

System.Net.AuthenticationManager Class

```
[ILAsm]
.class public AuthenticationManager extends System.Object

[C#]
public class AuthenticationManager
```

Assembly Info:

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

Summary

Manages the authentication modules called during the client authentication process.

Inherits From: System.Object

Library: Networking

Thread Safety: All public static members of this type are safe for multithreaded operations. No instance members are guaranteed to be thread safe.

Description

The `System.Net.AuthenticationManager` class manages authentication modules that are responsible for client authentication. [Note: The `System.Net.AuthenticationManager` is called by `System.Net.WebRequest` instances to provide information that is sent to servers to authenticate the client. The authentication process might consist of requests to an authentication server separate from the resource server, as well as any other activities required to properly authenticate a client.]

The `System.Net.AuthenticationManager` queries registered authentication modules by calling the `System.Net.IAuthenticationModule.Authenticate` method for each module. The first authentication module that returns a `System.Net.Authorization` instance is used to authenticate the request. An authentication module, which can be any object that implements the `System.Net.IAuthenticationModule` interface, is registered using the `System.Net.AuthenticationManager.Register` method. Authentication modules are called in the order in which they are registered.

Applications typically do not access this type directly; it provides authentication services for the `System.Net.WebRequest` type.

AuthenticationManager.Authenticate(System.String, System.Net.WebRequest, System.Net.ICredentials) Method

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

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

Summary

Calls registered authentication modules to find a module that responds to the specified authentication challenge.

Parameters

Parameter	Description
<i>challenge</i>	A System.String containing the challenge returned by an Internet host. The content of this string is determined by the authentication protocol(s) used by the server that issued the challenge.
<i>request</i>	The System.Net.WebRequest that received <i>challenge</i> .
<i>credentials</i>	The System.Net.ICredentials associated with <i>request</i> . [Note: The System.Net.WebRequest.Credentials property of <i>request</i> is used to supply this argument.]

Return Value

A System.Net.Authorization instance containing the response from the authentication module, or null if no authentication module responded to the challenge.

Applications do not call this method; it is called by System.Net.WebRequest instances.

Description

The System.Net.AuthenticationManager.Authenticate method invokes the System.Net.IAuthenticationModule.Authenticate method of each registered authentication module until one of the modules returns a System.Net.Authorization instance. Authentication modules are called in the order in which they were registered

via the `System.Net.AuthenticationManager.Register` method.

[*Note:* The `System.Net.Authorization.Message` property of the object returned by this method contains the client's response to the server challenge contained in *challenge*.]

Exceptions

Exception	Condition
System.ArgumentNullException	<i>challenge</i> , <i>request</i> , or <i>credentials</i> is null.

AuthenticationManager.PreAuthenticate(System.Net.WebRequest, System.Net.ICredentials) Method

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

Summary

Attempts to obtain a `System.Net.Authorization` instance used to initiate client authentication.

Parameters

Parameter	Description
<i>request</i>	A <code>System.Net.WebRequest</code> containing a request for access to a resource.
<i>credentials</i>	The <code>System.Net.ICredentials</code> associated with <i>request</i> .

Return Value

A `System.Net.Authorization` instance if an authentication module can provide authentication information to be sent with *request*; otherwise, `null`. If *credentials* is `null`, this method returns `null`.

Description

The `System.Net.AuthenticationManager.PreAuthenticate` method invokes the `System.Net.IAuthenticationModule.PreAuthenticate` method of each registered authentication module until one of the modules returns a `System.Net.Authorization` instance. Authentication modules are called in the order in which they were registered via the `System.Net.AuthenticationManager.Register` method.

[*Note:* The `System.Net.Authorization` instance contains the information that will be sent by a client to initiate authentication instead of waiting for the server to request it. Authentication modules that support preauthentication allow clients to improve server efficiency by avoiding extra round trips caused by authentication challenges.]

[*Note:* If an authorization module supports preauthentication of requests, its `System.Net.IAuthenticationModule.CanPreAuthenticate` property returns `true`. Note that preauthentication requires that an authentication of the client has already occurred. The information obtained from the initial authentication is used to provide the `System.Net.Authorization.Message` that is sent to the server as an authentication header in *request*.]

Exceptions

Exception	Condition
System.ArgumentNullException	<i>request</i> is null.

AuthenticationManager.Register(System.Net.IAuthenticationModule) Method

```
[ILAsm]  
.method public hidebysig static void Register(class  
System.Net.IAuthenticationModule authenticationModule)  
  
[C#]  
public static void Register(IAuthenticationModule authenticationModule)
```

Summary

Adds an authentication module to the list of registered authentication modules managed by the authentication manager.

Parameters

Parameter	Description
<i>authenticationModule</i>	The System.Net.IAuthenticationModule to register.

Description

The System.Net.AuthenticationManager.Register method adds an authentication module to the end of the list of modules managed by the authentication manager. Each registered module is required to have a unique System.Net.IAuthenticationModule.AuthenticationType. If a module with the same System.Net.IAuthenticationModule.AuthenticationType is already registered, this method removes the registered module, and adds *authenticationModule* to the end of the list. [Note: Authentication modules are called in the order in which they were added to the list.]

[Note: To remove a module, call one of the System.Net.AuthenticationManager.Unregister methods.]

Exceptions

Exception	Condition
System.ArgumentNullException	<i>authenticationModule</i> is null.

AuthenticationManager.Unregister(System.Net.IAuthenticationModule) Method

```
[ILAsm]  
.method public hidebysig static void Unregister(class  
System.Net.IAuthenticationModule authenticationModule)  
  
[C#]  
public static void Unregister(IAuthenticationModule authenticationModule)
```

Summary

Removes the specified authentication module from the list of registered modules.

Parameters

Parameter	Description
<i>authenticationModule</i>	The System.Net.IAuthenticationModule module to remove.

Description

[Note: To add an authentication module to the list of registered modules, call the System.Net.AuthenticationManager.Register method.]

Exceptions

Exception	Condition
System.ArgumentNullException	<i>authenticationModule</i> is null.
System.InvalidOperationException	<i>authenticationModule</i> is not a registered authentication module.

AuthenticationManager.Unregister(System.String) Method

```
[ILAsm]  
.method public hidebysig static void Unregister(string  
authenticationScheme)  
  
[C#]  
public static void Unregister(string authenticationScheme)
```

Summary

Removes the authentication module with the specified authentication type from the list of registered modules.

Parameters

Parameter	Description
<i>authenticationScheme</i>	A System.String containing the authentication type of the module to remove.

Description

The *authenticationScheme* is required to match the value returned by the System.Net.IAuthenticationModule.AuthenticationType property of a registered authentication module.

[Note: To add an authentication module to the list of registered modules, call the System.Net.AuthenticationManager.Register method.]

Exceptions

Exception	Condition
System.ArgumentNullException	<i>authenticationScheme</i> is null.
System.InvalidOperationException	There is no registered module with the <i>authenticationScheme</i> authentication type.

AuthenticationManager.RegisteredModules Property

```
[ILAsm]
.property class System.Collections.IEnumerator RegisteredModules { public
hidebysig static specialname class System.Collections.IEnumerator
get_RegisteredModules() }

[C#]
public static IEnumerable RegisteredModules { get; }
```

Summary

Gets a list of registered authentication modules.

Property Value

A `System.Collections.IEnumerator` that provides access to the list of registered authentication modules.

Description

This property is read-only.

[*Note:* The `System.Net.AuthenticationManager.Register` method adds modules to the list of registered authentication modules, and the `System.Net.AuthenticationManager.Unregister` method removes modules from it.]