Jakarta EE Concurrency 3.1

- Java 17 and Java 21

- New Annotations

- Contextual Flows (Reactive Streams)

- Virtual Threads

New Annotations

- @Inject can now be used in place of @Resource
  - ManagedExecutorService
  - ManagedScheduledExecutorService
  - ContextService

- @Schedule
  - Used with @Asynchronous to schedule repeated executions

Contextual Flows (Reactive Streams)

- New APIs in ContextService
  - `contextualSubscriber( Flow.Subscriber )`
  - `contextualProcessor( Flow.Processor )`

- Already Possible with ManagedExecutor
  - Flow.Publisher may not allow configuring an Executor

Virtual Threads

- Enabled by adding `virtual = true` on:
    - ManagedThreadFactoryDefinition
    - ManagedExecutorDefinition
    - ManagedScheduledExecutorDefinition

- May not always return virtual threads, requires:
    - Java 21
    - A Jakarta EE implementation which supports virtual threads

Jakarta Concurrency 3.1 on Open Liberty Demo

https://github.com/OpenLiberty/sample-concurrency

Microsoft

Thank you

https://github.com/OpenLiberty/sample-concurrency
https://github.com/jakartaee/concurrency

Mark Swatosh

https://github.com/mswatosh
@MarkSwatosh