



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.Sq
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 listdataprovder : 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 | | | | |