ZIM 9.10

Structure

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What is Zim 9.10

Zim is

a complete framework to develop and run professional and mission critical applications by tightly integrating a lean relational database, a powerful Fourth Generation Language, an integrated development tool, the integration with outside world and client user interfaces.

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Configuration Files

- ZIMDB.ZIM
- ZIMCONFIG.SRV
- ZIMCONFIG.ZIM
- AREAS.ZIM
- DIRS.ZIM

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Configuration Files

ZIMDB.ZIM

- Tells which ZIM databases should be managed by Zim Server
- Located in the Zim installation directory (aka $ZIM)
- Is read by Zim Server upon its start up or when ZimExplore makes some dynamic changes to it
- Databases referred in zimdb.zim are property of Zim Server while it runs

Configuration Files

ZIMCONFIG.SRV

- Describes configuration options for Zim Server
- It is located in the Zim installation directory (aka $ZIM)
- Is read by Zim Server upon its start up only

Configuration Files

ZIMCONFIG.ZIM

- Describes configuration options applicable for all users connecting to a specific database (one configuration file per Zim database)
- It is located in the directory where the database resides
- It is read by Zim Server when a Zim client starts a new connection to this particular database

Configuration Files

DIRS.ZIM

- Describes which foreign Zim directories will be managed by Zim Server
- It is read by Zim Server at its start up and each foreign directory is opened as a normal Zim database
- It is located in the database directory that accesses these Zim directories

Configuration Files

AREAS.ZIM

- Allows the physical distribution of Zim files
- It is located in the database directory
- It is read by Zim Server at its start up

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A Physical Zim Database

A typical structure of Zim database is a collection of several physical files in the range from ZIM0001 to ZIM9999 (not all exist) organized in two sets:

- Data Dictionary: from ZIM0001 to ZIM0099
- Data: from ZIM0100 to ZIM9999

They usually reside in the same OS directory but files can be distributed using the AREAS.ZIM configuration file.

A new Zim database can be created by ZimExplore.

User Access to a Database

- All databases managed by Zim Server are accessed by users in shared mode unless explicitly set to exclusive by the command:

```
SET DATABASE ACCESS EXCLUSIVE/SHARED
```

- The exclusive mode can be used to copy files or to take specific actions in that database
- The exclusive mode is granted as soon as all pending transactions are finished; no new ones are allowed to start
- If not explicitly set back to shared, the database automatically reverts its status to shared upon Zim session termination

Zim Executables and Utilities

ZimServer – Manages Zim databases and controls the user interaction with these databases. Runs on Windows and various flavors of Linux;

ZimQTC – Is the Zim client connected to a ZimServer anywhere. Runs only on Windows;

ZimIDE – The Integrated Development Environment. Assists the developer the build Zim applications;

ZimExplore – The administrative utility to perform functions like creating a Zim database, manage users, provide statistics, browse database information and other tasks.

Other utilities exist but they are all controlled by **ZimExplore**.

Invoking Zim Executables

ZimServer – It can be invoked at OS prompt by:

```
zimserver [-k]
```

Where the option –k kills a running ZimServer.

On Windows, it can also be invoked by shortcuts created during Zim installation.

ZimIDE – The Integrated Development Environment. Assists the developer the build Zim applications. It runs exclusively on Windows and can be invoked from a shortcut created during Zim installation or from the OS prompt:

```
zimide [-n <databasename>]
```

ZimExplore – The administrative utility to perform functions like creating a Zim database, manage users, provide statistics, browse database information and other tasks.

Other utilities exist but they are all controlled by **ZimExplore**.

Invoking Zim Executables

ZimQTC – As it only runs on Windows, it can connect to a ZimServer in three ways:

- At OS prompt:

```
zimqtc –n <database name> -c <Zim command>
    -h <Zim Server address> -p <port number>
```

database name is the database to connect to as defined in Zim Server;

zim command is any valid Zim statement to be executed as soon as ZimQTC starts and before anything else. Usually, it is **Zimprof**;

Zim Server address is a network address of the place where Zim Server is running that specific database. By default, is **localhost**;

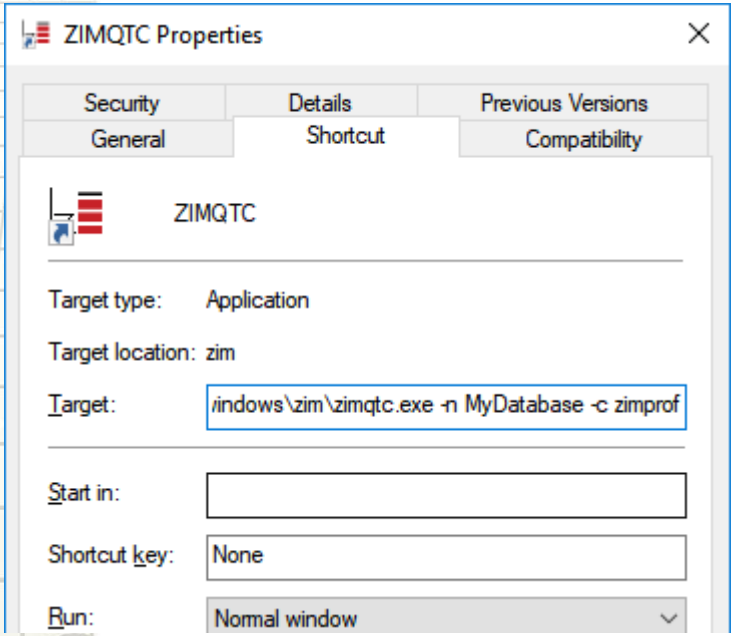
port number is the port Zim Server is listening to. By default, it is **6002**.

Invoking Zim Executables

- Create a specific shortcut with the following target:

```
"C:\Program Files\Zim\9.10\zimqtc.exe"
    -n <database name> -c <Zim command>
    -h <Zim Server address> -p <port number>
```

The target is where Zim 9.10 was installed and the parameters are the same as discussed in the previous slide.



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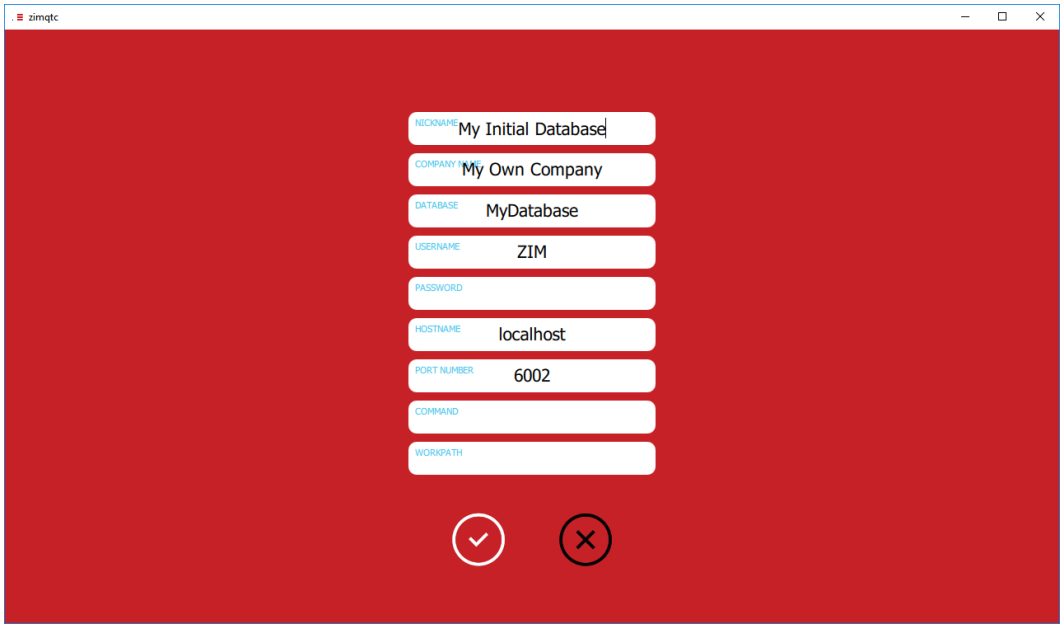
Invoking Zim Executables

- Invoke ZimQTC from a shortcut without parameters or from the OS prompt without parameters:

  "C:\Program Files\Zim\9.10\zimqtc.exe"

Click on the big plus at top right and fill the form (up to three connections can be defined this way):



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