

# Failed to connect to cloud service

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## Determine which FQDN is blocked

If customer's SHIR could not connect to the cloud service, SHIR connects either below FQDNs:

- **{region}.frontend.clouddatahub.net**
- **{factoryname}.{region}.datafactory.azure.net**

Which one to connect is determined by the key format the high-light part in below key format:

Whether key contains ServiceEndpoint	Key format	Targeted FQDN	Comment
No	IR@{Guid}@{factoryName}@ <b>{region}</b> @*****	<b>{region}.frontend.clouddatahub.net</b>	Factory created before 2020/08 and not enabled PE, Synapse, Purview
Yes	IR@{Guid}@{factoryName}@ServiceEndpoint= <b>{region}.frontend.clouddatahub.net</b> @*****	The value of ServiceEndpoint	Fairfax, Mooncake
Yes	IR@{Guid}@{factoryName}@ServiceEndpoint= <b>{factoryname}.{region}.datafactory.azure.net</b> @*****	The value of ServiceEndpoint	Factory created after 2020/08 or enabled PE

Customer could verify it from the SHIR key:

## Register Integration Runtime (Self-hosted)

Welcome to Microsoft Integration Runtime Configuration Manager. Before you start, register your Integration Runtime (Self-hosted) node using a valid Authentication Key.

IR@e1ca25db-bd6c-484d-aebb-e5459e7b7c63@ligeng0824ncu@ServiceEndpoint=[REDACTED].northcentralus.datafactory.azure.net@C/Mh5Bzx3CL.....d29Fnmldioyohg



☒ Show Authentication Key

[Learn how to find the Authentication Key](#)

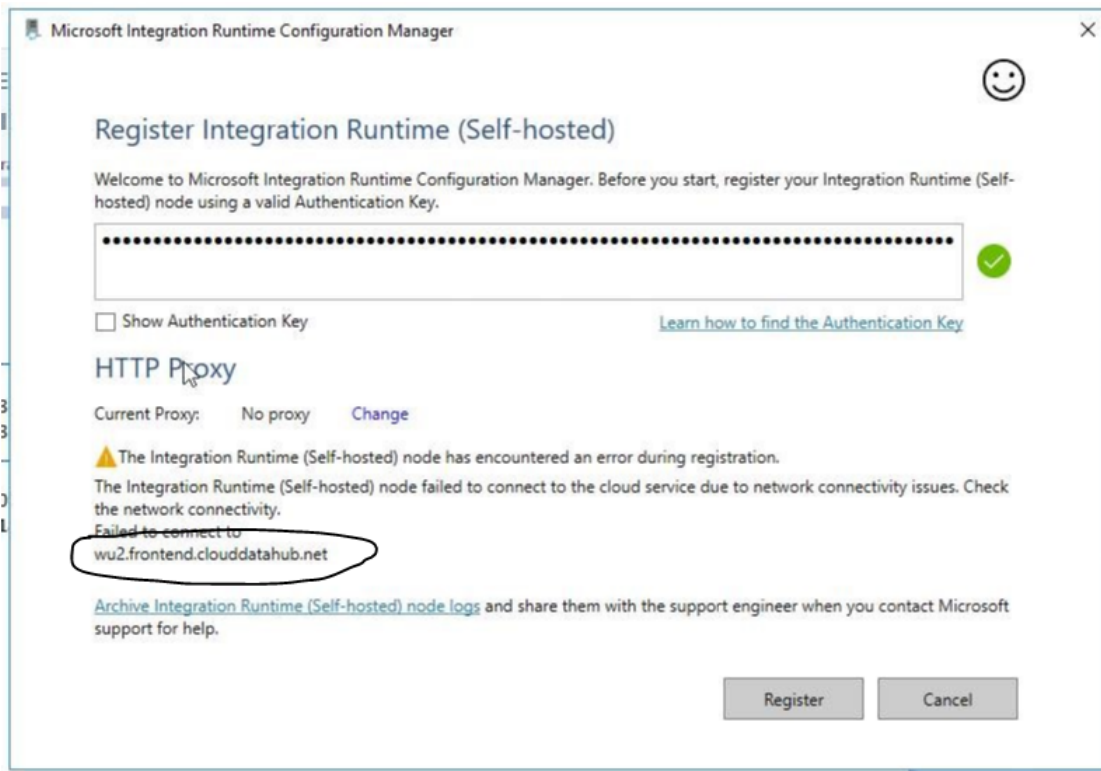
## HTTP Proxy

Current Proxy: No proxy

[Change](#)

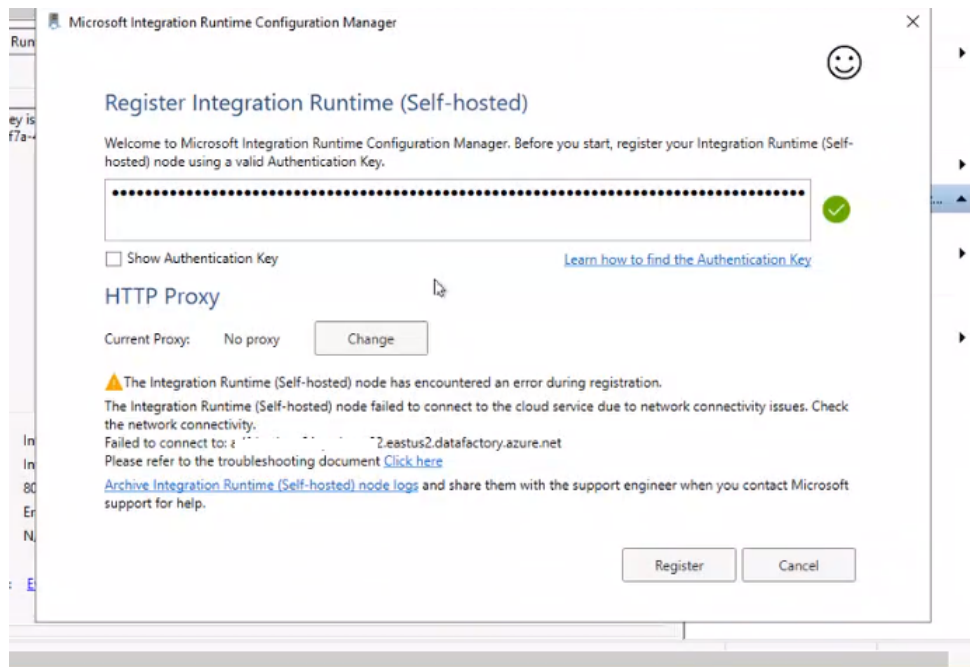
## Factory enabled private endpoint

**{region}.frontend.clouddatahub.net**



**{factoryname}.{region}.datafactory.azure.net**

why SHIR is connecting to this per factory fqdn, we are doing some migration for each new factory we will create a DNS record, so new SHIR created in these data factory will use this fqdn to connect to Azure Data Factory service



if customer could resolve the FQDN in public internet, check below:

```
PS C:\WINDOWS\system32> Resolve-DnsName 1tigeng0824ncu.northcentralus.datafactory.azure.net
```

```

Name                               Type      TTL      Section  NameHost
-----
1tigeng0824ncu.northcentralus.d CNAME     0        Answer   1tigeng0824ncu.northcentralus.privatelink.datafactory.azure.net
atafactory.azure.net
1tigeng0824ncu.northcentralus.p CNAME     0        Answer   1tigeng0824ncu.frontend.clouddatahub.net
rivatelink.datafactory.azure.n
et
ncu.frontend.clouddatahub.net CNAME     0        Answer   tm-ncu-prod-adms-fe.trafficmanager.net
tm-ncu-prod-adms-fe.trafficman CNAME     0        Answer   fe-ncu-prod-adms.cloudapp.net
ager.net

Name      : 1tigeng0824ncu.frontend.cloudapp.net
QueryType : A
TTL       : 9
Section   : Answer
IP4Address : 10.0.0.1

```

but could not resolve the DNS in his private VNet






1. check whether there is any Private DNS Zones: [privatelink.datafactory.azure.net](#) associated with SHIR's VNet

## **privatelink.datafactory.azure.net** | Virtual network links


Private DNS zone


&lt;&lt;


[+ Add](#) [Refresh](#)


-  Overview
-  Activity log
-  Access control (IAM)
-  Tags
-  Diagnose and solve problems

### Settings

 Virtual network links

 Export template

 Properties


 Locks

### Monitoring

 Alerts

 Metrics

### Support + troubleshooting

 New support request

Link Name	Link status
gw6p7vcvp7txk	Completed

2. If yes, either add a CRecord entry or delete the private dns zone or delete the Virtual network links
3. otherwise, go to below more troubleshooting steps

# Add record set



privatelink.datafactory.azure.net

Name

.privatelink.datafactory.azure.net

Type

TTL \*

TTL unit

Alias

## Troubleshooting

### 1. If customer do not use proxy, use below powershell command

```
(New-Object System.Net.WebClient).DownloadString("https://eu.frontend.clouddatahub.net/")
```

[eu.frontend.clouddatahub.net](#) should be replaced with above fqdn

```
PS C:\WINDOWS\system32> (New-Object System.Net.WebClient).DownloadString("https://eu.frontend.clouddatahub.net/")
Exception calling "DownloadString" with "1" argument(s): "The remote server returned an error: (403) Forbidden."
At line:1 char:2
+ (New-Object System.Net.WebClient).DownloadString("https://eu.fronten...
+ ~~~~~
+ CategoryInfo          : NotSpecified: (:) [], MethodInvocationException
+ FullyQualifiedErrorId : WebException
```

- [1] If you get error "the remote name could not be resolved", please help customer check DNS settings (change DNS server or change hosts mapping file)
- [2] If you get error like ssl/tls cert is not trusted, please let customer check the Cert for "https://{region please replace it to customer's region like below image}.frontend.clouddatahub.net/" is trusted on the machine, install the public cert to trusted people could mitigate this issue.
- [3] Check Event log for any failure, mostly caused by DNS, firewall rule and network settings of the company (Forcely close the connection), for this issue we should engage customer's network team for further troubleshoot, every company has customize network settings.

### 2. If customer use proxy

Verify whether customer's proxy could access our service endpoint, (Use similar command like below, but make sure the powershell use the same proxy (<https://stackoverflow.com/questions/571429/powershell-web-requests-and-proxies>))

```
_User = env : usernamewebproxy = (get-itemproperty 'HKCU:\Software\Microsoft\Windows\CurrentVersion\Internet Settings').ProxyServer $pwd = Read-Host "Password?" -assecurestring
```

```
proxy = new - object System.Net.WebProxy proxy.Address = webproxy account = new-object
System.Net.NetworkCredential(
user, [Runtime.InteropServices.Marshal]::PtrToStringAuto([Runtime.InteropServices.Marshal]::SecureStringToBSTR(
pwd)), "") $proxy.credentials = account url = "https://wu.frontend.clouddatahub.net/" wc = new - objectsystem.net.WebClient wc.proxy = proxy
webpage = wc.DownloadData(url) string = [System.Text.Encoding]::ASCII.GetString(webpage)_
```

below response is expected:

```
Exception calling "DownloadData" with "1" argument(s): "The remote server returned an error: (403) Forbidden."
At line:1 char:1
+ $webpage = $wc.DownloadData($url)
+ ~~~~~
+ CategoryInfo          : NotSpecified: (:) [], MethodInvocationException
+ FullyQualifiedErrorId : WebException
```

Some special notes for Proxy:

- ☐ Please help customer check if the proxy need whitelist for URL/IP, engage customer's network team or proxy admin.

- ☐ Check TLS/SSL cert for "https://{region please replace it to customer's region like below image}.frontend.clouddatahub.net/" trusted on proxy server
- ☐ If customer change diahost.exe.config for proxy settings, please let customer check the same settings works for powershell.exe.config.  
(C:\windows\System32\WindowsPowerShell\v1.0)
- ☐ Check diahost.exe.config & diawp.exe.config both changed for proxy settings
- ☐ If customer use bypass rules in config file make sure the regex in config is correct.
- ☐ If the proxy is AD Auth, please let customer change the service account to the account can access the proxy for "Integration Runtime Service"

Note: Please engage customer's network team/Proxy admin, if there's any special network settings.

**3. If all options not resolved the issue, please help collect below log:**

IR log: [Collecting Self-hosted IR logs](#)

Netmon log Fiddler Trace (should use same account as "Integration Runtime Service")