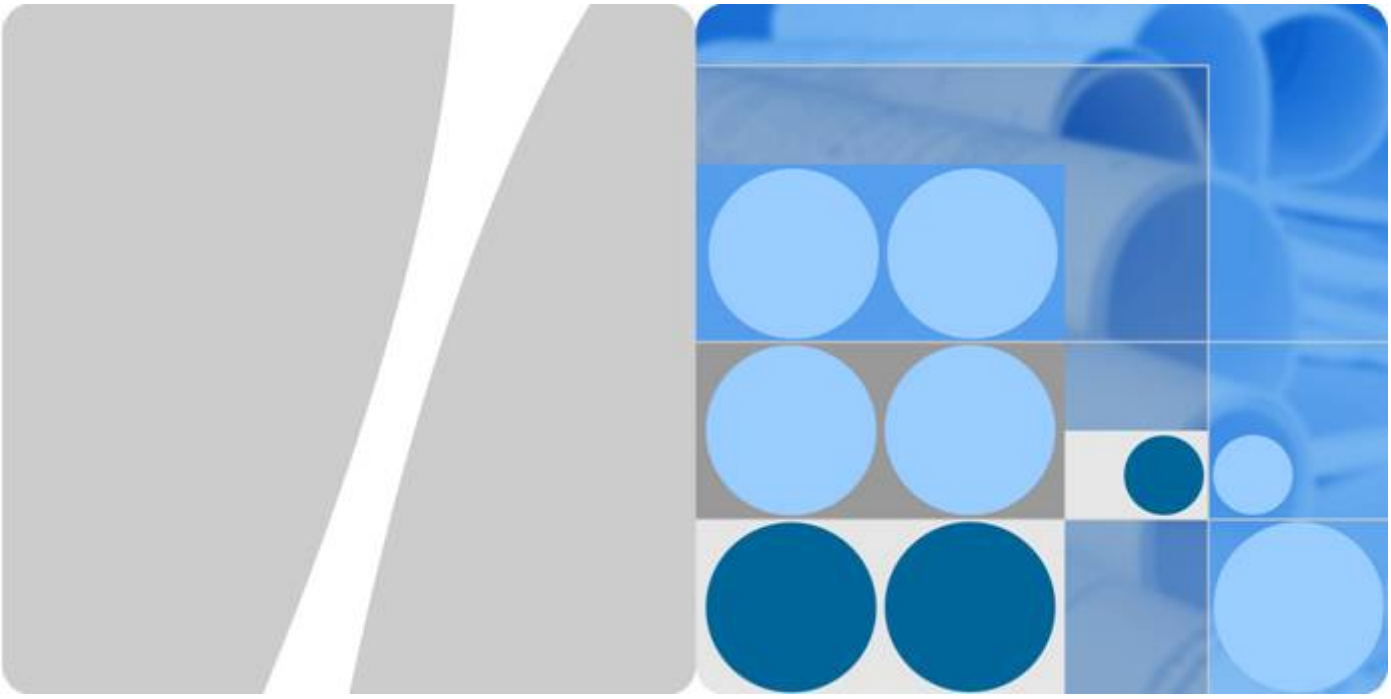

EC SDK

6.1.T2

Demo Guide(JS)

Issue 01

Date 2018-06-08

HUAWEI TECHNOLOGIES CO., LTD.

HUAWEI

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1 Introduction

The CloudEC_Client_API_Demo_Windows_JS only fit to the CloudEC 6.1 solution. Based on the Web JS SDK, the CloudEC_Client_API_Demo_Windows_JS provides basic service implementation samples for third-party applications. Developers can customize interfaces based on the samples to develop their own special services.

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2 Quick Experience

2.1 Applying for a Service Account

Use Huawei eSDK RemoteLab Environment

For details on how to schedule and use RemoteLab, see the **RemoteLab operating instructions**. Obtain the service server address and service account information.

Use Cooperation Vendor's Own Test or Production Environment.

Contact the environment administrator to obtain the service server address and service account information.

2.2 Development Environment Preparation

Development Tool

- Operating System：Windows 7 Professional. Minimum hardware requirements: i5 processor and 4 GB memory.
- Visual Studio Code：VS Code 1.8.
- Browser compatibility component: webcomponentsjs-1.0.20: **available at a click**. The file is webcomponentsjs-1.0.20.zip. This component is used only for demonstration using multiple browsers and is not for commercial use.

SDK

- Visit **http://developer.huawei.com**，to obtain eSDK EC API V6.1.RC1 Windows_C.

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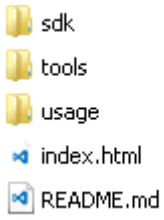
Demo

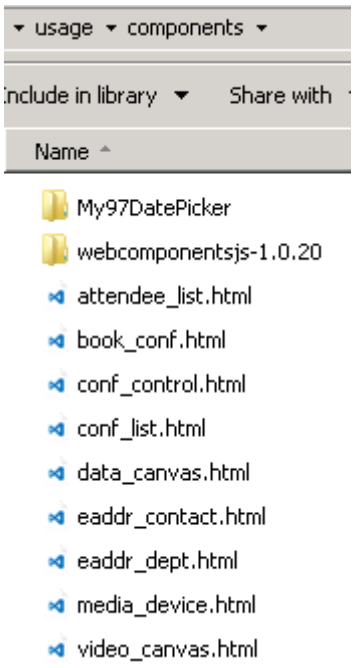
- Visit **https://github.com/Huawei**，to obtain CloudEC_Client_API_Demo_Windows_JS.

2.3 Importing SDK

Step 1 Decompress the downloaded demo source code and copy web_server_demo to the working directory.



Step 2 Decompress the downloaded webcomponentsjs-1.0.20.zip package to the \usage\components directory of the web_server_demo directory in the working directory.



----End

2.4 Debugging and Running Demo

Step 1 Open Visual Studio Code and import the demo project that was processed in section 2.3.

Step 2 Install and start the TSDK daemon. Double-click TSDK_XXX_BASE.exe to enter the installation wizard, and complete the installation according to the boot.

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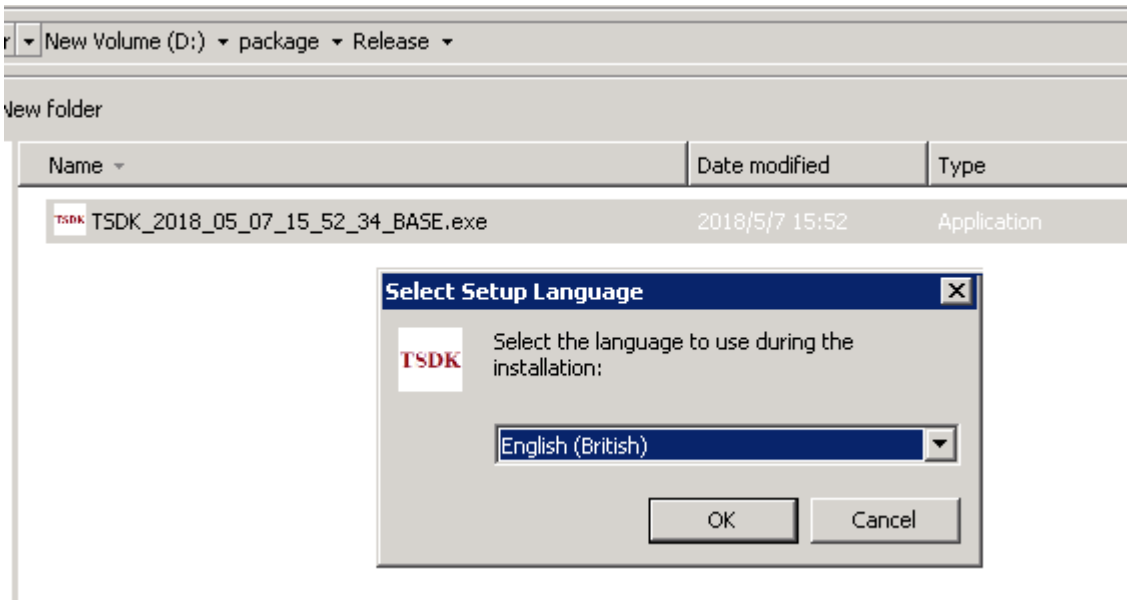
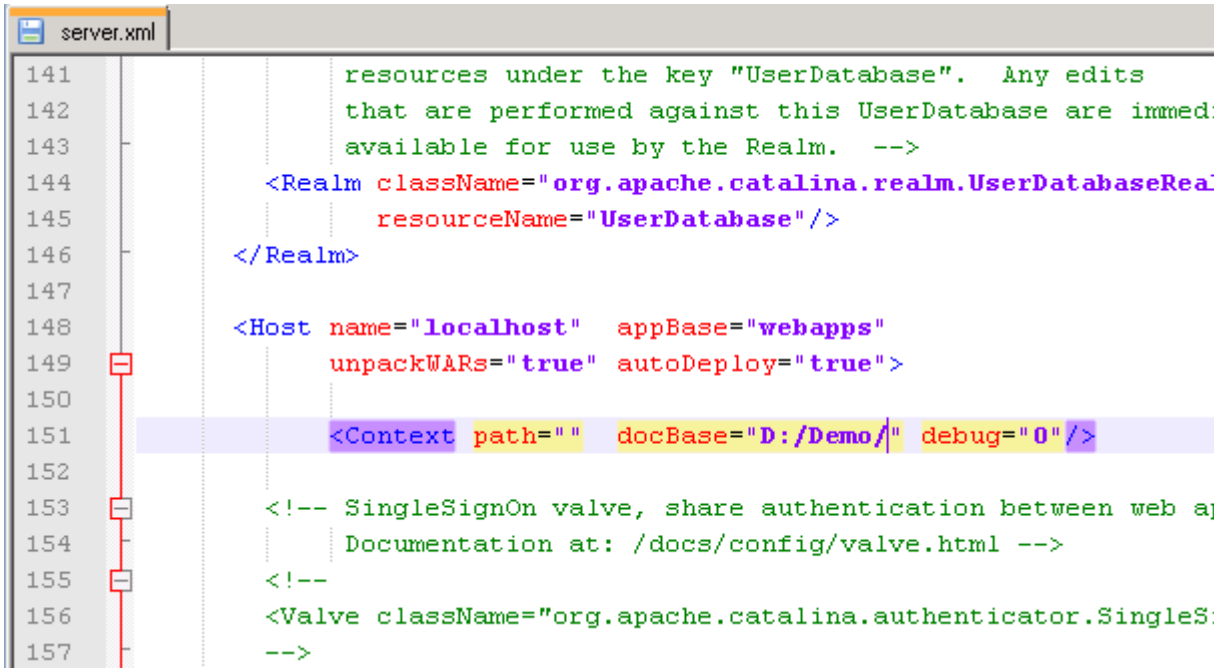


NOTE

For details on how to make the TSDK installation program, see section **Creating a TSDK Installation Package**

Step 3 Configure the path for Demo on the web server, and restart the web service. Tomcat 8.5.24 is used as an example, add context configurations in the host tag in the **conf/server.xml** file of Tomcat, set the path to the directory where the Demo directory is located, and restart Tomcat.



NOTE

First, verify that the Java running environment is correctly configured and Tomcat can be started properly.

Step 4 Visit **http://localhost:8080/** using a browser. For details about how to visit through HTTPS, see section **Configuring HTTPS Access**.

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NOTICE

The TSDK background process supports only one browser connection at a time. Therefore, do not open multiple browser windows at a time.

Step 5 Set the server address and port number, and enter the user name and password to log in to the server.

----End

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3 Demo Code Framework

3.1 Folder Structure

Figure 3-1 Folder Structure

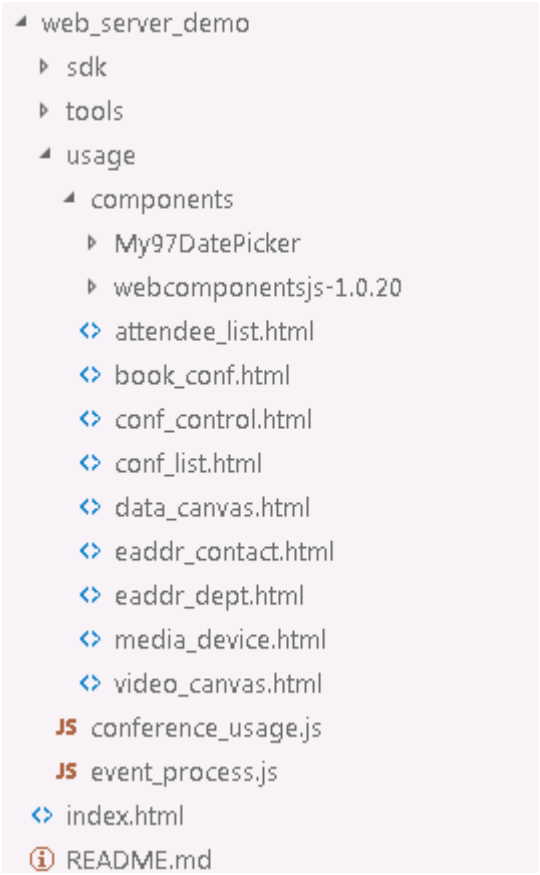

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Table 3-1 Folder Description

Folder	Description
sdk	SDK storage path
tools	JSSDK log analysis tool
usage	JSSDK interface invoking example (Including UI controls)
usage\conference_usage.js	Interface invoking example entry
usage\event_process.js	Interface callback event listener processing template
usage\components	UI component, invoke method according to function module example related interface
usage\components\attendee_list.html	Participant list component
usage\components\book_conf.html	Schedule a conference component
usage\components \conf_control.html	Conference control component
usage\components\conf_list.html	Conference information list component
usage\components\data_canvas.html	Data conference component
usage\components \eaddr_contact.html	Contacts of the address book component
usage\components\eaddr_dept.html	Department of the address book component
usage\components \media_device.html	Media device component
usage\components \video_canvas.html	Video conference component
usage\components\My97DatePicker	Third-party date component
usage\components \webcomponentsjs-1.0.20	Third-party components that support customized pages, compatible with multiple browsers.
index.html	Home page, function display area

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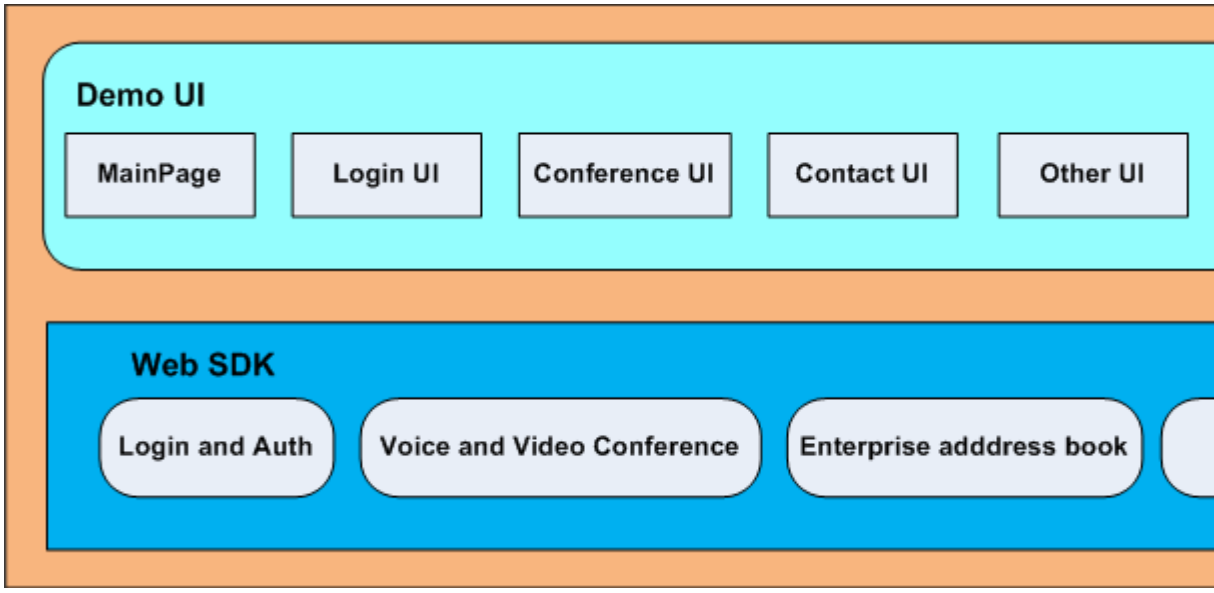
3.2 Logical framework



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4 Demo Function List

Function Item	Function Subitem	Open or Not	Whether Demo Is Supported
Initialization	createClient	Y	Y
	configure	Y	Y
Login Authentication	login	Y	Y
	logout	Y	Y
Scheduling a Conference	bookConference	Y	Y
	getMyConfList	Y	Y
	getMyConfInfo	Y	Y
	getConfHandler	Y	Y
Joining a Conference	joinConference	Y	Y
	joinInstanceConf	Y	Y
	joinAnonymousConf	Y	Y
	answerConference	Y	Y
Basic Conference Control	addAttendee	Y	Y
	delAttendee	Y	Y
	muteConference	Y	Y
	muteAttendee	Y	Y
	requestChairman	Y	Y
	releaseChairman	Y	Y
	handup	Y	Y
	leaveConf	Y	Y

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	endConf	Y	Y
Video Conference Control	setConfMode	Y	Y
	broadcastAttendee	Y	Y
	watchAttendee	Y	Y
	videoMute	Y	Y
	videoMute	Y	Y
Participant List	getAttendeeList	Y	Y
Screen Sharing	startScreenSharing	Y	Y
	stopScreenSharing	Y	Y
	answerScreenSharing	Y	Y
	requestRemoteCtrl	Y	Y
	answerRemoteCtrl	Y	Y
	setRemoteCtrl	Y	Y
Conference Messages	sendMessage	Y	Y
Media Devices	getMediaDevice	Y	Y
	setMediaDevice	Y	Y
	setVoiceVol	Y	Y
	getVoiceVol	Y	Y
Obtaining the Version Number	getVersion	Y	N
Corporate Directory	searchUserInfo	Y	Y
	searchDeptInfo	Y	Y

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5 Appendix

5.1 Configuring HTTPS Access

Purpose:

To ensure browser security, you need to encrypt WebSocket to use WSS instead of WS during HTTPS access. This section describes how to enable WSS connection in this scenario. The localhost domain name and a certificate of the corresponding domain name are involved.

The procedure is as follows:

Step 1 Verify that the HTTPS service has been enabled on the server. Take tomcat as an example:

```
    </Connector>
    -->

    <Connector port="8443" protocol="HTTP/1.1" SSLEnabled="true"
               maxThreads="150" scheme="https" secure="true"
               clientAuth="false" sslProtocol="TLS"
               keystoreFile="D:\server.keystore"
               keystorePass="123456">
               <UpgradeProtocol className="org.apache.coyote.http2.Http2Protoco
    </Connector>
```

Step 2 Install a security certificate in the local browser. You can use a generated certificated of the corresponding domain name, or the default factory certificate. The default certificate is stored in the TSDK installation directory (**server.crt**).

Step 3 Enable WSS configurations in a demo file.

```
var options = {
    domain: "localhost.cloudec.huaweicloud.com",
    isWSS:1,
    isTlsSupport:0,
    isWithSBC: 0,
    dropFrame: 2,
}
cloudEC.configure(options)
```


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CAUTION

If you cannot access the Internet, deploy a domain name server, set localhost.cloudec.yourcompany.com, and bind 127.0.0.1. The domain name can be customized, and the certificate of the corresponding domain name must be generated.

If you can access the Internet but the proxy is enabled, resolve the domain name and add proxy exceptions as shown in the following figure. Otherwise, you cannot visit any website because the certificate is not trusted.

----End

5.2 Creating a TSDK Installation Package

This section describes how to create, install, and uninstall a TSDK installation package, and how to customize parameters.

5.2.1 Environment Preparation

The following table lists the development environment requirements.

Environment or Tool Name	Required Versions	Description
Operating system	Windows 7 Professional	N/A
Inno Setup	5.5.9	**innosetup-5.5.9.exe**, **available at a click**.
Visual Studio	2008	For compiling source codes and generating **tsdk_service_tray.exe**. If the default tsdk_service_tray.exe is used, this tool is not required.
Microsoft Visual C++ 2008 Redistributable	9.0.30729.17	**vcredist_x86.exe**, **available at a click**

NOTE

The language file (**EnglishBritish.isl**) is stored in the **make_package_demo** directory in **CloudEC_Client_API_Demo_Windows_JS.zip**.

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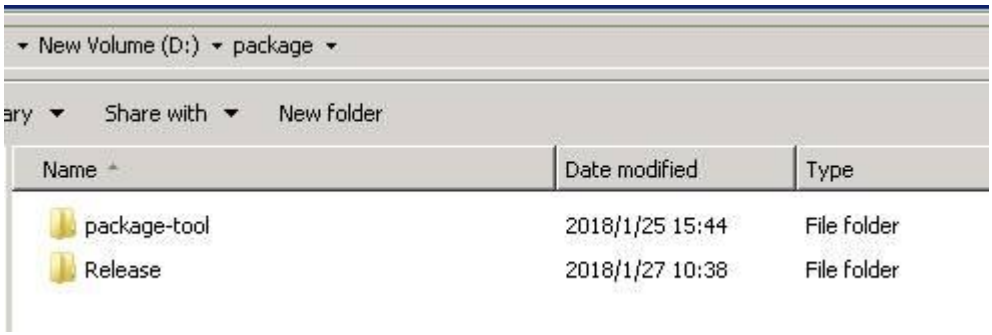
5.2.2 Quickly Creating a TSDK Installation Package

Step 1 Create a **package** directory, decompress **CloudEC_Client_API_Demo_Windows_JS.zip**, and copy the **package-tool** and **Release** folder in **make_package_demo** directory to the **package** directory of disk D.

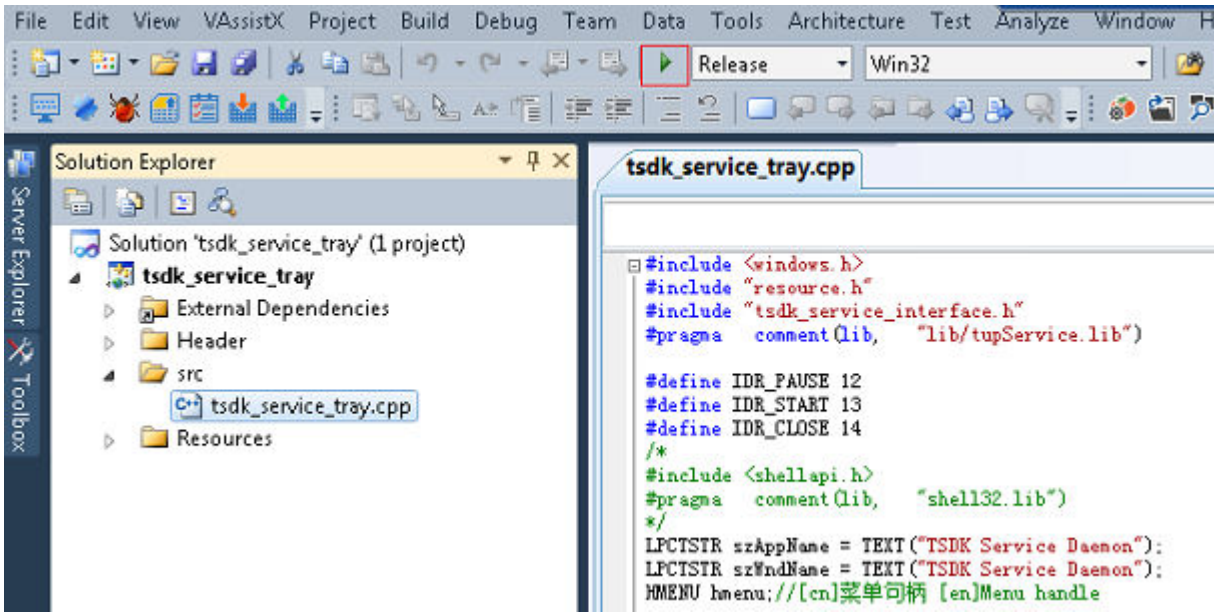


Step 2 Copy the downloaded **vcredist_x86.exe** file to **D:\package\package-tool**.

Step 3 Go to the **client_deamon_demo** directory of **CloudEC_Client_API_Demo_Windows_JS**.

a. If the default **tsdk_service_tray.exe** is used, copy the **tsdk_service_tray.exe** file in the **bin** directory to the **D:\package\package-tool\sdk** directory.

b. Copy the **tupService.lib** in **lib** folder of **eSDK_EC_API_XXX_windows_c.zip** (*XXX* indicates the version number) to **tsdk_service_tray\lib**. Use Visual Studio 2008 to open the **tsdk_service_tray.sln** file, and click the button to generate the **tsdk_service_tray.exe** file. Copy the **tsdk_service_tray.exe** file to **D:\package\package-tool\sdk**.



NOTE

The **tsdk_service_tray.exe** file needs to be compiled and generated only when you create a TSDK installation package the first time. It can be reused for subsequent creation.

Step 4 Prepare the library file to be depended on, and copy release library files in the **dll** folder of **eSDK_EC_API_XXX_windows_c.zip** (*XXX* indicates the version number) to **D:\package\package-tool\sdk**.

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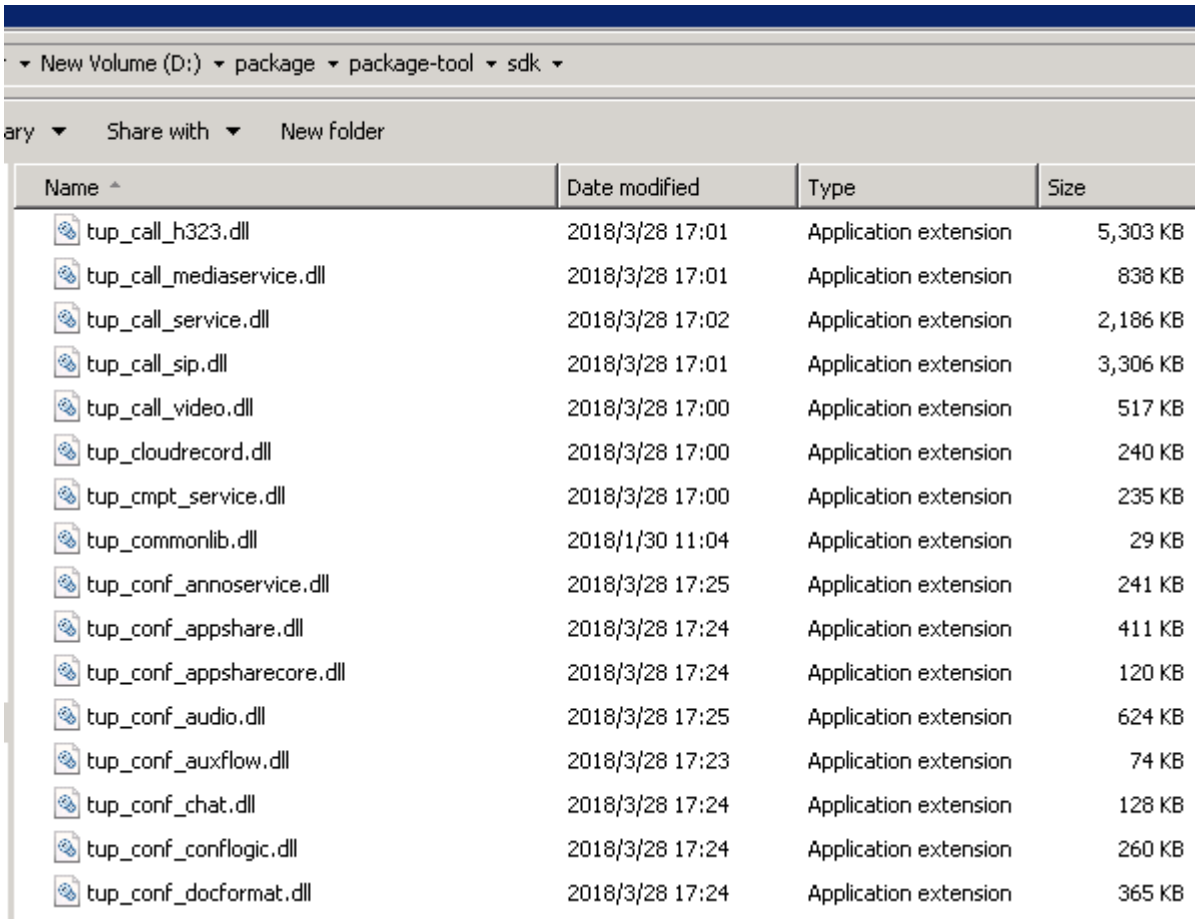

Name	Date modified	Type	Size
tup_call_h323.dll	2018/3/28 17:01	Application extension	5,303 KB
tup_call_mediaservice.dll	2018/3/28 17:01	Application extension	838 KB
tup_call_service.dll	2018/3/28 17:02	Application extension	2,186 KB
tup_call_sip.dll	2018/3/28 17:01	Application extension	3,306 KB
tup_call_video.dll	2018/3/28 17:00	Application extension	517 KB
tup_cloudrecord.dll	2018/3/28 17:00	Application extension	240 KB
tup_cmpt_service.dll	2018/3/28 17:00	Application extension	235 KB
tup_commonlib.dll	2018/1/30 11:04	Application extension	29 KB
tup_conf_annoservice.dll	2018/3/28 17:25	Application extension	241 KB
tup_conf_appshare.dll	2018/3/28 17:24	Application extension	411 KB
tup_conf_appsharecore.dll	2018/3/28 17:24	Application extension	120 KB
tup_conf_audio.dll	2018/3/28 17:25	Application extension	624 KB
tup_conf_auxflow.dll	2018/3/28 17:23	Application extension	74 KB
tup_conf_chat.dll	2018/3/28 17:24	Application extension	128 KB
tup_conf_conflogic.dll	2018/3/28 17:24	Application extension	260 KB
tup_conf_docformat.dll	2018/3/28 17:24	Application extension	365 KB

Step 5 Copy the **tup_service_deamon.exe** file from **D:\package\package-tool\sdk** to the current directory and rename it **tup_service_s.exe**.

Step 6 Install Inno Setup. After the installation is completed, copy **EnglishBritish.isl** to the **Inno Setup 5\Languages**. Start compiling the installation package. Specifically, double-click **TSDKpack.iss** in **D:\package\package-tool**, and then choose **Build** > **Compile** from the main menu or press Ctrl+F9 to start compiling the installation package.

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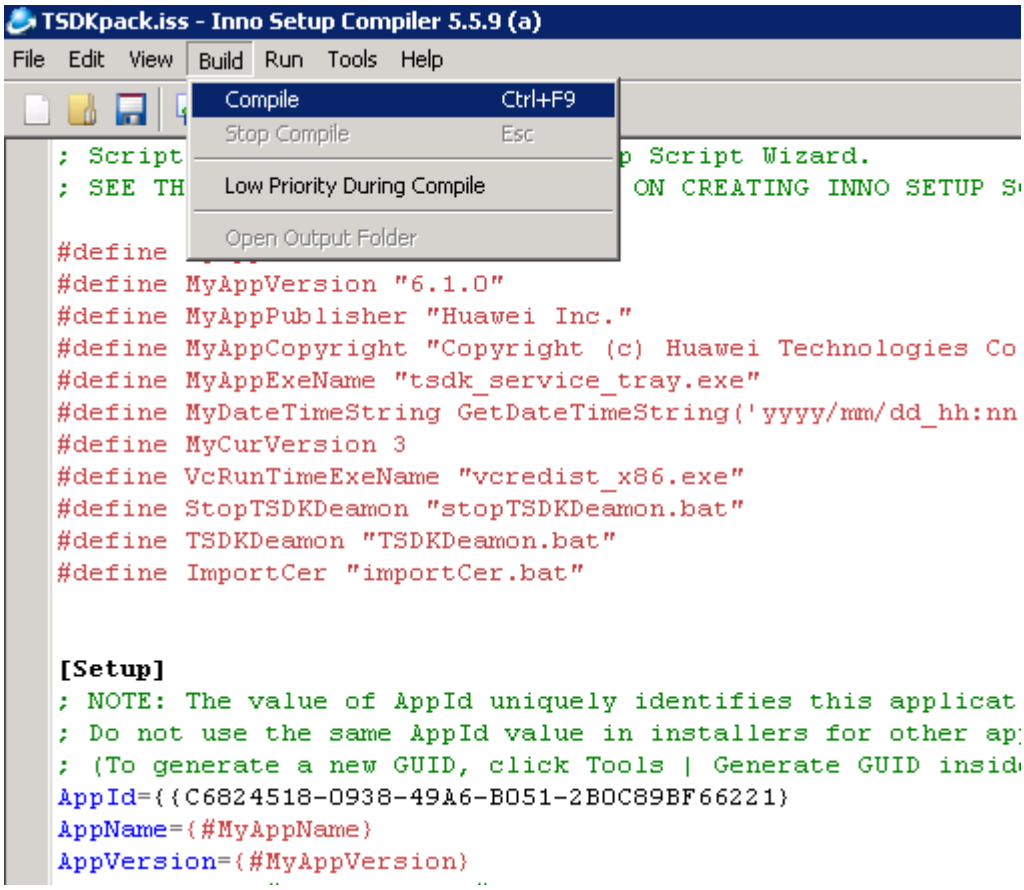
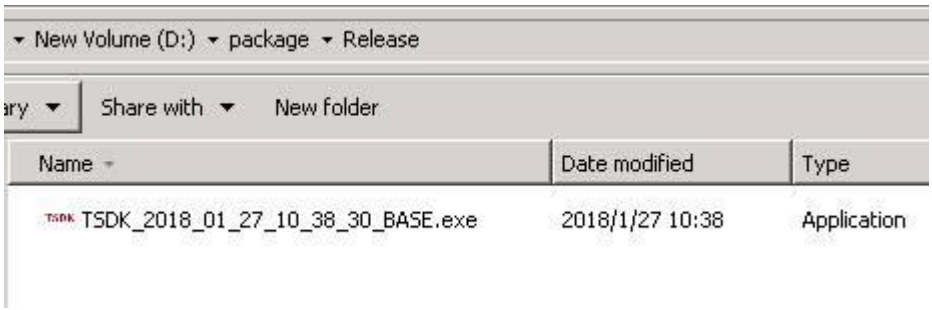


Step 7 Obtain the TSDK installation package. Specifically, after the compilation is completed, obtain the TSDK installation package from **D:\package\Release**.



----End

5.2.3 Installing or Uninstalling TSDK

- **Installation**

  Double-click the installation package (**TSDK_*XXX*_BASE.exe**) to access the installation wizard, and complete the installation according to the wizard.

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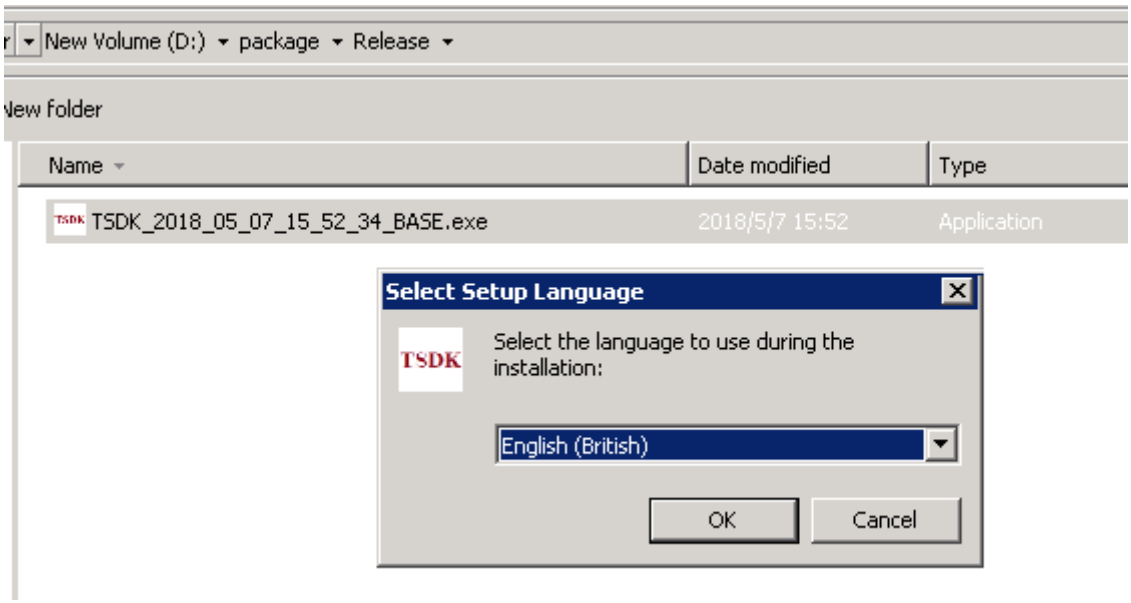
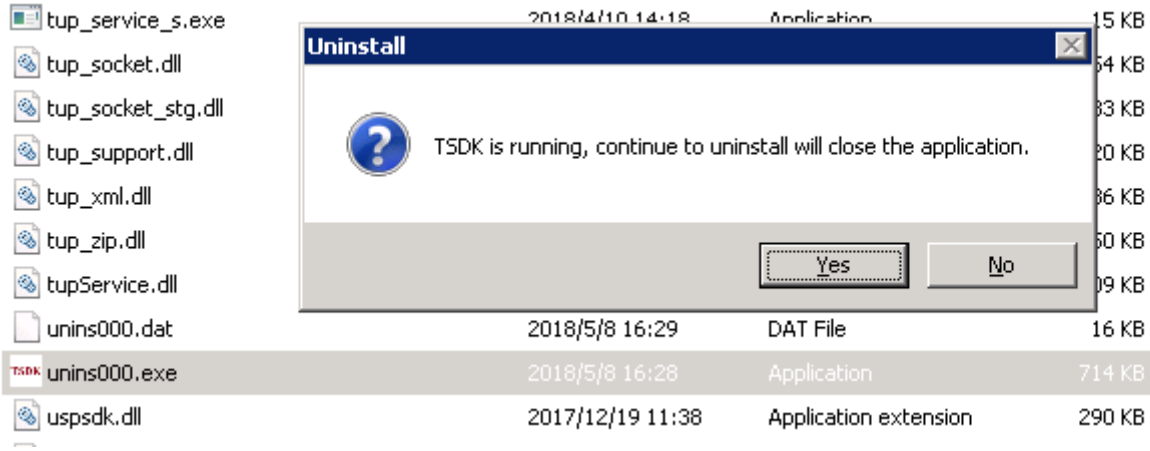


- **Uninstallation**

  In the TSDK installation directory, double-click **unins000.exe** to start the uninstallation wizard, and uninstall the TSDK according to the wizard.



5.2.4 Advanced Operations

5.2.4.1 Customizing the Directory for Storing the Package Directory

If you do not want to save the **package** directory to the root directory of disk D, you can modify the directory as required.

Specifically, place the entire **package** directory in the desire directory, open the **TSDKpack.iss** file in **\package\package-tool**, and modify the contents as shown in the following figures.

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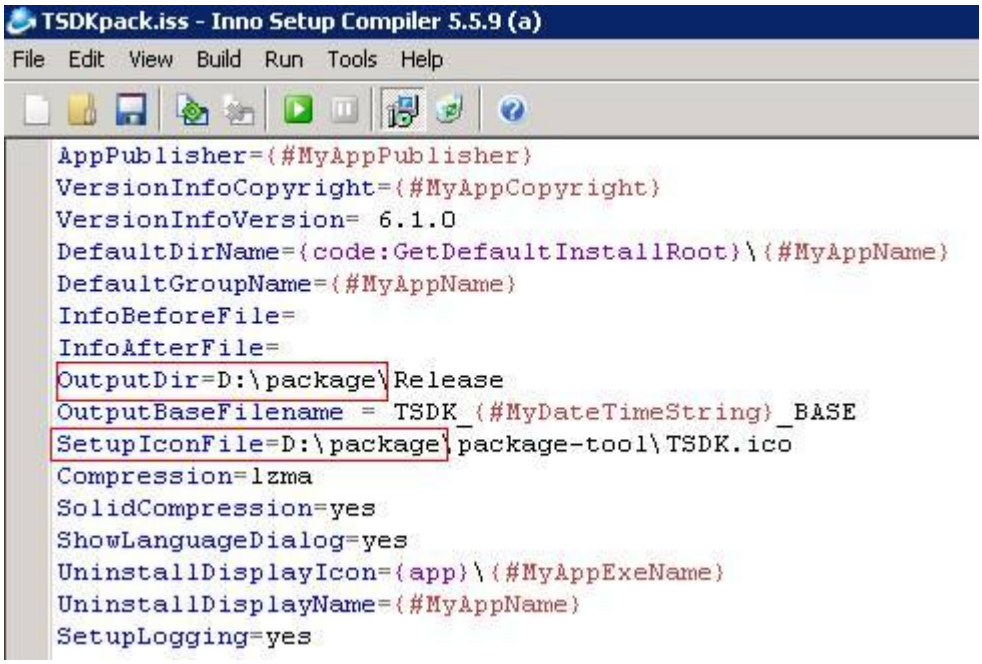

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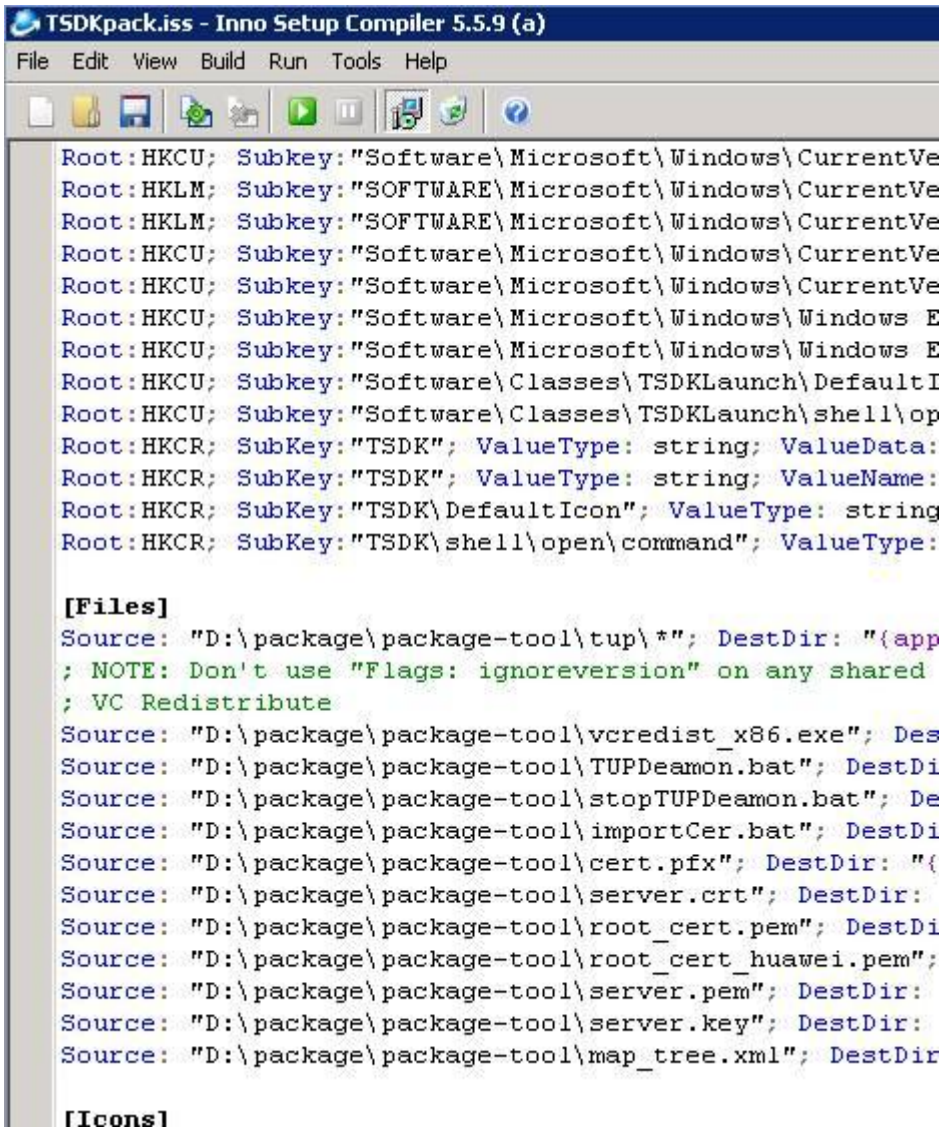
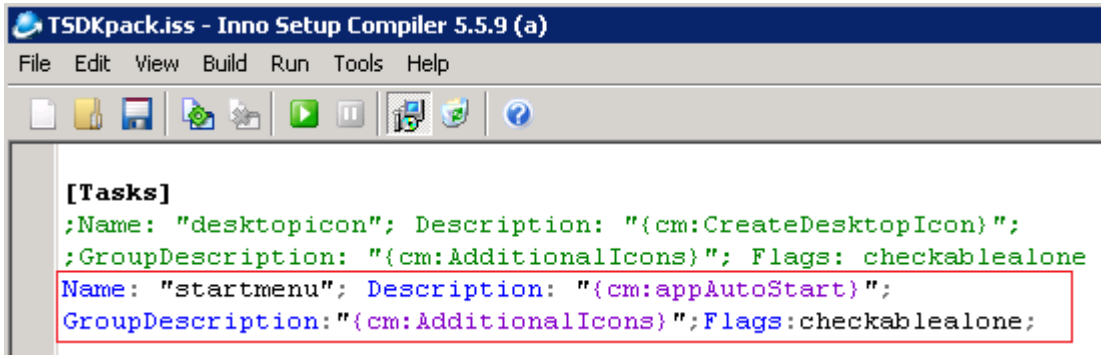


5.2.4.2 Configuring the Function of Automatic Startup upon Power-on

To modify the configurations for the function of automatic startup upon power-on, open the **TSDKpack.iss** file in **\package\package-tool** and modify the contents as shown in the following figures.



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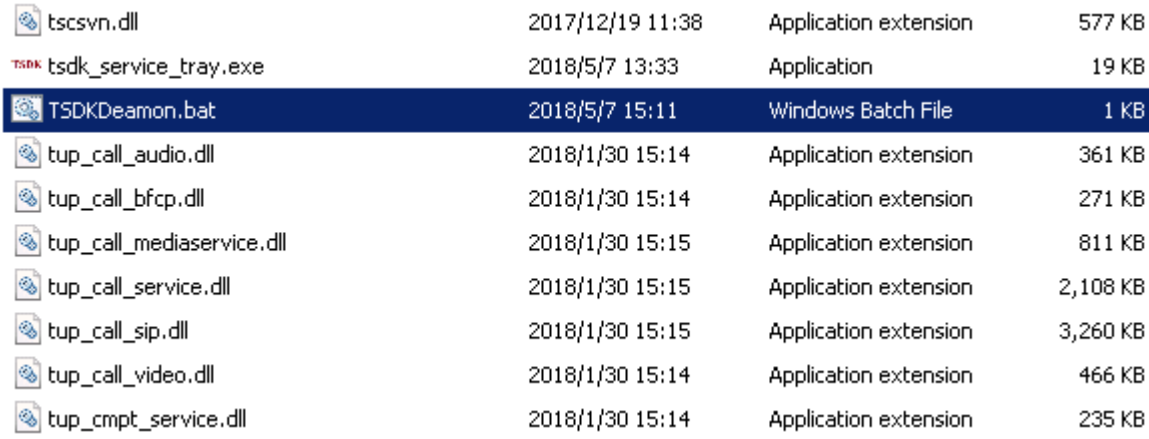
```
[Icons]
;Name: "{group}\{#MyAppName}"; Filename: "{app}\{#MyAppExeName}"
;Name: "{group}\Uninstall"; Filename: "{app}\unins000.exe"
;Name: "{commondesktop}\{#MyAppName}"; Filename: "{app}\{#MyAppExeName}"; Tasks: desktopico
;Boot mode: create shortcuts in the start menu startup directory.
Name: "{userstartup}\{#TSDKDeamon}"; Filename: "{app}\{#TSDKDeamon}";  Tasks: startmenu
```

NOTE

To manually start the TSDK, double-click **TSDKDeamon.bat** in the TSDK installation directory to start the TSDK.



5.2.4.3 Modifying the Certificate and Service Ports

To modify parameters such as the TSDK certificate and service port, use an editor tool to open the **TSDKDeamon.bat** file in **\package\package-tool**, and modify the related contents as required.

TSDKDeamon.bat

```
22  ::sc create tup_service_d binPath= "\"%paths%tup_service_d.exe\" --ss
    --resource_path=\"%appdata%\TSDK/\" --log_path=\"%appdata%\TSDK\log/\
    --cert_file=\"%paths%server.pem\" --key_file=\"%paths%server.key\"
    --winservice  "
23  ::sc config tup_service_d start= auto
24  ::net start tup_service_d
25  start "" "%paths%tsdk_service_tray.exe" --ssl  --resource_path="%appd
    \TSDK/" --log_path="%appdata%\TSDK\log/" --cert_file="%paths%server.p
    --key_file="%paths%server.key" --ws_port=7684
26
```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6 Change History

Date	Issue	Change Description
2018-05-31	01	Cooperate 6.1.0 version(at present only fit to convergent meeting network), document first published.

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