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Note: *Technical Service is for security professionals only*

ALARM LOCK Tech Support

TECH NOTE

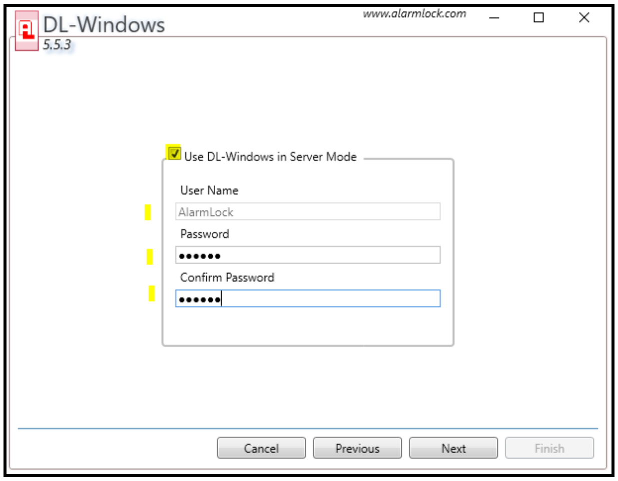
Date: Thursday, March 30, 2023

Subject: Troubleshooting Server / Workstation Connection Issues

Models: DL-Windows V5

When attempting to connect a DL-Windows Workstation instance to an existing DL-Windows Server instance, issues may sometimes arise due to the installation site's network configuration. If you encounter a connectivity issue between the DL-Windows Server and Workstation installations, proceed as follows:

1. Verify all appropriate steps were taken for the initial installation: Ensure both instances are installed correctly, that the Server instance is set to be used in **Server Mode** (**Fig. 1A**), and that all credentials were entered under the appropriate sections in the Workstation instance (**Fig. 1B**).


DL-Windows 5.5.3

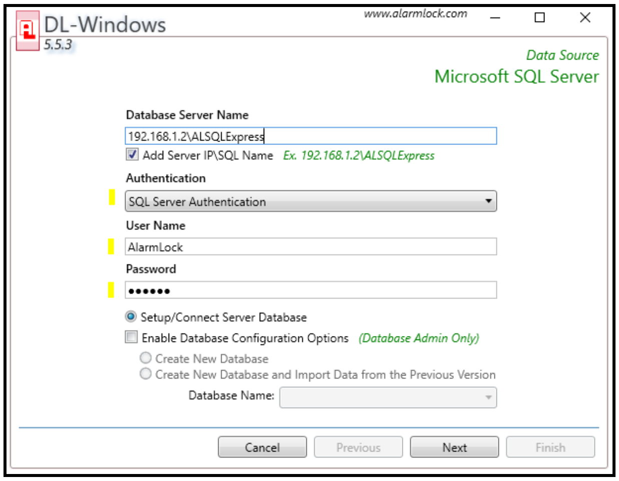
☑ Use DL-Windows in Server Mode

User Name: AlarmLock

Password: ••••••

Confirm Password: ••••••

Fig.1A


DL-Windows 5.5.3

Data Source
Microsoft SQL Server

Database Server Name: 192.168.1.2\ALSQLExpress

☑ Add Server IP\SQL Name *Ex. 192.168.1.2\ALSQLExpress*

Authentication: SQL Server Authentication

User Name: AlarmLock

Password: ••••••

● Setup/Connect Server Database

□ Enable Database Configuration Options *(Database Admin Only)*

○ Create New Database

○ Create New Database and Import Data from the Previous Version

Database Name:

Fig. 1B

2. Verify that both instances of the DL-Windows software are on the same network: To do this, simply ping the IP address of the Server *from the Workstation computer* in a command prompt window (click **Start** > **Run** > type **cmd**). Type **ping x.x.x.x** (replace each **x** with the

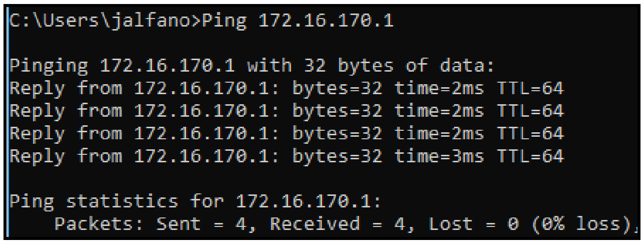
IP Address) and press **Enter**. If the ping is successful (see **Fig. 2A**), under **Ping statistics**, look for:

```
"Packets:  Sent = 4, Received = 4, Lost = 0 (0% loss)"
```

If the ping is unsuccessful (see **Fig. 2B**), this section will read:

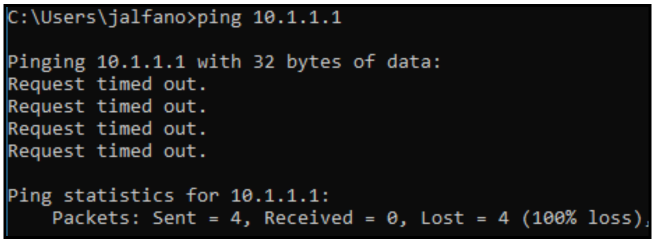
```
"Packets:  Sent = 4, Received = 0, Lost = 4 (100% loss)"
```

If the ping is unsuccessful, check the network configuration to determine why the two PCs are unable to communicate on the network (e.g., each PC may be on separate networks, a firewall issue might block communications, a network policy issue exists, etc.), then re-test until the ping is successful.



```
C:\Users\jalfano>Ping 172.16.170.1

Pinging 172.16.170.1 with 32 bytes of data:
Reply from 172.16.170.1: bytes=32 time=2ms TTL=64
Reply from 172.16.170.1: bytes=32 time=2ms TTL=64
Reply from 172.16.170.1: bytes=32 time=2ms TTL=64
Reply from 172.16.170.1: bytes=32 time=3ms TTL=64

Ping statistics for 172.16.170.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

Fig.2A



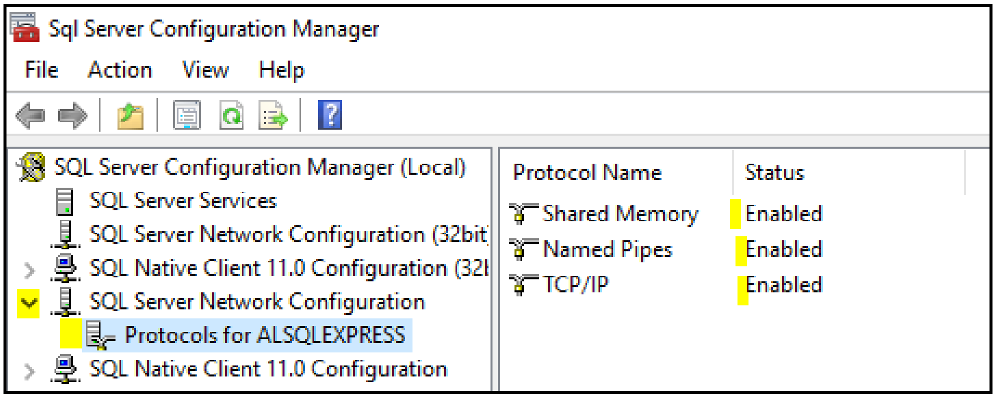
```
C:\Users\jalfano>ping 10.1.1.1

Pinging 10.1.1.1 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 10.1.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Fig. 2B

3. Ensure the Network Configuration Protocols are correctly configured for the DL-Windows SQL database, as follows:

   3a. Open the **SQL Server Configuration Manager** (**Start** > **All Programs** > **Microsoft SQL Server 2012** > **Configuration Tools** > **SQL Server Configuration Manager**).

   3b. In the **Configuration Manager**, locate a header on the left that reads, "**SQL Server Network Configuration**", click the pull-down and select **Protocols for ALSQLEXPRESS** (see **Fig. 3A**).



Sql Server Configuration Manager
File
Action
View
Help
SQL Server Configuration Manager (Local)
SQL Server Services
SQL Server Network Configuration (32bit
SQL Native Client 11.0 Configuration (32l
SQL Server Network Configuration
Protocols for ALSQLEXPRESS
SQL Native Client 11.0 Configuration

Protocol Name	Status
Shared Memory	Enabled
Named Pipes	Enabled
TCP/IP	Enabled

3c. The main display of the **Configuration Manager** displays three options:

- **Shared Memory**
- **Named Pipes**
- **TCP/IP**

Ensure the status for all three options reads **Enabled**. If any are not enabled, right-click that option and select the **Enable** menu item.

3d. In the **Configuration Manager**, locate the header on the left that reads, "**SQL Server Services**".
The Instance Names of both **SQL Server (Instance Name)** and **SQL Server Browser** must BOTH be running and set to **Start Mode**: "**Automatic**". If they are disabled or stopped, right-click each instance and select **Properties**, then set the **Startup type** to "**Automatic**" and start the service.

4. If the connectivity issue still exists, the Windows Firewall may be blocking access to the database. To unblock, create a rule within the network to allow communications between both instances of DL-Windows, as follows:

4a. Click **Start** > **Run** and type **Firewall.cpl** in the **Open** field and click **OK**.

Helpful Tip: *Before continuing, try disabling Windows Firewall and re-launching the Database Configuration utility; if a Workstation is then able to locate the database, this will serve as a likely confirmation that the Windows Firewall is responsible for blocking access. If the connectivity issue still exists, continue with the rule creation process:*

4b. Click **Advanced settings**.

4c. In the left pane, under **Windows Firewall with Advanced Security on Local Computer**, click **Inbound Rules**.

4d. On the right side under **Actions** > **Inbound Rules**, click **New Rule…**, and the **New Inbound Rule Wizard** dialog opens.

4e. Select the **Port** radio button and click **Next**.

4f. In the option, **Does this rule apply to TCP or UDP?**, verify **TCP** is selected (take special notice of this selection; keep it in mind for a later step). Also select **Specific local ports:** and type "**1433**, **1434**" in this field (quotes omitted). Click **Next**.

4g. Verify the **Allow the connection** radio button is selected, then click **Next**.

4h. Verify ALL checkboxes are checked (**Domain**, **Private** and **Public**), then click **Next**.

4i. In the **Name** field, type "**SQL PORTS**" (quotes omitted). Click **Finish**.

4j. Repeat steps **4a** through **4i**, but in step **4f** select **UDP** and continue through step **4i**.

4k. In the left pane, under **Windows Firewall with Advanced Security on Local Computer**, click **Outbound Rules**. Carefully repeat steps **4a** through **4j** (this will enable ports **1433** and **1434** for **TCP** and **UDP** outbound).