

IX. Disposability

What is graceful shutdown?

- For a web process, graceful shutdown is achieved by **ceasing to listen** on the service port (thereby refusing any new requests), allowing any **current requests to finish**, and then exiting. This implies that **HTTP requests should be short**.
- For a worker process, graceful shutdown is achieved by manually **returning the current job to the work queue**. Other queueing systems return the job automatically to the queue whenever a worker disconnects. For this to happen, jobs are assumed to be **reentrant**, which is typically achieved by wrapping the results in a **transaction** (to allow rollbacks).

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- Twelve-factor apps must be able to be started or stopped at a **moment's notice**.
- This facilitates fast **elastic scaling**, **rapid deployment** of code or config changes, and **robustness of production deploys**.