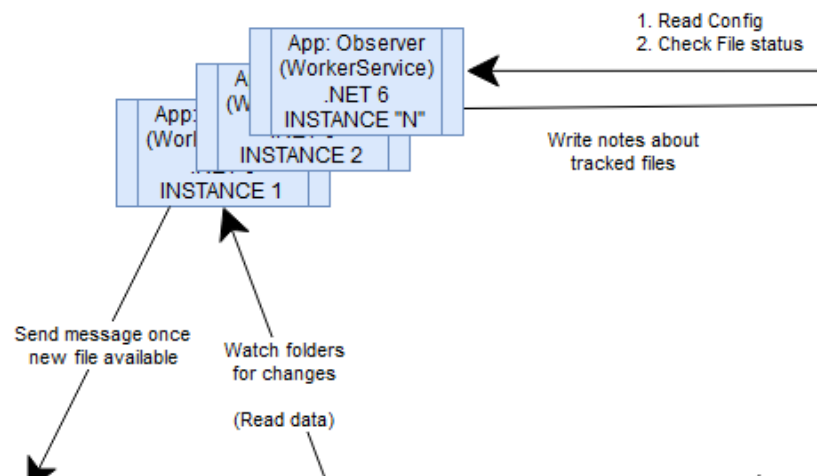


Solution for “NTS”

Code name “Sim City 2023”

Solution Units

WorkerService_Observer



This unit is responsible for:

- 1) Folder observation, according to provided file mask,
- 2) Sending notification to MQ server, once new file with matched criteria has been created

Unit is fully configurable and expandable.

You can run few instance of this unit in order to load balancer.

You can run one app instance to monitor set of folders.

Each app can get assignment to specific scope of folders.

How to assign observer app to specific folder

Step 1: make changes in Db table *Config_Folders*

SDK\SQL2019.SimCi...bo.Config_Folders		SDK\SQL2019.SimCi...dbo.TrackLog_Files		Object Explorer Details	
	FolderId	FolderToObserver	FilePattern	FolderIsActive	AssignToObser...
▶	1	E:\My\SDK\XTask6\data_in\s1\	*.txt	True	35
	2	E:\My\SDK\XTask6\data_in\s2\	*.txt	True	35
	3	E:\My\SDK\XTask6\data_in\s3\	*.*	True	35

Step 2: make necessary changes in *appsettings.json*. In this sample instance of App Broker has Id “35” and it mean that this specific instance going to monitor only folders assigned to it in database

```
{
  "Logging": {
    "LogLevel": {
      "Default": "Information",
      "Microsoft.Hosting.Lifetime": "Information"
    }
  },
  // Observer area
  "ScopeOfFolders": 35,
  // Executor area
  "FileMaxAccessWait": 120000,
  "SleepBetweenFileAccessAttempt": 500,
  // Common area. MQ Server. Observer and Broker
  "QueuePath": "SimCity2023",
  "QueueServer": "localhost",
  // Common area. Db. Observer and Executor
  "ConnectionString": "Data Source=SDK\\SQL2019;Initial Catalog=SimCity;Integrated Security=true;TrustServerCertificate=True;"
}
```

Additional configuration

Make sure that *ConnectionString*, as well as *QueuePath* and *QueueServer* inside *appsettings.json* has proper value before running app.

Observer behavior

Once new file appear in observed folder, app check, does this file (with the same file name and path) already has been registered in the system. If file with similar file name already is in system, it will be ignored for future processing.

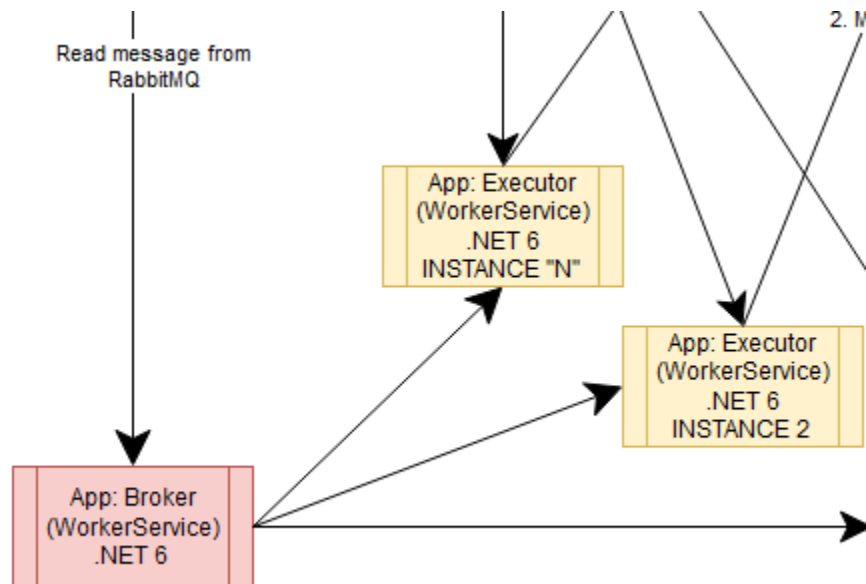
Information about tracked files stored in Db table *TrackLog_Files*.

SDK\SQL2019.SimCi...bo.Config_Folders		SDK\SQL2019.SimCi...dbo.TrackLog_Files		Object Explorer Details		
TrackFileId	FileFullPath	FileStartProcee...	FileFinishProc...	EntriesInFilesOK	EntriesInFilesF...	
81	E:\My\SDK\XTask6\data_in\s3\file1.txt	NULL	NULL	0	0	
82	E:\My\SDK\XTask6\data_in\s1\file1.txt	NULL	NULL	0	0	
83	E:\My\SDK\XTask6\data_in\s2\file1.txt	NULL	NULL	0	0	
84	E:\My\SDK\XTask6\data_in\s3\file1a.txt	NULL	NULL	0	0	
85	E:\My\SDK\XTask6\data_in\s3\file2.txt	NULL	NULL	0	0	
86	E:\My\SDK\XTask6\data_in\s1\file1a.txt	NULL	NULL	0	0	
87	E:\My\SDK\XTask6\data_in\s2\file1a.txt	NULL	NULL	0	0	
88	E:\My\SDK\XTask6\data_in\s1\file2.txt	NULL	NULL	0	0	
89	E:\My\SDK\XTask6\data_in\s2\file2.txt	NULL	NULL	0	0	

Demo

```
WorkerService_Observer.exe - Shortcut
info: WorkerService_Observer.WorkerObserver[0]
      watcher is initializing
info: WorkerService_Observer.WorkerObserver[0]
      watcher for folder "E:\My\SDK\XTask6\data_in\s1\" created. File mask: "*.txt"
info: WorkerService_Observer.WorkerObserver[0]
      watcher for folder "E:\My\SDK\XTask6\data_in\s2\" created. File mask: "*.txt"
info: WorkerService_Observer.WorkerObserver[0]
      watcher for folder "E:\My\SDK\XTask6\data_in\s3\" created. File mask: ".*"
info: WorkerService_Observer.WorkerObserver[0]
      watcher is started for 3 folder(s)!
info: WorkerService_Observer.WorkerObserver[0]
      New incoming file "E:\My\SDK\XTask6\data_in\s1\file1.txt" at 11/11/2023 9:35:48 AM
info: WorkerService_Observer.WorkerObserver[0]
      New incoming file "E:\My\SDK\XTask6\data_in\s2\file1.txt" at 11/11/2023 9:35:48 AM
info: WorkerService_Observer.WorkerObserver[0]
      New incoming file "E:\My\SDK\XTask6\data_in\s3\file1.txt" at 11/11/2023 9:35:48 AM
info: WorkerService_Observer.WorkerObserver[0]
      New incoming file "E:\My\SDK\XTask6\data_in\s3\file1a.txt" at 11/11/2023 9:35:49 AM
info: WorkerService_Observer.WorkerObserver[0]
      New incoming file "E:\My\SDK\XTask6\data_in\s3\file2.txt" at 11/11/2023 9:35:49 AM
info: WorkerService_Observer.WorkerObserver[0]
      New incoming file "E:\My\SDK\XTask6\data_in\s1\file1a.txt" at 11/11/2023 9:35:49 AM
info: WorkerService_Observer.WorkerObserver[0]
      New incoming file "E:\My\SDK\XTask6\data_in\s2\file1a.txt" at 11/11/2023 9:35:49 AM
info: WorkerService_Observer.WorkerObserver[0]
      New incoming file "E:\My\SDK\XTask6\data_in\s2\file2.txt" at 11/11/2023 9:35:49 AM
info: WorkerService_Observer.WorkerObserver[0]
      New incoming file "E:\My\SDK\XTask6\data_in\s1\file2.txt" at 11/11/2023 9:35:49 AM
```

WorkerService_Broker



This unit is responsible for:

Receiving and processing message from MQ server

Once new valid message received, file status in database and changed to new one, Broker run Executor app in new thread by using principle – one file to proceed – one Executor to run.

Additional configuration

Make sure that *QueuePath* and *QueueServer* inside *appsettings.json* has proper value before running app.