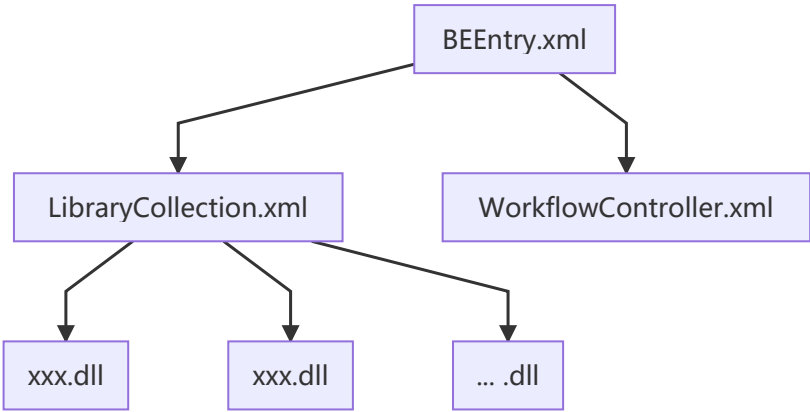


BE

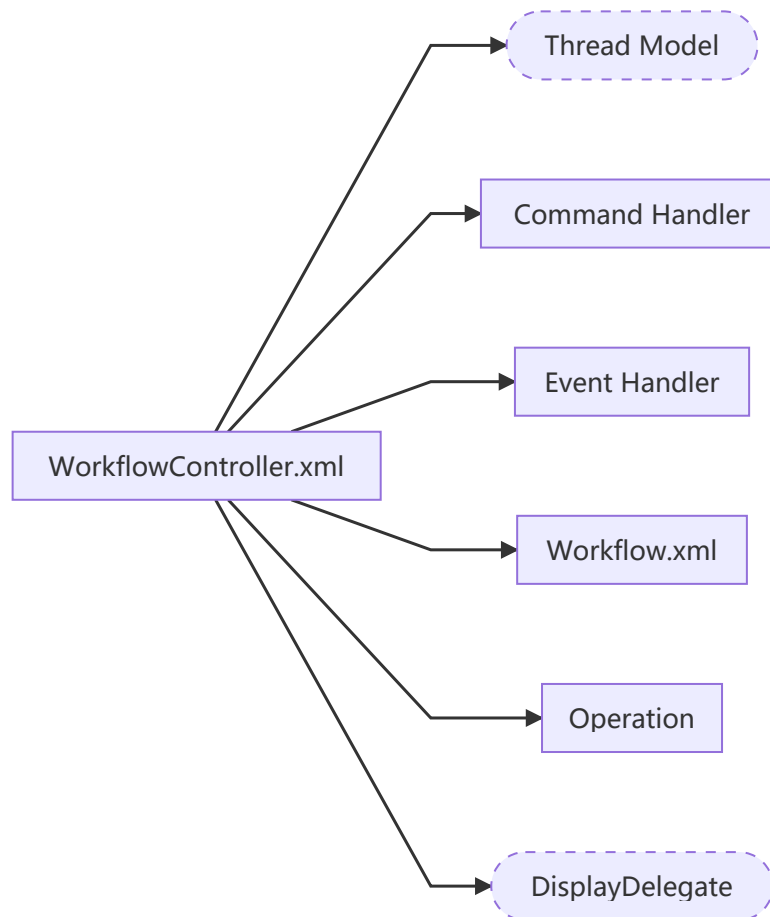
层级

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <!-- You can reference the doc 'ConfigForSystemManager.docx and The step of system integration config.docx' in
3 | Location:6/MCSF/Doc/Mcsf_Container
4 -->
5 <!-- Root node. Needn't modify -->
6 <Container>
7 <!--Config name and version
8 | Name:container's name ,default empty
9 | Version: this xml file's version default empty
10 -->
11 <Configuration Name="" Version="">
12 </Configuration>
13 <!--Config listen address of this container
14 | Host:IP address which container locate
15 | Port:Port number.Recommend to input 0 here
16 -->
17 <ListenEventChannel>
18 </ListenEventChannel>
19 <ListenAddress>
20 <Host>127.0.0.1</Host>
21 <Port>
22 </Port>
23 </ListenAddress>
24 <!--Config container's dll name and it's config file
25 | CustomizedConfigFile:config file name which be used by container
26 -->
27 <Container>
28 <!--Library CustomizedConfigFile=brainanalysis/config/BEEntry.xml <csfAppBEContainer_V1.dll>/Library>
29 </Container>
30 <!--Config log file name
31 | Name:log name used to identify log record,remember to add relative path
32 -->
33 <LogConfigFile>brainanalysis/config/BELog.xml</LogConfigFile>
34 </Container>
```

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <!-- This XML file generated by XMLSpy v2011 (http://www.altova.com)-->
3 <ContainerConfig xmlns:noNamespaceSchemaLocation="Container.xsd" xmlns:xsi="http://www.w3.org/2001
4 -->
5 <!-- To modify -->
6 <!-- Library config -->
7 <LibraryConfig>brainanalysis/config/BE/LibraryCollection.xml</LibraryConfig>
8 <!-- To modify -->
9 <!-- Application config -->
10 <ApplicationConfig>brainanalysis/config/BE/WorkflowController.xml</ApplicationConfig>
11 <!-- To modify -->
12 <!-- Cmd handler config -->
13 <CmdHandlerConfig>config/application/app_cmd_handler_config.xml</CmdHandlerConfig -->
14 <!-- To modify -->
15 <!-- Cmd handler config -->
16 <CmdHandlerConfig>config/application/app_cmd_handler_config.xml</CmdHandlerConfig -->
17 </ContainerConfig>
18
```



WorkflowController.xml



CommandHandler

```
<AppCmdHandler  
ID="10002">AppPluginCommonCellOperationCmdHandler</AppCmdHandler>  
  <AppCmdHandler ID="10003">AppPluginCommonCmdHandlerLoadSeries</AppCmdHandler>  
  <AppCmdHandler  
ID="10004">AppPluginCommonControllerOperationCmdHandler</AppCmdHandler>  
  <AppCmdHandler  
ID="12008">AppPluginCommonPanelOperationCmdHandler</AppCmdHandler>  
    <AppCmdHandler ID="15107">AppPluginCommonCmdHandlerLoadSeries</AppCmdHandler>  
    <AppCmdHandler ID="1416">AppPluginCommonCmdHandlerLoadSeries</AppCmdHandler>
```

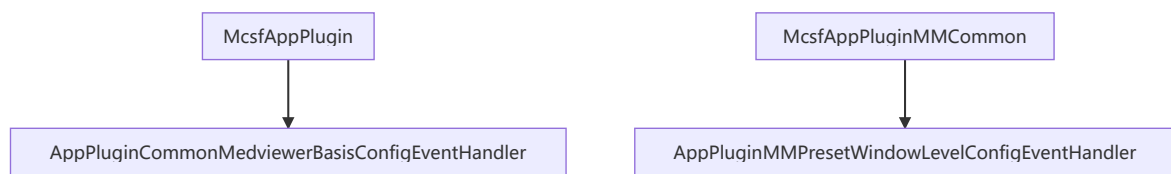
EventHandler

```

<!-- Event handler -->
<AppEventHandler ChannelID="11"
EventID="20005">AppPluginCommonMedviewerBasisConfigEventHandler</AppEventHandler>
<AppEventHandler ChannelID="11"
EventID="20007">AppPluginMMPresetWindowLevelConfigEventHandler</AppEventHandler>

<!-- Leave and Enter App Event handler -->
<AppEventHandler ChannelID="9"
EventID="151001">BrainAnalysisEnterAppEventHandler</AppEventHandler>
<AppEventHandler ChannelID="9"
EventID="151002">AppPluginCommonLeaveAppEventHandler</AppEventHandler>

```



Operation

```

<!-- Operations of controller -->
<Operation type="APPLoadSeries">AppPluginMMOperationLoadSeries</Operation>
<Operation type="ConsumeDataPacket">AppPluginMMOperationConsumeDataPacket</Operation>
<Operation type="PostConsumeDataPacket">AppPluginMMOperationPostConsumeDataPacket</Operation>
<Operation type="ChangeBrainConfig">AppPluginMMOperationChangeBrainConfig</Operation>
<Operation type="ExitApp">AppPluginMMOperationExitApp</Operation>
<Operation type="SwitchInApp">AppPluginMMOperationSwitchInApp</Operation>
<Operation type="SwitchOutApp">AppPluginMMOperationSwitchOutApp</Operation>
<Operation type="CancelProgress">AppPluginMMOperationCancelProgress</Operation>
<Operation type="SendROIStatistics">AppPluginMMOperationSendROIStatistics</Operation>
<Operation type="ChangeSelectedTissue">AppPluginMMOperationChangeSelectedTissue</Operation>

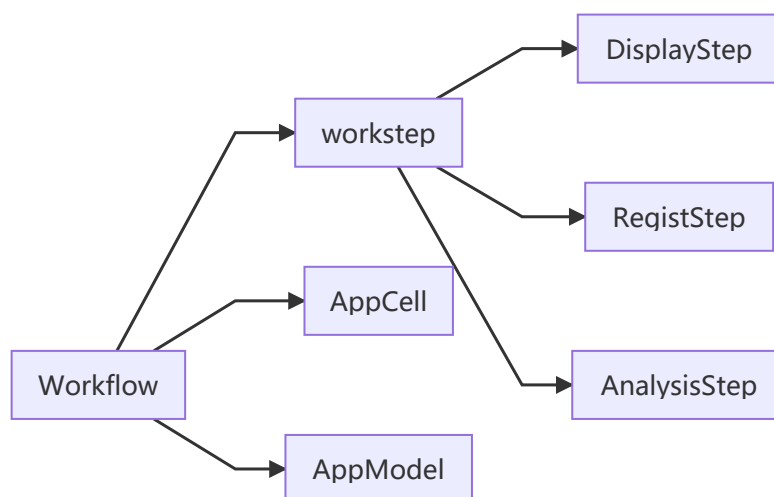
```

```

59 }
60
61 auto sOnlineLoadSeriesOperationName = spController->GetOperation("APPLoadSeries");
62 auto spOperationLoadSeries = OPERATION_CREATOR(sOnlineLoadSeriesOperationName);
63 if (!spOperationLoadSeries)
64 {
65     LOG_DEV_ERROR(0) << "BrainAnalysisOperationOnlineAIBrainSegmentation::Execute F
66 }
67
68 McsfInteractionInfoWrapper myReceivedInfo;
69 std::vector<SeriesInfo> vecSeriesInfo;
70

```

Workflow



AppModel

应用后端的数据模型

AppCell

相当于应用后端的 view

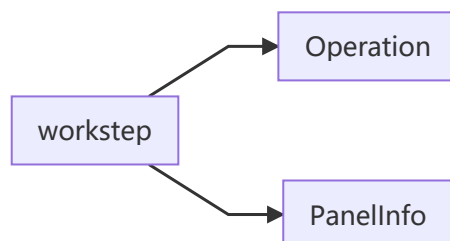
脑分析将AppCell统一放在 LayoutList.xml 中

```
<AppCell type="BrainAnalysis_ZCurve" blsceneallmodalityinvolved="TableOrCurveBL"/>
<AppCell type="BrainAnalysis_ZTable" blsceneallmodalityinvolved="TableOrCurveBL"/>

//Special Cell Name
public const string ZCurve_PluginName = "BrainAnalysis_ZCurve";
public const string ZTable_PluginName = "BrainAnalysis_ZTable";

else if (cell.Name == AppPluginName.ZCurve_PluginName)
{
    var curvetableVM = container.GetModel<DatabaseCurveROItableViewModel>
    if (curvetableVM.ShowMode == CurveTableShowMode.RoiStatisticTable)
    {
        return CurROITable.Descriptions
    }
}
```

workstep



总结

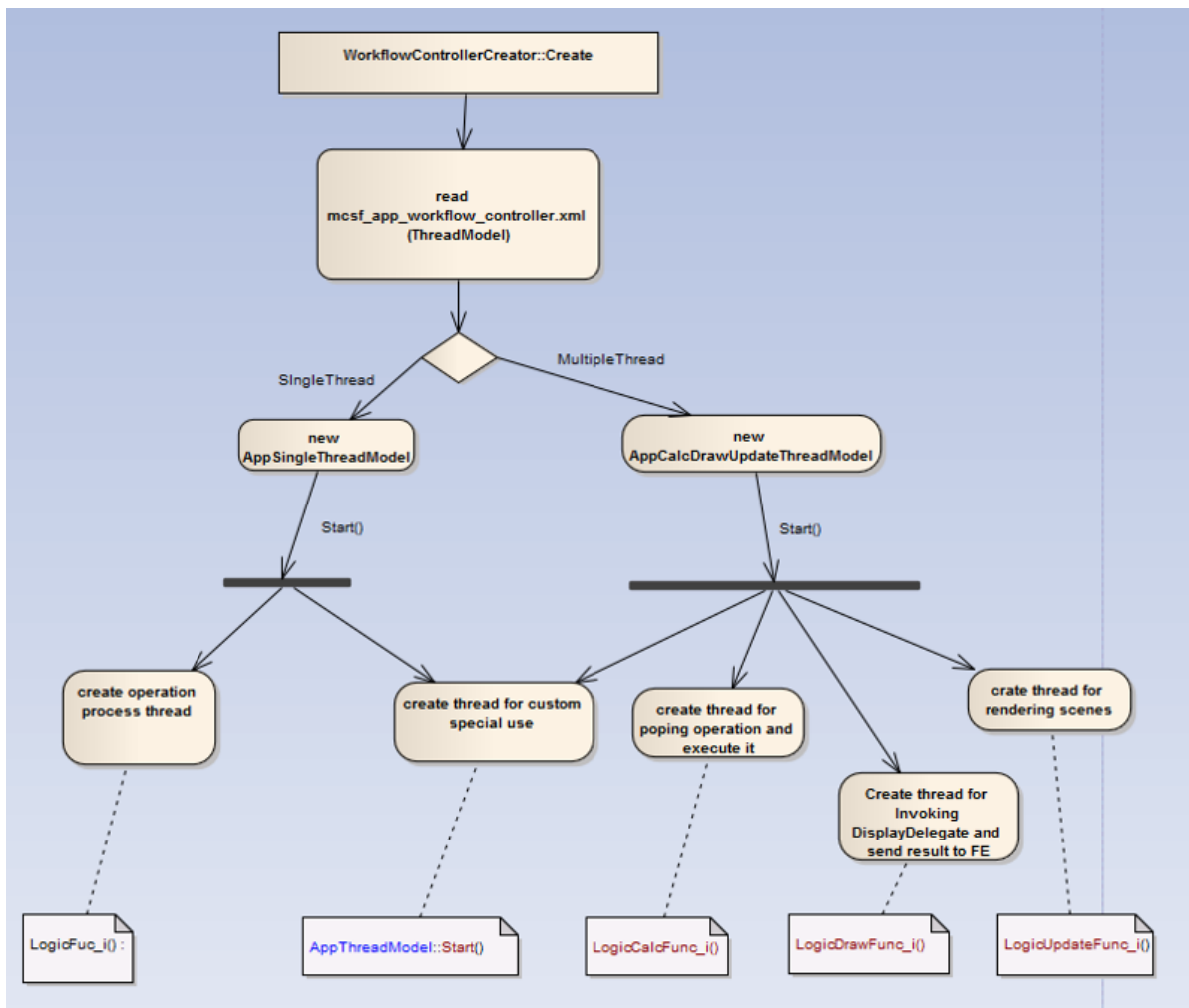
后端框架实际上可以视为采用了MVC模式

M (AppModel)

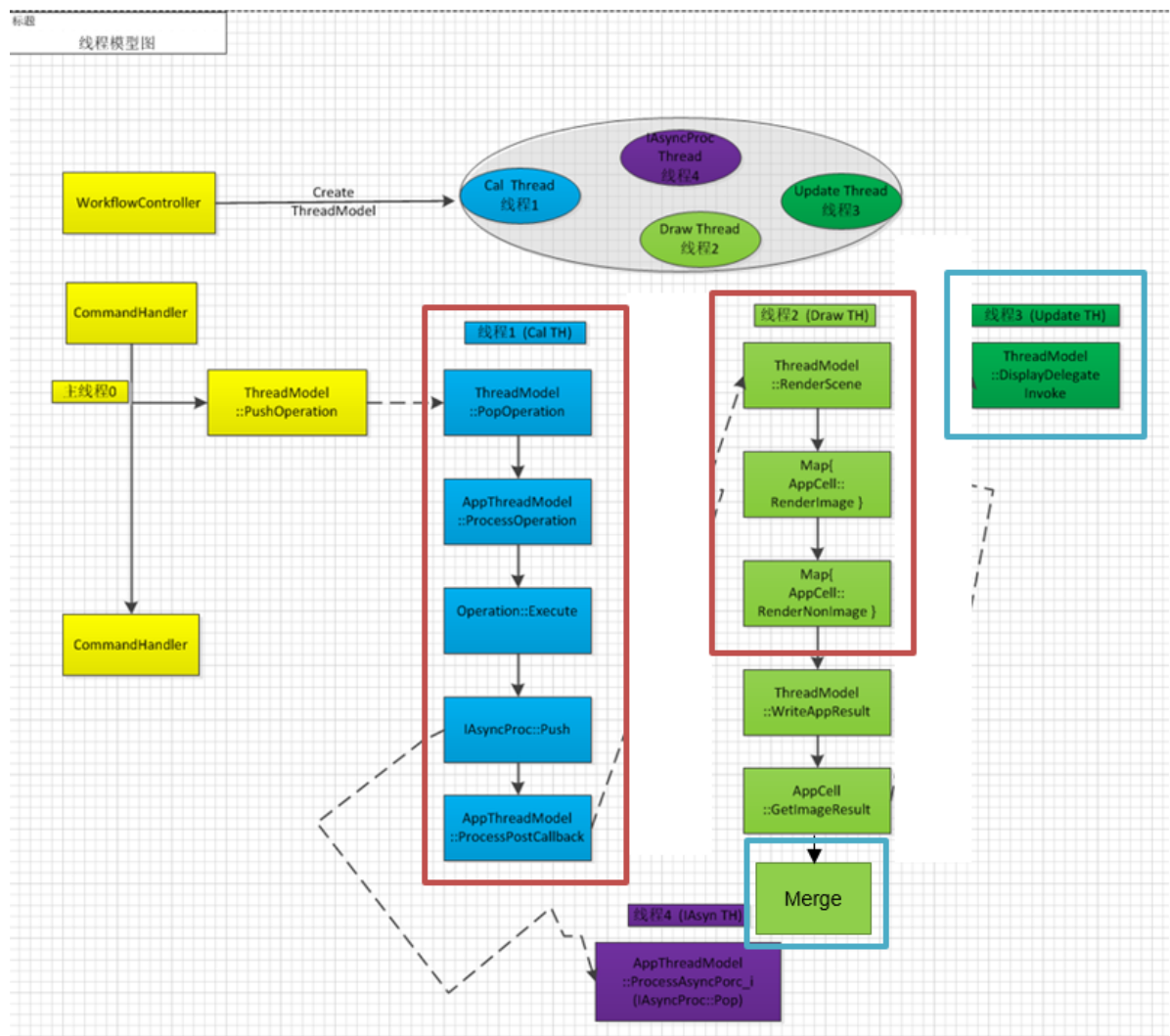
V (AppCell) MedViewer

C (workstep)

Diagram



线程模型



线程1和线程2，红色方框内的部分，两个线程之间是加锁的；

线程2 在 AppResult Merge 的时候和线程3 DisplayDelegateInvoke 时，两个线程是加锁的。