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Introduction

This document describes how to isolate the IP address that sends packets to the Telepresence Management Server (TMS) on behalf of the endpoint, causing the issue. When any managed device is added to TMS, its status shows Reachable on LAN by default for sometime however after sometime the status might change to Behind the Firewall. This generally happens when packets received from device have source IP address different from the system IP address that is received from device's xstatus by the TMS.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco Telepresence Endpoint running TC (Telepresence Codec) software or MXP
- TMS

Component Used

This document is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Problem

Endpoints managed by the TMS change from Reachable on LAN status to Behind the firewall status automatically, causing the TMS to stop the management of the device. It is considered that in order to troubleshoot, you must have HTTP communication that is allowed in the network between the managed device and the TMS.

Troubleshoot

In order to verify a packet capture from the TMS is required :

1. Connect to TMS server via Remote Desktop Protocol (RDP).
2. Ensure that TMS and endpoint have HTTP communication enabled and that HTTPS is disabled.
3. Install/Run Wireshark and Select default network interface.
4. Do not apply any filter and start the capture.
5. Navigate to Connection tab of the endpoint with which you are facing issue, Click **Save/Try** button as shown in this image.

Summary Settings Call Status Phone Book **Connection** Permissions Logs

Connection Replace System

Current Connection Status: Wrong provisioning mode

IP Address: 10.106.85.231

MAC Address: 00:50:60:05:80:26

Hostname:

Track System on Network by: MAC Address ▼

System Connectivity: Reachable on LAN ▼

Allow Bookings: Yes ▼

Save/Try

6. When endpoint falls back to behind firewall, stop wireshark capture.

Note: Sometimes the issue might take longer than is expected. To re-create hence while starting the Wireshark capture ensure to save in multiple file.

7. Go to **Capture File** option and select the **Use multiple files** check box.

Capture Files

File: C:\Users\Administrator.DCTMS1\Desktop\wireshark

Use multiple files Use pcap-ng format

Next file every 250 mebibyte(s)

Open Wireshark

- Apply filter such as `xml.cdata == IP_ADDRESS_OF_DEVICE`
- After applying this filter you might see that response will change from actual device ip address to some different ip address.

As shown in this image, the actual IP address of device is x.x.x.174; however later this IP changes to x.x.x.145

No.	Time	Source	Destination	Protocol	Length	Info
1000	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1001	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1002	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1003	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1004	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1005	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1006	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1007	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1008	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1009	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1010	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1011	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1012	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
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1016	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1017	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1018	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1019	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1020	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1021	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1022	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1023	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
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1025	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1026	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
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1100	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1101	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1102	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1103	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1104	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1105	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1106	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1107	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1108	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1109	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1110	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1111	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1112	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1113	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1114	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1115	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1116	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1117	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1118	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1119	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1120	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1121	0.000000	10.106.85.174	10.106.85.145	HTTP	1024	HTTP/1.1 200 OK
1122						

Due to change of this IP address, the TMS verifies that the device IP address sent in xstatus is not the same as the IP address in IP header and hence it changes the device to Behind the firewall status.

Solution

To solve this issue you need to ensure that there is no device in the network between the Endpoint and TMS that is changing source IP address in IP header, hence causing the Source IP in the IP header to be different from the actual IP of the endpoint.