

TECH-05	ISOXpress NET How Network Implementation Works	Rev.: A
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ARCHITECTURE

The architecture of ISOXpress network implementation is very simple: A shared folder with the database and document files, named **IsoXpressData**, is configured on a server (which can be any computer on the network). The ISOXpress application is installed on several client (user) computers on the network. Client applications access the common database and files by connecting to the **IsoXpressData** share. There is no software running on the server -- just a shared folder.

This is the simplest and most robust network architecture possible. It was designed especially for small companies where there may be no professional IT resources available. The system can be installed on any network that supports file sharing, even the most basic peer-to-peer, LAN network without a dedicated server. Backing up data is as simple as copying a file folder.

SECURITY

The ISOXpress application connects to the database and other files in the **IsoXpressData** share on the server by impersonating a special user called **isoexpress**, which is created during the installation process on both the server and all client computers.

Access permissions on the **IsoXpressData** share are granted only to the **isoexpress** user (and the server Administrator), so that no one can access the share directly from any computer. The only way to connect to the **IsoXpressData** share is through the ISOXpress application impersonating the **isoexpress** user. For this to work, the server and all client computers must have a user with the same name, **isoexpress**, and the same secret password.

INSTALLATION

Server installation

Installation of ISOXpress on the server (which can be any computer on the network) consists of three actions:

- Copying the **IsoXpressData** folder to the server (can be any location);
- Creating a new user named **isoexpress**;
- Making the **IsoXpressData** folder into a share (shared folder); and
- Configuring permission for the **IsoXpressData** share and folder, so that only the the newly created **isoexpress** user will be allowed to access the share.

The last three actions can be performed automatically with the ISOXpress Server Utility application, or can be done manually.

Client (user) computers installation

Installation of ISOXpress on a client (user) computer involves two actions, both performed automatically by the installer:

- Installing the ISOXpress application into the local 'Program Files' folder; and
- Creating a new user named **isoexpress**.

The **isoexpress** user is given a default password that is not known to anyone, except for the ISOXpress application (it is encrypted and compiled into the application code). This new user is referenced in the the application menus and setups as the **Server Access User**.

The isoxpress user is created automatically during the initial installation of the application. It can also be recreated later from the **Setups > Server Access User** menu, or created and configured manually.

Single computer installation

The **IsoXpressData** share and the ISOXpress client application can be installed on a single computer. In this case the computer is both the server and the client. When installing on a single computer, you must follow this installation sequence:

- Install the ISOXpress client application (this will also create the **isoxpress** user)
- Copy the **IsoXpressData** folder to the computer (any location); and
- Install and run the ISOXpress Server Utility (which again creates the **isoxpress** user, makes the **IsoXpressData** share, and configures the share with appropriate permissions).

If you reverse the order and run the ISOXpress Server Utility before installing the client application, the **isoxpress** user created by the application will delete the **isoxpress** user created by the server utility, and thus invalidate the **IsoXpressData** permissions.

When installing ISOXpress on a single computer there is some duplication of actions (creating **isoxpress** user twice) and some actions are not strictly necessary (**IsoXpressData** folder does not necessarily need to be a share if there are no other computers connecting to it). But the installers are designed primarily for implementation over a network, so the single computer installation does not have its own special procedures.

INSTALLED COMPONENTS AND CONFIGURATIONS

Irrespective of whether the ISOXpress system is installed automatically using installers and utilities, or is configured manually, the final installation must satisfy the following requirements:

- All client (user) computers must have installed the ISOXpress client application;
- All computers, server and clients, must have a special user with the name **isoxpress** and the same password;
- The server (computer hosting the data) must have a folder called **IsoXpressData** and a share of the same name;
- The **IsoXpressData** folder and the share must be configured with permissions granting the **isoxpress** user Full Control.

If a single computer hosts both the the **IsoXpressData** folder and the ISOXpress application, both server-specific and client-specific installations must be performed on that computer.