Sterling Connect:Direct for Microsoft Windows

.Net SDK User Guide

Version 4.6

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Note

Before using this information and the product it supports, read the information in “Notices” on page 29.

This edition applies to version 4.6 of IBM Sterling Connect:Direct for Microsoft Windows and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

Chapter 1. Sterling Connect:Direct for Microsoft Windows .Net SDK Overview

The IBM® Sterling Connect:Direct® for Microsoft Windows .Net SDK allows system programmers to extend the capabilities of the Sterling Connect:Direct for Microsoft Windows environment. It supports any version of the .Net framework from Microsoft using any .Net supported programming language, including C#, VB.Net and J#.

Sterling Connect:Direct for Microsoft Windows .Net SDK uses preconfigured connection settings. For information, see *Editing Connections Settings* in the *IBM Sterling Connect:Direct for Microsoft Windows SDK Programmer Guide*.

The following files are provided:

- ConnectDirectSdk.dll is a managed dll that interfaces the .Net managed program to the Sterling Connect:Direct for Microsoft Windows CdCore.dll. Copy this file to a folder in your executable path.
- CdCore.dll interfaces to the Sterling Connect:Direct for Microsoft Windows server. Copy this file to a folder in your executable path.
- ConnectDirectSdk.xml is the help file that provides autocompletion and parameter help.

Chapter 2. Sample Programs

Sample source code projects help you understand how to use the .Net SDK. To run the samples, place the CdCore.dll and ConnectDirectSdk.dll in your executable path. You can copy these files to the same directory as the sample executables.

The sample programs include:

Sample Type	Program Name	Description
VB.Net	VbDotNetSample1	Console program that connects to a node, submits a Process from a file, and displays statistics for the Process. Change the $todo tags in Module1.vb to valid variables for your Sterling Connect:Direct for Microsoft Windows node.
C#.Net	DotNetSample1 DotNetSample2	Change the $todo tags in the SDKInterface.cs files for each sample to valid values for the Sterling Connect:Direct for Microsoft Windows node. DotNetSample1 connects to a node, issues a select process, then displays the Process information returned. DotNetSample2 – Connects to a node, submits a Process and displays the Process and statistics information.

Chapter 3. Add the .Net Class Interface

About this task

To use the Sterling Connect:Direct for Microsoft Windows .Net SDK, add the ConnectDirectSdk.dll as a reference in your Visual Studio project.

To add the dll:

Procedure

1. Select **Project >Add Reference** from the menu.
2. Select **Browse** and search for the ConnectDirectSdk.dll file. Browse to the C:\Program Files\Sterling Commerce\Connect Direct v4.6.00\SDK.Net\Sdk_Files\Release location.
3. Highlight ConnectDirectSdk.dll and click **OK.**
4. Do one of the following to import the ConnectDirectSdk namespace:
   - In Vb.Net, add the following command to your source modules:

```
Imports ConnectDirectSdk
```

   - In C#.Net, add the following to your source modules:

```
Using ConnectDirectSdk
```

Chapter 4. About Classes

Classes are provided to help configure your environment.

The Node class is the main interface to the Sterling Connect:Direct for Microsoft Windows server. It contains the high-level Sterling Connect:Direct functions. Use it to connect to a Node, submit Processes, and select statistics. Most access to the Sterling Connect:Direct for Microsoft Windows server is through the Node object. The Node object creates and removes the connection to the Sterling Connect:Direct for Microsoft Windows server. Connections are shared and reused as different requests are made.

The Process class allows you to retrieve information about Processes you submit or that are in the TCQ. It contains all of the criteria returned from a Submit or SelectProc method call.

The Statistic class allows you to retrieve statistic records from the TCQ. It represents a group of records in the statistics database. They are returned from a SelectStat method call.

Chapter 5. Connect to a Sterling Connect:Direct for Microsoft Windows Node

The Sterling Connect:Direct node name and connection information is set at object creation using the Node constructor. If a parameter is not supplied (NULL pointer), the default value is read from the Registry.

During construction, the Node object tries to connect to the physical Sterling Connect:Direct node, using the protocol information in the Registry. If the connection fails, an exception is generated

In the following constructor, stNode is required. stUser and stPass are optional. stPass is ignored if stUser is not provided.

```
Node(String stNode, String stUser, String stPass)
```

In the following constructor, stLcuFile is required. This is the file spec for an LCU file that contains the login information.

```
Node(String stLcuFile)
```

Chapter 6. Disconnect Nodes

Use the DisconnectAll method to disconnect from all Nodes.

```
bool DisconnectAll()
```

Chapter 7. Submit Processes

Use Submit and SubmitFile to submit Processes to a Node. These methods automatically create a Process object and associate it with the Node for the Submit.

Below is the standard SubmitFile method. stFileName is required and is the file specification of the Process to submit.

```
void SubmitFile(String stFileName)
```

The SubmitFile method allows more control of the submitted Process.

- stFileName is required and defines the requirements for the Process.
- holdOverride places the Process in the Hold queue.
- startTime specifies when to run the Process.
- symbolics define the substitution parameters to apply to the Process.

```
void SubmitFile(String stFileName, Hold holdOverride, String startTime, Dictionary<String,
String> symbolics)
```

The Submit method is very similar to the SubmitFile method but instead of passing the file name of the Process to submit, you pass stText which is the text of a Process to submit.

```
void Submit(String stText, Hold holdOverride, String startTime, Dictionary<String, String> symbolics)
```

Chapter 8. Manage Processes

The Node object provides several methods to manage Processes. You can view, change and delete Processes, place a Process on Hold, or release it from Hold. Each method returns Process information in the ProcessList property of the Node class for each Process that was selected or changed.

The following SelectProc method allows you to retrieve a list of all Processes from the TCQ:

```
void SelectProc()
```

The following SelectProc method retrieves Processes from the TCQ whose Process name matches stName.

```
void SelectProc(String^ stName)
```

The following SelectProc method retrieves Processes from the TCQ whose Process number matches nNumber.

```
void SelectProc(int nNumber)
```

The following SelectProc method retrieves Processes from the TCQ whose Process name matches any name in the array arrayNames.

```
void SelectProc(array<String^>^ arrayNames)
```

The following SelectProc method retrieves Processes from the TCQ whose Process number matches a number in arrayNumbers.

```
void SelectProc(array<int>^ arrayNumbers)
```

The following HoldProc method places a Process in the TCQ on HOLD. pProcess is a Process object.

```
void HoldProc(Process^ pProcess)
```

The following ReleaseProc method releases a Process from the HOLD and allows it to run. pProcess is a process object.

```
void ReleaseProc(Process^ pProcess)
```

The following ReleaseProc method releases a Process that is on HOLD. nNumber is the Process number of the Process, stPNode is the primary node of the Process, and stUserid is the User ID of the Process.

```
void ReleaseProc(int nNumber, String^ stPNode, String^ stUserid)
```

The following DeleteProc method deletes a Process from the TCQ. pProcess is a Process object.

```
void DeleteProc(Process^ pProcess)
```

The following DeleteProc method deletes a Process from the TCQ. nNumber is the Process number to delete, stPNode is the primary node of the Process, and stUserid is the User ID of the Process.

```
void DeleteProc(int nNumber, String^ stPNode, String^ stUserid)
```

Chapter 9. Retrieve Statistics

Use SelectStat methods to retrieve statistics from the stats database. Statistics are returned in the StatsList property of the Node class.

The following SelectStat method retrieves all statistic records.

Note: The list could be large depending on how many days of records are kept in the database.

```
void SelectStat()
```

The following SelectStat method retrieves all statistic records for a specific Process. pProcess is the Process object to retrieve the stats for.

```
void SelectStat(Process^ pProcess)
```

The following SelectStat method retrieves all statistic records within a specified time range. dtBegin identifies the beginning time and dtEnd is the ending time. The time is in the format MM/DD/YYYY hh:mm:ss AM|PM.

```
void SelectStat(String^ dtBegin, String^ dtEnd)
```

Chapter 10. Node Properties

Following are the node properties returned:

- ApiVersion - API version of the node as a long
- CDName - Sterling Connect:Direct node name sent to the client after successfully logging on
- Name - Alias node name passed in the constructor
- OSSubType - Operating system sub-type (additional information) of the node
- OSType - Operating system type of the node
- ProcessEntry - Process from a Submit call
- ProcessList - Array of Processes
- SecurePlusSupported - Indicates if the node supports IBM Sterling Connect:Direct Secure Plus
- SecurePlusVersion - Sterling Connect:Direct Secure Plus version as a long
- Server - File server name where the Sterling Connect:Direct node is running
- StatsList - Array of Stat messages from a SelectStat call
- Userid - User ID used to log in to the node

Chapter 11. Process Class

The Process class contains Process criteria returned from a SUBMIT or SELECT PROCESS method. Processes are submitted using the Node.Submit or Node.SubmitFile method.

Method to Wait for Process Completion

The following WaitForCompletion method blocks the current thread until the Process exits all queues on the Sterling Connect:Direct server, including error queues. It waits indefinitely.

```
void WaitForCompletion()
```

The following WaitForCompletion method blocks the current thread until the Process exits all queues on the Sterling Connect:Direct server, including error queues, or until the timeout period expires. timeout is in milliseconds.

```
void WaitForCompletion(long timeout)
```

Chapter 12. Process Properties

Following is a list of the Process properties:

- ByteCount - Returns the Bytes read from the file as a long
- Checkpoint - Returns the Checkpointing Enabled flag
- Class - Returns the session class property as a String
- ConditionCode - Returns the Return Code as an int
- DestDisp1 - Returns the Destination file disposition parameter 1 as a char
- DestDisp2 - Returns the Destination file disposition parameter 2 as a char
- DestDisp3 - Returns the Destination file disposition parameter 3 as a char
- DestFile - Returns the Destination File Name as a string
- ExecPriority - Returns the Current Execution Priority as a String
- ExtendedCompression - Returns the Extended Compression flag
- Feedback - Returns the Additional Return Code Information as an int
- FromNode - Returns the From Node flag
- Function - Returns the Current Function Executing as a string
- Hold - Returns the Hold flag as a char
- LocalNode - Returns the Local Node indicator flag
- LogDateTime - Returns the Logged Timestamp
- MsgData - Returns the Message Substitution Data as a string
- MsgId - Returns the Message Identifier field as a string
- MsgText - Returns the Message Text field as a string
- Name - Returns the Process Name as a string
- Number - Returns the Process Number as an int
- PNode - Returns the Primary Node Name as a string
- Priority - Returns the Current Priority as in int
- Queue - Returns the Process Queue as a string
- RecordCount - Returns the Records read/written as a long
- Restart - Returns the Restart flag
- Retain - Returns the Retain flag as a char
- SchedDateTime - Returns the Scheduled Timestamp
- SecureEnabled - Returns the Sterling Connect:Direct Secure Plus enabled flag
- SecureProtocol - Returns the Sterling Connect:Direct Secure Plus Protocol as a string
- Signature - Returns the Sterling Connect:Direct Secure Plus effective Signature setting
- SNode - Returns the Secondary Node Name as a string
- SourceDisp1 Returns the Source Disposition 1 as a char
- SourceDisp2 - Returns the Source Disposition 2 as a char
- SourceDisp3 - Returns the Source Disposition 3 as a char
- SourceFile - Returns the Source File Name as a String
- SSLCipherSuite - Returns the Sterling Connect:Direct Secure Plus SSL Cipher Suite as a string
- StandardCompression - Returns the Standard Compression flag

- Status - Returns the Current Status as a string
- StepName - Returns the Current Stepname as a string
- SubmitNode - Returns the Submitter Node Name as a String
- Submitter - Returns the Submitter User ID as a string
- XmitBytes - Returns the Bytes sent/received count as a long
- XmitRUs - Returns the RUs sent/received as a long

Chapter 13. Statistic Class

The Statistic class represents a group of records in the statistics database. They are returned by a SelectStat method call.

Audit Information

The GetAuditField method returns the value of the field requested from the Stats Audit Information. Audit data in Stats records is optional and Stat records can have different audit fields available. stField is the name of the audit field you request information for; stValue is the value of the field requested. This method returns TRUE if the audit field is found and FALSE if not.

```
BOOL GetAuditField(String^ stField, String^% stValue)
```

Chapter 14. Statistic Properties

Following are the statistics properties:

- ConditionCode - Returns the Return Code
- Feedback - Returns Additional Return Code information
- LogDateTime - Returns the Logged Timestamp
- MsgData - Returns the Message Substitution Data as a string
- MsgId - Returns the Message Identifier field as a string
- MsgText - Returns the Message Text field as a string
- ProcessName - Returns the Name of the process
- ProcessNumber - Returns the Process number
- RecCat - Returns the Record Category
- RecId - Returns the Record Identifier tag
- SNode - Returns the Secondary Node Name
- StartDateTime - Returns the Start Timestamp
- StopDateTime - Returns the Stop Timestamp
- Submitter - Returns the User Id of the submitter

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