Reporting: Web Services as Data Source

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Case Study

- Need to access an XML field in a table
- XML field is an XML file, say with all details of a 911 CALL.
- Create a Report with fields from XML file

Technology

- Visual Studio 2003
- SQL Server 2005
- Crystal Reports 2008

Three Step Solution

Solution - SQL

1. Wrote a SQL Script using Open XML which will convert the xml format to a document representation.

Solution – Web Services

- Wrote a Web Service that create a DB Connection, use this stored procedure and access the XML file.

- Input Parameter for Web Service is the Identifier for the XML File

Sample code

```
<WebMethod()> _
Public Function GetCallType(ByVal IdentiKey As Integer) As Integer
    Dim oConn As SqlConnection
    oConn = New SqlConnection("packet size=4096;user id=sa;pwd=!Password1;data source=P
    oConn.Open()
    Dim oCommand As SqlCommand
    oCommand = New SqlCommand("getxml", oConn)
    oCommand.CommandType = CommandType.StoredProcedure
    Dim oParam As SqlParameter
    oParam = New SqlParameter("@identifier_key", IdentiKey)
    oCommand.Parameters.Add(oParam)
    Dim iResult = System.Convert.ToInt32(oCommand.ExecuteScalar())
    oConn.Close()
    'Nature = "Test"
    Return iResult
End Function
```

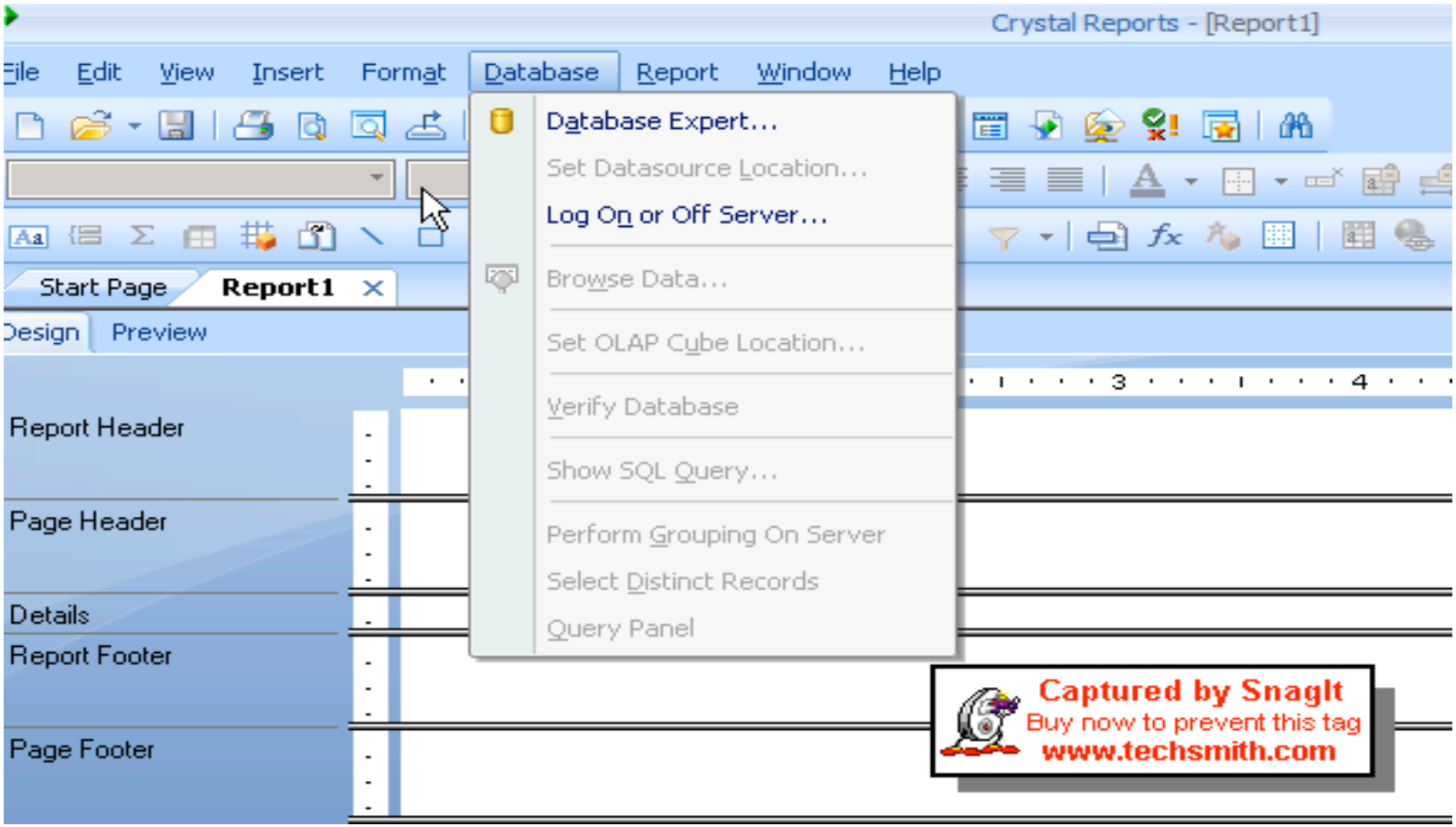
Solution – Crystal Reports

- Use the Web Service as Data Source
- Displays the result in Report

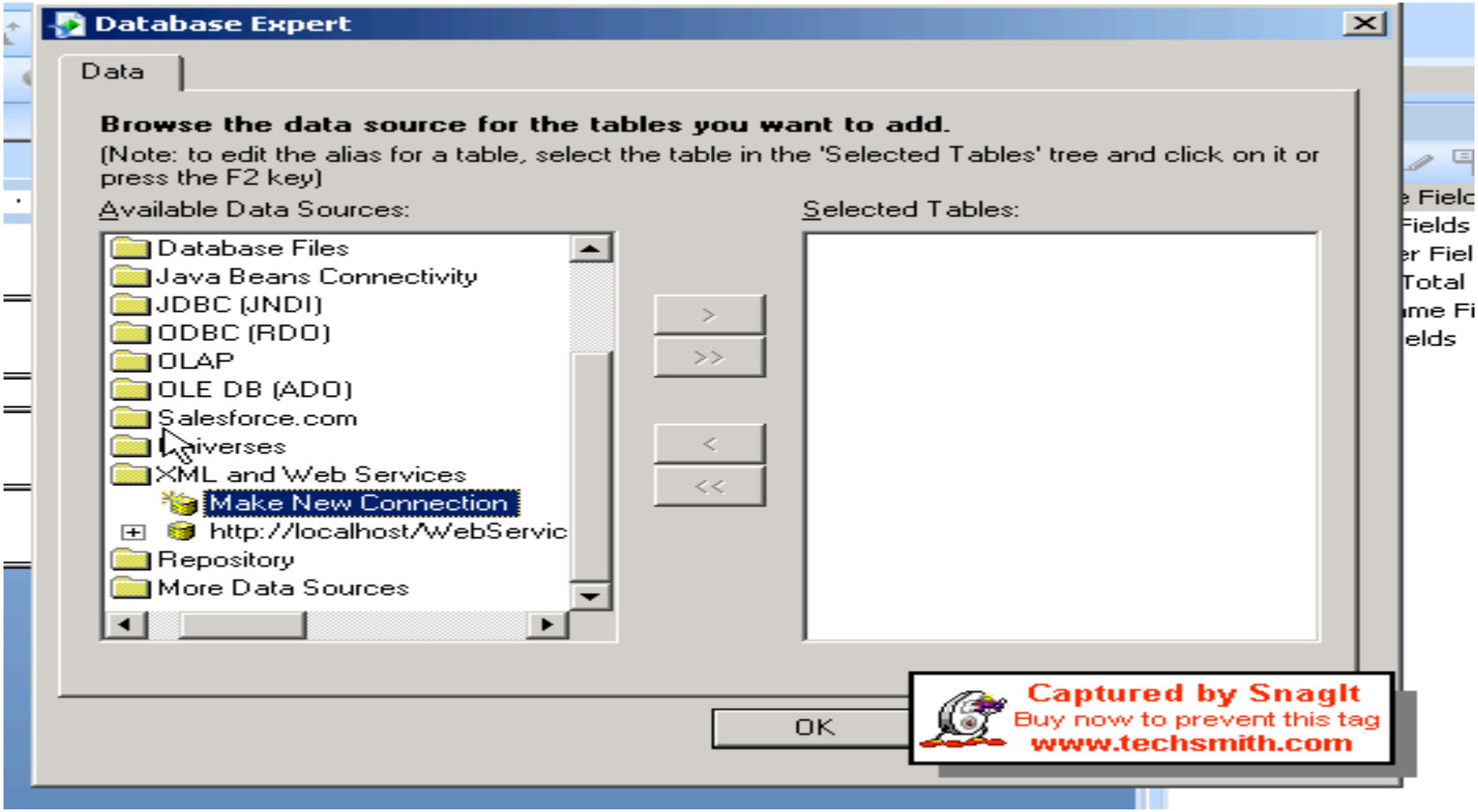
Disadvantages of this approach

- Can Access only one field at a time.
- Have to make DB connection call each time to access the file
- Crystal cannot access multiple fields at a time.

Crystal Reports : Step -1



Step-2


Database Expert
Data
Browse the data source for the tables you want to add.
(Note: to edit the alias for a table, select the table in the 'Selected Tables' tree and click on it or press the F2 key)
Available Data Sources:
Selected Tables:
Database Files
Java Beans Connectivity
JDBC (JNDI)
ODBC (RDO)
OLAP
OLE DB (ADO)
Salesforce.com
iverses
XML and Web Services
Make New Connection
http://localhost/WebServic
Repository
More Data Sources
>
>>
<
<<
OK
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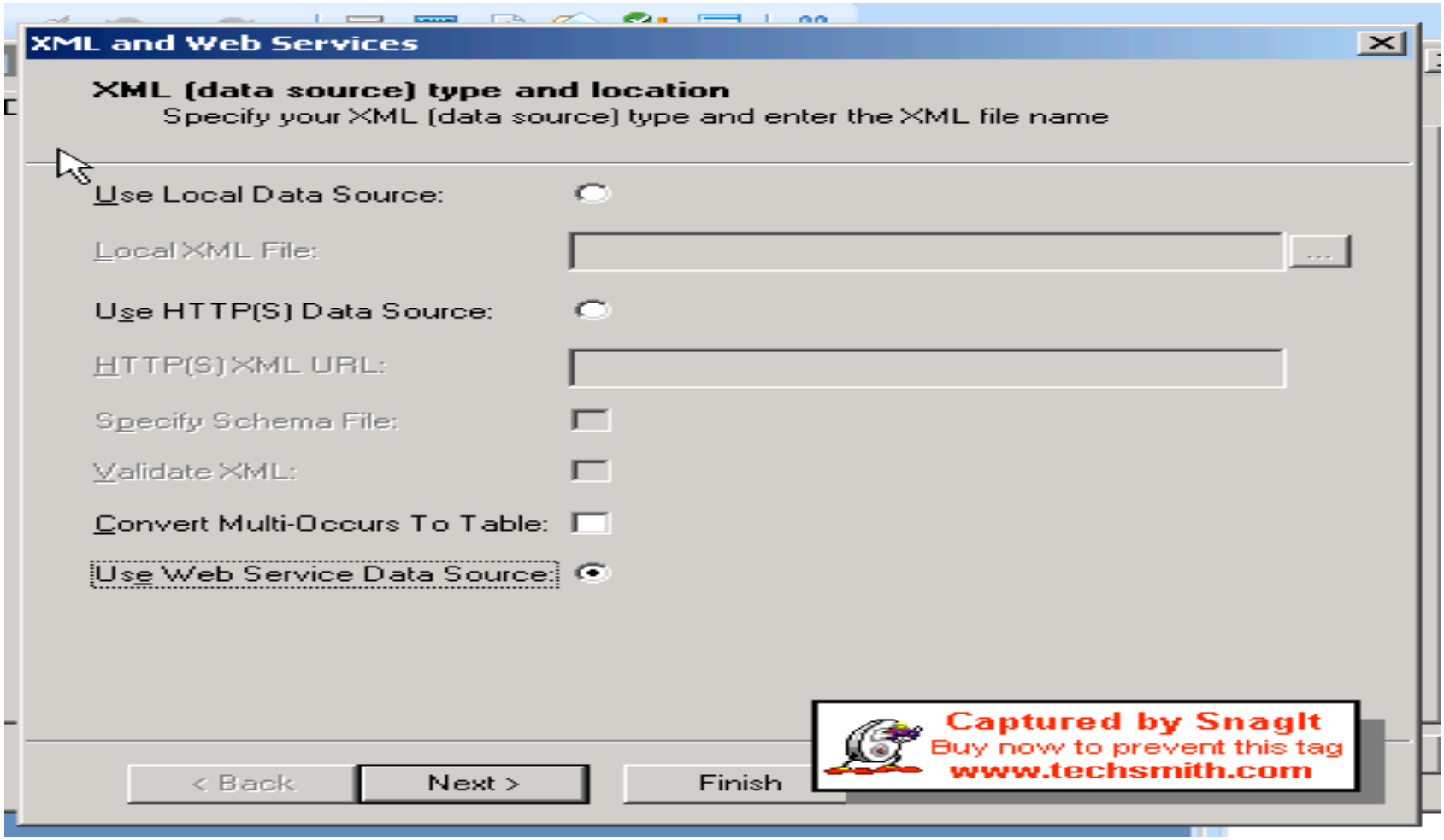
Step-3


XML and Web Services
XML (data source) type and location
Specify your XML (data source) type and enter the XML file name
Use Local Data Source:
Local XML File:
...
Use HTTP(S) Data Source:
HTTP(S) XML URL:
Specify Schema File:
Validate XML:
Convert Multi-Occurs To Table:
Use Web Service Data Source:
< Back
Next >
Finish
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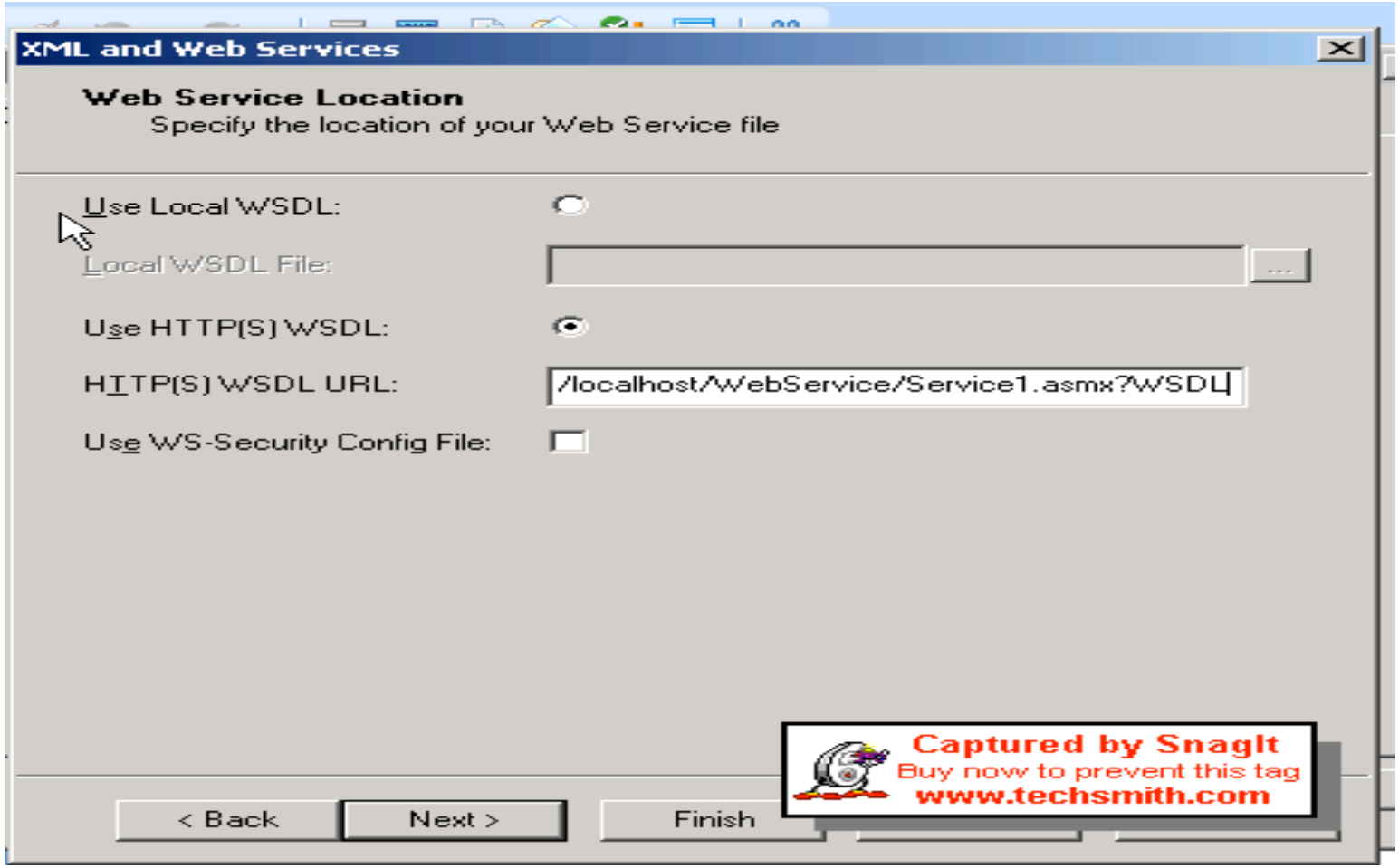
Step-4


XML and Web Services
Web Service Location
Specify the location of your Web Service file
Use Local WSDL:
Local WSDL File:
Use HTTP(S) WSDL:
HTTP(S) WSDL URL:
/localhost/WebService/Service1.asmx?WSDL
Use WS-Security Config File:
< Back
Next >
Finish
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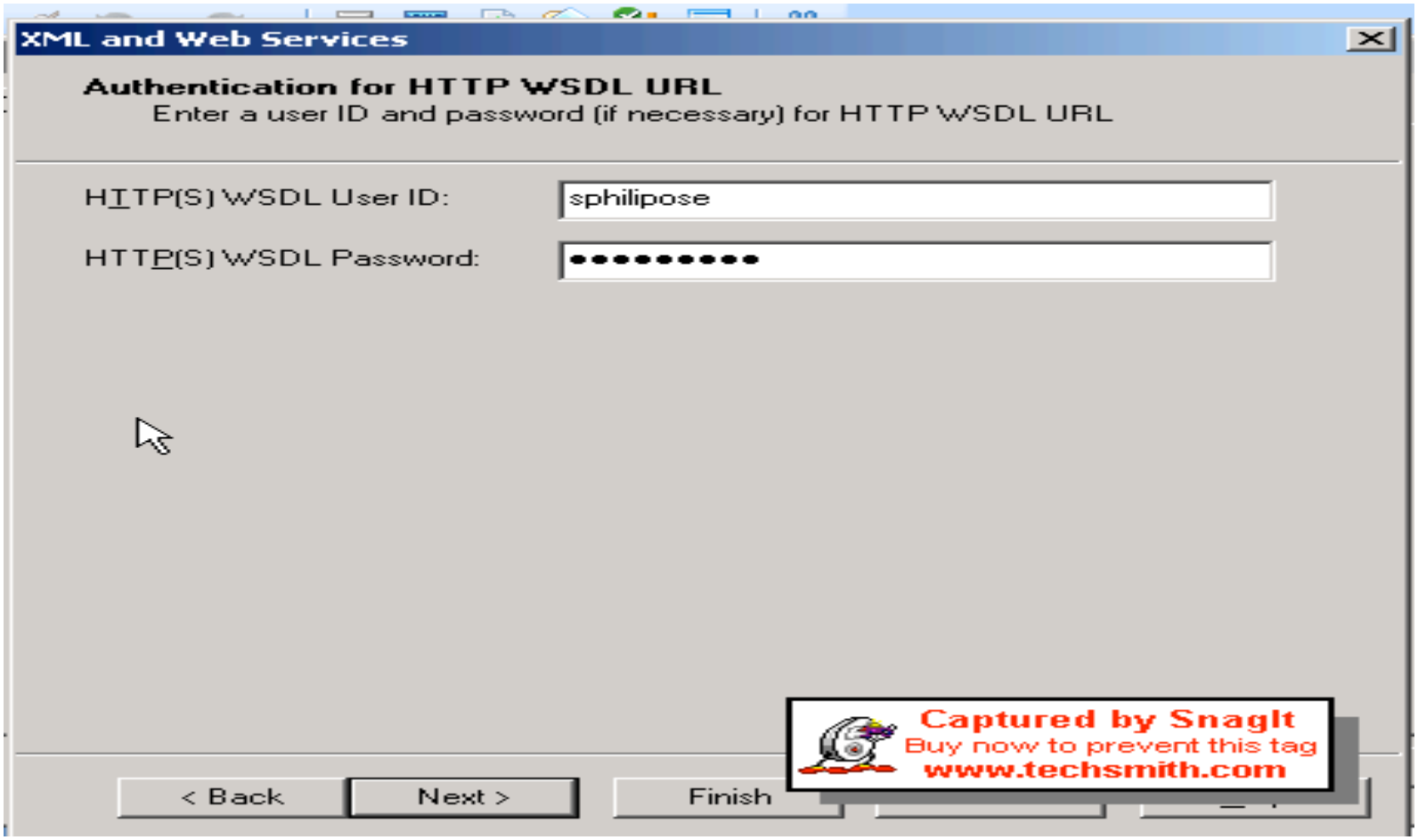
Step-5


XML and Web Services
Authentication for HTTP WSDL URL
Enter a user ID and password (if necessary) for HTTP WSDL URL
HTTP(S) WSDL User ID:
sphilipose
HTTP(S) WSDL Password:
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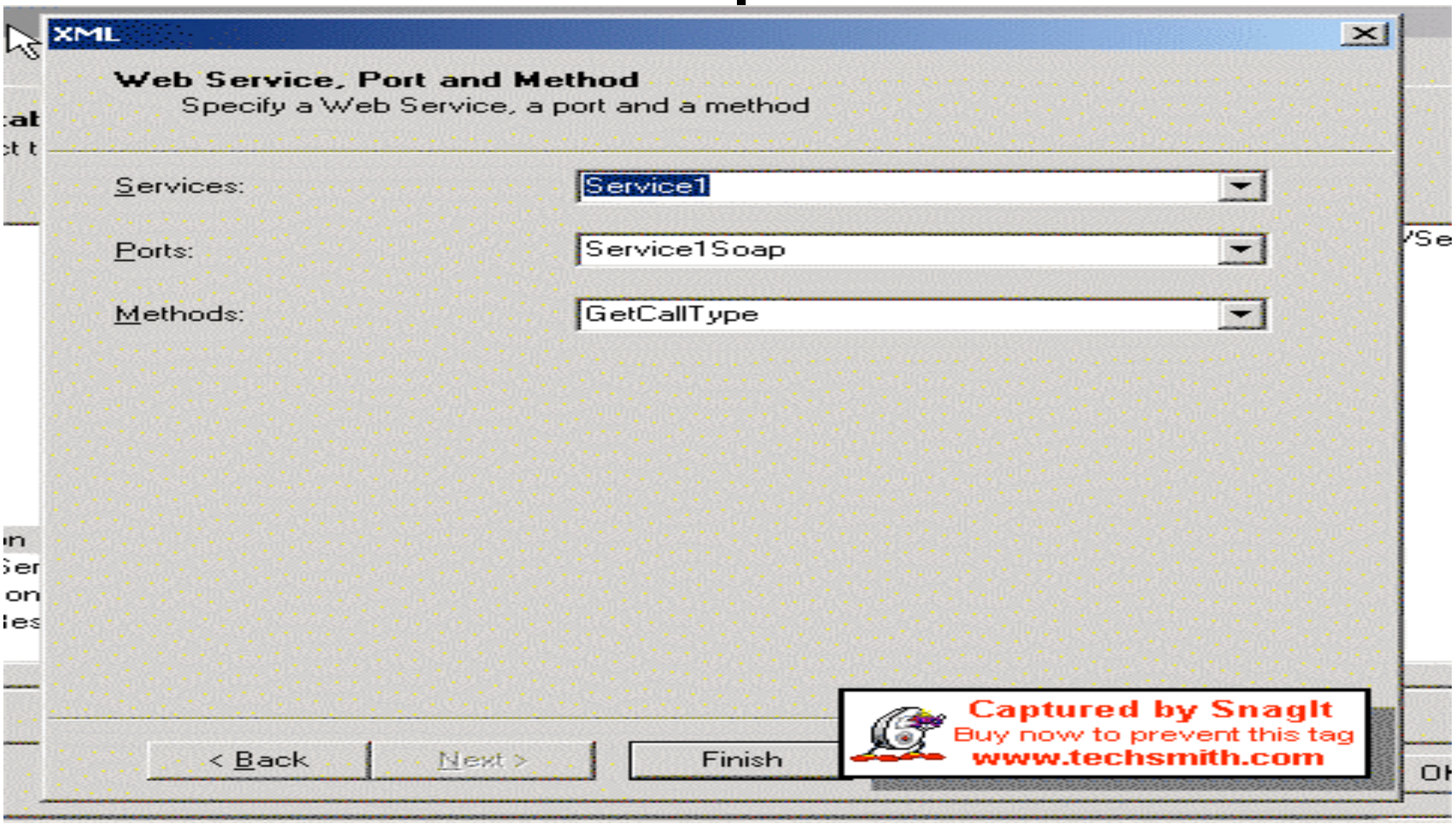
< Back
Next >
Finish

Step-6


XML
Web Service, Port and Method
Specify a Web Service, a port and a method
Services:
Service1
Ports:
Service1Soap
Methods:
GetCallType
< Back
Next >
Finish
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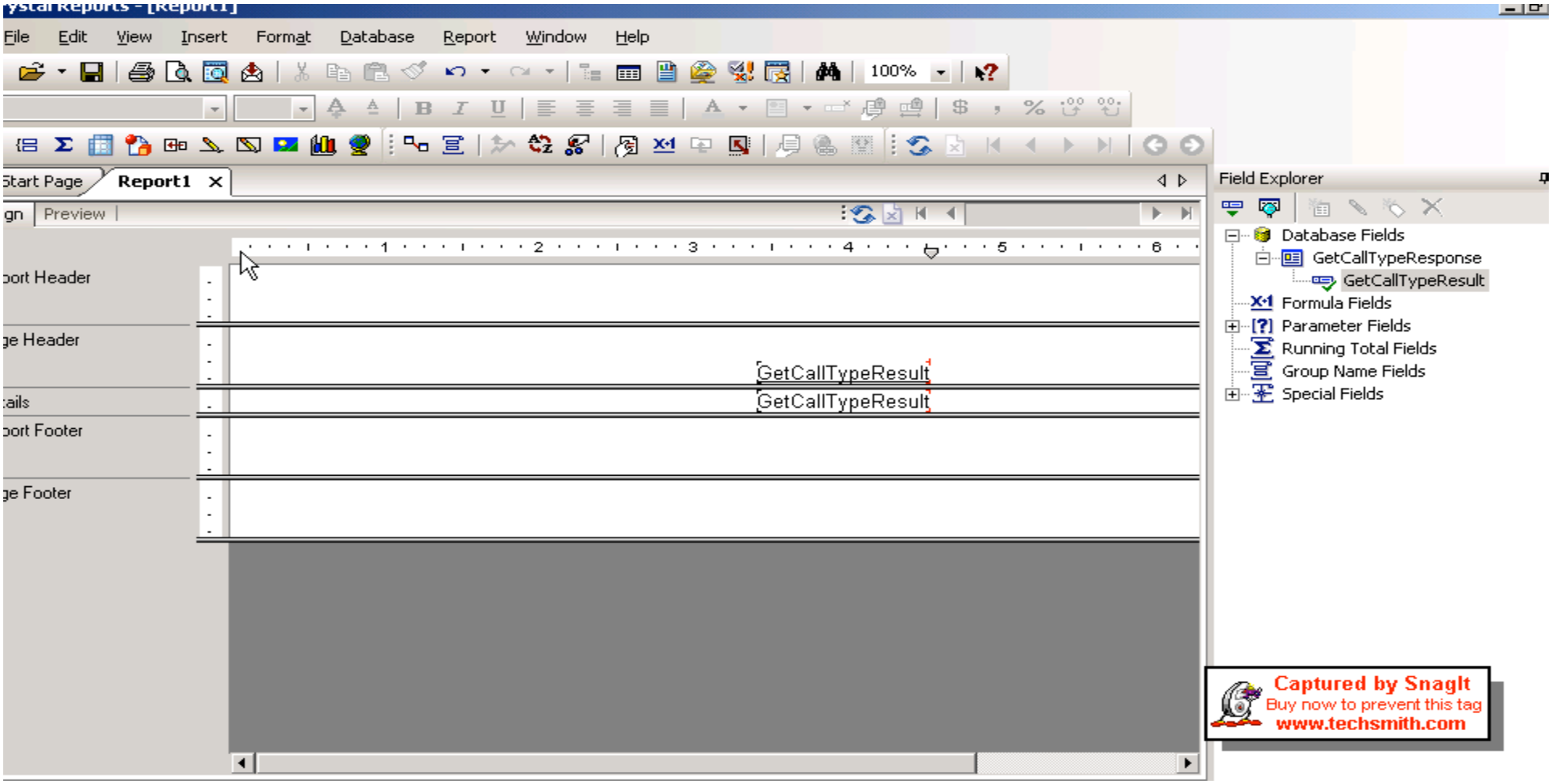
Step-7


File Edit View Insert Format Database Report Window Help
100%
Start Page
Report1
Preview
Header
Header
Footer
Footer
GetCallTypeResult
GetCallTypeResult
Field Explorer
Database Fields
GetCallTypeResponse
GetCallTypeResult
Formula Fields
Parameter Fields
Running Total Fields
Group Name Fields
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