

LDDS Testing System VDE Deployment 4.0.3 Operation Manual September 2025

Documentation changes

date	version	illustrate
2020-11-26	1.0.0	First release
2022-01-13	1.1.0	1. Improve network bandwidth requirements 2. Adjust the deployment instructions according to the latest version of VDE and add the description of Level-1 Binary market data configuration
2022-12-12	1.1.1	VDE file receiving configuration start time adjustment (From 8:30 a.m. to 8:00 a.m.)
2023-10-09	1.1.2	1. Shenzhen Stock Exchange's Cash market data and Options market data are separated. The new category number (26) is used to represent Shenzhen Stock Exchange's Options market data; The configuration of Shenzhen Stock Exchange's binary market data service port in the vde.json is adjusted. 2. Supplementary market service address configuration requirements
2023-12-25	1.1.3	Add the configuration related to the bond of Beijing Stock Exchange
2024-02-22	1.2.0	1. Add the descriptions of new version VDE related function 2. Add the descriptions of new version VDE related configuration 3. Adjust part of the descriptions and instructions 4. Add new chapter 4.3 (Related questions of configuration)
2024-10-22	1.2.1	VDE version upgraded to 4.0.3 Adjusted the description and content
2025-09-17	1.2.1(IOPV)	Added independent IOPV market related configuration

1. Software and hardware requirements

i. Hardware requirements

CPU	2.4G or above, not less than 8 core	OS	Linux / Windows 64bit
RAM	16G or above	Network Bandwidth	See below table
Hard Disk	50G or above		

Product	Access	Bandwidth
Level-1 FAST	Internet/Leased line	8M
Level-2	Leased line	20M

ii. Software requirements

ldds-vde-V4.0.3—— VDE programme
jre1.8.0_91—— JAVA Running environment

iii. Installation

This software does not need to be installed, the corresponding compressed package can be decompressed to any directory of the local hard disk.

2. System Configuration

JRE download link:

<http://www.oracle.com/technetwork/java/javase/downloads/jre8-downloads-2133155.html>

Windows: jre-8u91-windows-x64.tar

Linux: jre-8u91-linux-x64.gz

3. Program Deployment Configuration

3.1 VDE Connection Server IP Address

Cloud Testing Platform & MPLS Connection

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CIIS Platform server	Shanghai (LDDS)	
	IP address	Port
Cloud Testing Platform - Level 2	201.1.3.25	5261
Cloud Testing Platform - Level 2 Rebuild	201.1.3.32	5262
Cloud Testing Platform Third parties (DCE, ZCE, CFFEx)	201.1.3.24	6261
Cloud Testing Platform SZV5 Level 1	201.1.3.27	5261
All-weather Platform - level 2	201.1.3.29	5261
All-weather Platform - level 2 Rebuild	201.1.3.29	5262
Production (ALC DC) Level 2 Primary	201.1.6.12	6261
Production (ALC DC) Level 2 Secondary	201.1.6.13	6261
Production (ALC DC) Level 2 Rebuild Primary	201.1.6.15	5262
Production (ALC DC) Level 2 Rebuild Secondary	201.1.6.13	5262
Production (ALC DC) Third parties (DCE, ZCE, CFFEx)	201.1.6.16	6261
Production (ALC DC) SZV5 Level 1	201.1.6.10	5261
Production (TKO DC) Level 2 Primary	201.1.5.12	6261
Production (TKO DC) Level 2 Secondary	201.1.5.13	6261
Production (TKO DC) Level 2 Rebuild Primary	201.1.5.15	5262
Production (TKO DC) Level 2 Rebuild Secondary	201.1.5.13	5262
Production (TKO DC) Third parties (DCE, ZCE, CFFEx)	201.1.5.16	6261
Production (TKO DC) SZV5 Level 1	201.1.5.10	5261

Internet Connection

CIIS Platform server	Shanghai (LDDS)	
	IP address	Port
Testing SH Level 1	202.82.148.193	5261
Testing SZV5 Level 1	202.82.148.193	5261
Production (ALC DC) SH Level 1	203.85.62.20	5261
Production (ALC DC) SZV5 Level 1	203.85.62.20	5261
Production (TKO DC) SH Level 1	203.85.119.200	5261
Production (TKO DC) SZV5 Level 1	203.85.119.200	5261
All-weather Platform - level 1	202.82.148.195	:5261
All-weather Platform - level 1 Rebuild	202.82.148.195	:5262

3.2 VDE directory structure

ldds-vde-V4.0.3	
conf	Directory of vde configuration file
vde.json	vde configuration file
log4j2-vde.xml	vde log configuration file
moniter.html	vde monitoring page file
SSE_Infonet_LDDS.cer	vde public key
*.pfx	vde private key (Copy by user)
sample	Directory of other sample configuration file (Used to save other version configuration files)
sample_vde_L1fast.json	FAST market data configuration file (User who receives SSE Level-1 FAST market data can use it)
log4j2 vde_dateBased.xml	VDE log configuration by date
template	Directory of template file
castTable.json	Configuration file of Level-1 market data protocol conversion (Binary to FAST)
*.xml	
data	Directory of Fast quotation service port
static	Directory of static file
lib	Directory of jar program
*.jar	
log	Directory of vde log file
script	Directory of program Control Script
restart.sh	restart script in Linux Environment (backend)
startup.sh	start script in Linux Environment (backend)
stop.sh	stop script in Linux Environment
vde.bat	start script in Win Environment
vde.sh	start script in Linux Environment

3.3.1 Configuration of vde.json

ldds-vde-V4.0.3/conf/vde.json

```
{
  "user": {
    "name": "Vendor_*(or Test_*)", // Change to corresponding certificate
    "ip": "本机 IP 地址 ", // Change to local IP Address
    "password": "111111",
    "pfx": "../conf/Vendor_*(or Test_*) .pfx", // Corresponding certificate
    "cert": "../conf/SSE_Infonet_LDDS.cer"
  },
  "thread": [{
    "class": "com.sseinfo.lddsidc.thread.vde.VdeRealTimeThread",
    "listener": [
      //Binary 行情服务端口配置 (If user uses the FAST protocol to receive the SSE
      market data, this configuration needs to be deleted.)
      {
        "port": "9126", // VSS connection port to VDE in Binary standard and can
        be modified if conflict occurs.
        "conversation": "ezeiToBin",
        "params": {
          "heartbeatInt": 0,
          //Added independent IOPV product category number (category=37)
          "categoryList": "37,47,48,49,50" // Binary market data product category number (Ch
          oose to configure the corresponding market category according to your own situation, "-1" cannot be
          configured)
        }
      },
      //FAST 行情服务端口配置
      {
        "port": "9129", // The port of VSS connect to VDE in FAST standard and can be modifi
        ed if conflict occurs.
        "conversation": "step",
        "params": {
          "heartbeatInt": 0,
          "categoryList": "-1"
        }
      },
      //LDDS 行情服务端口配置
      {
        "port": "8888", // Real-time data feed turn into files port of the VSS
        connect to VDE, if conflict can be modified,
```

must be the same as the "sub" configuration below.

```
"conversation": "ldds",
"params": {
  "heartbeatInt": 6
}
},
//深交所二进制数据行情服务端口配置
{
  "port": "6666", // SZ market data port of VSS connect to VDE and can be
                  // modified if conflict occurs.
  "conversation": "sjs",
  "params": {
    "heartbeatInt": 0,
    "categoryList": "25,26" // SZ Cash market data (25), SZ Options market
                           // data (26)
  }
},

//上交所二进制数据行情服务端口配置（债券现券）
{
  "port": "5555", // BSE market data port of VSS connect to VDE and can
                  // be modified if conflict occurs.
  "conversation": "sjs",
  "params": {
    "heartbeatInt": 0,
    "categoryList": "61" // BSE Bond market data (61)
  }
}
],
//从服务器订阅数据
"sub": [{
  "startTime": "800",
  "endTime": "1800",
  "conversation": "ldds",
  "master": [{
    "uri": "tcp://201.1.5.12:6261", // Real-time data server IP and port
    "params": {
      "heartbeatInt": 6,
      "castTable": "../conf/template/castTable.json", // The configuration of
      // SSE Level-1 market data from Binary to FAST (If user uses the Binary protocol to receive SSE
      // Level-1 market data, this configuration needs to be deleted.)
      "categoryList": "-1"
    }
  }
}
```

```

    }],
    "slave": [{
        "uri": " tcp://201.1.5.13:6261", // Real-time data server IP and port
        "params": {
            "heartbeatInt": 6,
            "castTable": "../conf/template/castTable.json", // The configuration of
SSE Level-1 market data from Binary to FAST (If user uses the Binary protocol to receive SSE
Level-1 market data, this configuration needs to be deleted.)
            "categoryList": "-1"
        }
    }
    ]],
    //缓存配置, 设置 size 越大, 可以缓存数据越多
    "messagePool": {
        "size": "10000",
        "bufferSize": "262144"
    }
},
//文件行情配置
{
    "class": "com.sseinfo.lddsidc.thread.vss.RealTimeClientThread",
    "intervalTime": 1,
    "file": [{
        // The mkt00.txt file configuration generated by the Binary protocol (Cannot
co-exist with the corresponding configuration of the FAST protocol)
        "market": "SHBIN",
        "securityType": "01",
        "outputFilePath": "../data",
        "fileName": "mkt00.txt",
        "encode": "GBK",
        "messageTemplate": "../conf/template/SSE_FIXT11.xml",
        "fastTemplate": "../conf/template/SSE_GP_MarketData_Templates.xml",
        "fileTemplate": "../conf/template/SSE_GP_FileWrite_Templates.xml",
        "incInterval": "3000",
        "lddsType": [4701]
    }
    ],
    // The mkt03.txt file configuration generated by the Binary protocol (Cannot
co-exist with the corresponding configuration of the FAST protocol)
    {
        "market": "SHBIN",
        "securityType": "02",
        "outputFilePath": "../data",
        "fileName": "mkt03.txt",
    }
}

```



```
"encode": "GBK",
"messageTemplate": "../conf/template/SSE_FIXT11.xml",
"fastTemplate": "../conf/template/SSE_QQ_MarketData_Templates.xml",
"fileTemplate": "../conf/template/SSE_QQ_FileWrite_Templates.xml",
"incInterval": "500",
"lddsType": [4901]
```

```
},
```

// The mkttdt01.txt file configuration generated by the Binary protocol (Cannot co-exist with the corresponding configuration of the FAST protocol)

```
{
"market": "SHBIN",
"securityType": "03",
"outputFilePath": "../data",
"fileName": "mkttdt01.txt",
"encode": "GBK",
"messageTemplate": "../conf/template/SSE_FIXT11.xml",
"fastTemplate": "../conf/template/SSE_ATP_MarketData_Templates.xml",
"fileTemplate": "../conf/template/SSE_ATP_FileWrite_Templates.xml",
"incInterval": "3000",
"lddsType": [4801]
```

```
},
```

// The mkttdt02.txt file configuration generated by the Binary protocol (Cannot co-exist with the corresponding configuration of the FAST protocol)

```
{
"market": "SHBIN",
"securityType": "12",
"outputFilePath": "../data",
"fileName": "mkttdt02.txt",
"encode": "GBK",
"messageTemplate": "../conf/template/SSE_FIXT11.xml",
"fastTemplate": "../conf/template/SSE_ZQ_MarketData_Templates.xml",
"fileTemplate": "../conf/template/SSE_ZQ_FileWrite_Templates.xml",
"incInterval": "3000",
"lddsType": [5001]
```

```
},
```

// The mkttdt00.txt file configuration generated by the FAST protocol (Cannot Co-exist with the corresponding configuration of the Binary protocol)

```
{
"market": "SH",
"securityType": "01",
"outputFilePath": "../data",
"fileName": "mkttdt00.txt",
"encode": "GBK",
```

```
"messageTemplate": "../conf/template/SSE_FIXT11.xml",
"fastTemplate": "../conf/template/SSE_GP_MarketData_Templates.xml",
"fileTemplate": "../conf/template/SSE_GP_FileWrite_Templates.xml",
"incInterval": "3000",
"lddsType": [5302]
},
```

// The mkttdt03.txt file configuration generated by the FAST protocol (Cannot co-exist with the corresponding configuration of the Binary protocol)

```
{
"market": "SH",
"securityType": "02",
"outputFilePath": "../data",
"fileName": "mkttdt03.txt",
"encode": "GBK",
"messageTemplate": "../conf/template/SSE_FIXT11.xml",
"fastTemplate": "../conf/template/SSE_QQ_MarketData_Templates.xml",
"fileTemplate": "../conf/template/SSE_QQ_FileWrite_Templates.xml",
"incInterval": "500",
"lddsType": [9002]
},
```

// The mkttdt01.txt file configuration generated by the FAST protocol (Cannot co-exist with the corresponding configuration of the Binary protocol)

```
{
"market": "SH",
"securityType": "03",
"outputFilePath": "../data",
"fileName": "mkttdt01.txt",
"encode": "GBK",
"messageTemplate": "../conf/template/SSE_FIXT11.xml",
"fastTemplate": "../conf/template/SSE_ATP_MarketData_Templates.xml",
"fileTemplate": "../conf/template/SSE_ATP_FileWrite_Templates.xml",
"incInterval": "3000",
"lddsType": [1701]
},
```

// The mkttdt02.txt file configuration generated by the FAST protocol (Cannot co-exist with the corresponding configuration of the Binary protocol)

```
{
"market": "SH",
"securityType": "12",
"outputFilePath": "../data",
"fileName": "mkttdt02.txt",
"encode": "GBK",
"messageTemplate": "../conf/template/SSE_FIXT11.xml",
```

```

"fastTemplate": "../conf/template/SSE_ZQ_MarketData_Templates.xml",
"fileTemplate": "../conf/template/SSE_ZQ_FileWrite_Templates.xml",
"incInterval": "3000",
"lddsType": [5401]
},
//Independent IOPV file configuration
{
"market": "SHBIN",
"securityType": "14",
"outputFilePath": "../data",
"fileName": "mkttdte.txt",
"encode": "GBK",
"messageTemplate": "../conf/template/SSE_FIXT11.xml",
"fastTemplate": "../conf/template/SSE_MKTDTE_MarketData_Templates.xml",
"fileTemplate": "../conf/template/SSE_MKTDTE_FileWrite_Templates.xml",
"incInterval": "3000",
"lddsType": [3701]
},
{
"market": "SH",
"securityType": "60",
"outputFilePath": "../data",
"fileName": "csiYYYYMMDD.txt",
"encode": "GB18030",
"messageTemplate": "../conf/template/SSE_FIXT11.xml",
"fastTemplate": "../conf/template/SSE_CSI_MarketData_Templates.xml",
"fileTemplate": "../conf/template/SSE_CSI_FileWrite_Templates.xml",
"incInterval": "3000",
"lddsType": [7301]
},
{
"market": "SH",
"securityType": "61",
"outputFilePath": "../data",
"fileName": "se015cjhqYYYYMMDD001.txt",
"encode": "GBK",
"messageTemplate": "../conf/template/SSE_FIXT11.xml",
"fastTemplate": "../conf/template/SSE_FI_CJHQ_MarketData_Templates.xml",
"fileTemplate": "../conf/template/SSE_FI_CJHQ_FileWrite_Templates.xml",
"incInterval": "3000",
"lddsType": [6302]
},
{

```

```

"market": "SH",
"securityType": "62",
"outputFilePath": "../data",
"fileName": "se015qdbjYYYYMMDD001.txt",
"encode": "GBK",
"messageTemplate": "../conf/template/SSE_FIXT11.xml",
"fastTemplate": "../conf/template/SSE_FI_QDBJ_MarketData_Templates.xml",
"fileTemplate": "../conf/template/SSE_FI_QDBJ_FileWrite_Templates.xml",
"incInterval": "3000",
"lddsType": [6304]
},
{
  "market": "SH",
  "securityType": "63",
  "outputFilePath": "../data",
  "fileName": "se015cjmxYYYYMMDD001.txt",
  "encode": "GBK",
  "messageTemplate": "../conf/template/SSE_FIXT11.xml",
  "fastTemplate": "../conf/template/SSE_FI_CJMX_MarketData_Templates.xml",
  "fileTemplate": "../conf/template/SSE_FI_CJMX_FileWrite_Templates.xml",
  "incInterval": "3000",
  "lddsType": [6301]
},
{
  "market": "SH",
  "securityType": "64",
  "outputFilePath": "../data",
  "fileName": "se015zqxxYYYYMMDD001.txt",
  "encode": "GBK",
  "messageTemplate": "../conf/template/SSE_FIXT11.xml",
  "fastTemplate": "../conf/template/SSE_FI_ZQXX_MarketData_Templates.xml",
  "fileTemplate": "../conf/template/SSE_FI_ZQXX_FileWrite_Templates.xml",
  "incInterval": "3000",
  "lddsType": [6303]
},
{
  "market": "SH",
  "securityType": "65",
  "outputFilePath": "../data",
  "fileName": "mktdt04.txt",
  "encode": "GBK",
  "messageTemplate": "../conf/template/SSE_FIXT11.xml",
  "fastTemplate": "../conf/template/SSE_HK_MarketData_Templates.xml",

```

```

"fileTemplate": "../conf/template/SSE_HK_FileWrite_Templates.xml",
"incInterval": "3000",
"lddsType": [2301]
},
{
  "market": "SH",
  "securityType": "67",
  "outputFilePath": "../data",
  "fileName": "trdses04.txt",
  "encode": "GBK",
  "messageTemplate": "../conf/template/SSE_FIXT11.xml",
  "fastTemplate": "../conf/template/SSE_TRDSES_MarketData_Templates.xml",
  "fileTemplate": "../conf/template/SSE_TRDSES_FileWrite_Templates.xml",
  "incInterval": "3000",
  "lddsType": [2201]
},
{
  "class": "com.sseinfonet.ce.dbf.app.VSSDbfHandler",
  "market": "BJ",
  "securityType": "68",
  "outputFilePath": "../data",
  "fileName": "NQHQ.dbf",
  "encode": "GBK",
  "messageTemplate": "../conf/template/SSE_FIXT11.xml",
  "fastTemplate": "../conf/template/SSE_NQHQ_MarketData_Templates.xml",
  "fileTemplate": "../conf/template/SSE_NQHQ_FileWrite_Templates.xml",
  "incInterval": "3000",
  "lddsType": [5101]
},
{
  "class": "com.sseinfonet.ce.smallfile.app.VSSSmallFileHandler",
  "market": "MOEX",
  "outputFilePath": "../data",
  "fileName": "imoex.html",
  "encode": "utf-8",
  "lddsType": [8302]
}],
"sub": [{
  "startTime": "800",
  "endTime": "1800",
  "conversation": "ldds",
  "master": [{

```

```

"uri": "tcp://127.0.0.1:8888", // This port will be same with the port of the "LDDS
行情服务".

"params": {
  "heartbeatInt": 6,
  "categoryList": "-1"
}
}],
"messagePool": {
  "size": "2000",
  "bufferSize": "262144"
},
//Level-2 Rebuild 配置
{
  "class": "com.sseinfo.lddsidc.thread.vde.VdeRebuildProxyThread",
  "messagePool": {
    "size": "50",
    "bufferSize": "2048576"
  },
  "listener": [{
    "port": "9130",
    "conversation": "step"
  }],
  "address": {
    "master": [{
      "uri": "tcp://201.1.5.15:5262", // Rebuilding server IP
      "categoryList": "-1"
    }],
    "slave": [{
      "uri": "tcp://201.1.5.13:5262", // Rebuilding server slave IP
      "categoryList": "-1"
    }]
  }
},
//请求文件配置
{
  "class": "com.sseinfo.lddsidc.thread.vss.RebuildClientThread",
  "filePath": "../data/static/<yyyyMMdd>", // Directory of static file
  "messagePool": {
    "size": "50",
    "bufferSize": "2048576"
  },

```

```

"address": {
  "master": [{
    "uri": "tcp://201.1.5.15:5262", // Rebuilding server IP
    "categoryList": "-1"
  }],
  "slave": [{
    "uri": "tcp://201.1.5.13:5262", // Rebuilding server slave IP
    "categoryList": "-1"
  }]
},
"rebuild": [{
  "conversation": "ldds",
  "params": {
    "category": "1",
    "messageType": 100001
  }
}],
},
//静态文件清单配置, 不配置会导致静态文件获取不到
{
  "class": "com.sseinfo.lddsidc.thread.vss.FileListThread",
  "sub": [{
    "startTime": "800", //Static data file subscription start time adjustment
    "endTime": "2330",
    "conversation": "ldds",
    "master": [{
      "uri": "tcp://127.0.0.1:8888", // This port will be same with the port of the "LDDS
      //行情服务".

      "params": {
        "name": "FileList",
        "category": 2,
        "heartbeatInt": 6
      }
    }]
  }],
  "messagePool": {
    "size": "1000",
    "bufferSize": "262144"
  }
},
//本地监控配置, 如果不配置"html"项, 可以从 8080 端口直接获得监控数据; 或者从组播地址
//获得监控数据
{

```

```
"class": "com.sseinfo.lddsidc.thread.MonitorThread",
"html": "../conf/moniter.html",
"listener": [{
  "port": "8080",      //Monitor port
}],
"messagePool": {
  "size": "10",
  "bufferSize": "65536"
}
}
}]
```

3.3.2 Configuration of castTable.json

This file is the configuration file of Level-1 market data protocol conversion. Normally, it is only applicable to user who need to receive FAST protocol market data.

The following is the description of “castTable.json” file:

```
{
  "fastTemplate": "../conf/template/SSE_GP_MarketData_Templates.xml",
  "ezeibinToFast": [
    // The configuration of auction Level-1 market data from Binary to FAST protocol
    {
      "category": 47,
      "msgType": 4701,
      "toCategory": 11,
      "toMsgType": 5302
    },
    // The configuration of Comprehensive Level-1 market data (after-market fixed
    price trading) from Binary to FAST protocol
    {
      "category": 48,
      "msgType": 4801,
      "toCategory": 17,
      "toMsgType": 1701
    },
    // The configuration of Options Level-1 market data from Binary to FAST protocol
    {
      "category": 49,
      "msgType": 4901,
      "toCategory": 30,
      "toMsgType": 9002
    }
  ]
}
```



```

    },
    // The configuration of Bond Level-1 market data from Binary to FAST protocol
    {
        "category": 50,
        "msgType": 5001,
        "toCategory": 54,
        "toMsgType": 5401
    }]
}

```

3.4 Start script configuration

3.4.1、The script configuration on the Windows Environment

```

@echo off
title SSEINFONET-LDDS-VDE-TEST

set JAVA_HOME=C:\Program Files\Java\jre1.8.0_91 // Setting up JAVA according to local path

set JAVA="%JAVA_HOME%\bin\java"
set basedir=d:\ldds-vde-V4.0.3 // Setting up VDE according to local path

set CLASSPATH=.
set CLASSPATH=%CLASSPATH%;%basedir%
set CLASSPATH=%CLASSPATH%;%basedir%\lib\bcprov-jdk18on-1.76.jar
set CLASSPATH=%CLASSPATH%;%basedir%\lib\codec-loader.jar
set CLASSPATH=%CLASSPATH%;%basedir%\lib\dom4j-2.1.4.jar
set CLASSPATH=%CLASSPATH%;%basedir%\lib\ezsoft_step.jar
set CLASSPATH=%CLASSPATH%;%basedir%\lib\hamcrest-core-1.3.jar
set CLASSPATH=%CLASSPATH%;%basedir%\lib\json-20240303.jar
set CLASSPATH=%CLASSPATH%;%basedir%\lib\ldds_pipe.jar
set CLASSPATH=%CLASSPATH%;%basedir%\lib\log4j-api-2.19.0.jar
set CLASSPATH=%CLASSPATH%;%basedir%\lib\log4j-core-2.19.0.jar
set CLASSPATH=%CLASSPATH%;%basedir%\lib\openfast-1.1.2.jar
set CLASSPATH=%CLASSPATH%;%basedir%\lib\ldds-vde.jar
set CLASSPATH=%CLASSPATH%;%basedir%\conf

set sysprops=
set sysprops= %sysprops% -server
set sysprops= %sysprops% -Xms1024M -Xmx4096M

```

```
rem set sysprops= %sysprops% -XX:NewRatio=2 -XX:+AggressiveHeap
rem set sysprops= %sysprops% -XX:CompileThreshold=100
rem set sysprops= %sysprops% -verbose:GC -XX:+PrintGCDetails -XX:+PrintGCTimeStamps
set sysprops= %sysprops% -Djava.net.preferIPv4Stack=true

%JAVA% %sysprops% -cp "%CLASSPATH%"
com.sseinfo.lddsidc.boot.Main ../conf/vde.json ../conf/log4j2-vde.xml
pause;
```

3.4.2、The script configuration on the Linux Environment

```
#!/bin/sh
#
# (llds-vde) startup script...
#
#
# java setup...

JAVA_HOME="/level2/jre1.8.0_91/" // Setting up JAVA according to local path
JAVA="{JAVA_HOME}/bin/java"

# check if there is an existing instance running...
PID=`ps auxwwwww | grep java | grep vde.json | awk '{ print $2 }'`
if [ ${PID}x != x ]
then
    echo "vde is already running (pid: ${PID})..."
    exit 0
fi

basedir="/level2/llds-vde-V4.0.3/" // Setting up VDE according to local path

CLASSPATH=
CLASSPATH=${CLASSPATH}:${basedir}
CLASSPATH=${CLASSPATH}:${basedir}/lib/bcprov-jdk18on-1.76.jar
CLASSPATH=${CLASSPATH}:${basedir}/lib/codec-loader.jar
CLASSPATH=${CLASSPATH}:${basedir}/lib/dom4j-2.1.4.jar
CLASSPATH=${CLASSPATH}:${basedir}/lib/ezsoft_step.jar
CLASSPATH=${CLASSPATH}:${basedir}/lib/hamcrest-core-1.3.jar
CLASSPATH=${CLASSPATH}:${basedir}/lib/json-20240303.jar
CLASSPATH=${CLASSPATH}:${basedir}/lib/llds_pipe.jar
CLASSPATH=${CLASSPATH}:${basedir}/lib/log4j-api-2.19.0.jar
CLASSPATH=${CLASSPATH}:${basedir}/lib/log4j-core-2.19.0.jar
CLASSPATH=${CLASSPATH}:${basedir}/lib/openfast-1.1.2.jar
CLASSPATH=${CLASSPATH}:${basedir}/lib/llds-vde.jar
CLASSPATH=${CLASSPATH}:${basedir}/conf

sysprops=
sysprops="${sysprops} -server"
sysprops="${sysprops} -Xms1024M -Xmx4096M "
```

```
# sysprops="${sysprops} -XX:NewRatio=2 -XX:+AggressiveHeap "  
# sysprops="${sysprops} -XX:CompileThreshold=100"  
# sysprops="${sysprops} -verbose:GC -XX:+PrintGCDetails -XX:+PrintGCTimeStamps"  
sysprops="${sysprops} -Djava.net.preferIPv4Stack=true"
```

```
CMD="${JAVA} ${sysprops} - cp ${CLASSPATH}  
com.sseinfo.lddsidc.boot.Main ../conf/vde.json ../conf/log4j2-vde.xml"  
echo ${CMD}  
${CMD}
```

3.5 Monitoring Page

You can visit: [http:// VDE local IP:8080/](http://VDE local IP:8080/) (chrome 、firefox)

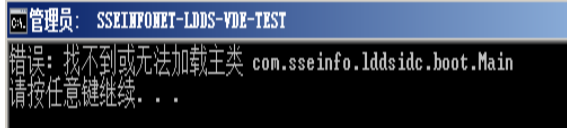
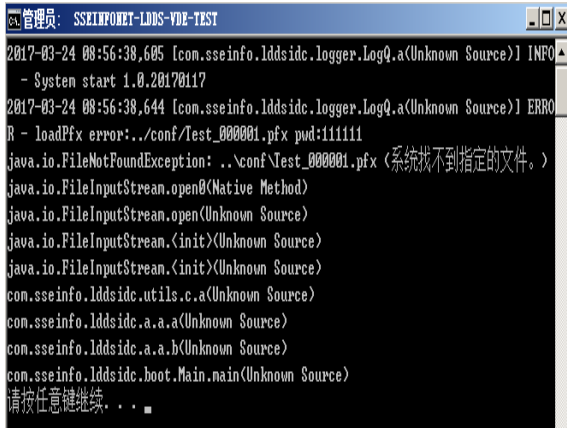
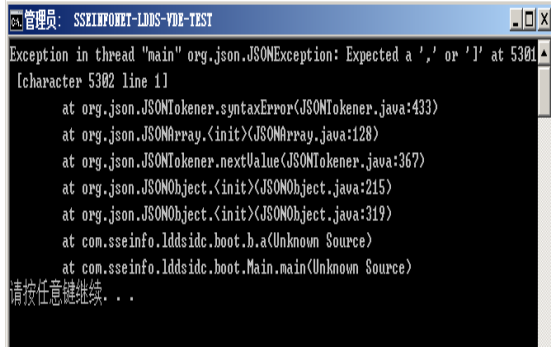
应用程序状态监控

主机	IP	证书	消息发送 总数	消息发送总数 大小	接收消息 总数	接收消息总 大小	输入带 宽	输出带 宽	平均延 时	最大延 时	丢包总 数	上次丢包时间	未发送消息 数量	应用启动时间	系统状 态
host_Vendor 0 00098	172.39.14 6.50	1	6410566	4729057407	26666121	193614777 36	22503 9	11331 5	-3959	24023	11	2018-08-30 11: 50:42	407305	2018-08-10 08: 22:01	可用

Name	Explain
主机	According to “name” in vde.json
IP	According to “ip” in vde.json
证书	0 certify fail, 1 certify success, 2 no need to certify
消息发送总数	Total number of messages sent by VDE, unit is “packet”
消息发送总数大小	Total size of messages sent by VDE, unit is “Byte”
接收消息总数	Total number of messages received by VDE ,unit is “packet”
接收消息总大小	Total size of messages received by VDE, unit is “Byte”
输入带宽	Input bandwidth of VDE ,unit is “Byte/s”
输出带宽	Output bandwidth of VDE ,unit is “Byte/s”
平均延时	When VDE receives data, it compares the time with the local time. The difference is the delay time, unit is “ms”
最大延时	Max delay of VDE , unit is “ms”
丢包总数	Total package lost of VDE, unit is “packet”
上次丢包时间	Time of the VDE last package lost
未发送消息数量	Total number of undelivered messages, unit is “packet”
应用启动时间	Start Time of VDE
系统状态	Status of VDE

4. The description of common error messages in VDE programs

4.1、Troubleshooting of Common Error Messages

Error message	Reason	Measures taken
	The Java environment path is incorrect	modify “set JAVA_HOME= “in vde.bat
	basedir path is incorrect, should be the path of LDSS folder	Fill the right path of LDSS Example : set basedir=D:\ldds-vde-V3.3.3 or the Relative path: set basedir=..\
	\\ldds-vde-V3.3.3\conf\vde.json Certificate file Configured problem Or in the path: \\ldds-vde-V3.3.3\conf\ the certificate file does not exit.	Write the right certificate file name, modify the configuration.
Expected a ', ' or ']' 	\\ldds-vde-V3.3.3\conf\vde.json Certificate file Configured problem	wrong format in vde.json, check reconfiguration]
Error occurred during initialization of VM	Memory set in vde.bat/vde.sh of the server is too small	Modify “set sysprops=%sysprops% -Xms2048M -Xmx4096” in vde.bat/vde.sh

java.lang. OutOfMemoryError	Lack of memory	Modify “set sysprops=%syspr ops% -Xms2048M - Xmx4096” in vde.bat/vde.sh or add memory
JSONObject [“class”] not found]	vde.json wrong configured	Check whether the punctuation marks are correct in notvde.bat/vde.
Auth error:auth:user or password er	1. Certification wrong configured in vde.json 2. The client’s server time deviates too much	1. Configure the vde.json according to manual 2. Check the client’s server time
Not contain xxx	Configuration of the market data without permission	Check the market data category configured in vde.json or contact CIIS for help
Not allow multi subscribe	Multiple Start of VDE	Disconnect the redundant VDE, only allow one session per Ecrt.
ServerSocketChannel error, port:xxxx	Port occupied	Modify the port
Create a new message buffer size	Multiple VSS connect to VDE	Disconnect the redundant VSS, only allow one VSS per VDE.

4.2、Meaning of Error Log

Error message	Reason	Measures taken
Log error: "lost message from"	Packet Loss Caused by Network Instability	It is normal to lose packets occasionally. If you lose packets for a long time, need to check the network, increase bandwidth, or maintain network stability.
Log error: "lost message from" And cannot receive market data	Incorrect configuration of according port number	vde.json Port of "LDDS 行情服务" in vde.json should be same with port of "master": [{"uri": "tcp://127.0.0.1:8888"}]

4.3、Related questions of configuration

Q1: How to select or adjust the VDE configuration when the Shanghai Stock Exchange Level-1 market data (including auction, bonds, options, and after-market fixed price trading market data) uses the Binary protocol?

A: The default configuration file in the VDE package can be used directly, and no other configuration content needs to be adjusted except for basic user information and market access addresses.

Q2: How to select or adjust the VDE configuration when the Shanghai Stock Exchange Level-1 market data (including auction, bonds, options, and after-market fixed price trading market data) uses the FAST protocol?

A: You can directly use the "sample_vde_L1fast.json" file in the "..\conf\sample" to replace the "vde.json" in the "..\conf".

Q3: How to adjust the VDE configuration when different types of Shanghai Stock Exchange Level-1 market data are received using different protocols? For example: Binary protocol is used to receive auction quotations; FAST protocol is used to receive Options, bonds and after-market fixed price trading quotations.

A: Taking the situation of "Auction Level-1 market data using Binary protocol and other Level-1 market data using FAST protocol" as an example, the following configuration content needs to be adjusted:

1) The Binary market service port configuration in the "vde.json" file only retains the auction Level-1 market data category (47), as shown below:

```
},
"thread": [
{
  "class": "com.sseinfo.lddsidc.thread.vde.VdeRealTimeThread",
  "listener": [
    //Binary行情服务端口配置
    {
      "port": "9126",
      "conversation": "ezeiToBin",
      "params": {
        "heartbeatInt": 0,
        "categoryList": "47"
      }
    },
    //FAST行情服务端口配置
    {
      "port": "9129",
      "conversation": "step",
      "params": {
        "heartbeatInt": 0,
        "categoryList": "-1"
      }
    }
  ]
},
],
```

2) The “vde.json” json file needs to add the Shanghai Stock Exchange Level-1 market data configuration line (From Binary to FAST) and enable the “castTable.json” file, as shown below:

```

    }
  }],
  //从服务器订阅数据
  "sub": [
    {
      "startTime": "800",
      "endTime": "1800",
      "conversation": "ldds",
      "master": [
        {
          "uri": "tcp://114.28.169.7:5261",
          "params": {
            "heartbeatInt": 6,
            "castTable": "../conf/template/castTable.json",
            "categoryList": "-1"
          }
        }
      ]
    },
    {
      "uri": "tcp://114.28.169.7:5261",
      "params": {
        "heartbeatInt": 6,
        "castTable": "../conf/template/castTable.json",
        "categoryList": "-1"
      }
    }
  ]
},
//缓存配置, 设置size越大, 可以缓存数据越多
"messagePool": {
  "size": "10000",
  "bufferSize": "262144"
}
}

```

3) The configuration of the “vde.json” file is adjusted, each Level-1 market data file needs to be adjusted to the corresponding protocol configuration section. Specifically, the vde.json instance file in Chapter 3.3.1 above can be selected and configured according to actual needs, as shown below:

// The mkttdt00.txt file configuration generated by the Binary protocol (Cannot exist at the same time as the corresponding configuration of the FAST protocol exist)

```
"market": "SHBIN",
"securityType": "01",
"outputFilePath": "../data",
"fileName": "mkttdt00.txt",
"encode": "GBK",
"messageTemplate": "../conf/template/SSE_FIXT11.xml",
"fastTemplate": "../conf/template/SSE_GP_MarketData_Templates.xml",
"fileTemplate": "../conf/template/SSE_GP_FileWrite_Templates.xml",
"incInterval": "3000",
"lddsType": [4701]
},
```

// The mkttdt03.txt file configuration generated by the FAST protocol (Cannot exist at the same time as the corresponding configuration of the Binary protocol exist)

```
{
"market": "SH",
"securityType": "02",
"outputFilePath": "../data",
"fileName": "mkttdt03.txt",
"encode": "GBK",
"messageTemplate": "../conf/template/SSE_FIXT11.xml",
"fastTemplate": "../conf/template/SSE_QQ_MarketData_Templates.xml",
"fileTemplate": "../conf/template/SSE_QQ_FileWrite_Templates.xml",
"incInterval": "500",
"lddsType": [9002]
},
```

// The mkttdt01.txt file configuration generated by the FAST protocol (Cannot exist at the same time as the corresponding configuration of the Binary protocol exist)

```
{
"market": "SH",
"securityType": "03",
"outputFilePath": "../data",
"fileName": "mkttdt01.txt",
"encode": "GBK",
"messageTemplate": "../conf/template/SSE_FIXT11.xml",
"fastTemplate": "../conf/template/SSE_ATP_MarketData_Templates.xml",
"fileTemplate": "../conf/template/SSE_ATP_FileWrite_Templates.xml",
"incInterval": "3000",
"lddsType": [1701]
},
```

// The mkttdt02.txt file configuration generated by the FAST protocol (Cannot exist at the same time as the corresponding configuration of the Binary protocol exist)

```
{
  "market": "SH",
  "securityType": "12",
  "outputFilePath": "../data",
  "fileName": "mkttdt02.txt",
  "encode": "GBK",
  "messageTemplate": "../conf/template/SSE_FIXT11.xml",
  "fastTemplate": "../conf/template/SSE_ZQ_MarketData_Templates.xml",
  "fileTemplate": "../conf/template/SSE_ZQ_FileWrite_Templates.xml",
  "incInterval": "3000",
  "lddsType": [5401]
},
```

4) The configuration adjustment of "castTable.json" file protocol conversion, refer to Chapter 3.3.2 for adjustment according to your own situation, as shown below:

```
{
  "fastTemplate": "../conf/template/SSE_GP_MarketData_Templates.xml",
  "ezeibinToFast": [
    {
      "category": 48,
      "msgType": 4801,
      "toCategory": 17,
      "toMsgType": 1701,
    },
    {
      "category": 49,
      "msgType": 4901,
      "toCategory": 30,
      "toMsgType": 9002,
    },
    {
      "category": 50,
      "msgType": 5001,
      "toCategory": 54,
      "toMsgType": 5401,
    }
  ]
}
```

Level-1综业行情Binary转FAST配置

Level-1期权行情Binary转FAST配置

Level-1债券行情Binary转FAST配置

Q4: When the Shanghai Stock Exchange Level-1 market data (including auction, bonds, options and after-market fixed price trading market data) is in file format, how to select or adjust the VDE

configuration?

A: The default configuration file in the VDE package can be used directly, and no other configuration content needs to be adjusted except for basic user information and market access addresses.

Q5: Does receiving Shanghai Stock Exchange Level-2 market data involve VDE configuration adjustments?

A: Shanghai Level-2 market data only support the FAST protocol in streaming, and receiving Shanghai Level-2 market data does not involve configuration adjustments.

4.4、 Technical Specifications

<https://www.sseinfo.com/services/assortment/document/>