



ADO.NET???DBMS???, ???Data Provider. ??????????????????, ????????, ??????????, ???Data Provider??  
?????????, ????????????????

.NET 2.0?, ????(factory)?, ???NET Data Provider?????DbProviderFactory?base-class. DbProviderFactory?  
????????????, ??????????????????????. ??:

1. CreateCommand
2. CreateCommandBuilder
3. CreateConnection
4. CreateDataAdapter
5. CreateParameter

????????????????????????????????? ????????

DbProviderFactory dbProviderFactory;

dbProviderFactory=DbProviderFactories.GetFactory("System.Data.SqlClient");

?????????????????, ???GetFactory?????????. ??????????????????(hard-coded)?????, ??????????????????. ?????????????????  
?.

?????????????????????????????, ??????:

1. ??????????????
2. ??????????????

????????????????????????Simple Factory?. ?????????????????machine.config?????.

```

128     <system.data>
129         <DbProviderFactories>
130             <add name="Odbc Data Provider" invariant="System.Data.Odbc" d
131             <add name="OleDb Data Provider" invariant="System.Data.OleDb"
132             <add name="OracleClient Data Provider" invariant="System.Data
133             <add name="SqlClient Data Provider" invariant="System.Data.Sql
134             <add name="Microsoft SQL Server Compact Data Provider" invari
135         </system.data>
  
```

????????????????????Data Provider.

```

using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Data;
using System.Data.Common;
  
```

```

namespace WA_ADONET
  
```

```

{
    public partial class listdataprovider : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            DataTable dtDataProviders = DbProviderFactories.GetFactoryClasses();
            //GvDataProviders is a GridView component
            GvDataProviders.DataSource = dtDataProviders;
        }
    }
  
```

```
GvDataProviders.DataBind();
}
}
}
??????:
```

Name	Description	InvariantName	AssemblyQualifiedName
Odbc Data Provider	.Net Framework Data Provider for Odbc	System.Data.Odbc	System.Data.Odbc.OdbcFactory, System.Data, Version=2.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089
OleDb Data Provider	.Net Framework Data Provider for OleDb	System.Data.OleDb	System.Data.OleDb.OleDbFactory, System.Data, Version=2.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089
OracleClient Data Provider	.Net Framework Data Provider for Oracle	System.Data.OracleClient	System.Data.OracleClient.OracleClientFactory, System.Data.OracleClient, Version=2.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089
SqlClient Data Provider	.Net Framework Data Provider for SqlServer	System.Data.SqlClient	System.Data.SqlClient.SqlClientFactory, System.Data, Version=2.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089
Microsoft SQL Server Compact Data Provider	.NET Framework Data Provider for Microsoft SQL Server Compact	System.Data.SqlServerCe.3.5	System.Data.SqlServerCe.SqlCeProviderFactory, System.Data.SqlServerCe, Version=3.5.0.0, Culture=neutral, PublicKeyToken=89845dcd8080cc91

????????????Data Provider???:

```
using System;
using System.Configuration;
using System.Collections.Generic;
using System.Linq;
using System.Web;
```

```

using System.Web.UI;
using System.Web.UI.WebControls;
using System.Data;
using System.Data.Common;
using System.Data.SqlClient;

namespace WA_ADONET
{
    public partial class usingsqldataprovider : System.Web.UI.Page
    {
        private const string DATA_PROVIDER_NAME = "System.Data.SqlClient";
        private const int CONNECTION_STRING_INDEX = 1;

        protected void Page_Load(object sender, EventArgs e)
        {
            string connString =
ConfigurationManager.ConnectionStrings[CONNECTION_STRING_INDEX].ConnectionString;

            DbProviderFactory dbProvider = DbProviderFactories.GetFactory(DATA_PROVIDER_NAME);
            DbConnection dbConnection = dbProvider.CreateConnection();
            DbCommand dbCommand = dbProvider.CreateCommand();
            DbDataAdapter dbDataAdapter = dbProvider.CreateDataAdapter();
            DataSet dataSet = new DataSet();

            dbConnection.ConnectionString = connString;

            dbCommand.Connection = dbConnection;
            dbCommand.CommandText = "SELECT TOP 10 * FROM Mail ORDER BY CDATE DESC";

            dbDataAdapter.SelectCommand = dbCommand;
            dbDataAdapter.Fill(dataSet);
            //GvMails is a GridView component
            GvMails.DataSource = dataSet.Tables[0];
            GvMails.DataBind();
        }
    }
}
DataAdapter?????????, ???????Connection?????????Open?Close???. ???DataAdapter???????. ???Fill?????????????
?DataSet??, DataSet????????????????????????????????????????, ???, ??????????, ??????????????????????. ??????????:

```

CDate	Caption	Content	Author	EMail	Tel	RDate	RContent	RAuthor	FDate
2011/9/26 下午 05:22:00	噪音汙染聲響干擾影響起居生活	test..... 我在竹 北市三 民路 附 近，發 現 噪音 汙染聲 響干擾 影響起 居生 活，	JERRY	@.COM	111				
2011/9/23 下午 02:14:00	TEST1	TEST1...	jerry	jerry@gmail.com	0922000111				
2011/9/23 下午 02:13:00	TEST	TEST...	jerry	jerry@gmail.com	0922000111				
2011/9/23 下午 02:10:00	Test	Test	Test	Test	Test				
2011/9/23 下午 02:09:00	Test	Test	Test	Test	Test				
2011/9/23 下午	Test	Test	Test	Test	Test				