排除ISE集成故障

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简介

本文档介绍CyberVision Center到ISE集成的故障排除步骤。

最佳实践概述

最佳做法是您必须考虑的推荐步骤,以确保系统配置的正确运行。建议:

- 有关最新功能、指南、限制和警告,请参阅Cisco Cyber Vision版本说明和Cisco身份服务引擎 (ISE)版本说明
- 实施任何新的配置更改后,请对其进行验证和故障排除

CCV-ISE高级流程图

Configure



故障排除指南

通过回答接下来的问题,您可以确定故障排除路径和需要进一步调查的组件。回答后续问题以确定 安装状态:

- 这是新安装的系统还是现有安装?
- CyberVision是否能看到ISE?

使用命令systemctl status pxgrid-agent检查pxGrid服务状态。

root@center:~# systemctl status pxgrid-agent
 pxgrid-agent.service - Agent for interfacing with pxGrid
Loaded: loaded (/lib/systemd/system/pxgrid-agent.service; enabled)
Active: active (running) since Wed 2021-03-17 20:12:15 UTC; 17min ago
Process: 28434 ExecStop=/usr/bin/lxc-stop -n pxgrid-agent (code=exited, status=0/SUCCESS)
Main FID: 28447 (lxc-start)
CGroup: / system slice/nysrid-agent_service
29447 Just / Jus
- EVIII / WEL/WEL/WEL/VELV - E -H PRYEEV-UYELV
Mar 17 20:12:15 center 1xc-start[28447]: 1xc-start: cgfsng.c: create path for hierarchy: 1306 Path "/sys/fs/cgroup/pids//1xc/pxgrid-agent-6" already existed.
Mar 17 20:12:15 center lxc-start[28447]: lxc-start: cgfsng.c: cgfsng_create: 1363 File exists - Failed to create /sys/fs/cgroup/pids//lxc/pxgrid-agent-6: File exists
Mar 17 20:12:15 center 1xc-start[28447]: pxgrid-agent Center type: standalone [caller=postgres.go:290]
Mar 17 20:12:16 center lxc-start[28447]: pxgrid-agent HTTP server listening to: '169.254.0.90:2027' [caller=main.go:135]
Mar 17 20:12:16 center lxc-start[28447]: pxgrid-agent RPC server listening to: '/tmp/pxgrid-agent.sock' [caller=main.go:102]
Mar 17 20:12:16 center lxc-start[28447]: pxgrid-agent Account activated [caller=pxgrid.go:81]
Mar 17 20:12:16 center lxc-start[28447]: pxgrid-agent Service registered, ID: 3d7bee0f-3840-4dc7-a121-a8740f86fa06 [caller=pxgrid.go:99]
Mar 17 20:13:19 center lxc-start[28447]: pxgrid-agent API: getSyncStatus [caller=sync status.go:34]
Mar 17 20:13:19 center lxc-start[28447]: pxgrid-agent Cyber Vision is in sync with ISE [caller=assets.go:67]
Mar 17 20:23:19 center lxc-start[28447]: pxgrid-agent API: getSyncStatus [caller=sync status.go:34]

- ISE是否以高可用性运行pxGrid?
- 在应用程序开始出现问题之前,配置或整个基础架构发生了什么变化?

要发现网络问题,请使用常规网络故障排除步骤:

步骤1:您是否能从ISE ping通CyberVision Center主机名?

```
ESCISE2/admin# ping center

PING center (10.2.3.138) 56(84) bytes of data.

64 bytes from 10.2.3.138: icmp_seq=1 ttl=64 time=1.53 ms

64 bytes from 10.2.3.138: icmp_seq=2 ttl=64 time=1.73 ms

64 bytes from 10.2.3.138: icmp_seq=3 ttl=64 time=1.87 ms

64 bytes from 10.2.3.138: icmp_seq=4 ttl=64 time=1.80 ms

--- center ping statistics ---

4 packets transmitted, 4 received, 0% packet loss, time 3005ms

rtt min/avg/max/mdev = 1.539/1.737/1.878/0.125 ms
```

如果无法ping通,请使用安全外壳(SSH)和添加主机名连接到ISE CLI。

```
ESCISE2/admin# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
ESCISE2/admin(config)# ip host 10.2.3.138 center
Add Host alias was modified. You must restart ISE for change to take effect.
Do you want to restart ISE now? (yes/no) yes
```

第二步:您是否能从CyberVision Center对ISE主机名执行ping操作?

```
root@center:~# ping ESCISE2.ccv.local
PING ESCISE2.ccv.local (10.2.3.118) 56(84) bytes of data.
64 bytes from ESCISE2.ccv.local (10.2.3.118): icmp_seq=1 ttl=64 time=2.04 ms
64 bytes from ESCISE2.ccv.local (10.2.3.118): icmp_seq=2 ttl=64 time=1.88 ms
64 bytes from ESCISE2.ccv.local (10.2.3.118): icmp_seq=3 ttl=64 time=1.75 ms
64 bytes from ESCISE2.ccv.local (10.2.3.118): icmp_seq=4 ttl=64 time=1.98 ms
64 bytes from ESCISE2.ccv.local (10.2.3.118): icmp_seq=5 ttl=64 time=2.02 ms
64 bytes from ESCISE2.ccv.local (10.2.3.118): icmp_seq=5 ttl=64 time=1.97 ms
64 bytes from ESCISE2.ccv.local (10.2.3.118): icmp_seq=6 ttl=64 time=1.97 ms
^C
--- ESCISE2.ccv.local ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5006ms
rtt min/avg/max/mdev = 1.754/1.945/2.045/0.109 ms
```

否则,尝试将ISE主机名添加到Center中的/data/etc/hosts文件。

```
root@Center:~# cat /data/etc/hosts
127.0.0.1 localhost.localdomain localhost
# The following lines are desirable for IPv6 capable hosts
::1 localhost ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
127.0.1.1 center
10.48.60.131 ise31-tm2.cisco.com
```

从CyberVision Center输入命令openssl s_client -connect YourISEHostname:8910。

```
root@center:~# openssl s_client -connect ESCISE2.ccv.local:8910
CONNECTED (0000003)
depth=3 CN = Certificate Services Root CA - ESCISE2
verify error:num=19:self signed certificate in certificate chain
verify return:1
depth=3 CN = Certificate Services Root CA - ESCISE2
verify return:1
depth=2 CN = Certificate Services Node CA - ESCISE2
verify return:1
depth=1 CN = Certificate Services Endpoint Sub CA - ESCISE2
verify return:1
depth=0 OU = Certificate Services System Certificate, CN = ESCISE2.ccv.local
verify return:1
Certificate chain
 0 s:OU = Certificate Services System Certificate, CN = ESCISE2.ccv.local
   i:CN = Certificate Services Endpoint Sub CA - ESCISE2
 1 s:CN = Certificate Services Endpoint Sub CA - ESCISE2
   i:CN = Certificate Services Node CA - ESCISE2
 2 s:CN = Certificate Services Node CA - ESCISE2
   i:CN = Certificate Services Root CA - ESCISE2
 3 s:CN = Certificate Services Root CA - ESCISE2
   i:CN = Certificate Services Root CA - ESCISE2
Server certificate
 ----BEGIN CERTIFICATE--
MIIF3jCCA8agAwIBAgIQUKVBBihpQhWBK5cZEjFpeDANBgkqhkiG9w0BAQsFADA5
MTcwNQYDVQQDDC5DZXJ0aW2pY2F0ZSBTZXJ2aWN1cyBFbmRwb21udCBTdWIgQ0Eg
LSBFU0NJU0UyMB4XDTIwMTEyOTE3Mjc1M1oXDTI1MTEzMDE3Mjc1M1owTjEwMC4G
A1UECwwnQ2VydG1maWNhdGUgU2Vydm1j2XMgU31zdGVtIEN1cnRpZm1jYXR1MRow
GAYDVQQDDBFFU0NJU0UyLmNjdi5sb2NhbDCCAiIwDQYJKoZIhvcNAQEBBQADggIP
ADCCAgoCggIBANE1Ukx/7QnUdrCIXJLUxg0XWTvOFTNme4L16yDFsLvytGjFqYfR
RCRM/kzRVjDk8f/cSSP9T+5pR/JA+PbOZqkAWWDJVaQh1ndqL0kX7UaCCodKUWon
DafVimPjKqV1RSCd8bwVDxAr7qYou3S4BcCe00s1x5pL1WyZw6F6MPze2F388kSR
GuSRsn40ZM4JjDDeaxSBrs789f7zACw4eMZIfRDk0RL9qzMtoghIU089/1VuacUb
WYrF0e0mThUWg7wk7dFv4bozyWeHjdqsbEtb0Geme8ZWPX5ZYddSKjWhOrNUXeQV
NvDBUXhb5NpSsKYMoCqnvIv+JYzkIV6ukksX9xqI5bL3/vik/CyPVMeXI0Jo64dK
\verb"S0vMjrcnmpNznoLzEv3mgvgp9mJhcTROg86w1yOrOzjOoMCGGLrhpgxuLeVatFKv"
GLWjsmrWcLk/F0Ae4H+tb6/+y07KNXTSX+nP1z5epDA8stzvLxm1ylw65XdeEBho
m0qgGEKr5y/I/2b+myi24ZYrqsv64KPohCisIvZxbCG/2q77SP7ml8v8+BidpMaW
LZrZ0tD2XRJeyhPyprBYwV4QDBWPn+mCAFgpNd3KC36zAn138c2WW1Hs0PKhReMX
vNn+SwltKmyIbM090eww5zRSdMU90zPcFkY0qvrBUD31Gf5fAiWqlmkVAgMBAAGj
gcwwgckwaAYDVR0jBGEwX4AUxz+SV+KtR/CpwGiyNg+mp/xxiAqhNaQzMDExLzAt
BgNVBAMMJkN1cnRp2mljYXR1IFN1cnZpY2VzIE5v2GUgQ0EgLSBFU0NJU0UyghAx
lcB30YJL0Kwj6XolaV7SMB0GA1UdDgQWBBRigvgT63F0qKmS9m9COhW3ahdv8jA0
BgNVHQ8BAf8EBAMCBeAwIAYDVR01AQH/BBYwFAYIKwYBBQUHAwEGCCsGAQUFBwMC
MAwGA1UdEwEB/wQCMAAwDQYJKoZIhvcNAQELBQADggIBADwnDKtdHj/y3Pj4ADDV
57RrdHsiU/EkkWGLzmP/aMKJ9rY7f6eUDlig6b6gpJ8B0MnTPi9VFVduc++oZDEt
CrIMMwFexnnbhPWJfzjSNJPnAMIgFUeiPuoxBJYkjFzhiXtat0fOmdm5RbEu5Wla
f7EEBd/X0iRTMyIxqubXQCt6pE61y9gBPuQU9Hvd5QpcLX77LSfEroJhkD4dmuRs
o4uj0wWKFtXW+yLWhwjkiieoBuREEU8Gvtk+iq+11mThfpeP32fV2IO/WIo4SKh0
ILkzS206rbSzxxatKDQ6jZDs3a5YKyFtR55r7VndmX0I4sqXI9dFQjTPVfW7TEbK
GPds+vMe4J9g4c1KGRhiXNiNzfB5S3eWzOL/2092gWS1u7R7GVXKlYrvSHMieL3t
n/p+ov8cogr00o6jXFItZ+Rsnp11Kbq+DrsoCE/i26QgkTKBruMFhz6P8k/2aLqQ
MwJp0dhH1SFmkWCAQbGQpapoX31pK36FUta3sZL2mdN/XyK5UutLbLJx87elwunp
w6Cxz5MA97NXOUZIuqThnTG7Ibu8pzwl1X2Yt1f1T50luCoY2CkVbU93rqfD4zyr
WyK2a0BmizcKXD+F8Yti4fm4Kv10bpWihUNPPMTmgwJMUOW+zdC7b7g13j5rnE9X
lyFJ3uHTohidxEtXi4XsiCn5
----END CERTIFICATE----
subject=OU = Certificate Services System Certificate, CN = ESCISE2.ccv.local
```

要收集的数据

对于网络问题:

架构:

显示中心与ISE之间详细信息的方案非常有用:

- 防火墙规则
- 静态路由
- 网关配置
- VLAN 配置
- 针对所有ISE问题收集的日志:

您可以从收集中心诊断文件开始,以免丢失数据。

System statistics	st 2 Hours 💌		Center Sensors
 VMWARE-42 3F 84 Version: 3.2.1 (build 202 Uptime: 5h 33m 50s System date (UTC): Wednesd DHCP: disabled 	4 89 49 FA 9F 1E-65 F5 D4 50 92 99 FF B6 102011648) Jay, March 17, 2021 8:41 PM		GENERATE DIAGNOSTIC
SYSTEM HEALTH			
CPU	RAM	DISK	
CPU 然后,按照以下步骤激; 在文件夹中创建两个文件 第一个文件必须命名为1	RAM 活中心上的高级日志: 件/data/etc/sbs。 istener.conf,并包含内容:	DISK	

root@Center:~# cat /data/etc/sbs/listener.conf configlog: loglevel: debug root@Center:~# 第二个文件必须命名为pxgrid-agent.conf,并包含内容:

(请注意日志级别前面的前导空格。)

root@Center:~# cat /data/etc/sbs/pxgrid-agent.conf configlog: loglevel: debug

创建这两个文件后,请重新启动中心或重新启动sbs-burrow和pxgrid-agent服务。

Restart service using the command: #systemctl restart sbs-burrow #systemctl restart pxgrid-agent

然后收集pxGrid日志(使用文件传输工具从中心导出日志)。

root@Center:~# journalctl -u pxgrid-agent > /data/tmp/pxgridLogs.log

收集tcpdump捕获以分析中心与ISE之间的通信流。

root@Center:~# tcpdump -i eth0 -n host CCV_IP and host ISE_IP -w /data/tmp/ccv_ise.pcap

• 在ISE上启用调试并收集支持捆绑包。

要在ISE上启用调试,请导航到Administration > System > Logging > Debug Log Configuration。将日志级别设置为以下级别:

角色	组件名称	日志级别	要检查的文件	
PAN(可选)	分析器	调试	profiler.log	
已启用pxGrid探测功能的 PSN	分析器	调试	profiler.log	

PxGrid	pxgrid	跟踪	pxgrid- server.log	
--------	--------	----	-----------------------	--

预期日志消息

中心中pxGrid-agent的调试日志显示正在启动的代理、已注册的服务、思科网络愿景(CCV)与ISE建立简单(或流式)面向文本消息协议(STOMP)连接,以及正在发送资产/组件的更新操作:

<#root>

Jul 11 13:05:02 center systemd[1]:

Started Agent

```
for interfacing with pxGrid.
Jul 11 13:05:02 center pxgrid-agent[5404]: pxgrid-agent Center type: standalone [caller=postgres.go:543
Jul 11 13:05:03 center pxgrid-agent[5404]: pxgrid-agent RPC server listening to: '/tmp/pxgrid-agent.soc
Jul 11 13:05:03 center pxgrid-agent[5404]: pxgrid-agent HTTP server listening to: '169.254.0.90:2027' [Jul 11 13:05:03 center pxgrid-agent[5404]: pxgrid-agent Request path=/pxgrid/control/AccountActivate boy
Jul 11 13:05:03 center pxgrid-agent[5404]: pxgrid-agent
```

Account activated

[caller=pxgrid.go:58]
Jul 11 13:05:03 center pxgrid-agent[5404]: pxgrid-agent Request path=/pxgrid/control/ServiceRegister bo

"assetTopic":"/topic/com.cisco.endpoint.asset"

,"restBaseUrl":"https://Center:8910/
Jul 11 13:05:04 center pxgrid-agent[5404]: pxgrid-agent

Service registered

, ID: c514c790-2361-47b5-976d-4a1b5ccfa8b7 [caller=pxgrid.go:76] Jul 11 13:05:04 center pxgrid-agent[5404]: pxgrid-agent Request path=/pxgrid/control/ServiceLookup body Jul 11 13:05:05 center pxgrid-agent[5404]: pxgrid-agent Request path=/pxgrid/control/AccessSecret body= Jul 11 13:05:06 center pxgrid-agent[5404]: pxgrid-agent

Websocket connect url

=wss://labise. aaalab .com:

8910

/pxgrid/ise/pubsub [caller=endpoint.go:129]
Jul 11 13:05:07 center pxgrid-agent[5404]: pxgrid-agent

STOMP CONNECT host

=10.48.78.177 [caller=endpoint.go:138]
Jul 11 13:06:59 center pxgrid-agent[5404]: pxgrid-agent

STOMP SEND destination

=/topic/com.cisco.endpoint.asset body={

"opType":"UPDATE"

,"asset":{"assetId":"01:80:c2:00:00","assetName":"LLDP/STP bridges Multicast 0:0:0","assetIpAddress"
Jul 11 13:10:04 center pxgrid-agent[5404]: pxgrid-agent Request path=/pxgrid/control/ServiceReregister

成功集成后的预期消息格式和assetGroup属性发布时不带值,如下所示:

<#root>

Jan 25 11:05:49 center pxgrid-agent[1063977]: pxgrid-agent STOMP SEND destination=/topic/com.cisco.endpoint.asset body={"opType":"UPDATE","as
{"key":"assetGroup","value":""}
,{"key":"assetCustomName","value":"test"},{"key":"assetGroupPath","value":""}],"assetConnectedLinks":[]

预期的消息格式(带值的assetGroup,如下所示)。这确认了CyberVision Center正在发送属性,如果ISE端没有进一步反映相同的属性 ,您必须使用ISE进行进一步调查。

<#root>

Jan 25 11:09:28 center pxgrid-agent[1063977]: pxgrid-agent STOMP SEND destination=/topic/com.cisco.endpoint.asset body={"opType":"UPDATE","as
{"key":"assetGroup","value":"test group"}

,{"key":"assetCustomName","value":"test"},{"key":"assetGroupPath","value":"test group"}],"assetConnecte

相关信息

- <u>CCV和ISE解决方案简介</u>
- <u>演示实验:使用思科网络愿景提供使用Cisco ISE的动态微分段</u>
- <u>演示ISE和CCV</u>
- <u>ISE集成指南</u>
- 思科技术支持和下载

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