

# Server Trust Groups

Last updated by | Vitor Tomaz | Nov 22, 2021 at 1:08 PM PST


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## Investigation/Analysis

For public preview, Server Trust Groups will reuse communication link workflows to setup certificates between two instances.

To quickly check if the communication link is setup, look for the InstancePartners fabric property:

 Edit property InstancePartners



### Edit property InstancePartners



Name:

fabric:/Worker.CL/fbc40540b0b7

Property name:

InstancePartners

Data type:

Binary

Value:

For Int64, Double and Guid exact data type is expected. String will be stored verbatim. Binary can be entered as hex or as string - select encoding:

ASCII

```
<Partners>
  <Partner name="testcl">
    <Certificates>
      <Certificate isprimary="1" generation="4"><![CDATA[MIIDrjCCApagAwIBAgIQLUmL3N
+dldHr4tBPNXUCjANBgkqhkiG9w0BAQsFADB7MXkwYDVBQDHNAAASQBuAHMAdABhAG4AYwBIAEMAZQB
yAHQAaQBMAGkAYwBhAHQAZQBFAGEANABhAGQAMwA3AGQAMQAtADcAYQA2ADIALQA0ADgAYwA5AC0
AOAA4ADcANAAAtAGQAZQBIADgAZgBkAGYANQBMADEAYgBhMB4XDlMDgzMDIwMTYyOVVoXDTIzMDgzM
DIwMTYyOVVowezF5MHcGA1UEAxwAEkAbgBzAHQAYQBuAGMAZQBDAGUAcgB0AGkAZgBpAGMAYQB0AG
UAXwBhADQAYQBkADMANwBkADEALQA3AGEANgAyAC0ANAA4AGMAOQAtADgAOAA3ADQALQBkAGUAZ
QA4AGYAZABmADUAZgAxAAGIAYTCCASlwDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBANNa0wcic6lso
mNTM3kC6ziLzmroa8Wc7GS5arTYOsmXgYtpio6PNX3SOWUyilxK/5kEJmKdOCHqUzwbmEOnniZdi6LLQxWwlr
vZQz3pEsA
+0B48rFICzFMmiASc6VnQIX4cYKq50VGpfgl/DyYNNfSrYfjk9dfx5oRReaOZWQCj7pK4CiwQ571YY6B0U15/K
+F72WrDcrtQ9Q6V8aaa95DBBU2i0IO3RdlmKP S nB46MdWRpeOFGmacM3WFTku5LkHm+
+08Q T wjMNUmdoGcSz1bciVgIvhnw9e/8djBxiOh2gb3nUG7+KJQvb0U65d5rOEgjRREqV2BGsJO7CqHEO0CAw
EAAaMuMCwwCwYDVROPAQDAgQwMB0GA1UdJQQWMBQGCCsGAQUFBwMBBggrBgEFBQcDAjANBgkqhki
iG9w0BAQsFAAOCAQEAlk5KtN7EQxZHwcXuzxyW4fgvBSvqZa5NQB6FhA96KTB602WnK2mjr57wQDV3+pluJ
w28mg9KtkffPkLXVvfPxr4wP89k5PLamDxqa0Ytpmfg7vnFd1Ak1QhkhU96Gj8pBMHJJX2PxFScE/clbX1PHOLtq
0sKdMI5/oRMZ7amb5V3US1EDuy0TLhDNUBlm3IMSDXfVNkwr7vGlsJD2GVzoRv7LJO7o4Hw0BI6R4YGT2q95
1XveUTCWb737xveOo/e6qOm5UWRQliPa8Gd6pZNQiMv9J3NP3uRNeqM1Gw75bH9Pp9mtUkQ1J/7pltFdiNxd
BV9eEaMdHaYKB4lhg==]]></Certificate>
    </Certificates>
  </Partner>
</Partners>
```

Submit

Cancel

Additionally, to check if the certificate for the partner exists, connect to physical master (this can be done through XTS "adhoc query to backend") and run: select name, issuer\_name,subject, thumbprint from sys.certificates where name like 'instancepartner%'

[https://supportability.visualstudio.com/AzureSQLDB/\\_wiki/wikis/AzureSQLDB.wiki/391187/Server-Trust-Groups](https://supportability.visualstudio.com/AzureSQLDB/_wiki/wikis/AzureSQLDB.wiki/391187/Server-Trust-Groups)

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Result Set (1 item)			
name	issuer_name	subject	thumbprint
instancepartner-testcl-primary	InstanceCertificate_a4ad37d1-7a62-48c9-8874-dee8df5f1ba	InstanceCertificate_a4ad37d1-7a62-48c9-8874-dee8df5f1ba	16 0D 17 C1 70 30 E1 0F 3C 20 B0 84 84 9D B2 91 3B EF 3F 1A

There are two state machines that you should pay attention to:

- **ManagedServerCommunicationStateMachine** This is a transient state machine which initiates communication link CRUD operations on both the local and the partner side. The up-to-date view is `managed_server_communication`.
- **ManagedServerCommunicationLinkStateMachine** This is a permanent state machine - it keeps the current state of the communication link. One instance of this FSM exists for both the local and the partner side. Note that CMS view was changed and the up-to-date view is `managed_server_communication_links_v2`.

To look for all management operations related to communication and comm links, use following CMS query:  
select top 100 \* from management\_operations where fully\_qualified\_operation\_type\_name like  
'%ManagedServerComm%'

No specific TSGs for communication link workflows exist so far. The investigation should go in the direction of general MS investigations. MonManagement Kusto table and management\_operations CMS view (along with the FSM views from above) should be good starting points.

**How good have you found this content?**



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