

# Cisco版本的4.1.3 WAAS故障排除指南及以后

## 章节：排除EPM AO故障

此条款描述如何排除EPM AO故障。

指南

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## EPM加速器排除故障

终点制图员(EPM)加速器优化不使用预定义的TCP端口的MS-RPC协议。客户端与在服务器(TCP端口135)的EPM服务联系协商根据应用程序UUID的一个动态端口。EPM AO听客户端通信并且创建动态策略项匹配协商的端口。在所有MS-RPC协议要求EPM适用MAPI特定最优化或提供记帐。

您能验证一般AO配置和状态用**显示加速器**和**显示许可证**命令，正如[排除应用程序加速度](#)条款故障所描述。企业许可证对于EPM加速器操作是必需的。

其次，如图1所显示，请验证是特定的对EPM AO通过使用**显示加速器epm**命令的状态。您要发现EPM AO是启用的，运行和注册，并且连接限制显示。如果设置状态是启用的，但是操作状态被关闭，指示一个许可证问题。

**验证EPM加速器状态的图1.**

```

WAE674# sh accelerator epm

Accelerator      Licensed      Config State  Operational State
-----
epm              Yes           Enabled       Running

EPM:
Policy Engine Config Item
-----
State
Default Action
Connection Limit
Effective Limit
Keepalive timeout

Value
-----
Registered
Use Policy
6000
6000
5.0 seconds

```

请使用show running-config命令验证适当配置EPM数据流策略。您要为配置使用EPM AO的应用程序或UUIDs发现适配器EPM，如下：

```

WAE674# sh run | begin EPM
...skipping
map adaptor EPM 1544f5e0-613c-11d1-93df-00c04fd7bd09
    name Email-and-Messaging All action pass-through
    exit
map adaptor EPM ms-sql-rpc
    name SQL All action optimize full
    exit
map adaptor EPM mapi
    name Email-and-Messaging All action optimize full accelerate mapi
    exit
map adaptor EPM ms-ad-replication
    name Replication All action optimize full
    exit
map adaptor EPM ms-frs
    name Replication All action optimize full
    exit
map adaptor EPM f5cc5a18-4264-101a-8c59-08002b2f8426
    name Email-and-Messaging All action pass-through

```

请使用dynamic命令显示策略引擎的应用程序验证动态策略引擎匹配条件如下：

```

WAE674# sh policy-engine application dynamic
Dynamic Match Freelist Information:
    Allocated: 32768   In Use: 3   Max In Use: 4   Allocations: 380
Dynamic Match Type/Count Information:
None                0
Clean-Up            0
Host->Host          0
Host->Local          0
Local->Host          0
Local->Any           0
Any->Host            3
Any->Local           0
Any->Any             0
Individual Dynamic Match Information:
Number:      1   Type: Any->Host (6)   User Id: EPM (3)
Src: ANY:ANY   Dst: 10.10.100.101:1146

```

```

Map Name: uuida4f1db00-ca47-1067-b31f-00dd010662da <-----
Flags: TIME_LMT REPLACE FLOW_CNT <-----
Seconds: 1200 Remaining: - NA - DM Index: 32765 <-----
Hits: 54 Flows: 39 Cookie: 0x00000000 <-----
Number: 2 Type: Any->Host (6) User Id: EPM (3)
Src: ANY:ANY Dst: 10.10.100.101:1040
Map Name: uuid1544f5e0-613c-11d1-93df-00c04fd7bd09
Flags: TIME_LMT REPLACE FLOW_CNT
Seconds: 1200 Remaining: 1163 DM Index: 32766
Hits: 1 Flows: 0 Cookie: 0x00000000

```

请使用**show statistics**连接优化的**epm**命令检查WAAS设备建立被最优化的EPM连接。验证“TE”或“TDLE”出现于EPM连接的Accel列，表明使用了EPM AO，如下：

```
WAE674# sh stat conn opt epm
```

```

Current Active Optimized Flows: 18
  Current Active Optimized TCP Plus Flows: 17
  Current Active Optimized TCP Only Flows: 0
  Current Active Optimized TCP Preposition Flows: 1
Current Active Auto-Discovery Flows: 0
Current Active Pass-Through Flows: 28
Historical Flows: 100

```

```

D:DRE,L:LZ,T:TCP Optimization,
A:AOIM,C:CIFS,E:EPM,G:GENERIC,H:HTTP,M:MAPI,N:NFS,S:SSL,V:VIDEO

```

ConnID	Source IP:Port	Dest IP:Port	PeerID	Accel	
2048	10.10.10.10:3007	10.10.100.101:135	00:14:5e:84:24:5f	TE	<-----Look for "E"
2049	10.10.10.10:3009	10.10.100.101:135	00:14:5e:84:24:5f	TE	

通过使用**show statistics**连接结束的**epm**命令，您能检查连接统计密切关系。

要查看从中央管理器的相似的信息，请选择WAE设备，然后选择**监控程序>最优化>连接统计**。

通过使用**show statistics**连接优化的**epm detail**命令如下，您能查看EPM连接特定统计数据：

```
WAE674# sh stat connection optimized epm detail
```

```

Connection Id: 1885
Peer Id: 00:14:5e:84:24:5f
Connection Type: EXTERNAL CLIENT
Start Time: Wed Jul 15 09:50:45 2009
Source IP Address: 10.10.10.10
Source Port Number: 2465
Destination IP Address: 10.10.100.101
Destination Port Number: 135
Application Name: Other
Classifier Name: MS-EndPointMapper <-----Should see
MS-EndPointMapper
Map Name: basic
Directed Mode: FALSE
Preposition Flow: FALSE
Policy Details:
  Configured: TCP_OPTIMIZE
  Derived: TCP_OPTIMIZE
  Peer: TCP_OPTIMIZE

```

```

Negotiated:      TCP_OPTIMIZE
Applied:         TCP_OPTIMIZE
Accelerator Details:
Configured:     EPM                                     <-----Should see
EPM configured
Derived:        EPM
Applied:        EPM                                     <-----Should see
EPM applied
Hist:          None

```

	Original	Optimized
Bytes Read:	5220	5076
Bytes Written:	5076	5220

...

## EPM AO记录

以下日志文件为排除EPM AO问题故障是可用的：

- 事务处理日志文件：/local1/logs/tfo/working.log (和/local1/logs/tfo/tfo\_log\_\*.txt)
- 调试日志文件：/local1/errorlog/epmao-errorlog.current (和epmao-errorlog.\*)

对于更加容易的调试，第一设置ACL对一台主机限制信息包。

```

WAE674(config)# ip access-list extended 150 permit tcp host 10.10.10.10 any
WAE674(config)# ip access-list extended 150 permit tcp any host 10.10.10.10

```

对enable (event)处理日志，请使用处理日志配置命令如下：

```

wae(config)# transaction logs flow enable
wae(config)# transaction-logs flow access-list 150

```

您能查看事务处理日志文件的末端通过使用类型尾标命令如下：

```

wae# type-tail tfo_log_10.10.11.230_20090715_130000.txt
Wed Jul 15 16:53:22 2009 :1799 :10.10.10.10 :2369 :10.10.100.101 :1025 :OT :START :EXTERNAL
CLIENT :00.14.5e.84.24.5f
:uuide3514235-4b06-11d1-ab04-00c04fc2dcd2 :Replication :**Map Default** :F :(DRE,LZ,TFO)
(DRE,LZ,TFO) (DRE,LZ,TFO) (DRE,LZ,TFO)
(DRE,LZ,TFO) :<None> :(None) (None) (None) :<None> :<None> :0 :169
Wed Jul 15 16:53:51 2009 :1798 :10.10.10.10 :2368 :10.10.100.101 :135 :OT :END :EXTERNAL
CLIENT :(EPM) :228 :212 :212 :228
Wed Jul 15 16:53:51 2009 :1799 :10.10.10.10 :2369 :10.10.100.101 :1025 :OT :END:EXTERNAL
CLIENT :(None) :596 :220 :347 :429
Wed Jul 15 16:53:51
2009 :1799 :10.10.10.10 :2369 :10.10.100.101 :1025 :SODRE :END :596 :220 :347 :429 :0

```

要设置和enable (event) EPM AO的调试记录，使用以下命令。

**NOTE:**调试记录强化中央处理，并且能生成很多输出。明智地和稀少请使用它在生产环境。

您能enable (event)详细日志到磁盘如下：

```
WAE674(config)# logging disk enable
WAE674(config)# logging disk priority detail
```

您能enable (event)连接的调试记录在ACL如下：

```
WAE674# debug connection access-list 150
```

EPM AO调试的选项如下：

```
WAE674# debug accelerator epm ?
  all          enable all EPM accelerator debugs
  shell        enable EPM shell debugs
```

您能enable (event) EPM连接的调试记录然后显示调试错误日志的末端如下：

```
WAE674# debug accelerator epm connection
WAE674# type-tail errorlog/epmao-errorlog.current follow
```