"Plugin proxy"

1

"Plugin proxy"   ,
.   "Python plugin",
API,   API   ,
.

DLL   API   .

,   ,   Visual C++ 2015,
,   .

2

Plugin proxy   :

: Windows 2000 SP4   ,   32-x   64-x
,   .
-   .
:   5 MB
.
:
,   .

(   ),   Advanced Serial Data Logger.

Microsoft Vista   :

Program Files,
:

1.   ,
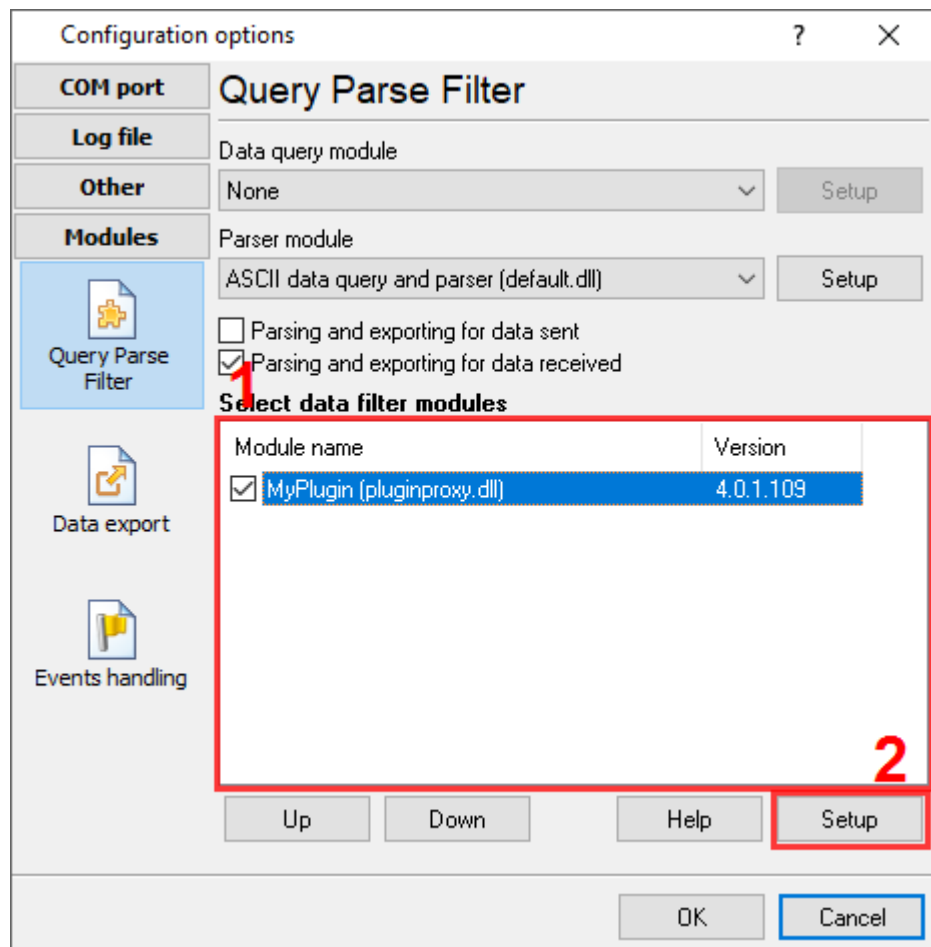2.   ;
3.   Windows Vista   .

.   ,
.   -   Google.

3   **Plugin proxy**

1.   (, Advanced Serial Data Logger),
;
2.   ;
3.   ,
Windows;

4.   .
            "   ";

5.   .
                           ,   "   ".

                        ,
           .   .1-2.
                  .
         "   "   .
        .

             "   -   ".
     "   "   "   ".

.1.

4

Plug-in -

-   ,   .   :

Advanced Serial Data Logger

-    ."   ".

-         ,   ,

.

.

-    ."   ".

5

"Plugin proxy"   .   "   "

,   API   .

.

:

1.   DLL   .
2.   pluginproxy.dll (
\plugins\pluginproxy).

6   API

,   ,   Visual C++ 2015,

,   .

.

:

1.   ,   API
(aggPluginShowOptionsDialog).
.
2.   DLL
.
3.   DLL.
try ... catch.

.

aggPluginCreate

void __stdcall aggPluginCreate(_di_IaggPluginW Sender)

Sender -   API.
        API.

,

.   ,

        :

1.   ,   .
2.   ,   DLL.
        ,
    (   ).

                                        aggPluginLoad.

aggPluginLoad

void __stdcall aggPluginLoad(_di_IaggPluginW Sender, const PPluginCallRec pCallRec, int &Result)

pCallRec - _____   .

                                        ,   .
                        ,   (
)   .

Result -   .
mrtSuccess,   ,   .
                                ,
                    .

aggPluginUnload

void __stdcall aggPluginUnload(_di_IaggPluginW Sender, const PPluginCallRec pCallRec, int &Result

Result -   .

                                                                            .
                                        ,
            .

aggPluginDestroy

void __stdcall aggPluginDestroy(_di_IaggPluginW Sender)

.

DLL .

, .

aggPluginLoadSettingsNow

void __stdcall aggPluginLoadSettingsNow(_di_IaggPluginW Sender)

:

1. aggPluginShowOptionsDialog
.
2. .

, ,

, . ,

.

aggPluginSaveSettingsNow

void __stdcall aggPluginSaveSettingsNow(_di_IaggPluginW Sender)

.

(INI).

aggPluginShowOptionsDialog

void __stdcall aggPluginShowOptionsDialog(_di_IaggPluginW Sender, const PPluginCallRec pCallRec, bool &

"   "   ,
.
.

Success -   TRUE,   ,
,   .
aggPluginLoadSettingsNow   .

.   ,
.

aggPluginEvent

void __stdcall aggPluginEvent(_di_IaggPluginW Sender, const PWideChar Event, const PPluginCallRec pCall

Event -   "PORT-CLOSE".

Result -   ,   mrtSuccess.

,   "_____"

,

.

aggPluginExecuteCustomCommand

void __stdcall aggPluginExecuteCustomCommand(_di_IaggPluginW Sender, const PWideChar Comm

Command -   "MY-COMMAND".

Result -   ,   mrtSuccess.

             _____   .

.

,   .

aggPluginSetParserItems

void __stdcall aggPluginSetParserItems(_di_IaggPluginW Sender)

,

.   aggPluginShowOptionsDialog,
"   " (mttFilter), "   " (mttDataExport),
"   " (mttEventsHandling).

aggPluginProcessData

void __stdcall aggPluginProcessData(_di_IaggPluginW Sender, const PPluginCallRec pCallRec, int &

,   -
        .   "
" (mttDataQuery), "   " (mttDataParser) "   " (mttFilter), "
" (mttDataExport), "   " (mttEventsHandling).

           "   ",   **_____ pCallRec**
               .

            _____.

            _____.

Result -   ,   mrtSuccess.

aggPluginGetData

void __stdcall aggPluginGetData(_di_IaggPluginW Sender, const PPluginCallRec pCallRec, int &Resu

"   "   .   ,   -
.

aggPluginStateChanged

void __stdcall aggPluginStateChanged(_di_IaggPluginW Sender, const DWORD ModuleTypes)

,
.   ,   "   ".

ModuleTypes -   ,   .

_____ "ModuleEnabled",
.

7

API   .

mrtSuccess = 0.   .   .
mrtInvalidParameter = -1.   .
mrtNotSupported = -2.   .
mrtException = -3.   .
mrtNotInitialized = -4.   .
mrtError = -5.   .

"aggPluginModule.h".

8   API

"aggPluginModule.h"   "CaggPlugin"
++   API   .

mttDataQuery = 0x01.   .
mttDataParser = 0x02.   (   )   .
mttDataExport = 0x04.   .
mttEventsHandling = 0x08.   .
mttLogging = 0x10.   -   .   Data Logger Suite.
mttFilter = 0x20.   .
mttDeviceLayer = 0x40.   .   API.
mttMenuExt = 0x80.   (
).

:

```
TDataRecType : unsigned char {
  pdtNone, //                       .
  pdtParamList, //                                    pParams.
  pdtBuffer, //                              pData.
  pdtObject, //                         pObject (              API).
  pdtString, //             ANSI ASCII,                              pStr.
  pdtDWORD, //                              ,                  dwData.
  pdtCommand, //           ,                     dwData (    .       ).
              .                                               .
  pdtNotify, //                  ,                   dwData (   .       ).
              .                                                   .
  pdtParamListObj //                             (          ).
};
```

:

```
 pdtCommand_ClientConnect = 0x0101; //                         (                   IP =>            ).
 pdtCommand_ClientDisconnect = 0x0102; //                      (                     )
(                 IP <=>           ).
 pdtCommand_TryRestoreConnection = 0x0103; //                        (                 <=
      ).
 pdtCommand_ClientBlock = 0x0104; //                          (                  IP <=           ).
 pdtCommand_BufferCleanupEnable = $0105; //                                 ,
                             ,                ,                          (                  <=
      -       ).
 pdtCommand_BufferCleanupDisable = $0106; //                    (                   <=           -
      ).
 pdtCommand_GetQueueSize = $0201; //
(               =>                    ).
```

```
struct TDataRec
{
        DWORD dwTag; //                         .
        DWORD dwDataSize; //                                    .                        .
                                  pdtBuffer      pdtString.

        TDataRecType bDataType;
        union
        {
                struct
                {
                        DWORD dwData;
                };
                struct
                {
                        char *pStr;
```

```
                };
                struct
                {
                        void* pObject;
                };
                struct
                {
                        TaggParamsList* pParamsObj;
                };
                struct
                {
                        void *pData;
                };
                struct
                {
                        _di_IaggParamsListA* pParams;
                };

        };
};
```

API

```
struct TPluginCallRec
{
        DWORD dwSize; //                                    TPluginCallRec
        Byte bVersion; //
        DWORD dwModuleHandle; //                                    .
        DWORD dwModuleIndex; //
        DWORD dwDataSource; //
        DWORD dwClientID; //                                                    .
                , dwDataSource    dwClientID
        .
        TModuleTypes aCallModuleType; //                              ,
                                API.                                    .
        TaggParamsList* aParameters_; //
                        .          .              .
        TDataRec aDataIn; //                      .
        TDataRec aDataOut; //                  .
        unsigned char aClientName[50]; //                              dwClientID.
                      .
        _di_IaggParamsListA aParameters; //
                        .              .
};

typedef TPluginCallRec* PPluginCallRec;
```

                ,
                .

API
```

0 (S_OK).

**HRESULT \_\_stdcall Log(const byte Level, const BSTR str)**

                         **str**                            . **Level**         : 0 -       , 1
-             , 2 -        .

**HRESULT \_\_stdcall GetModuleParameter(const BSTR AName, OleVariant\* AResult)**

                      [_____](#)           **AName**.

**HRESULT \_\_stdcall SetModuleParameter(const BSTR AName, const OleVariant &Value, bool\* AResu**

                 [_____](#)       **AName**          **Value**.
      ,                                          .

**HRESULT \_\_stdcall NewData(\_di\_IaggParamsListW\* List)**

                             "     "         .
        mttDataParser   mttFilter.                        ,
             .
         .

**HRESULT \_\_stdcall PluginStorageAdd(const BSTR AId, const PVOID AData)**
**HRESULT \_\_stdcall PluginStorageGet(const BSTR AId, PVOID\* AData)**
**HRESULT \_\_stdcall PluginStorageDel(const BSTR AId, PVOID\* AData)**

                                 .
                         .
         [_____API](#).                       .

**AId** -                       .

**AData** -             .

**HRESULT \_\_stdcall GetParserItems(OleVariant\* AResult)**

                                   (BSTR),
               CR+LF              .
              :

`DESCRIPTION|NAME|DATA_TYPE|DEFAULT_VALUE`

DESCRIPTION -                                   .
NAME -                 (      ,                       A-Z,
            ).

DATA_TYPE - , . ,
"String". : String, Memo, Bytes, Blob, Boolean, Float, Smallint, Word,
Integer, Date, Time, DateTime, DWord, Byte, Shortint, Int64, Currency.
DAFAULT_VALUE - , .


## HRESULT __stdcall GetConfigs(OleVariant* AResult)

, ,
. (BSTR),
CR+LF .
:

NAME<TAB>DATA_SOURCE_ID

NAME - .
<TAB> - ASCII (0x09).
DATA_SOURCE_ID - HEX.
DWORD .


## HRESULT __stdcall SendData(const PPluginCallRec pCallRec, const PBYTE AData, const int ASize, int* AResu

.

, .

pCallRec - . NULL.
.

AData - .

ASize - .

AResult - . :

>= 0 - .
-1 - .
-2 - .
-3 - .
-4 - .
-5 - .
-6 - ( , . .)
.
-7 - ( ).
-8 - ( ).
-9 - .
-10 - .
-11 - .
-12 - ( ).
-13 - ( ,
, . .).

-14 -              ,                                                                      .


**HRESULT __stdcall GetArgs(const _di_IaggParamsListW* AArgs)**


                     .                                                    _____,
                                                                              .


**HRESULT __stdcall SendEvent(const BSTR AEventId, const _di_IaggParamsListW AArgs)**


                                    **AEventId**                    **AArgs**
           .                                                          GetArgs. AArgs
NULL.                                                    "_____".

**HRESULT __stdcall LoadSaveConfig(const bool ASave, const _di_IaggParamsListW AArgs)**


              ,                              **ASave**,
                     **AArgs.**                                                          GetArgs
                                  .                                                      "\".
              ,                                                      ,                          .


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                                                                      ,
                                      ,                                         API.
                     "[w]",                                 .


**ModulePath** - (string)                    ,                                 .

**ModuleName** - (string)              .

**ApplicationFullName** - (string)                                 .

**ModuleRegistryRoot1** - (dword)                ,                             :
HKEY_LOCAL_MACHINE      HKEY_CURRENT_USER

**ModuleRegistryRoot2** - (dword)                                 .

**ModuleRegistryPath** - (string)                    ,                           .

**INIFile** - (string)        INI         ,                              .                  ,
                                 ,              .

**INISectionPrefix** - (string)                                        ,
             INI                                                          .

**DisplayFullVersion** - (string)                          .

**IsTemporaryLoad** - (bool)                    ,                              .                    ,
.

**LogTitle** - (string) [w]                    ,                                -
.                                                    .

**Description** - (string) [w]                        ,
.

**EventsSupported** - (string) [w]                      ,
.                                              .                                    .
:

LOG-MESSAGE -                                              .
NEW-LOG-FILE -                          -              .
LOG-FILE-DELETE -                        -              .
NEW-DATA-PACKET -                                  .
ERROR-WRITE-FILE -                      -    .
PORT-OPEN -                          (          ).
PORT-CLOSE -                        .
CONFIG-CHANGE -                                      .

USER-LOGOOF, USER-LOGON -                        ,
.
STOP-SERVICE -                        ,                      .

# 10

,    API
65   .
.                    API aggPluginProcessData,
.                              ,
.                        ,                      ,
.                        ,                                  .

"fifobuffer.h".
"[CaggPlugin](#)":

**CFifoBuffer GetDataSourceBuffer(const PPluginCallRec pCallRec)**

CFifoBuffer                                                      :

**Size** -                                      .

**Data** -                                  .

**void Clear() -                        .

**void Shift(const int ASize) -            "ASize"                          (                ).

**int Find(const PBYTE ASign, const byte ASignSize, const unsigned int Offset = 0)**

"**ASign**"          "**ASingSize**"                    ,
**Offset**.                                                    "**-1**".


# 11

"aggParamLst.h"                                   "CaggParamsList"
                ++                                    .

                    -                      .                          -              ,
          .
                              -                      ,
"$NEW_ROW$".

                    "CaggParamsList"                              .

**Clear()** -                                    .

**Delete(index)** -                                        **index**          .

**CopyFrom(object [, start_index = 0[, end_index = -1]])** -
                    **object**.                                  **start_index**    **end_index**
                                        .          **end_index**          -1,
                    .

**ItemByName(name)** -                                          **name** (          ).

**ItemIndexByName(name)** -                                              **name**.

**ItemValueByName(name)** -                                              **name**.
                              ,              Null.

**ItemValueByNameDef(name, default)** -
**name**.                                  ,                          **default**.

**InsertItem(index, name, value)** -                              **name**          **value**
          **index**.                                      .

**SetItem(name, value[, canadd = False])** -                                          **name**
                **value**.                              **canadd**        True,
                    ,                              .
                    .

**AddItem(name, value)** -                                  **name**          **value**
          .                      .

**AddItemCopy(item)** -                              **item**              .
                    .

**FindRow(item, start_idx, is_row_end_sign)** -                                    ,
                                    start_idx.                    True                    (
                                    start_idx). **end_idx** -                    ,
                                                            . **is_row_end_sign** -                    ,
                                    True,        **end_idx**                                    -
                    .

                    :

```
int nStartIdx = 0;
int nEndIdx = 0;
bool bEndRowSign = false;
while (aData.FindRow(nStartIdx, nEndIdx, bEndRowSign))
{
        //
        // your code here
        //

        nStartIdx = nEndIdx + 1;
}
```

NewRow() -   -   .

Count -   ,   .

Items[index] -   ,   .

                                            :

Name -   (   ).

Value -   .   ,   "Null".