

[Self-help Document] Self-Hosted IR General Failure or Error


Last updated by | Veena Pachauri | Mar 8, 2023 at 11:10 PM PST

Path: Data Factory/Copy Activity or Self-Hosted IR/Self-Hosted IR General Failure or Error

Support Topic Id: 32637155

Description: My problem is not listed or I have other issues related to self-hosted IR

Self-hosted IR general failure or error

Note: Please follow the steps on the [troubleshooting guide](#) , and take note of the **Report ID** to provide it with the support request.


TLS/SSL certificate issue

Symptoms

When trying to enable TLS/SSL certificate (advanced) from *Self-hosted IR Configuration Manager* -> *Remote access from intranet*, after selecting TLS/SSL certificate, below error shows up:

Remote access settings are invalid. Identity check failed for outgoing message. The expected DNS identity of the remote endpoint was 'abc.microsoft.com' but t




In above case, the user is using certificate with "[microsoft.com](#) " as last item.

Cause

This is a known issue in WCF: WCF TLS/SSL validation only checks last DNSName in SAN.

Resolution

Wildcard certificate is supported in Azure Data Factory v2 Self-hosted IR. This issue normally happens because the SSL certificate is not correct. The last DNSName in SAN should be valid. Follow steps below to verify it.

1. Open Management Console, double check both Subject and Subject Alternative Name from the Certificate Details. In above case, for example, the last item in Subject Alternative Name, which is "DNS Name= [microsoft.com](#) ", is not legitimate.
2. Contact the certificate issue company to remove the wrong DNS Name

Concurrent jobs limit issue

Symptoms

When trying to increase the limit concurrent jobs from the Azure Data Factory UI, it hangs as *updating* forever. The max value of concurrent jobs was set to 24 and you want to increase the count so that jobs can run faster. The minimum value that you can enter is 3 and the maximum value that you can enter is 32. You increased the value from 24 to 32 and hit on update button, in the UI it got stuck on updating. After refreshing, the customer still saw the value as 24 and it never got updated to 32.

Cause

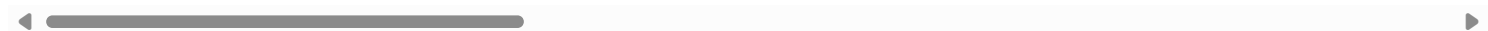
There is a limitation for the setting as the value depends on the computer logicCore and Memory, you can just adjust it to a smaller value such as 24 and see the result.

Self-hosted IR HA SSL Certificate issue

Symptoms

Self-hosted IR work node has reported the error below:

Failed to pull shared states from primary node net.tcp://abc.cloud.corp.Microsoft.com:8060/ExternalService.svc/. Activity ID: XXXXX The X.509 certificate CN=a



Cause

When we handle cases related to SSL/TLS handshake, we might encounter some issues related to certificate chain verification.

Resolution

- Here is a quick and intuitive way to troubleshoot X.509 certificate chain build failure:
 1. Export the certificate, which needs to be verified. Go to manage computer certificate and find the certificate that you want to check and right-click **All tasks** -> **Export**.
 2. Copy the exported certificate to the client machine

- On the client side, run below command in CMD. Make sure that you have replaced below *<certificate path>* and *<output txt file path>* placeholders with related paths:

```
Certutil -verify -urlfetch <certificate path> > <output txt file path>
```

For example:

```
Certutil -verify -urlfetch c:\users\test\desktop\servercert02.cer > c:\users\test\desktop\Certinfo.txt
```

- Check if there is any error in the output txt file. You can find the error summary at the end of the txt file.

For example:

```
ERROR: Verifying leaf certificate revocation status returned The revocation function was unable to check revocation because the revocation server was off
CertUtil: The revocation function was unable to check revocation because the revocation server was offline.
```

If you do not see any error at the end of the log file, you can consider the certificate chain built up successfully in the client machine.

- If there is AIA, CDP and OCSP configured in the certificate file, we can check it in a more intuitive way:

- You can get this info by checking the details of a certificate
- Run below command. Make sure that you have replaced *<certificate path>* placeholder with related path of the certificate:

```
Certutil -URL <certificate path>
```

3. Then the *URL Retrieval tool* will be opened. You can verify certificates from AIA, CDP, and OCSP by clicking the *Retrieve* button. The certificate chain can be built up successfully if the certificate from AIA is "Verified", and the certificate from CDP or OCSP is "Verified".

If you see failure when retrieving AIA, CDP, work with network team to get the client machine ready to connect to target URL. It will be enough if either the http path or the ldap path is able to be verified.

Self-hosted IR could not load file or assembly

Symptoms

```
Could not load file or assembly 'XXXXXXXXXXXXXXXX, Version=4.0.2.0, Culture=neutral, PublicKeyToken=XXXXXXXX' or one of its dependencies. The system cannot f
```

For example:

```
Could not load file or assembly 'System.ValueTuple, Version=4.0.2.0, Culture=neutral, PublicKeyToken=XXXXXXXX' or one of its dependencies. The system cannot
```

Cause

If you take process monitor, you can see PATH NOT FOUND errors on files accessed from the GAC or Integration Runtime installation path (ie. *System.ValueTuple.dll*)

Tip

You can set a filter on the Path column using the file name like *System.ValueTuple*, you will see the file is not located in GAC related folder, or in *C:\Program Files\Microsoft Integration Runtime\4.0\Gateway*, or in *C:\Program Files\Microsoft Integration Runtime\4.0\Shared* folder. Basically, it will load the dll from GAC folder first, and then from *Shared* and finally from *Gateway* folder. Therefore, you can put the dll to any path which can be helpful.

Resolution

You can find that the *System.ValueTuple.dll* is located at *C:\Program Files\Microsoft Integration Runtime\4.0\Gateway\DataScan* folder. Copy the *System.ValueTuple.dll* to *C:\Program Files\Microsoft Integration Runtime\4.0\Gateway* folder to resolve the issue.

You can use the same method to solve other file or assembly missing issues.

How to audit Self-hosted IR key missing

Symptoms

The self-hosted integration runtime suddenly goes to offline without key, below error message shows in the Event Log: Authentication Key is not assigned yet

Cause

- The Self-hosted IR node or logical Self-hosted IR in portal is deleted.

- A clean uninstall is done.

Resolution

If neither of the above causes applies, you can go to the folder: %programdata%\Microsoft\Data Transfer\DataManagementGateway , and check whether the file named *Configurations* is deleted. If it's deleted, follow the instructions [here](#) to audit who deletes the file.

Cannot use Self-hosted IR to bridge two on-premises data stores

Symptoms

After creating Self-hosted IRs for both source and destination data stores, you want to connect the two IRs together to finish a copy. If the data stores are configured in different VNets, or they cannot understand the gateway mechanism, you will hit errors like: *the driver of source cannot be found in destination IR*; *the source cannot be accessed by the destination IR*.

Cause

The Self-hosted IR is designed as a central node of a copy activity, not a client agent that needs to be installed for each data store.

In above case, the linked service for each data store should be created with the same IR, and the IR should be able to access both data stores through network. No matter the IR is installed with source data store, destination data store, or on a third machine, if two linked services are created with different IRs, but used in the same copy activity, the destination IR will be used, and the drivers for both data stores need to be installed on the destination IR machine.

Resolution

Install drivers for both source and destination on the destination IR, and make sure it can access the source data store.

If the traffic cannot pass through the network between two data stores (for example, they are configured in two VNets), you may not finish the copy in one activity even with IR installed. In that case, you may create two copy activities with two IRs, each in a VENT: 1 IR to copy from data store 1 to Azure Blob Storage, another to copy from Azure Blob Storage to data store 2. This could simulate the requirement to use the IR to create a bridge that connects two disconnected data stores.

Credential sync issue causes credential lost from HA

Symptoms

The data source credential "XXXXXXXXXX" is deleted from current Integration Runtime node with payload "when you delete the link service on Azure portal, or the task has the wrong payload, please create new link service with your credential again".

Cause

Your Self-hosted IR is built in HA mode with two nodes, but they are not in credentials sync state, which means the credentials stored in dispatcher node aren't synced to other worker nodes. If any failover happens from dispatcher node to worker node but the credentials only existed in previous dispatcher node, the task will fail when trying to access credentials, and you will hit above error.

Resolution

The only way to avoid this issue is to make sure two nodes are in credentials sync state. Otherwise you have to reinput credentials for new dispatcher.

Cannot choose the certificate due to private key missing

Symptoms

Import a PFX file to the certificate store.

When selecting the certificate through IR Configuration Manager UI, you hit below error:

Failed to change Intranet communication encryption mode: It is likely that certificate ' ' may not have a private key that is capable of key exchange

Cause

The user account is in low privilege and cannot access private key. The certificate was generated as signature but not as key exchange.







Resolution

Use a privileged account that can access private key to operate the UI.

Run below command to import the certificate:

```
certutil -importpfx FILENAME.pfx AT_KEYEXCHANGE
```

Recommended Documents

- [Troubleshoot Self-Hosted Integration Runtime](#) 
- [How to create and configure Self-hosted Integration Runtime](#) , including:
 - [Best Practice](#) 
 - [Ports and Firewall](#) 
 - [Proxy Server](#) 
- [Self-hosted integration runtime](#) 
- [Monitor integration runtime](#) 