

WMI Queries

[This topic is pre-release documentation and is subject to change in future releases. Blank topics are included as placeholders.]

You can use standard WMI queries in .NET Framework applications. WMI queries use WMI Query Language (WQL), a subset of SQL. The query string is stored in a .NET Framework query class such as the [SelectQuery](#) class, the [WqlEventQuery](#) class, or the [RelatedObjectQuery](#) class, and invoked by the [ManagementObjectSearcher](#) or [ManagementEventWatcher](#) class constructors.

For more information, see "Querying with WQL" in the Windows Management Instrumentation documentation in the MSDN Library at <http://msdn.microsoft.com/library>.

Queries limit the amount of data being returned by including:

- The *SELECT* clause to specify only the properties for which you want data returned.
- The *WHERE* clause to specify which instances you want returned.

As an example, the following query selects all the drives on a computer (drive C, D, and so on) that have less than 2 MB of free space:

```
SELECT * FROM Win32_LogicalDisk WHERE FreeSpace < 2000000
```

Types of Query Classes

WMI in .NET Framework has a number of query classes in the Framework schema. Some of these perform certain types of WQL queries, such as WQL *SELECT* queries or WQL *ASSOCIATORS OF* queries.

The following table shows the query classes you can use to build queries of the WMI data.

<p>.NET Framework class EventQuery</p> <p>Description A WMI event query. Objects of this class or its derivatives are used in the constructor of the ManagementEventWatcher class to subscribe to WMI events. Use a more specific derivative of this class, such as the WqlEventQuery class, whenever you can.</p>
<p>.NET Framework class ManagementQuery</p> <p>Description Abstract base class from which other query classes are derived.</p>
<p>.NET Framework class ObjectQuery</p> <p>Description Query for WMI objects that can return instances or classes.</p>
<p>.NET Framework class RelatedObjectQuery</p> <p>Description A WQL <i>ASSOCIATORS OF</i> query that can be used for both instances and schema queries, depending on whether you request the class or a subset of instances. Used to specify the query in the constructor of the ManagementObjectSearcher class to obtain all the instances of classes that are related through association classes.</p>
<p>.NET Framework class RelationshipQuery</p> <p>Description A WQL <i>REFERENCES OF</i> query that can be used for both instances and schema queries, depending on whether you request the class or a subset of instances.</p>

.NET Framework class
SelectQuery

Description

A WQL SELECT query that can be used for both instances and schema queries, depending on whether you request the class or a subset of instances. For more information, see "SELECT Statement for Data Queries," "SELECT Statement for Event Queries," or "SELECT Statement for Schema Queries," in the Windows Management Instrumentation documentation in the MSDN Library at <http://msdn.microsoft.com/library>.

.NET Framework class
WqlEventQuery

Description

A WMI event query in WQL format. Objects of this class or its derivatives are used in the **ManagementEventWatcher** class to subscribe to WMI events.

.NET Framework class
WqlEventQuery

Description

A WMI query in WQL format. Objects of this class or its derivatives are used to specify a query in the constructor of the **ManagementObjectSearcher** class. Use more concise derivatives of this class, such as the **SelectQuery** class, when possible for more specificity.

The following diagram shows the inheritance of WMI query classes in the .NET Framework class library. WMI in .NET Framework has both object and event query classes.



Query Classes and WQL Queries

The following two code examples perform equivalent queries.

This code example uses the **SelectQuery** class to formulate a WQL query.

C#

```
using System;
using System.Management;
class Query_SelectQuery
{
    public static int Main(string[] args)
    {
        SelectQuery selectQuery = new
            SelectQuery("Win32_LogicalDisk");
        ManagementObjectSearcher searcher =
            new ManagementObjectSearcher(selectQuery);

        foreach (ManagementObject disk in searcher.Get())
        {
            Console.WriteLine(disk.ToString());
        }

        Console.ReadLine();
        return 0;
    }
}
```

This code example uses the original WQL form of a SELECT query.

C#

```
using System;
using System.Management;

class Query_Select_FullString
{
    public static int Main(string[] args)
```

```
{
    WqlObjectQuery wqlQuery =
        new WqlObjectQuery("SELECT * FROM Win32_LogicalDisk");
    ManagementObjectSearcher searcher =
        new ManagementObjectSearcher(wqlQuery);

    foreach (ManagementObject disk in searcher.Get())
    {
        Console.WriteLine(disk.ToString());
    }

    Console.ReadLine();
    return 0;
}
```