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Amesim and matlab joint simulation - detailed process of environment configuration

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The software installation versions of this article are AMESim2020, MATLAB2020b, and the compiler is Microsoft Visual Studio 2019. The installation order is: Microsoft Visual Studio 2019—AMESim2020—MATLAB2020b.

After the installation is complete, environment variables need to be configured. "Right-click the computer-Properties-Advanced system settings-Environment variables" and add user variables and system variables.

1. Add user variables.

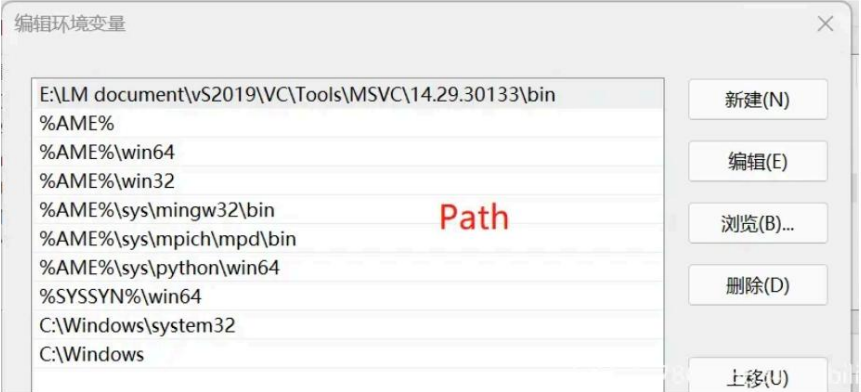
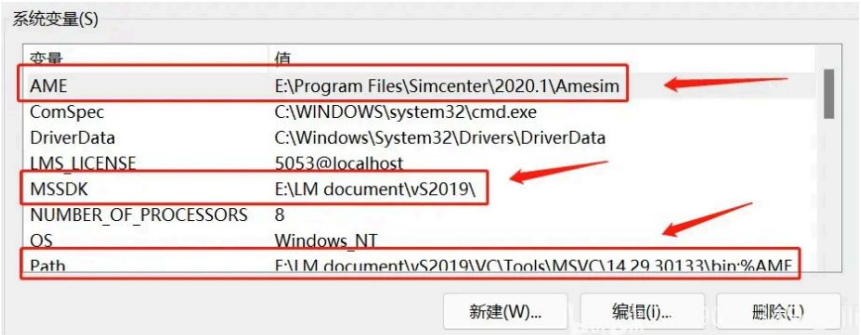
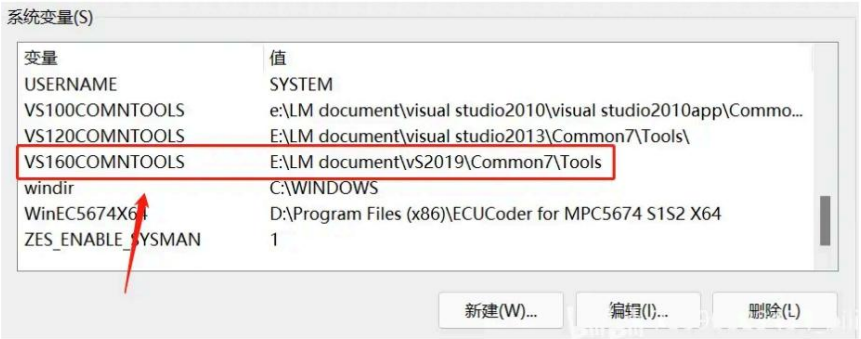
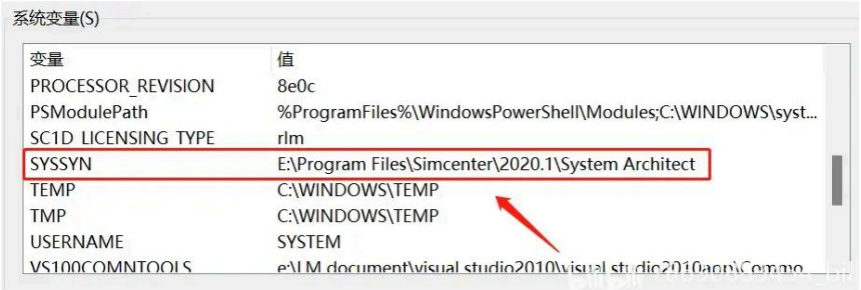
Add HOME as drive E, add the variable name MATLAB based on its own installation path, and add variables in Path as follows:

root 的用户变量(U)	
变量	值
HOME	E:\
MATLAB	E:\LM document\matlab2020b
OneDrive	C:\Users\root\OneDrive
Path	C:\Users\root\AppData\Local\Microsoft\WindowsApps;E:\LM docu...
TEMP	C:\Users\root\AppData\Local\Temp
TMP	C:\Users\root\AppData\Local\Temp

编辑环境变量	
%USERPROFILE%\AppData\Local\Microsoft\WindowsApps	Path
E:\LM document\matlab2020b\bin	
E:\LM document\matlab2020b\bin\win64	
%USERPROFILE%\dotnet\tools	
E:\LM document\vs2019\VC	
E:\LM document\vs2019\Common7\Tools	
E:\LM document\vs2019\VC\Tools\MSVC\14.29.30133\bin\Hostx64\...	
E:\LM document\vs2019\VC\Tools\MSVC\14.29.30133\bin\Hostx86\...	
E:\LM document\vs2019\VC\Auxiliary\Build	
E:\LM document\vs2019\VC\Auxiliary\VS	
	新建(N)
	编辑(E)
	浏览(B)...
	删除(D)
	上移(U)

2. Add system variables

Add SYSSYN and AME to the AMESim installation path, and add MSSDK and VS160COMNTOOLS to the Microsoft Visual Studio 2019 installation path. And add variables in Path as follows:



3. System settings

To prevent garbled errors, "Click Control Panel-Clock and Region-Region-Management-Change System Regional Settings" and check the Beta version before restarting.

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4. Modify file information

- (1) Find the vcvars64_vc140.bat file in the AMESim installation path



 vcvars64_vc140

- (2) Right-click to edit and open it with Notepad. If the path is consistent with the picture below, the compiler path has been found. Otherwise, you need to modify the file content according to the picture below and combine it with your own installation path.

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```

@echo off
set VS_FOUND=0

REM Looking for Visual Studio 2019 compiler
if DEFINED VS160COMNTOOLS call "%VS160COMNTOOLS%\\..\\..\\VC\\Auxiliary\\Build\\vcvarsall.bat" x64
if DEFINED VS160COMNTOOLS set VS_FOUND=1
if "x1"=="x%VS_FOUND%" goto :ok

REM Looking for Visual Studio 2017 compiler
if DEFINED VS150COMNTOOLS call "%VS150COMNTOOLS%\\..\\..\\VC\\Auxiliary\\Build\\vcvarsall.bat" x64
if DEFINED VS150COMNTOOLS set VS_FOUND=1
if "x1"=="x%VS_FOUND%" goto :ok

REM Looking for Visual Studio 2015 compiler
if DEFINED VS140COMNTOOLS call "%VS140COMNTOOLS%\\..\\..\\VC\\vcvarsall.bat" x64
if DEFINED VS140COMNTOOLS set VS_FOUND=1
if "x1"=="x%VS_FOUND%" goto :ok

REM No Visual Studio compilers found
goto :error

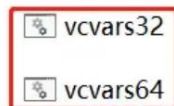
:error
set VS_FOUND=
echo You have to setup Visual Studio 2015, 2017 or 2019 compiler
exit /B 1

:ok
set VS_FOUND=
exit /B 0

```

(3) Find the vcvars32.bat and vcvars64.bat files in the Microsoft Visual Studio 2019 installation path, and copy and paste them to the AMESim installation path in step (1).

E:\LM document\vs2019\VC\Auxiliary\Build



(4) Right-click to edit the vcvars32.bat and vcvars64.bat files under the AMESim path, and modify the file contents as follows.

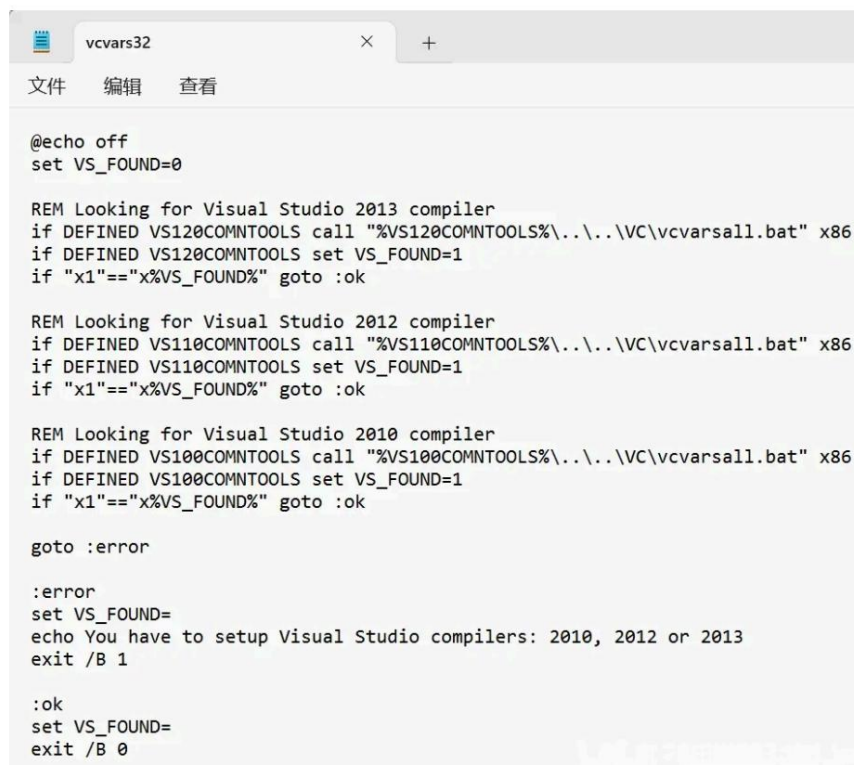
vcvars32.bat:

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```
@echo off
set VS_FOUND=0

REM Looking for Visual Studio 2013 compiler
if DEFINED VS120COMNTOOLS call "%VS120COMNTOOLS%\..\..\VC\vcvarsall.bat" x86
if DEFINED VS120COMNTOOLS set VS_FOUND=1
if "x1"=="x%VS_FOUND%" goto :ok

REM Looking for Visual Studio 2012 compiler
if DEFINED VS110COMNTOOLS call "%VS110COMNTOOLS%\..\..\VC\vcvarsall.bat" x86
if DEFINED VS110COMNTOOLS set VS_FOUND=1
if "x1"=="x%VS_FOUND%" goto :ok

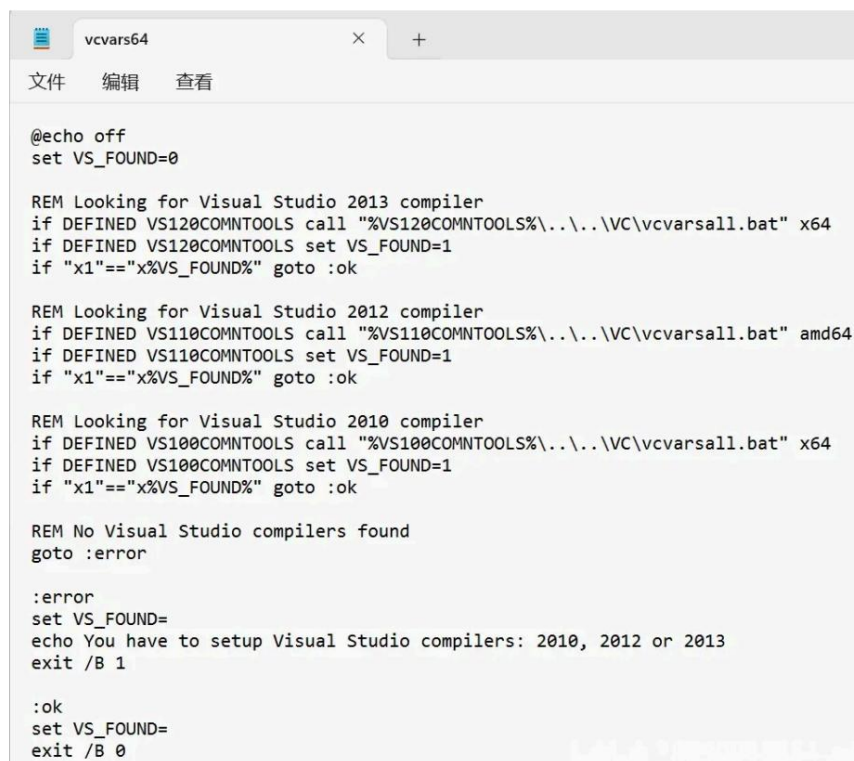
REM Looking for Visual Studio 2010 compiler
if DEFINED VS100COMNTOOLS call "%VS100COMNTOOLS%\..\..\VC\vcvarsall.bat" x86
if DEFINED VS100COMNTOOLS set VS_FOUND=1
if "x1"=="x%VS_FOUND%" goto :ok

goto :error

:error
set VS_FOUND=
echo You have to setup Visual Studio compilers: 2010, 2012 or 2013
exit /B 1

:ok
set VS_FOUND=
exit /B 0
```

Vcvars64.bat



```
@echo off
set VS_FOUND=0

REM Looking for Visual Studio 2013 compiler
if DEFINED VS120COMNTOOLS call "%VS120COMNTOOLS%\..\..\VC\vcvarsall.bat" x64
if DEFINED VS120COMNTOOLS set VS_FOUND=1
if "x1"=="x%VS_FOUND%" goto :ok

REM Looking for Visual Studio 2012 compiler
if DEFINED VS110COMNTOOLS call "%VS110COMNTOOLS%\..\..\VC\vcvarsall.bat" amd64
if DEFINED VS110COMNTOOLS set VS_FOUND=1
if "x1"=="x%VS_FOUND%" goto :ok

REM Looking for Visual Studio 2010 compiler
if DEFINED VS100COMNTOOLS call "%VS100COMNTOOLS%\..\..\VC\vcvarsall.bat" x64
if DEFINED VS100COMNTOOLS set VS_FOUND=1
if "x1"=="x%VS_FOUND%" goto :ok

REM No Visual Studio compilers found
goto :error

:error
set VS_FOUND=
echo You have to setup Visual Studio compilers: 2010, 2012 or 2013
exit /B 1

:ok
set VS_FOUND=
exit /B 0
```

5. Software compiler settings

(1) AMESim

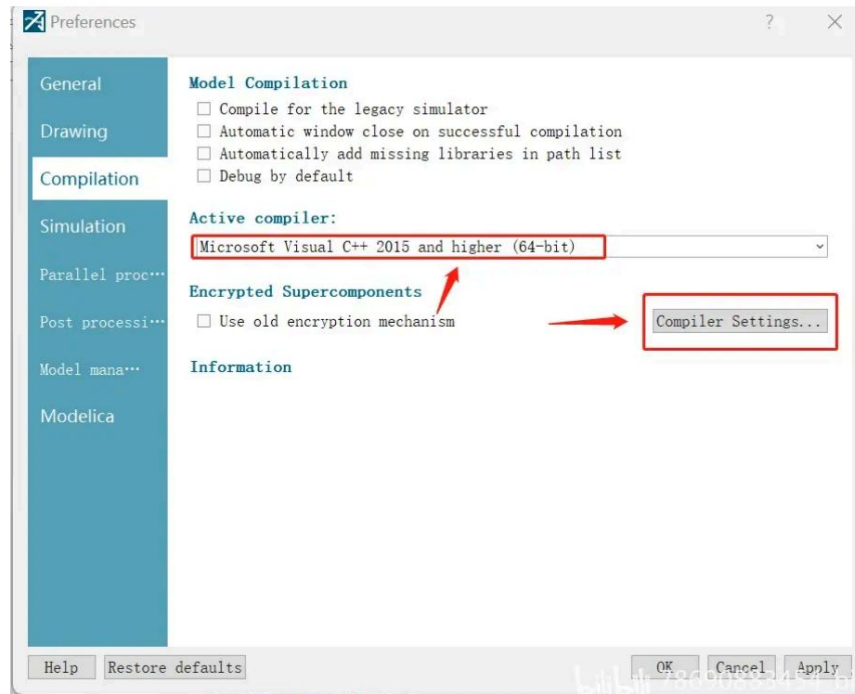
In AMESim, select "Tools-Preferences-Compilation", set the Active Compiler to Microsoft Visual C++ (64bit), and complete the same check in the Compiler settings. The above settings will not take effect until restarting.

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(2) Enter the command `mex -setup` in the MATLAB software command line. If the following picture appears, select `mex -setup C++` to complete the configuration.



Since then, the joint simulation configuration of Amesim and matlab has been completed.

This article is original to me

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