

Veco Administration Guides – Power Grids

Introduction

“Veco-onesystem” has the ability for administrators to create their own database queries to interrogate information in the “Veco” database. These queries are called “Power Grid” queries which can then be accessed by any Veco user.

The query results are presented in a standard Veco “grid” which can then be manipulated using standard “Veco” techniques.

Additionally, queries can be written that read information from non-“Veco” databases, such as in another SQL Server database; or in a completely different database system (eg Eurolink FoxPro database).

Before a “Power Grid” query can be written, the SQL Server may have to be configured to allow connections to a different SQL Server or different database system.

There are four possible “Power Grid” usage scenarios:

1. Connect to data in the “Veco” database

SQL Server Configuration: None required.

Query Configuration: See the section “Creating Queries”.

2. Connect to data in a different database in the same SQL Server

SQL Server Configuration: None required.

Query Configuration: See the section “Creating Queries”

3. Connect to data in a different database in a different SQL Server

SQL Server Configuration: See the section “Creating a Linked Server”.

Query Configuration: See the section “Creating Queries”

4. Connect to data in a different database in a different database system.

SQL Server Configuration: See the section “Creating a Linked Server”.

Query Configuration: See the section “Creating Queries”

Creating a Linked Server

SQL Server has the ability to connect to other SQL Servers and completely different database systems.

Creating a link to another SQL Server

1. Open “SQL Server Management Studio”
2. On the “Object Explorer” navigate to “Server Objects : Linked Servers”
3. Right-click on “Linked Servers”
4. Choose “New Linked Server”
5. In the “Linked Server” field enter the network name (or IP address) of the SQL Server you wish to connect to.
6. Under “Server Type” select “SQL Server”
7. Click “Security” on the left tree
8. Enter the login details as appropriate for the SQL Server you wish to create a link to
9. Click “OK”
10. Still in “SQL Server Management Studio”, click “New Query”
11. Enter the following Commands:

```
Sp_configure 'show advanced options',1
GO
RECONFIGURE
GO
Sp_configure 'ad hoc distributed queries',1
GO
RECONFIGURE
GO
```
12. You are now ready to create your “Power Grid” queries

Creating a link to another database system

We will use Eurolink (FoxPro) as an example of creating a link to a different database system.

1. First install the “Visual FoxPro VFP OLE Providers” on the SQL Server machine. To do this, Google and download the file VFPOLEDB.EXE
2. Open “SQL Server Management Studio”
3. On the “Object Explorer” navigate to “Server Objects : Linked Servers”
4. Right-click on “Linked Servers”
5. Choose “New Linked Server”
6. In the “Linked Server” field enter any name to call the “Linked Server” connection (eg EUROLINK)
7. Under “Server Type” select “Other Data Source”
8. In the “Provider” field select: “Microsoft OLE DB Provider for VFP”
9. In the “Product Name” field enter: VFPOLEDB

10. In the “Data Source” field enter the location of the Eurolink DBF files: eg [\\servername\c\\$\folder\oman](#)
11. Click “Security” on the left tree
12. Select the option “Be made without using a security context” if the OMAN folder is on the same machine, otherwise enter the appropriate login details
13. Click “OK”
14. Still in “SQL Server Management Studio”, click “New Query”
15. Enter the following Commands:

```
Sp_configure 'show advanced options',1
GO
RECONFIGURE
GO
Sp_configure 'ad hoc distributed queries',1
GO
RECONFIGURE
GO
```
16. You are now ready to create your “Power Grid” queries

Creating Queries

To create a “Power Grid” query, follow the following instructions:

1. In “Veco”, select the “Admin : Power Grid Queries” option
2. Click “Add” to add a new query
3. In the “Query Name” field enter a quick name for your query
4. In the “Query SQL” box enter the complete query script (see further details below)
5. Enter a “Description” so that users understand what the query is designed to show
6. Select which “Departments” should have access to the query. For example, you might not want certain departments to have access to restricted data from other databases or from within “Veco”
7. Click “Save”
8. Click “Close”
9. Access the finished “Power Grid” queries from the “Power Grid” option on the “Veco” menu tree

Query Scripts

“Query” scripts should be written in standard SQL query language and should take the structure:

```
SELECT <field1> AS <heading1>,<field2> AS <heading2>,<field3> AS <heading3>
FROM <tablename>
WHERE <field><condition><expression>
      AND <field><condition><expression>
ORDER BY <field>
```

Table Reference

The <tablename> reference must be a full reference to the link server, database, and table containing the data.

Examples:

For “Veco” queries you should reference the table directly:

```
FROM [contacts]
```

For tables in a different database in the same SQL Server:

```
FROM [databasename].[dbo].[tablename]
```

For tables in a different database in a different SQL Server:

```
FROM [[linkedserver].[databasename].[dbo].[tablename]
```

For tables in a different type of database (eg Eurolink FoxPro LANDLORD.DBF table):

```
FROM [EUROLINK]...[LANDLORD]
```

(EUROLINK would be the “linked server” name and LANDLORD is the name of the DBF table). The three full stops are required).

Query Conditions

Due to the inbuilt “Veco” security, every query, regardless of which database is being queried, MUST contain a reference to a “CompanyID” in the “WHERE” statement.

When writing “Veco” queries this must take the form:

```
WHERE CompanyFK='{CompanyID}'
```

“Veco” will automatically replace the expression ‘{CompanyID}’ with the correct “Veco” company reference.

For other databases that may not have a “CompanyID” field, use the following:

```
WHERE NOT ('CompanyCode'='{CompanyID}')
```

Query Parameters

The user can be provided with prompts to allow the selection of certain information (filtering).

To include a prompt surround a field description with squiggly brackets. The description will appear on the screen when the user runs the “Power Grid” query.

Also, the user can be prompted to enter different field types by prefixing the description with:

t_ to prompt for a text string
b_ to prompt for a Boolean (Yes/No) tick box field
d_ to prompt for a date
n_ to prompt for a numeric value

Eg to prompt the user to enter a reference, you might include the query command:

```
WHERE referencefield='{t_Please Select a Reference}'
```

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