
Visual Mining, Inc.

Using NetCharts™ with Cold Fusion

A Programmers Guide to Scripting with Cold Fusion and NetCharts

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1. Scope

This document provides web page designers with detailed information on the capabilities of NetCharts when used with Cold Fusion. A companion document, *The Visual Mining CDL Reference Guide*, provides additional useful information on designing chart templates to be used with NetCharts.

Note to our customers:

Thank you for evaluating and/or purchasing NetCharts. We sincerely believe that the charts produced by NetCharts are among the most robust online charts available.

Please direct any questions or comments on this product to support@visualmining.com.

—*The Visual Mining Team*



2. Introduction

The purpose of this document is to provide web designers familiar with Macromedia's Cold Fusion Server technology an example of using NetCharts with CFML (Cold Fusion Markup Language). An example will be given that: walks the user through installing an ODBC data source, runs the sample CFML script that is provided, and explains the script and how NetCharts and Cold Fusion interact with each other.

3. NetCharts Cold Fusion Example

Using NetCharts with CFML

This example uses Cold Fusion to extract data from an ODBC data source (`regionalsales`), populate variables with the data, and build an HTML page that contains a NetCharts applet that uses this data. This page provides a brief overview of how to use CFML to interact with ODBC, how to construct an HTML page containing a NetCharts applet, and how to populate that applet using NetCharts `<param>` tags and CFML variables.

Setting up an ODBC Data Source

The installation of NetCharts 4.0 should have added a small Access database to the host machine's ODBC Data Sources manager. It should be registered as a System DSN called `regionalsales`.

Alternatively, This ODBC data source can be configured manually using the following steps.

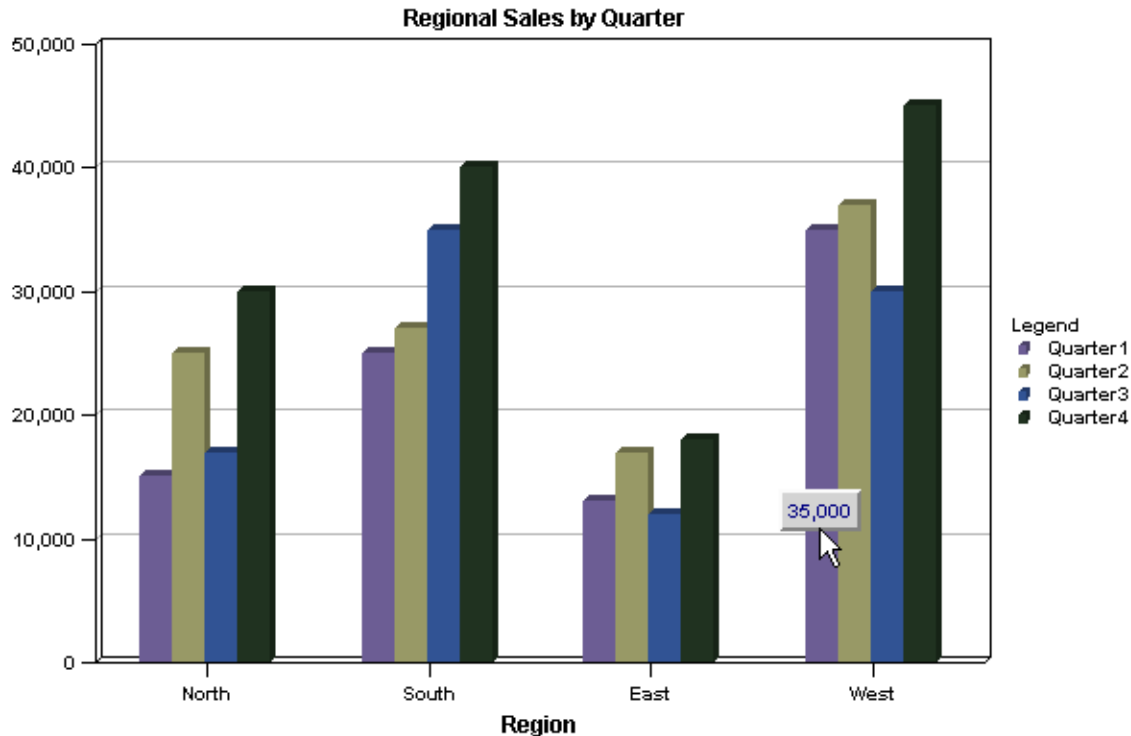
- 1) Launch the Control Panel.
- 2) Select Data Sources (ODBC).
- 3) Select the System DSN tab.
- 4) Add a "Microsoft Access Driver (*.mdb)" data source:
 - a) Name the data source `regionalsales`.
 - b) Select the `regionalsales.mdb` file. Its default location is `c:\program files\visual mining\netcharts4.0\netcharts\examples`.

Running the Example

The example can be configured and run using the following steps:

1. Make sure that `regionalsales.mdb` is available as a System DSN (see above).
2. Copy the `getSalesDataChart.cfm` file to any subdirectory under the Cold Fusion-enabled webserver. For instance, with IIS or PWS, it could be in the `\wwwroot` directory or any subdirectory under `\wwwroot`.
3. Make a copy of the NetCharts 4.0 `\classes` directory under `\wwwroot`, or make a `\classes` virtual directory that points to the `\classes` directory under the NetCharts 4.0 installation. The default installation directory for NetCharts 4.0 is `c:\program files\visual mining\netcharts 4.0\netcharts\`.
4. Start a web browser and load the CFM page. For example, if the CFM page was installed in the `wwwroot/examples` directory, the URL would look like <http://localhost/examples/getSalesDataChart.cfm>.

When you load the page, you should see something like:



Looking at the Code

The basic sequence of events in using Cold Fusion to populate a NetCharts applet is as follows:

- Define the variables
- Connect to the database and pass in the SQL statement
- Open the database and extract the data
- Temporarily pass the data into holding arrays
- Populate the variables with the data from the arrays
- Instantiate the applet and pass the variables in through the NFParmScript parameter.

The following code fragments demonstrate how this is accomplished.

The first section of code defines several variables. These variables are used to temporarily hold the data when it is extracted from the database, and then hold the values in string format to be passed to the NetCharts applet:

```
<!-- here, the variables are defined as cold fusion parameters. -->

<!-- Create CFML variables to hold values to be passed to the NetCharts
Applet. -->
<cfparam name=DataSet1 default=#URLEncodedFormat("15,20,25,15")#>
<cfparam name=DataSet1 default=#URLEncodedFormat("15,20,25,15")#>
<cfparam name=DataSet1 default=#URLEncodedFormat("15,20,25,15")#>
<cfparam name=DataSet1 default=#URLEncodedFormat("15,20,25,15")#>
<cfparam name=BarLabels default=#URLEncodedFormat("Jan, Feb, Mar, Apr")#>

<!-- Create arrays to temporarily hold data from database -->
<cfset ds1 = ArrayNew(1)>
<cfset ds2 = ArrayNew(1)>
<cfset ds3 = ArrayNew(1)>
```

3. NetCharts Cold Fusion Example

```
<cfset ds4 = ArrayNew(1)>
<cfset labels = ArrayNew(1)>
```

The next section of code opens a connection to the database, and prepares and executes the SQL statement. It then copies the RecordSet data into the temporary holding arrays.

```
<!--- Query regionalsales data source for sales info.
      Remember to add the regionalsales.mdb Access database
      as a System DSN.
--->
<cfquery name="sales" datasource="regionalsales">
SELECT region, quarter1, quarter2, quarter3, quarter4 FROM Sales
</cfquery>

<!--- Loop through the RecordSets and populate the arrays with the data --->
<cfloop query="sales">
  <cfset ds1[CurrentRow]=sales.quarter1[CurrentRow]>
  <cfset ds2[CurrentRow]=sales.quarter2[CurrentRow]>
  <cfset ds3[CurrentRow]=sales.quarter3[CurrentRow]>
  <cfset ds4[CurrentRow]=sales.quarter4[CurrentRow]>
  <cfset labels[CurrentRow]=sales.region[CurrentRow]>
</cfloop>
```

Next, data is extracted from the holding arrays and stored in strings. These strings contain the data in a comma-separated format, which NetCharts can understand. Ultimately, the data will look something like "5,10,15,20".

```
<!--- Use cfsript to transfer the array data over to the variables
      to be used in the NetCharts Applet's NFPParamScript
--->
<cfsript>
  DataSet1 = arraytolist(ds1,",");
  DataSet2 = arraytolist(ds2,",");
  DataSet3 = arraytolist(ds3,",");
  DataSet4 = arraytolist(ds4,",");
  BarLabels = arraytolist(labels,",");
</cfsript>
```

The applet tag can now be constructed. NetCharts uses an applet parameter called NFPParamScript to pass in chart definition strings. A simple *name=value* format is used to construct complete chart definitions that can be processed by the NetCharts applet.

```
<applet name=Quarterly Sales
  code=NFBarChartApp.class
  codebase=/classes
  width=600 height=400>
<param name=NFPParamScript value='
#Populate the chart with all of the static template information;
ChartName          = "Basic Grouped BarChart";
DebugSet           = ALL;
ChartWidth         = 600;
ChartHeight        = 400;
Background         = (white,NONE,3,null,TILE,black);
...

```

The relevant parameters for this chart are DataSet1, DataSet2, DataSet3, DataSet4, and BarLabels:

3. NetCharts Cold Fusion Example

```
#Now populate the chart with the dynamic data extracted from the database via  
Cold Fusion;  
<cfoutput>  
DataSet1           = #DataSet1#;  
DataSet2           = #DataSet2#;  
DataSet3           = #DataSet3#;  
DataSet4           = #DataSet4#;  
BarLabels          = #BarLabels#;  
</cfoutput>
```

When this Cold Fusion page runs, it will convert the variables into the strings created earlier. These strings will then be passed in to the applet, and the chart will be created.

For a complete code listing, go to </examples/getSalesDataChart.cfm>.

3. NetCharts Cold Fusion Example

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