTDBG:bgp: setting reinit routine for BGP_100
\\重新初始化路由

*0.2645703 RT2 RM/7/RTDBG:bgp: peer 20.1.1.1 (Internal AS 100) receiver change
d to bgp_recv_v4_update
*0.2645703 RT2 RM/7/RTDBG:bgp: rt policy init, first group peer update group as100
peer 20.1.1.1 (Internal AS 100)
\\如果配置了路由策略，进行策略初始化

*0.2645703 RT2 RM/7/RTDBG:bgp: rt policy init, peer 20.1.1.1 (Internal AS 100) 0 ro
utes ready 0 deferred
\\路由策略初始化过程中对匹配路由数和延迟处理路由数的显示

*0.2645734 RT2 RM/7/RTDBG:BGP SEND 20.1.1.2+1026 -> 20.1.1.1+179
*0.2645734 RT2 RM/7/RTDBG:BGP SEND message type 4 (KeepAlive) length 19
*0.2645734 RT2 RM/7/RTDBG:bgp send: sending 19 bytes to 20.1.1.1 (Internal AS 1
00)
\\向邻居20.1.1.1发送KeepAlive报文，并有KeepAlive报文的各个参数；

*0.2645734 RT2 RM/7/RTDBG:bgp: receiving updates from peer 20.1.1.1 (Internal A
S 100)
\\从邻居20.1.1.1收到更新消息
*0.2645734 RT2 RM/7/RTDBG:BGP RECV 20.1.1.1+179 -> 20.1.1.2+1026
*0.2645734 RT2 RM/7/RTDBG:BGP RECV message type 4 (KeepAlive) length 19
*0.2645734 RT2 RM/7/RTDBG:bgp: done with peer 20.1.1.1 (Internal AS 100) receiv
ed 19 octets 0 updates 0 routes
\\再次从邻居20.1.1.1接收KeepAlive报文，并有KeepAlive报文的各个参数；

[RT2-bgp]dis bgp peer

Peer   AS-num Ver Queued-Tx Msg-Rx Msg-Tx Up/Down State

20.1.1.1 100   4   0   1   3   00:00:05 Established
\\邻居正常建立

上面是打开debugging bgp all RT2得到全部调试信息的一个流程（先配置RT2端，然后再配置RT3端），当发现设备无法建立邻居关系时，可以初步对比此流程，观察是否缺少某个步骤报文，进而定位问题所在。