

# ADLS | TLS Communication Certificate

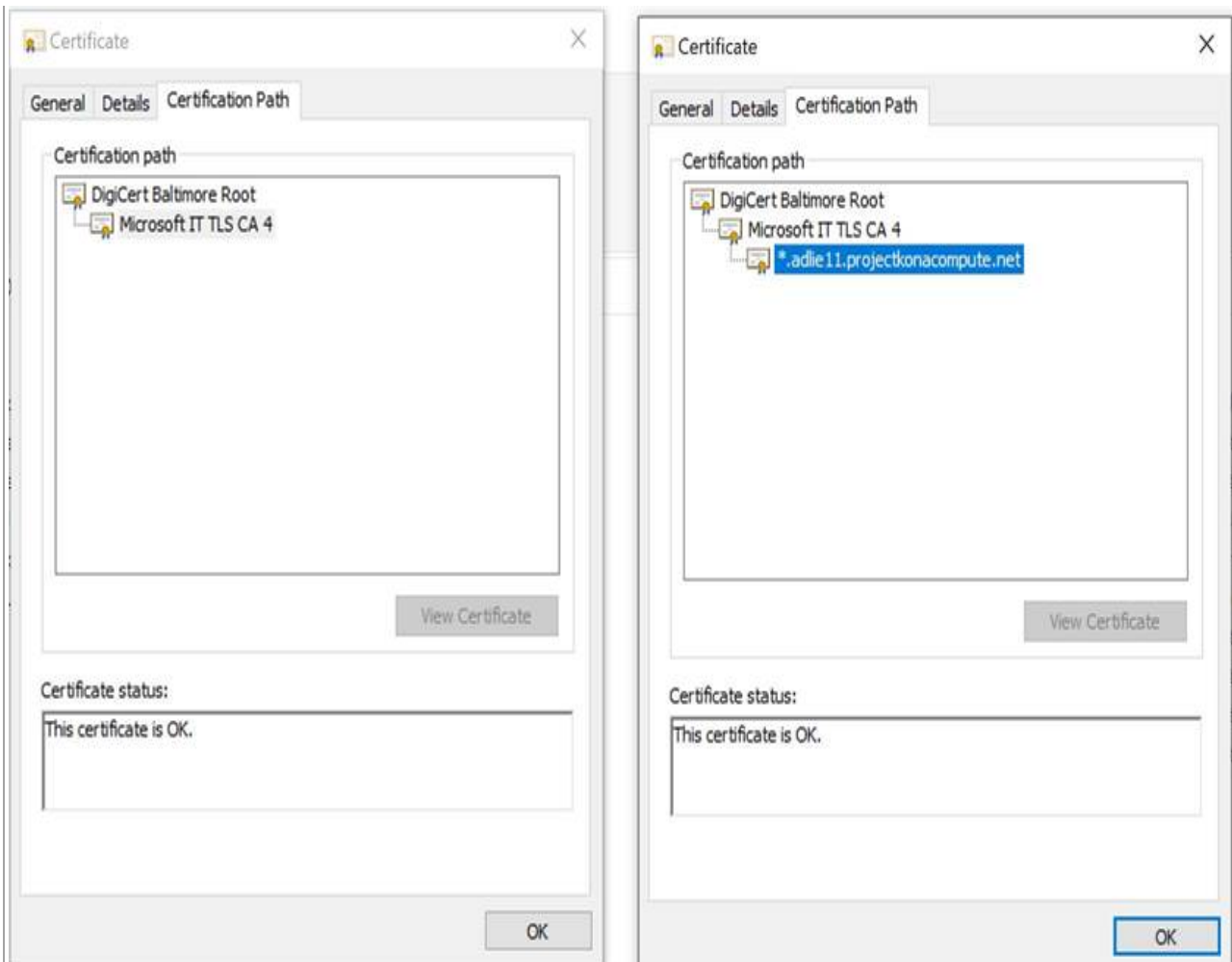
Last updated by | Veena Pachauri | Mar 8, 2023 at 11:59 PM PST

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[ADF TSG] ADLS | The underlying connection was closed: Could not establish trust relationship for the SSL/TLS secure channel

Friday, March 27, 2020  
3:54 PM

SME	
Symptoms	<p>Copy activity fail with the following error:</p> <p>Error Message: Failure happened on 'Sink' side. ErrorCode=UserErrorFailedFileOperation,'Type=Microsoft.DataTransfer.Common.Shared.HybridDeliveryException,Message=Upload file failed at path STAGING/PLANT/INDIARENEWABLE/LiveData/2020/01/14\\20200114-0701-oem_gibtvl_mannur_data_10min.csv,Source=Microsoft.DataTransfer.ClientLibrary,'Type=System.Net.WebException,Message=<b>The underlying connection was closed: Could not establish trust relationship for the SSL/TLS secure channel</b>,Source=System,'Type=System.Security.Authentication.AuthenticationException,Message=<b>The remote certificate is invalid according to the validation procedure</b>,Source=System,'.</p>
Cause	The certificate validation failed during TLS handshake.
Resolution	<p>Workaround: Use staged copy to skip the TLS validation for ADLS.</p> <p>Need to reproduce this issue and gather netmon trace, then engage customer's network team to check the local network configuration.</p>
More Information	<div><div><div><div><div>1. Need to reproduce this issue and gather netmon trace to investigate this issue. Refer to <a href="https://supportability.visualstudio.com/AzureDataFactory/_wiki/wikis/AzureDataFactory/291075/Capture-Netmon-Trace">https://supportability.visualstudio.com/AzureDataFactory/_wiki/wikis/AzureDataFactory/291075/Capture-Netmon-Trace</a></div><div>2. Once you get the netmon trace, please check below picture and check from which stage the issue happened.</div></div><div><div><div><div><div><div>Sender</div><div>Receiver</div></div><div><pre>sequenceDiagram     participant S as Sender     participant R as Receiver     Note over S: SYN     S-&gt;&gt;R: SYN     Note over R: 0 ms     Note over R: SYN ACK     R-&gt;&gt;S: SYN ACK     Note over S: 28 ms     Note over S: ACK     S-&gt;&gt;R: ACK     Note over R: 56 ms     Note over R: ClientHello     S-&gt;&gt;R: ClientHello     Note over R: 84 ms     Note over R: ServerHello Certificate ServerHelloDone     R-&gt;&gt;S: ServerHello Certificate ServerHelloDone     Note over S: 112 ms     Note over S: ClientKeyExchange ChangeCipherSpec Finished     S-&gt;&gt;R: ClientKeyExchange ChangeCipherSpec Finished     Note over R: 140 ms     Note over R: ChangeCipherSpec Finished     R-&gt;&gt;S: ChangeCipherSpec Finished     Note over S: 168 ms     Note over S: Application Data     S-&gt;&gt;R: Application Data     Note over R: 196 ms     Note over R: Application Data     R-&gt;&gt;S: Application Data     Note over S: 224 ms</pre></div><div><div>TCP - 56 ms</div><div>TLS - 112 ms</div></div></div></div><div><div>3. If the issue happens between ClientHello and ServerHello,</div><div>1. Please check the certificate subject is correct, ADLS subject should be in below pattern: <b>Subject: *.adlie11.projectkonacompute.net</b></div></div></div></div></div></div></div>



2. If it is not correct, you can have a look into customer's proxy or DNS server setting.

Example:

(Refer to case 120011623000165)

The incorrect certificate returned by server 208.91.112.55 is [ **subjectName**] \*.fortinet.com

Netmon query:

**dns.QRecord.QuestionName** = "<customer's ADLS hostname>"

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dns.QRecord.QuestionName == "sciadlseu.azuredatalakestore.net"
```

Frame Summary - dns.QRecord.QuestionName == "sciadlseu.azuredatalakestore.net"

Find   

Frame Number	Time Date Local Adjusted	Time Offset	Process Name	Process Id	Source	Destination	Protocol Name
16485	5:22:50 PM 1/10/2020	198.0495246			IND-SGI-IOT-PRI		DNS
16486	5:22:50 PM 1/10/2020	198.0495842			IND-SGI-IOT-PRI		DNS
16496	5:22:50 PM 1/10/2020	198.1382571					DNS
16502	5:22:50 PM 1/10/2020	198.1470329					DNS
17456	5:22:57 PM 1/10/2020	205.7836919					DNS
17462	5:22:57 PM 1/10/2020	205.7991287					DNS
17526	5:22:57 PM 1/10/2020	205.8952283					DNS
17608	5:22:58 PM 1/10/2020	206.1342205					DNS
18830	5:23:13 PM 1/10/2020	221.5019442					DNS
18831	5:23:13 PM 1/10/2020	221.5054115					DNS

There are 2 DNS servers

Frame Details

Frame: Number = 16496, Captured Frame Length = 184, MediaType = ETHERNET

Ethernet: Etype = Internet IP (IPv4), DestinationAddress: [00-15-5D-20-CF-16], SourceAddress: [94-57-A5-6C-...]

IPv4: Src = ..., Dest = ... Next Protocol = UDP, Packet ID = 16915, Total IP Length = ...

Udp: SrcPort = DNS(53), DstPort = 62161, Length = 150

Dns: QueryId = 0x7673, QUERY (Standard query), Response - Success, 50, 0

QueryIdentifier: 30323 (0x7673)

Flags: Response, Opcode - QUERY (Standard query), RD, RA, Rcode - Success

QuestionCount: 1 (0x1)

AnswerCount: 2 (0x2)

NameServerCount: 0 (0x0)

AdditionalCount: 0 (0x0)

QRecord: sciadlseu.azuredatalakestore.net of type Host Addr on class Internet

ARecord: sciadlseu.azuredatalakestore.net of type CNAME on class Internet: 97e89adc-d543-4b8c-8c25-ec2973bbfed9.adliell.projectcabostore.net

ResourceName: sciadlseu.azuredatalakestore.net

ResourceType: CNAME, Canonical name for an alias, 5(0x5)

ResourceClass: Internet, 1(0x1)

TimeToLive: 3 (0x3)

ResourceDataLength: 64 (0x40)

CName: 97e89adc-d543-4b8c-8c25-ec2973bbfed9.adliell.projectcabostore.net

ARecord: 97e89adc-d543-4b8c-8c25-ec2973bbfed9.adliell.projectcabostore.net of type Host Addr on class Internet

ResourceName: 97e89adc-d543-4b8c-8c25-ec2973bbfed9.adliell.projectcabostore.net

ResourceType: A, IPv4 address, 1(0x1)

ResourceClass: Internet, 1(0x1)

TimeToLive: 3599 (0xE0F)

ResourceDataLength: 4 (0x4)

IPAddress: 208.101.101.101

Hex Details

Decode As	Width
0000	00 15 5D 20 C
000F	00 00 AA 42 1
001E	AC 16 20 EC 0
002D	80 00 01 00 0
003C	6C 73 65 75 1
004B	61 6B 65 73 7
005A	00 01 C0 0C 0
0069	39 37 65 38 3
0078	62 38 63 2D 3
0087	62 62 66 65 6
0096	70 72 6F 6A 6
00A5	65 C0 29 C0 3
00B4	D0 5B 70 37

4. If the issue happens between ServerHello and ClientKeyExchange, you can check the customer local certificates. Whether they are validate.

We may need Directory team to help us about the certificate part.

Support area path \* Windows Servers/Windows Server 2019/Windows Server 2019 Standard/Certificates and Public Key Infrastructure/SSL or TLS

Email CC list ---

Current Queue \* MSaaS Windows Directory Services Premier

Training Video: <https://web.microsoftstream.com/video/8b53a1ff-0400-86ea-a346-f1ea7a45440b>

[ADF troubleshooting\\_ADLS TLS Communication Certificate.pptx](#)

	<a href="#">Netmon Trace</a> 	
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