

# Namespace PingPongClient

## Classes

[PingPongTcpClient](#)

# Class PingPongTcpClient

Namespace: [PingPongClient](#)

Assembly: PPClient.dll

```
public class PingPongTcpClient
```








## Inheritance

[object](#)  ← PingPongTcpClient

## Derived

[TestClient NonStopListening](#), [TestTcpClient NonStopListening](#), [TestTcpClient Slow](#)

## Inherited Members

[object.Equals\(object\)](#) , [object.Equals\(object, object\)](#) , [object.GetHashCode\(\)](#) , [object.GetType\(\)](#) , [object.MemberwiseClone\(\)](#) , [object.ReferenceEquals\(object, object\)](#) , [object.ToString\(\)](#) 

## Constructors

PingPongTcpClient(ILogger, ILogger,  
IConfigLoader<DefaultClientConfig>?)

```
public PingPongTcpClient(ILogger systemLogger, ILogger responseLogger,  
IConfigLoader<DefaultClientConfig>? configLoader = null)
```

## Parameters

systemLogger [ILogger](#) 

responseLogger [ILogger](#) 

configLoader [IConfigLoader](#) <[DefaultClientConfig](#)>

## Fields

\_clientCertificate

`protected X509Certificate2? _clientCertificate`

Field Value

[X509Certificate2](#) 

## \_config

`protected DefaultClientConfig? _config`

Field Value

[DefaultClientConfig](#)

## \_connectionPool

`protected IConnectionPool _connectionPool`

Field Value

[IConnectionPool](#)

## \_currentConnection

`protected SslStream? _currentConnection`

Field Value

[SslStream](#) 

## \_responseLogger

`protected readonly ILogger _responseLogger`

Field Value

[ILogger](#)

`_schemaSet`

`protected XmlSchemaSet? _schemaSet`

Field Value

[XmlSchemaSet](#)

`_shouldSwapConnections`

`protected bool _shouldSwapConnections`

Field Value

[bool](#)

`_systemLogger`

`protected readonly ILogger _systemLogger`

Field Value

[ILogger](#)

## Methods

`AdjustBehaviorBasedOnLatency(long)`

```
protected virtual void AdjustBehaviorBasedOnLatency(long latency)
```

Parameters

latency [long](#)

## CommunicateAsync(SslStream, CancellationToken)

```
protected virtual Task CommunicateAsync(SslStream connection, CancellationToken token)
```

Parameters

connection [SslStream](#)

token [CancellationToken](#)

Returns

[Task](#)

## DisconnectAllConnections()

```
public void DisconnectAllConnections()
```

## DisconnectCurrentConnection()

```
public void DisconnectCurrentConnection()
```

## GetConnectionFromPoolAsync(CancellationToken)

```
public Task GetConnectionFromPoolAsync(CancellationToken token)
```

Parameters

token [CancellationToken](#)

Returns

[Task](#)

## HandleTimeoutAsync(CancellationToken)

```
protected Task HandleTimeoutAsync(CancellationToken token)
```

Parameters

token [CancellationToken](#)

Returns

[Task](#)

## LoadCertificate()

```
protected void LoadCertificate()
```

## LoadXsdSchema()

```
protected void LoadXsdSchema()
```

## ReadPong(XmlSerializer, StringReader)

```
protected void ReadPong(XmlSerializer pongSerializer, StringReader stringReader)
```

Parameters

`pongSerializer` [XmlSerializer](#)

`stringReader` [StringReader](#)

## SendPing(StreamWriter)

```
protected void SendPing(StreamWriter writer)
```

Parameters

`writer` [StreamWriter](#)

## StartAsync(CancellationTokens)

```
public Task StartAsync(CancellationTokens token)
```

Parameters

`token` [CancellationTokens](#)

Returns

[Task](#)

## SwapConnectionAsync(CancellationTokens)

```
public Task SwapConnectionAsync(CancellationTokens token)
```

Parameters

`token` [CancellationTokens](#)

Returns

[Task](#)

# Namespace PingPongServer

## Classes

[PingPongTcpServer](#)



# Class PingPongTcpServer

Namespace: [PingPongServer](#)

Assembly: PPServer.dll

```
public class PingPongTcpServer
```

## Inheritance

[object](#) ← PingPongTcpServer

## Derived

[TestServer\\_SpammingMessages](#), [TestTcpServer\\_Slow](#), [TestTcpServer\\_SpammingMessages](#)

## Inherited Members

[object.Equals\(object\)](#), [object.Equals\(object, object\)](#), [object.GetHashCode\(\)](#), [object.GetType\(\)](#), [object.MemberwiseClone\(\)](#), [object.ReferenceEquals\(object, object\)](#), [object.ToString\(\)](#)

## Constructors

PingPongTcpServer(ILogger<PingPongTcpServer>, IConfigLoader<DefaultServerConfig>)

```
public PingPongTcpServer(ILogger<PingPongTcpServer> logger,  
    IConfigLoader<DefaultServerConfig> configLoader = null)
```

## Parameters

**logger** [ILogger](#) <[PingPongTcpServer](#)>

**configLoader** [IConfigLoader](#) <[DefaultServerConfig](#)>

## Fields

### ServerCertificate

```
protected static X509Certificate2 ServerCertificate
```

Field Value

[X509Certificate2](#) 

**\_config**

`protected IServerConfig _config`

Field Value

[IServerConfig](#)

**\_logger**

`protected readonly ILogger<PingPongTcpServer> _logger`

Field Value

[ILogger](#)  <[PingPongTcpServer](#)>

**schemaSet**

`protected static XmlSchemaSet schemaSet`

Field Value

[XmlSchemaSet](#) 

## Methods

**AuthenticateSsl(SslStream)**

`protected Task AuthenticateSsl(SslStream sslStream)`

Parameters

`sslStream` [SslStream](#)

Returns

[Task](#)

## HandleClientAsync(TcpClient, CancellationToken)

```
protected virtual Task HandleClientAsync(TcpClient client, CancellationToken token)
```

Parameters

`client` [TcpClient](#)

`token` [CancellationToken](#)

Returns

[Task](#)

## LoadCertificate()

```
protected void LoadCertificate()
```

## LoadXsdSchema()

```
protected void LoadXsdSchema()
```

## ReadPing(StringReader, XmlSerializer)

```
protected void ReadPing(StringReader stringReader, XmlSerializer pingSerializer)
```

## Parameters

`stringReader` [StringReader](#)↗

`pingSerializer` [XmlSerializer](#)↗

## SendPong(StreamWriter)

```
protected void SendPong(StreamWriter writer)
```

## Parameters

`writer` [StreamWriter](#)↗

## StartAsync(CancellationToken)

```
public Task StartAsync(CancellationToken token)
```

## Parameters

`token` [CancellationToken](#)↗

## Returns

[Task](#)↗

# Namespace PingPongTests

## Classes

[BasicTests](#)

[MemoryLoggerProvider](#)

[MemoryLogger<T>](#)

[TestScenarios](#)

# Class BasicTests

Namespace: [PingPongTests](#)








Assembly: Tests.dll

```
public class BasicTests
```

## Inheritance

[object](#)  ← BasicTests

## Inherited Members

[object.Equals\(object\)](#)  , [object.Equals\(object, object\)](#)  , [object.GetHashCode\(\)](#)  , [object.GetType\(\)](#)  ,  
[object.MemberwiseClone\(\)](#)  , [object.ReferenceEquals\(object, object\)](#)  , [object.ToString\(\)](#) 

## Constructors

### BasicTests()

```
public BasicTests()
```

## Methods

### LoadConfiguration\_InvalidValues()

```
[Fact]  
public void LoadConfiguration_InvalidValues()
```

### LoadConfiguration\_MissingValues()

```
[Fact]  
public void LoadConfiguration_MissingValues()
```

# TestConnectionAndCommunication()

[Fact]

```
public Task TestConnectionAndCommunication()
```

Returns

[Task](#)

# Class MemoryLoggerProvider

Namespace: [PingPongTests](#)

Assembly: Tests.dll

```
public class MemoryLoggerProvider : ILoggerProvider, IDisposable
```

## Inheritance

[object](#) ← MemoryLoggerProvider

## Implements

[ILoggerProvider](#), [IDisposable](#)

## Inherited Members

[object.Equals\(object\)](#), [object.Equals\(object, object\)](#), [object.GetHashCode\(\)](#), [object.GetType\(\)](#), [object.MemberwiseClone\(\)](#), [object.ReferenceEquals\(object, object\)](#), [object.ToString\(\)](#)

## Methods

### CreateLogger(string)

Creates a new [ILogger](#) instance.

```
public ILogger CreateLogger(string categoryName)
```

## Parameters

categoryName [string](#)

The category name for messages produced by the logger.

## Returns

[ILogger](#)

The instance of [ILogger](#) that was created.



# Dispose()

Performs application-defined tasks associated with freeing, releasing, or resetting unmanaged resources.

```
public void Dispose()
```

# GetLogs(string)

```
public IEnumerable<string> GetLogs(string categoryName)
```

## Parameters

categoryName [string](#)

## Returns

[IEnumerable](#) <[string](#) >

# Class MemoryLogger<T>

Namespace: [PingPongTests](#)

Assembly: Tests.dll

```
public class MemoryLogger<T> : ILogger<T>, ILogger
```

## Type Parameters

T

### Inheritance

[object](#) ← MemoryLogger<T>

### Implements

[ILogger](#)<T>, [ILogger](#)

### Inherited Members

[object.Equals\(object\)](#), [object.Equals\(object, object\)](#), [object.GetHashCode\(\)](#), [object.GetType\(\)](#), [object.MemberwiseClone\(\)](#), [object.ReferenceEquals\(object, object\)](#), [object.ToString\(\)](#)

## Properties

### Logs

```
public IEnumerable<string> Logs { get; }
```

### Property Value

[IEnumerable](#)<[string](#)>

## Methods

### BeginScope<TState>(TState)

Begins a logical operation scope.

```
public IDisposable BeginScope<TState>(TState state)
```

## Parameters

**state** TState

The identifier for the scope.

## Returns

[IDisposable](#) 

An [IDisposable](#)  that ends the logical operation scope on dispose.

## Type Parameters

**TState**


The type of the state to begin scope for.

## IsEnabled(LogLevel)

Checks if the given **logLevel** is enabled.

```
public bool IsEnabled(LogLevel logLevel)
```

## Parameters

**logLevel** [LogLevel](#) 

Level to be checked.

## Returns

[bool](#) 

**true** if enabled.

# Log<TState>(LogLevel, EventId, TState, Exception, Func<TState, Exception, string>)

Writes a log entry.

```
public void Log<TState>(LogLevel logLevel, EventId eventId, TState state, Exception exception, Func<TState, Exception, string> formatter)
```

## Parameters

**logLevel** [LogLevel](#)

Entry will be written on this level.

**eventId** [EventId](#)

Id of the event.

**state** TState

The entry to be written. Can be also an object.

**exception** [Exception](#)

The exception related to this entry.

**formatter** [Func](#) <TState, [Exception](#), [string](#)>

Function to create a [string](#) message of the **state** and **exception**.

## Type Parameters

**TState**

The type of the object to be written.

# Class TestScenarios

Namespace: [PingPongTests](#)








Assembly: Tests.dll

```
public class TestScenarios
```

## Inheritance

[object](#)  ← TestScenarios

## Inherited Members

[object.Equals\(object\)](#)  , [object.Equals\(object, object\)](#)  , [object.GetHashCode\(\)](#)  , [object.GetType\(\)](#)  , [object.MemberwiseClone\(\)](#)  , [object.ReferenceEquals\(object, object\)](#)  , [object.ToString\(\)](#) 

## Constructors

### TestScenarios()

```
public TestScenarios()
```

## Methods

### TestClientOverload()

```
[Fact]  
public Task TestClientOverload()
```

Returns

[Task](#) 

### TestClientReconnection()

```
[Fact]  
public Task TestClientReconnection()
```

Returns

[Task](#)

## TestClientWithSlowConnection()

```
[Fact]  
public Task TestClientWithSlowConnection()
```

Returns

[Task](#)

## TestServerOverload()

```
[Fact]  
public Task TestServerOverload()
```

Returns

[Task](#)

## TestServerShutdown()

```
[Fact]  
public Task TestServerShutdown()
```

Returns

[Task](#)

# Namespace Tests.TestClients

## Classes

[TestClient\\_NonStopListening](#)

[TestTcpClient\\_NonStopListening](#)

[TestTcpClient\\_Slow](#)

# Class TestClient\_NonStopListening

Namespace: [Tests.TestClients](#)








Assembly: Tests.dll

```
public class TestClient_NonStopListening : PingPongTcpClient
```

## Inheritance

[object](#)  ← [PingPongTcpClient](#) ← TestClient\_NonStopListening

## Inherited Members

[PingPongTcpClient.clientCertificate](#), [PingPongTcpClient.schemaSet](#), [PingPongTcpClient.config](#),  
[PingPongTcpClient.currentConnection](#), [PingPongTcpClient.systemLogger](#),  
[PingPongTcpClient.responseLogger](#), [PingPongTcpClient.connectionPool](#),  
[PingPongTcpClient.shouldSwapConnections](#), [PingPongTcpClient.StartAsync\(CancellationToken\)](#),  
[PingPongTcpClient.GetConnectionFromPoolAsync\(CancellationToken\)](#),  
[PingPongTcpClient.HandleTimeoutAsync\(CancellationToken\)](#),  
[PingPongTcpClient.AdjustBehaviorBasedOnLatency\(long\)](#),  
[PingPongTcpClient.SwapConnectionAsync\(CancellationToken\)](#),  
[PingPongTcpClient.SendPing\(StreamWriter\)](#), [PingPongTcpClient.ReadPong\(XmlSerializer, StringReader\)](#),  
[PingPongTcpClient.LoadCertificate\(\)](#), [PingPongTcpClient.LoadXsdSchema\(\)](#),  
[PingPongTcpClient.DisconnectCurrentConnection\(\)](#), [PingPongTcpClient.DisconnectAllConnections\(\)](#),  
[object.Equals\(object\)](#) , [object.Equals\(object, object\)](#) , [object.GetHashCode\(\)](#) , [object.GetType\(\)](#) ,  
[object.MemberwiseClone\(\)](#) , [object.ReferenceEquals\(object, object\)](#) , [object.ToString\(\)](#) 

## Constructors

### TestClient\_NonStopListening(ILogger, ILogger)

```
public TestClient_NonStopListening(ILogger systemLogger, ILogger responseLogger)
```

## Parameters

systemLogger [ILogger](#) 

responseLogger [ILogger](#) 



# Methods

## CommunicateAsync(SslStream, CancellationToken)

`protected override Task CommunicateAsync(SslStream connection, CancellationToken token)`

### Parameters

`connection` [SslStream](#)

`token` [CancellationToken](#)

### Returns

[Task](#)

# Class TestTcpClient\_NonStopListening

Namespace: [Tests.TestClients](#)








Assembly: Tests.dll

```
public class TestTcpClient_NonStopListening : PingPongTcpClient
```

## Inheritance

[object](#)  ← [PingPongTcpClient](#) ← TestTcpClient\_NonStopListening

## Inherited Members

[PingPongTcpClient.clientCertificate](#), [PingPongTcpClient.schemaSet](#), [PingPongTcpClient.config](#),  
[PingPongTcpClient.currentConnection](#), [PingPongTcpClient.systemLogger](#),  
[PingPongTcpClient.responseLogger](#), [PingPongTcpClient.connectionPool](#),  
[PingPongTcpClient.shouldSwapConnections](#), [PingPongTcpClient.StartAsync\(CancellationToken\)](#),  
[PingPongTcpClient.GetConnectionFromPoolAsync\(CancellationToken\)](#),  
[PingPongTcpClient.HandleTimeoutAsync\(CancellationToken\)](#),  
[PingPongTcpClient.AdjustBehaviorBasedOnLatency\(long\)](#),  
[PingPongTcpClient.SwapConnectionAsync\(CancellationToken\)](#),  
[PingPongTcpClient.SendPing\(StreamWriter\)](#), [PingPongTcpClient.ReadPong\(XmlSerializer, StringReader\)](#),  
[PingPongTcpClient.LoadCertificate\(\)](#), [PingPongTcpClient.LoadXsdSchema\(\)](#),  
[PingPongTcpClient.DisconnectCurrentConnection\(\)](#), [PingPongTcpClient.DisconnectAllConnections\(\)](#),  
[object.Equals\(object\)](#) , [object.Equals\(object, object\)](#) , [object.GetHashCode\(\)](#) , [object.GetType\(\)](#) ,  
[object.MemberwiseClone\(\)](#) , [object.ReferenceEquals\(object, object\)](#) , [object.ToString\(\)](#) 

## Constructors

### TestTcpClient\_NonStopListening(ILogger, ILogger)

```
public TestTcpClient_NonStopListening(ILogger systemLogger, ILogger responseLogger)
```

## Parameters

systemLogger [ILogger](#) 

responseLogger [ILogger](#) 

# Methods

## CommunicateAsync(SslStream, CancellationToken)

`protected override Task CommunicateAsync(SslStream connection, CancellationToken token)`

### Parameters

`connection` [SslStream](#) 

`token` [CancellationToken](#) 

### Returns

[Task](#) 

# Class TestTcpClient\_Slow

Namespace: [Tests.TestClients](#)








Assembly: Tests.dll

```
public class TestTcpClient_Slow : PingPongTcpClient
```

## Inheritance

[object](#)  ← [PingPongTcpClient](#) ← TestTcpClient\_Slow

## Inherited Members

[PingPongTcpClient.clientCertificate](#), [PingPongTcpClient.schemaSet](#), [PingPongTcpClient.config](#),  
[PingPongTcpClient.currentConnection](#), [PingPongTcpClient.systemLogger](#),  
[PingPongTcpClient.responseLogger](#), [PingPongTcpClient.connectionPool](#),  
[PingPongTcpClient.shouldSwapConnections](#), [PingPongTcpClient.StartAsync\(CancellationToken\)](#),  
[PingPongTcpClient.GetConnectionFromPoolAsync\(CancellationToken\)](#),  
[PingPongTcpClient.HandleTimeoutAsync\(CancellationToken\)](#),  
[PingPongTcpClient.AdjustBehaviorBasedOnLatency\(long\)](#),  
[PingPongTcpClient.SwapConnectionAsync\(CancellationToken\)](#),  
[PingPongTcpClient.SendPing\(StreamWriter\)](#), [PingPongTcpClient.ReadPong\(XmlSerializer, StringReader\)](#),  
[PingPongTcpClient.LoadCertificate\(\)](#), [PingPongTcpClient.LoadXsdSchema\(\)](#),  
[PingPongTcpClient.DisconnectCurrentConnection\(\)](#), [PingPongTcpClient.DisconnectAllConnections\(\)](#),  
[object.Equals\(object\)](#) , [object.Equals\(object, object\)](#) , [object.GetHashCode\(\)](#) , [object.GetType\(\)](#) ,  
[object.MemberwiseClone\(\)](#) , [object.ReferenceEquals\(object, object\)](#) , [object.ToString\(\)](#) 

## Constructors

### TestTcpClient\_Slow(ILogger, ILogger)

```
public TestTcpClient_Slow(ILogger systemLogger, ILogger responseLogger)
```

## Parameters

systemLogger [ILogger](#) 

responseLogger [ILogger](#) 

# Methods

## CommunicateAsync(SslStream, CancellationToken)

`protected override Task CommunicateAsync(SslStream connection, CancellationToken token)`

### Parameters

`connection` [SslStream](#)

`token` [CancellationToken](#)

### Returns

[Task](#)

# Namespace Tests.TestServers

## Classes

[TestServer\\_SpammingMessages](#)

[TestTcpServer\\_Slow](#)

[TestTcpServer\\_SpammingMessages](#)

# Class TestServer\_SpammingMessages

Namespace: [Tests.TestServers](#)








Assembly: Tests.dll

```
public class TestServer_SpammingMessages : PingPongTcpServer
```

## Inheritance

[object](#)  ← [PingPongTcpServer](#) ← TestServer\_SpammingMessages

## Inherited Members

[PingPongTcpServer.ServerCertificate](#) , [PingPongTcpServer.schemaSet](#) , [PingPongTcpServer.config](#) ,  
[PingPongTcpServer.logger](#) , [PingPongTcpServer.StartAsync\(CancellationToken\)](#) ,  
[PingPongTcpServer.LoadCertificate\(\)](#) , [PingPongTcpServer.LoadXsdSchema\(\)](#) ,  
[PingPongTcpServer.AuthenticateSsl\(SslStream\)](#) , [PingPongTcpServer.SendPong\(StreamWriter\)](#) ,  
[PingPongTcpServer.ReadPing\(StringReader, XmlSerializer\)](#) , [object.Equals\(object\)](#)  ,  
[object.Equals\(object, object\)](#)  , [object.GetHashCode\(\)](#)  , [object.GetType\(\)](#)  ,  
[object.MemberwiseClone\(\)](#)  , [object.ReferenceEquals\(object, object\)](#)  , [object.ToString\(\)](#) 

## Constructors

TestServer\_SpammingMessages(ILogger<PingPongTcpServer>)

```
public TestServer_SpammingMessages(ILogger<PingPongTcpServer> logger)
```

## Parameters

logger [ILogger](#)  <[PingPongTcpServer](#)>

## Methods

HandleClientAsync(TcpClient, CancellationToken)

```
protected override Task HandleClientAsync(TcpClient client, CancellationToken token)
```

## Parameters

**client** [TcpClient](#)

**token** [CancellationToken](#)

## Returns

[Task](#)



# Class TestTcpServer\_Slow

Namespace: [Tests.TestServers](#)








Assembly: Tests.dll

```
public class TestTcpServer_Slow : PingPongTcpServer
```

## Inheritance

[object](#)  ← [PingPongTcpServer](#) ← TestTcpServer\_Slow

## Inherited Members

[PingPongTcpServer.ServerCertificate](#) , [PingPongTcpServer.schemaSet](#) , [PingPongTcpServer.config](#) ,  
[PingPongTcpServer.logger](#) , [PingPongTcpServer.StartAsync\(CancellationToken\)](#) ,  
[PingPongTcpServer.LoadCertificate\(\)](#) , [PingPongTcpServer.LoadXsdSchema\(\)](#) ,  
[PingPongTcpServer.AuthenticateSsl\(SslStream\)](#) , [PingPongTcpServer.SendPong\(StreamWriter\)](#) ,  
[PingPongTcpServer.ReadPing\(StringReader, XmlSerializer\)](#) , [object.Equals\(object\)](#)  ,  
[object.Equals\(object, object\)](#)  , [object.GetHashCode\(\)](#)  , [object.GetType\(\)](#)  ,  
[object.MemberwiseClone\(\)](#)  , [object.ReferenceEquals\(object, object\)](#)  , [object.ToString\(\)](#) 

## Constructors

TestTcpServer\_Slow(ILogger<PingPongTcpServer>)

```
public TestTcpServer_Slow(ILogger<PingPongTcpServer> logger)
```

## Parameters

**logger** [ILogger](#)  <[PingPongTcpServer](#)>

## Methods

HandleClientAsync(TcpClient, CancellationToken)


```
protected override Task HandleClientAsync(TcpClient client, CancellationToken token)
```

## Parameters

**client** [TcpClient](#)

**token** [CancellationToken](#)

## Returns

[Task](#)

# Class TestTcpServer\_SpammingMessages

Namespace: [Tests.TestServers](#)








Assembly: Tests.dll

```
public class TestTcpServer_SpammingMessages : PingPongTcpServer
```

## Inheritance

[object](#)  ← [PingPongTcpServer](#) ← TestTcpServer\_SpammingMessages

## Inherited Members

[PingPongTcpServer.ServerCertificate](#) , [PingPongTcpServer.schemaSet](#) , [PingPongTcpServer.config](#) ,  
[PingPongTcpServer.logger](#) , [PingPongTcpServer.StartAsync\(CancellationToken\)](#) ,  
[PingPongTcpServer.HandleClientAsync\(TcpClient, CancellationToken\)](#) ,  
[PingPongTcpServer.LoadCertificate\(\)](#) , [PingPongTcpServer.LoadXsdSchema\(\)](#) ,  
[PingPongTcpServer.AuthenticateSsl\(SslStream\)](#) , [PingPongTcpServer.SendPong\(StreamWriter\)](#) ,  
[PingPongTcpServer.ReadPing\(StringReader, XmlSerializer\)](#) , [object.Equals\(object\)](#)  ,  
[object.Equals\(object, object\)](#)  , [object.GetHashCode\(\)](#)  , [object.GetType\(\)](#)  ,  
[object.MemberwiseClone\(\)](#)  , [object.ReferenceEquals\(object, object\)](#)  , [object.ToString\(\)](#) 

## Constructors

TestTcpServer\_SpammingMessages(ILogger<PingPongTcpServer>  
>)

```
public TestTcpServer_SpammingMessages(ILogger<PingPongTcpServer> logger)
```

## Parameters

**logger** [ILogger](#)  <[PingPongTcpServer](#)>

## Methods

StartSendingPongs(int, int, CancellationToken)

```
public Task StartSendingPongs(int count, int delayMs, CancellationToken token)
```

## Parameters

count [int](#)

delayMs [int](#)

token [CancellationToken](#)

## Returns

[Task](#)

# Namespace Utils

## Classes

[SslEventListener](#)

[StringTools](#)

[XmlTools](#)

[ping](#)

[pong](#)


# Class SslEventListener

Namespace: [Utils](#)


Assembly: Utils.dll

```
public class SslEventListener : EventListener, IDisposable
```

## Inheritance

[object](#)  ← [EventListener](#)  ← SslEventListener

## Implements

[IDisposable](#) 

## Inherited Members

[EventListener.DisableEvents\(EventSource\)](#)  , [EventListener.Dispose\(\)](#)  ,  
[EventListener.EnableEvents\(EventSource, EventLevel\)](#)  ,  
[EventListener.EnableEvents\(EventSource, EventLevel, EventKeywords\)](#)  ,  
[EventListener.EnableEvents\(EventSource, EventLevel, EventKeywords, IDictionary<string, string>\)](#)  ,  
[EventListener.EventSourceIndex\(EventSource\)](#)  , [EventListener.EventSourceCreated](#)  ,  
[EventListener.EventWritten](#)  , [object.Equals\(object\)](#)  , [object.Equals\(object, object\)](#)  ,  
[object.GetHashCode\(\)](#)  , [object.GetType\(\)](#)  , [object.MemberwiseClone\(\)](#)  ,  
[object.ReferenceEquals\(object, object\)](#)  , [object.ToString\(\)](#) 

## Constructors

### SslEventListener(ILogger)

```
public SslEventListener(ILogger logger)
```

## Parameters

**logger** [ILogger](#) 

## Methods

### OnEventSourceCreated(EventSource)

Called for all existing event sources when the event listener is created and when a new event source is attached to the listener.

```
protected override void OnEventSourceCreated(EventSource eventSource)
```

## Parameters

**eventSource** [EventSource](#)

The event source.

## OnEventWritten(EventWrittenEventArgs)

Called whenever an event has been written by an event source for which the event listener has enabled events.

```
protected override void OnEventWritten(EventWrittenEventArgs eventData)
```

## Parameters

**eventData** [EventWrittenEventArgs](#)

The event arguments that describe the event.

# Class StringTools

Namespace: [Utils](#)

Assembly: Utils.dll

```
public class StringTools
```

## Inheritance

[object](#) ← StringTools

## Inherited Members

[object.Equals\(object\)](#) , [object.Equals\(object, object\)](#) , [object.GetHashCode\(\)](#) , [object.GetType\(\)](#) , [object.MemberwiseClone\(\)](#) , [object.ReferenceEquals\(object, object\)](#) , [object.ToString\(\)](#)

## Methods

### RemovePrefix(string, string)

```
public static string RemovePrefix(string message, string prefix)
```

## Parameters

message [string](#)

prefix [string](#)

## Returns

[string](#)




# Class XmlTools

Namespace: [Utils](#)








Assembly: Utils.dll

```
public class XmlTools
```

## Inheritance

[object](#)  ← XmlTools

## Inherited Members

[object.Equals\(object\)](#)  , [object.Equals\(object, object\)](#)  , [object.GetHashCode\(\)](#)  , [object.GetType\(\)](#)  , [object.MemberwiseClone\(\)](#)  , [object.ReferenceEquals\(object, object\)](#)  , [object.ToString\(\)](#) 

## Methods

### SerializeToXml<T>(T)

```
public static string SerializeToXml<T>(T obj)
```

## Parameters

**obj** T

## Returns

[string](#) 

## Type Parameters

T

### ValidateXml(string, XmlSchemaSet)

```
public static bool ValidateXml(string xmlMessage, XmlSchemaSet schemaSet)
```

## Parameters

xmlMessage [string](#)

schemaSet [XmlSchemaSet](#)

## Returns

[bool](#)

## ValidateXml(XDocument, XmlSchemaSet)

```
public static bool ValidateXml(XDocument xmlDoc, XmlSchemaSet schemaSet)
```

## Parameters

xmlDoc [XDocument](#)

schemaSet [XmlSchemaSet](#)

## Returns

[bool](#)

# Class ping

Namespace: [Utils](#)








Assembly: Utils.dll

```
[Serializable]  
public class ping
```

## Inheritance

[object](#)  ← ping

## Inherited Members

[object.Equals\(object\)](#)  , [object.Equals\(object, object\)](#)  , [object.GetHashCode\(\)](#)  , [object.GetType\(\)](#)  ,  
[object.MemberwiseClone\(\)](#)  , [object.ReferenceEquals\(object, object\)](#)  , [object.ToString\(\)](#) 

# Properties

## timestamp

```
public DateTime timestamp { get; set; }
```

## Property Value

[DateTime](#) 

# Class pong

Namespace: [Utils](#)








Assembly: Utils.dll

```
[Serializable]  
public class pong
```

## Inheritance

[object](#)  ← pong

## Inherited Members

[object.Equals\(object\)](#)  , [object.Equals\(object, object\)](#)  , [object.GetHashCode\(\)](#)  , [object.GetType\(\)](#)  ,  
[object.MemberwiseClone\(\)](#)  , [object.ReferenceEquals\(object, object\)](#)  , [object.ToString\(\)](#) 

# Properties

## timestamp

```
public DateTime timestamp { get; set; }
```

## Property Value

[DateTime](#) 

# Namespace Utils.Configs

## Classes

[JsonConfigLoader<T>](#)

## Interfaces

[IConfigLoader<T>](#)

# Interface IConfigLoader<T>

Namespace: [Utils.Configs](#)

Assembly: Utils.dll

```
public interface IConfigLoader<T> where T : class, new()
```

Type Parameters

T

## Methods

LoadConfig()

```
T LoadConfig()
```

Returns

T

# Class JsonConfigLoader<T>

Namespace: [Utils.Configs](#)

Assembly: Utils.dll

```
public class JsonConfigLoader<T> : IConfigLoader<T> where T : class, new()
```

## Type Parameters

T

### Inheritance

[object](#) ← [JsonConfigLoader<T>](#)

### Implements

[IConfigLoader<T>](#)

### Inherited Members

[object.Equals\(object\)](#), [object.Equals\(object, object\)](#), [object.GetHashCode\(\)](#), [object.GetType\(\)](#), [object.MemberwiseClone\(\)](#), [object.ReferenceEquals\(object, object\)](#), [object.ToString\(\)](#)

## Constructors

### JsonConfigLoader(string, ILogger)

```
public JsonConfigLoader(string configFilePath, ILogger logger)
```

### Parameters

configFilePath [string](#)

logger [ILogger](#)

## Methods

### LoadConfig()

```
public T LoadConfig()
```

Returns

T



# Namespace Utils.Configs.Client

## Classes

[DefaultClientConfig](#)

## Interfaces

[IClientConfig](#)

# Class DefaultClientConfig

Namespace: [Utils.Configs.Client](#)

Assembly: Utils.dll

```
public class DefaultClientConfig : IClientConfig
```

## Inheritance

[object](#) ← DefaultClientConfig

## Implements

[IClientConfig](#)

## Inherited Members

[object.Equals\(object\)](#), [object.Equals\(object, object\)](#), [object.GetHashCode\(\)](#), [object.GetType\(\)](#), [object.MemberwiseClone\(\)](#), [object.ReferenceEquals\(object, object\)](#), [object.ToString\(\)](#)

# Properties

## HighLatencyThreshold

```
public int HighLatencyThreshold { get; set; }
```

Property Value

[int](#)

## Interval

```
public int Interval { get; set; }
```

Property Value

[int](#)

## LowLatencyThreshold

```
public int LowLatencyThreshold { get; set; }
```

Property Value

[int](#)

## MaxInterval

```
public int MaxInterval { get; set; }
```

Property Value

[int](#)

## MaxReadTimeout

```
public int MaxReadTimeout { get; set; }
```

Property Value

[int](#)

## MaxReconnectAttempts

```
public int MaxReconnectAttempts { get; set; }
```

Property Value

[int](#)

## MaxWriteTimeout

```
public int MaxWriteTimeout { get; set; }
```

Property Value

[int](#)

## MinInterval

```
public int MinInterval { get; set; }
```

Property Value

[int](#)

## MinReadTimeout

```
public int MinReadTimeout { get; set; }
```

Property Value

[int](#)

## MinWriteTimeout

```
public int MinWriteTimeout { get; set; }
```

Property Value

[int](#)

## Port

```
public int Port { get; set; }
```

Property Value

[int](#)

## ReadTimeout

```
public int ReadTimeout { get; set; }
```

Property Value

[int](#)

## ReconnectDelay

```
public int ReconnectDelay { get; set; }
```

Property Value

[int](#)

## Separator

```
public string Separator { get; set; }
```

Property Value

[string](#)

## ServerAddress

```
public string ServerAddress { get; set; }
```

Property Value

[string](#)

## SslPass

```
public string SslPass { get; set; }
```

Property Value

[string](#)

## WriteTimeout

```
public int WriteTimeout { get; set; }
```

Property Value

[int](#)

# Interface IClientConfig

Namespace: [Utils.Configs.Client](#)

Assembly: Utils.dll

```
public interface IClientConfig
```

## Properties

### HighLatencyThreshold

```
int HighLatencyThreshold { get; set; }
```

Property Value

[int](#)

### Interval

```
int Interval { get; set; }
```

Property Value

[int](#)

### LowLatencyThreshold

```
int LowLatencyThreshold { get; set; }
```

Property Value

[int](#)

## MaxInterval

```
int MaxInterval { get; set; }
```

Property Value

[int](#)

## MaxReadTimeout

```
int MaxReadTimeout { get; set; }
```

Property Value

[int](#)

## MaxReconnectAttempts

```
int MaxReconnectAttempts { get; set; }
```

Property Value

[int](#)

## MaxWriteTimeout

```
int MaxWriteTimeout { get; set; }
```

Property Value

[int](#)

## MinInterval



```
int MinInterval { get; set; }
```

Property Value

[int](#)

## MinReadTimeout

```
int MinReadTimeout { get; set; }
```

Property Value

[int](#)

## MinWriteTimeout

```
int MinWriteTimeout { get; set; }
```

Property Value

[int](#)

## Port

```
int Port { get; set; }
```

Property Value

[int](#)

## ReadTimeout

```
int ReadTimeout { get; set; }
```

Property Value

[int](#)

## ReconnectDelay

```
int ReconnectDelay { get; set; }
```

Property Value

[int](#)

## Separator

```
string Separator { get; set; }
```

Property Value

[string](#)

## ServerAddress

```
string ServerAddress { get; set; }
```

Property Value

[string](#)

## SslPass

```
string SslPass { get; set; }
```

Property Value

[string](#) 

## WriteTimeout

```
int WriteTimeout { get; set; }
```

Property Value

[int](#) 

# Namespace Utils.Configs.Server

## Classes

[DefaultServerConfig](#)

## Interfaces

[IServerConfig](#)

# Class DefaultServerConfig

Namespace: [Utils.Configs.Server](#)

Assembly: Utils.dll

```
public class DefaultServerConfig : IServerConfig
```

## Inheritance

[object](#) ← DefaultServerConfig

## Implements

[IServerConfig](#)

## Inherited Members

[object.Equals\(object\)](#), [object.Equals\(object, object\)](#), [object.GetHashCode\(\)](#), [object.GetType\(\)](#), [object.MemberwiseClone\(\)](#), [object.ReferenceEquals\(object, object\)](#), [object.ToString\(\)](#)

# Properties

## Port

```
public int Port { get; set; }
```

## Property Value

[int](#)

## ReadTimeout

```
public int ReadTimeout { get; set; }
```

## Property Value

[int](#)

## Separator

```
public string Separator { get; set; }
```

Property Value

[string](#)

## ServerSslPass

```
public string ServerSslPass { get; set; }
```

Property Value

[string](#)

## WriteTimeout

```
public int WriteTimeout { get; set; }
```

Property Value

[int](#)

# Interface IServerConfig

Namespace: [Utils.Configs.Server](#)

Assembly: Utils.dll

```
public interface IServerConfig
```

## Properties

### Port

```
int Port { get; set; }
```

#### Property Value

[int](#)

### ReadTimeout

```
int ReadTimeout { get; set; }
```

#### Property Value

[int](#)

### Separator

```
string Separator { get; set; }
```

#### Property Value

[string](#)

## ServerSslPass

```
string ServerSslPass { get; set; }
```

Property Value

[string](#) 

## WriteTimeout

```
int WriteTimeout { get; set; }
```

Property Value

[int](#) 



# Namespace Utils.Connection

## Classes

[ConnectionPool](#)

## Interfaces

[IConnectionPool](#)

# Class ConnectionPool

Namespace: [Utils.Connection](#)

Assembly: Utils.dll

```
public class ConnectionPool : IConnectionPool
```








## Inheritance

[object](#)  ← ConnectionPool

## Implements

[IConnectionPool](#)

## Inherited Members

[object.Equals\(object\)](#)  , [object.Equals\(object, object\)](#)  , [object.GetHashCode\(\)](#)  , [object.GetType\(\)](#)  , [object.MemberwiseClone\(\)](#)  , [object.ReferenceEquals\(object, object\)](#)  , [object.ToString\(\)](#) 

## Methods

### AuthenticateSsl(SslStream)

```
protected void AuthenticateSsl(SslStream sslStream)
```

## Parameters

**sslStream** [SslStream](#) 

### CloseAllConnectionsAsync()

```
public Task CloseAllConnectionsAsync()
```

## Returns

[Task](#) 

# CloseConnectionAsync(SslStream)

```
public Task CloseConnectionAsync(SslStream connection)
```

## Parameters

connection [SslStream](#)

## Returns

[Task](#)

# CreateAsync(int, string, int, X509Certificate2, ILogger, CancellationToken, int, int)

```
public static Task<ConnectionPool> CreateAsync(int poolSize, string serverAddress, int port, X509Certificate2 clientCertificate, ILogger logger, CancellationToken token, int maxReconnectAttempts, int reconnectDelay)
```

## Parameters

poolSize [int](#)

serverAddress [string](#)

port [int](#)

clientCertificate [X509Certificate2](#)

logger [ILogger](#)

token [CancellationToken](#)

maxReconnectAttempts [int](#)

reconnectDelay [int](#)

## Returns

[Task](#) <[ConnectionPool](#)>

## GetConnectionAsync(CancellationToken)

```
public Task<SslStream> GetConnectionAsync(CancellationToken token)
```

### Parameters

**token** [CancellationToken](#)

### Returns

[Task](#) <[SslStream](#)>

## ReconnectAsync(CancellationToken, SslStream?)

```
public Task<bool> ReconnectAsync(CancellationToken token, SslStream? connection = null)
```

### Parameters

**token** [CancellationToken](#)

**connection** [SslStream](#)

### Returns

[Task](#) <[bool](#)>

# Interface IConnectionPool

Namespace: [Utils.Connection](#)

Assembly: Utils.dll

```
public interface IConnectionPool
```

## Methods

### CloseAllConnectionsAsync()

```
Task CloseAllConnectionsAsync()
```

Returns

[Task](#)

### CloseConnectionAsync(SslStream)

```
Task CloseConnectionAsync(SslStream connection)
```

Parameters

**connection** [SslStream](#)

Returns

[Task](#)

### GetConnectionAsync(Cancellation\_token)

```
Task<SslStream> GetConnectionAsync(Cancellation_token token)
```

## Parameters

**token** [CancellationToken](#) 

## Returns

[Task](#)  < [SslStream](#)  >