Getting to Know Background Job Types

Rag Dhiman

@ragdhiman

Summary

Fire-and-forget

Delayed

Recurring

Using Batches

Chaining Batches

Complex Workflows

Passing Parameters

Passing Dependencies

Demo

Fire-and-forget

- BackgroundJob.Enqueue()

  - Lambda expression

  - Serialise method and parameter information

  - Create new background job based on the serialised information

  - Save to job storage and queue

  - Return to caller

- Hangfire server picks up job and processes

  - Job status updated

Demo

Delayed

- Postponed background job

- BackgroundJob.Schedule()

    - Lambda expression

    - Specify delay using TimeSpan

- Hangfire server queues scheduled jobs

- ASP.Net configure to always run in IIS

Demo

Recurring

- RecurringJob

  - AddOrUpdate()

    - Job identifier

    - Lambda expression

    - Cron types\Cron expressions

  - RemoveIfExists()

  - Trigger()

- Stored to job storage

- Hangfire server checks every minute

- ASP.Net configure to always run in IIS

Demo

Using Batches

- Hangfire Pro Only

  - NUGet package Hangfire.Pro

- Batch Scenarios

  - Optimise delivery schedule for n days

- Configuration.UseBatches()

- BatchJob.StartNew()

Demo

Chaining Batches

- Child batch job starts after parent

- Parent ID

- BatchJob.ContinueWith()

Demo

Complex Workflows

- Mixing job types

  - Scheduled jobs

  - Continuations

  - Continuations within continuations

  - Or any other combination

Demo

Passing Parameters

- Support for multiple parameters

- Parameters are serialised

  - Array

  - Collections

  - Custom objects

- Process boundaries

- Reference parameters not supported

  - ref and out not supported

- Concrete values more efficient

Demo

Passing Dependencies

- Other classes required for the job

- Passing them to the background method

- Static background methods

- Instance background methods

  - JobActivator creates an instance using default constructor

  - Constructor for unit testing

Summary

Fire-and-forget

Delayed

Recurring

Using Batches

Chaining Batches

Complex Workflows

Passing Parameters

Passing Dependencies