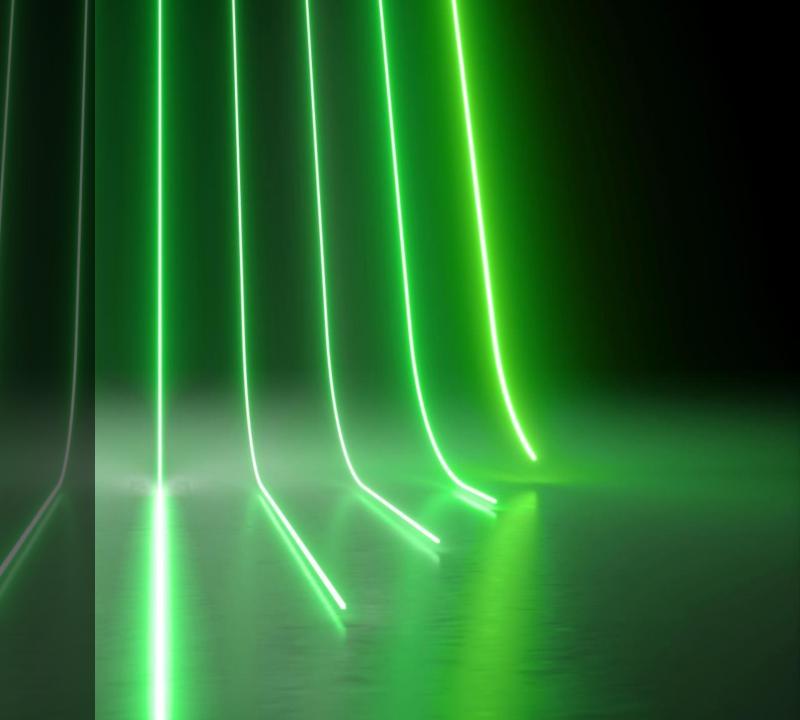# Continuous Integration Hands-On

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Continuous Integration

Goals

– Testing
  - o Protect Main Branch
  - o Advise Developers

– Binary Caches
  - o Developers
  - o Deployments/Users

Strategies

– Testing
  - o Pull request approvals
  - o Commit statuses

– Binary Caches
  - o Sources and dependencies
  - o Built artifacts

Why is Nix special?

– Large Closures

– Sandboxing

	GitHub	GitLab	Self-Hosted Build GUI	Managed Build GUI	Self-Hosted Runners	Managed Runners	Managed Cache
Hydra nixos.org/hydra	✅	✅	✅	❌	✅	❌	❌
Hercules CI hercules-ci.com	✅	❌	❌	✅	✅	❌	❌
garnix garnix.io	✅	❌	❌	✅	❌	✅	✅
Cachix cachix.org	❌	❌	❌	❌	❌	❌	✅
nixbuild.net nixbuild.net	❌	❌	❌	❌	❌	✅	❌

Important Choices

– Git provider (e.g. GitHub, GitLab)

– Flakes or not

– CI tool(s)
  ○ Coordinator (e.g. Hydra, Hercules, garnix)
  ○ Cache (e.g. Cachix)
  ○ Builder(s) (e.g. nixbuild.net)

Workshop

– Goals:
- o Build each push
- o Report success/failure of pull requests
- o Populate cache
- o Continuous deployment

– Ask for help early and often