

# System.Net.IAuthenticationModule Interface

```
[ILAsm]
.class interface public abstract IAuthenticationModule

[C#]
public interface IAuthenticationModule
```

## Assembly Info:

- *Name:* System
- *Public Key:* [00 00 00 00 00 00 00 00 04 00 00 00 00 00 00]
- *Version:* 2.0.x.x
- *Attributes:*
  - CLSCompliantAttribute(true)

## Summary

Implemented by types that perform client authentication.

**Library:** Networking

## Description

The `System.Net.IAuthenticationModule` interface defines the properties and methods that types are required to implement to handle client authentication. Types that implement this interface are called authentication modules. In addition to implementing this interface, an authentication module implements an authentication protocol, such as the Kerberos protocol. The `System.Net.IAuthenticationModule.AuthenticationType` property value is a case-insensitive string that typically indicates the protocol implemented by the module. Each authentication module registered with the authentication manager is required to have a unique `System.Net.IAuthenticationModule.AuthenticationType`. The following string values are reserved for use by modules implementing the indicated protocols:

AuthenticationType	Protocol
"basic"	Basic as defined by IETF RFC 2617
"digest"	Digest access as defined by IETF RFC 2617
"kerberos"	Kerberos as defined by IETF RFC 1510

[*Note:* Authentication modules are registered with the authentication manager (`System.Net.AuthenticationManager`) by calling the `System.Net.AuthenticationManager.Register` method. When the

authentication manager receives an authentication request, registered authentication modules are given the opportunity to handle the authentication in their `System.Net.IAuthenticationModule.Authenticate` method. Similarly, when a client wishes to avoid waiting for the server to request authentication, it can request preauthentication information to send with a request. If the `System.Net.IAuthenticationModule.CanPreAuthenticate` property of a registered module returns `true`, it is among the modules that are given the opportunity to provide the preauthentication information via the `System.Net.IAuthenticationModule.PreAuthenticate` method.

Not all modules receive all authentication and preauthentication requests. The authentication manager searches for an authentication module by invoking the `System.Net.IAuthenticationModule.Authenticate` or `System.Net.IAuthenticationModule.PreAuthenticate` method of each registered module in the order in which it was registered. Once a module returns a `System.Net.Authorization` instance, indicating that it handles the authentication, the authentication manager terminates the search.

]

# IAuthenticationModule.Authenticate(System.String, System.Net.WebRequest, System.Net.ICredentials) Method

```
[ILAsm]
.method public hidebysig virtual abstract class
System.Net.Authorization Authenticate(string challenge, class
System.Net.WebRequest request, class System.Net.ICredentials
credentials)

[C#]
Authorization Authenticate(string challenge, WebRequest request,
ICredentials credentials)
```

## Summary

Returns an instance of the `System.Net.Authorization` class that provides a response to an authentication challenge.

## Parameters

Parameter	Description
<i>challenge</i>	A <code>System.String</code> containing the authentication challenge sent by the server. The content of this string is determined by the authentication protocol(s) used by the server that issued the challenge.
<i>request</i>	The <code>System.Net.WebRequest</code> instance that received <i>challenge</i> .
<i>credentials</i>	The credentials of the <code>System.Net.WebRequest</code> instance that received <i>challenge</i> .

## Return Value

A `System.Net.Authorization` instance containing the challenge response, or `null` if the challenge cannot be handled.

## Behaviors

If the authentication module can handle *challenge*, this method proceeds with the authentication in accordance with the authentication protocol implemented by the current instance and returns a `System.Net.Authorization` instance containing the challenge response. If the authentication module cannot handle the challenge, this method returns `null`. If the authentication module encounters an error while conducting the authentication process, this method can, but is not required to throw an exception.

## How and When to Override

Implement this method to receive and optionally handle requests for client authentication from the authentication manager.

## Usage

The `System.Net.AuthenticationManager` class invokes the `System.Net.IAuthenticationModule.Authenticate` method on registered authentication modules to allow modules to handle a server challenge.

# IAuthenticationModule.PreAuthenticate(System.Net.WebRequest, System.Net.ICredentials) Method

```
[ILAsm]
.method public hidebysig virtual abstract class
System.Net.Authorization PreAuthenticate(class System.Net.WebRequest
request, class System.Net.ICredentials credentials)

[C#]
Authorization PreAuthenticate(WebRequest request, ICredentials
credentials)
```

## Summary

Returns an instance of the `System.Net.Authorization` class containing client authentication information.

## Parameters

Parameter	Description
<i>request</i>	The <code>System.Net.WebRequest</code> instance associated with the authentication request.
<i>credentials</i>	The credentials associated with the authentication request.

## Return Value

A `System.Net.Authorization` instance containing client authentication information to be sent with *request*, or `null` if the current instance does not support preauthentication.

## Behaviors

This method returns an instance of the `System.Net.Authorization` class containing authentication information to be sent with the request. This method is required to return `null` if it cannot handle preauthentication requests from the authentication manager.

## How and When to Override

Implement this method if the protocol implemented by the current instance supports preauthentication.

## Usage

This method is used by the authentication manager to handle requests by clients for authentication information that will be used to preempt a server's request for authentication. This method is not called unless the `System.Net.IAuthenticationModule.CanPreAuthenticate` property returns `true`.

# IAuthenticationModule.AuthenticationType Property

```
[ILAsm]
.property string AuthenticationType { public hidebysig virtual
abstract specialname string get_AuthenticationType() }

[C#]
string AuthenticationType { get; }
```

## Summary

Gets the authentication type of the current instance.

## Property Value

A `System.String` indicating the authentication type of the current authentication module.

## Description

This property is read-only.

## Behaviors

The following string values are reserved for use by modules implementing the indicated protocols:

AuthenticationType	Protocol
"basic"	Basic as defined by IETF RFC 2617
"digest"	Digest access as defined by IETF RFC 2617
"kerberos"	Kerberos as defined by IETF RFC 1510

## How and When to Override

Implement this property to return a string that identifies all instances of the current type. The string returned by this property typically indicates the protocol implemented by the current type. For example, an authentication module that implements the Digest protocol would typically return "digest" as its `AuthenticationType`.

## Usage

The `System.Net.IAuthenticationModule.AuthenticationType` property must be unique for all registered authentication modules. The value of this property is used by the `System.Net.AuthenticationManager.Register` method to determine if there is already an authentication module registered for the type. Modules can also be unregistered by passing the value of this property to the `System.Net.AuthenticationManager.Unregister` method.

# IAuthenticationModule.CanAuthenticate Property

```
[ILAsm]
.property bool CanAuthenticate { public hidebysig virtual
abstract specialname bool get_CanAuthenticate() }

[C#]
bool CanAuthenticate { get; }
```

## Summary

Gets a `System.Boolean` value indicating whether the authentication module supports preauthentication.

## Property Value

`true` if the authentication module supports preauthentication; otherwise `false`.

## Description

This property is read-only.

## Behaviors

The `System.Net.IAuthenticationModule.CanAuthenticate` property is set to `true` to indicate that the authentication module can respond with a `System.Net.Authorization` instance when the `System.Net.IAuthenticationModule.PreAuthenticate` method is called. This property returns `false` if the protocol implemented by the current authentication module does not support preauthentication.

## Usage

This method is used by the authentication manager to determine which modules receive requests by clients for authentication information that will be supplied in anticipation of a server's request for authentication. This method controls whether the `System.Net.IAuthenticationModule.PreAuthenticate` method can be called.