



Developer pushes:  
git push origin  
feat/new-agent

GitLab CI Pipeline  
7 Stages

Stage 1: lint - Parallel 3 jobs

Job 1.1:  
flake8  
Python linting  
2s

Job 1.2:  
shellcheck  
Bash linting  
1s

Job 1.3:  
yamllint  
YAML validation  
1s

PASS

Stage 2: validate

Job 2.1:  
mars-dev validate  
• Check ADR-022 schema  
• Validate compose  
fragments

- Check manifest.yaml  
5s

PASS

### Stage 3: test-fast - Parallel

- Job 3.1:  
core unit tests  
2s

- Job 3.2:  
mars-dev tests  
2s

- Job 3.3:  
agent unit tests  
3s

- Job 3.4:  
service unit tests  
3s

- Job 3.5:  
ADR-028 compliance  
2s

PASS

### Stage 4: test-full

Job 4.1:

Integration tests

- Start Neo4j container
- Start Zotero container
- Run end-to-end tests

45s

PASS

Stage 5: analyze

Job 5.1:

Coverage report

- Generate cobertura XML
- Check coverage > 80%

5s

PASS

Stage 6: audit

Job 6.1:

mars audit communication

- Validate ADR-028 patterns
- Check hardcoded URLs
- Verify MCP manifests

3s

PASS

Stage 7: build - Parallel 3  
jobs

Job 7.1:

Build agent images

120s

Job 7.2:  
Build service images  
180s

Job 7.3:  
Build mars-dev image  
90s

PASS

Pipeline Complete   
Merge Request Status:  
All checks passed  
Ready for peer review