Smash HDL bugs on the fly!

What added value we can bring to you

We help leading-edge teams write bug-free VHDL and Verilog code.

By automating deep code checks on commits and pull requests.

LINTY SERVICES

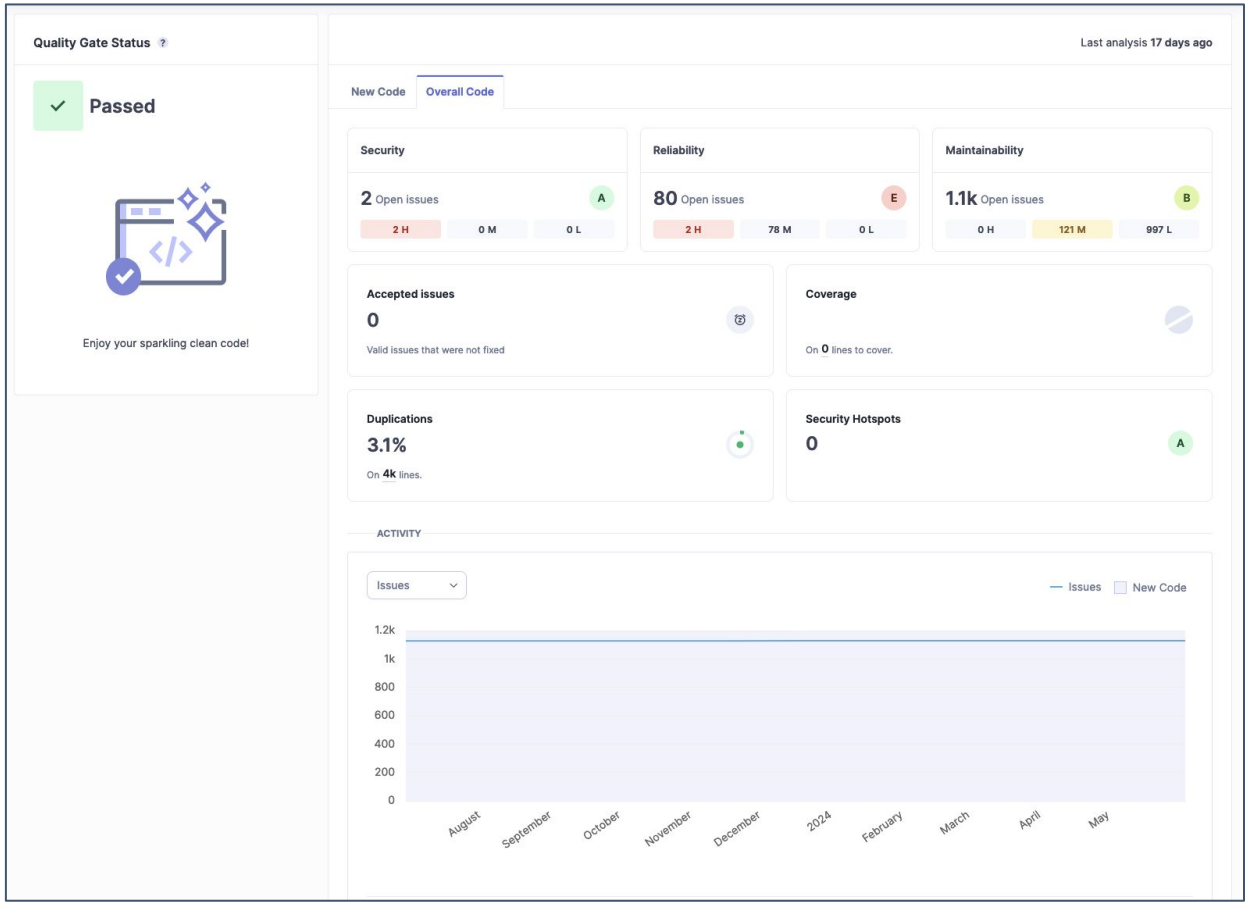
Why you should use our approach and tooling

- Write bug-free, secure and highly maintainable code
- Comply with standards
- Reduce hardware development costs
- Improve productivity and reduce time to market
- Cut down technical debt
- Attract and keep top-level designers

LINTY SERVICES

Linty for everyone

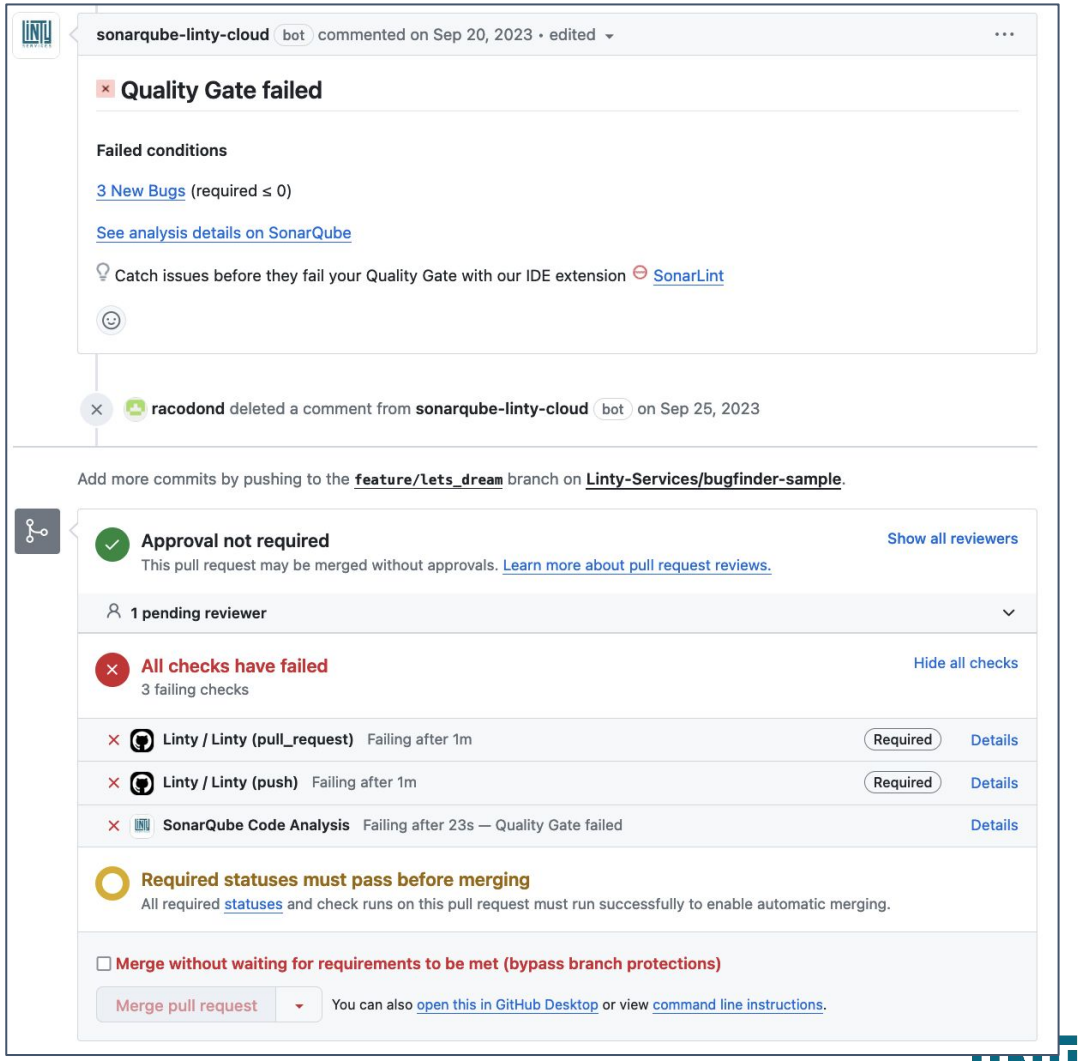
- Manager and Team Leader
  - Keep your developers happy
  - Rework less, innovate more
  - Minimize risks, maximize reputation
  - Gated quality
  - Configure rules
  - Set requirements
  - Define quality gate
  - Monitor Technical Debt



LINTY SERVICES

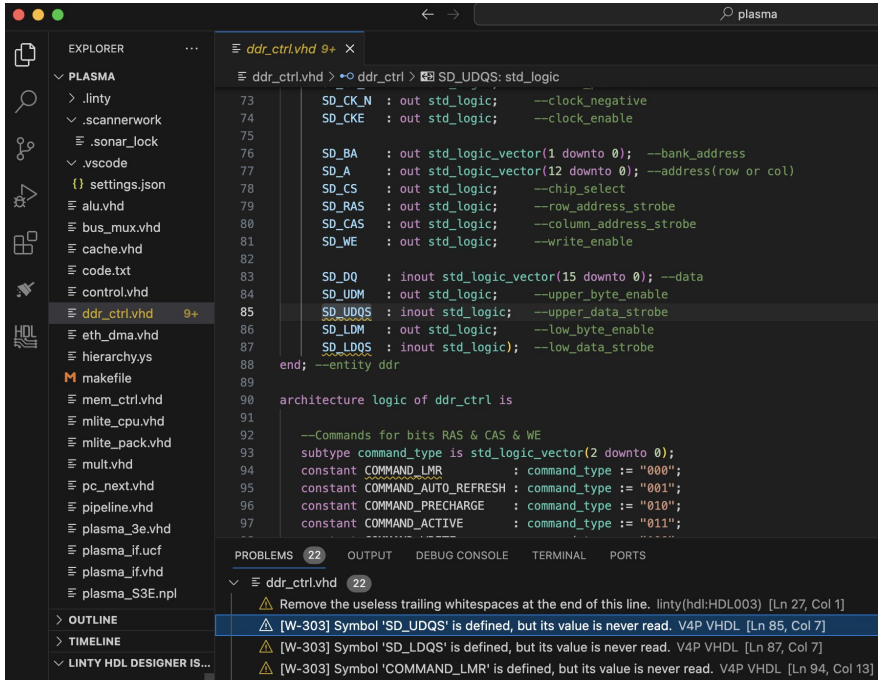
Linty for everyone

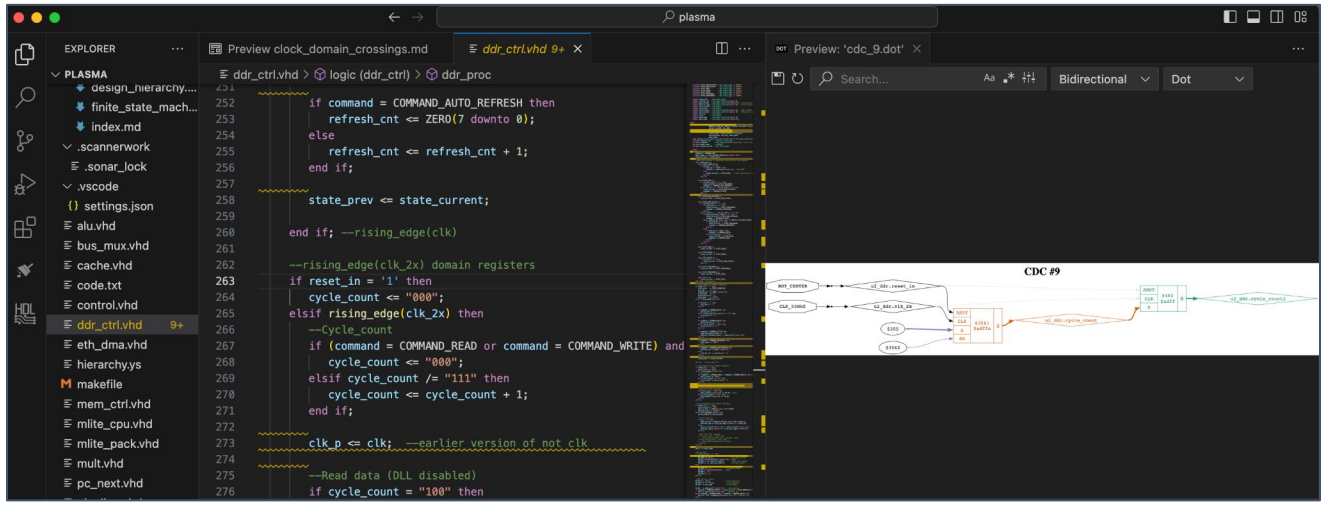
- Architect and Senior Designer
  - Protection of the main branch
  - CI/CD pipeline under GitHub, GitLab
  - MR/PR decoration
  - Peer reviews assistant
  - Safety-critical standards evidences (DO254, IEC61508,...)
  - Code coverage “on new code”



Linty for everyone

- Designers
  - Discover issues from the moment you write code
  - +220 HDL checks in real-time
  - CDC, RDC, FSM graphs
  - Navigation / Auto-completion
  - Code colorisation





Linty ROI from our customers

- ROI less than 3 months
- 3 - 5 hours per designer per week saved
- Improved designer experience
- Maintained stable designs by reducing technical debt
- HDL code quality standardization across the organization
- Reinforceable coding best practices

LINTY SERVICES

Smash HDL bugs on the fly!

CONTACT US

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CEO - Vincent Louis vincent.louis@linty-services.com

Useful links

Website:	https://linty-services.com
Demo platform:	https://demo.linty-services.com
VHDL checks:	https://vhdl.linty-services.com https://hdl.linty-services.com
Verilog/SystemVerilog checks:	https://verilog.linty-services.com https://hdl.linty-services.com
Coverage of DO254 and CNES standards:	https://standards.linty-services.com
Documentation/Installation:	https://doc.linty-services.com
Merge Request decoration on GitLab:	https://gitlab-mr.linty-services.com
Pull Request decoration on GitHub:	https://github-pr.linty-services.com
Linty HDL Designer for VS Code:	https://hdl-designer.linty-services.com

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Linty features

- Easy integration within your continuous integration process (GitHub, GitLab, Bitbucket, etc.)
- Wide range of rules: Conventions, complexity, CDC, FSM and many mores
- Clean as you code with Linty HDL Designer: Powerful VS Code extension
- Cloud platform or on-premise installation
- Automated qualification kit (DO-254, DO-330, IEC 61508, EN 50129, ISO 26262, etc.)
- Focus on new/modified code
- Based on SonarQube, leading platform for continuous code quality control
- Also analyze your C, C++, Python (and many more) code on the same platform

Linty Services

2017
- 1st Lexer/Parser VHDL prototype – SonarQube Plugin
- Promoted by French Defense Innovation Agency

DGA

AGENCE INNOVATION DÉFENSE

2018
- 1st Customers
- CNES : VHDL new rules implementation

cnes

mercury

2020
- New post synthesis rules
- Linty Safety-Critical (qualification kit)
  DO254, IEC 61508, ISO 26262, EN50129, ECSS

AIRBUS DEFENCE & SPACE

2022
- CNES strategic partnership
- Verilog/SystemVerilog plugin (+100 rules)
- Enhanced rules based on Yosys technology

YosysHQ

cnrs

LINTY SERVICES

Linty Safety-Critical

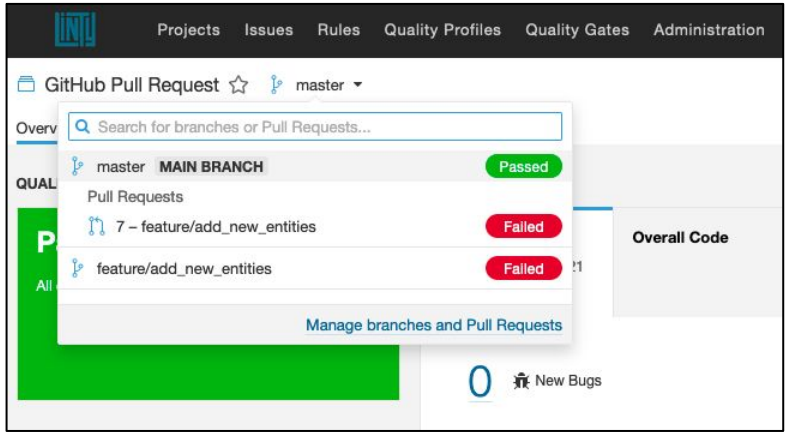
Airborne systems:	DO254, DO178C, DO330
Space:	ECSS
Automotive:	ISO26262
Electronic:	IEC 61508
Defense:	Mil-STD-882-E, DGA Technical Note
Naval:	SCAT 12805
Medical:	IEC 62304
Nuclear:	IEC 61513
Railway:	EN5012x

Hardware design audit experience : > 20 years, several hundreds reviews, world wide

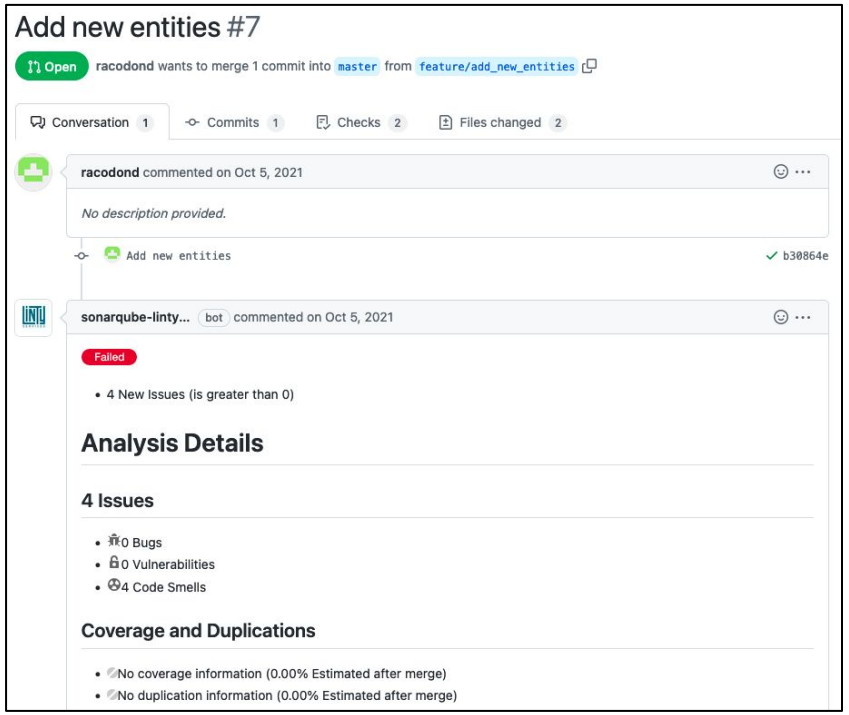
LINTY SERVICES

Linty DevOps - Continuous Integration

- Multi-branch analysis - Pull request decoration - GitLab - Bitbucket- GitHub - Jenkins
  - You would get the most added value from Linty while it is fully integrated in your DevOps / Continuous Integration process

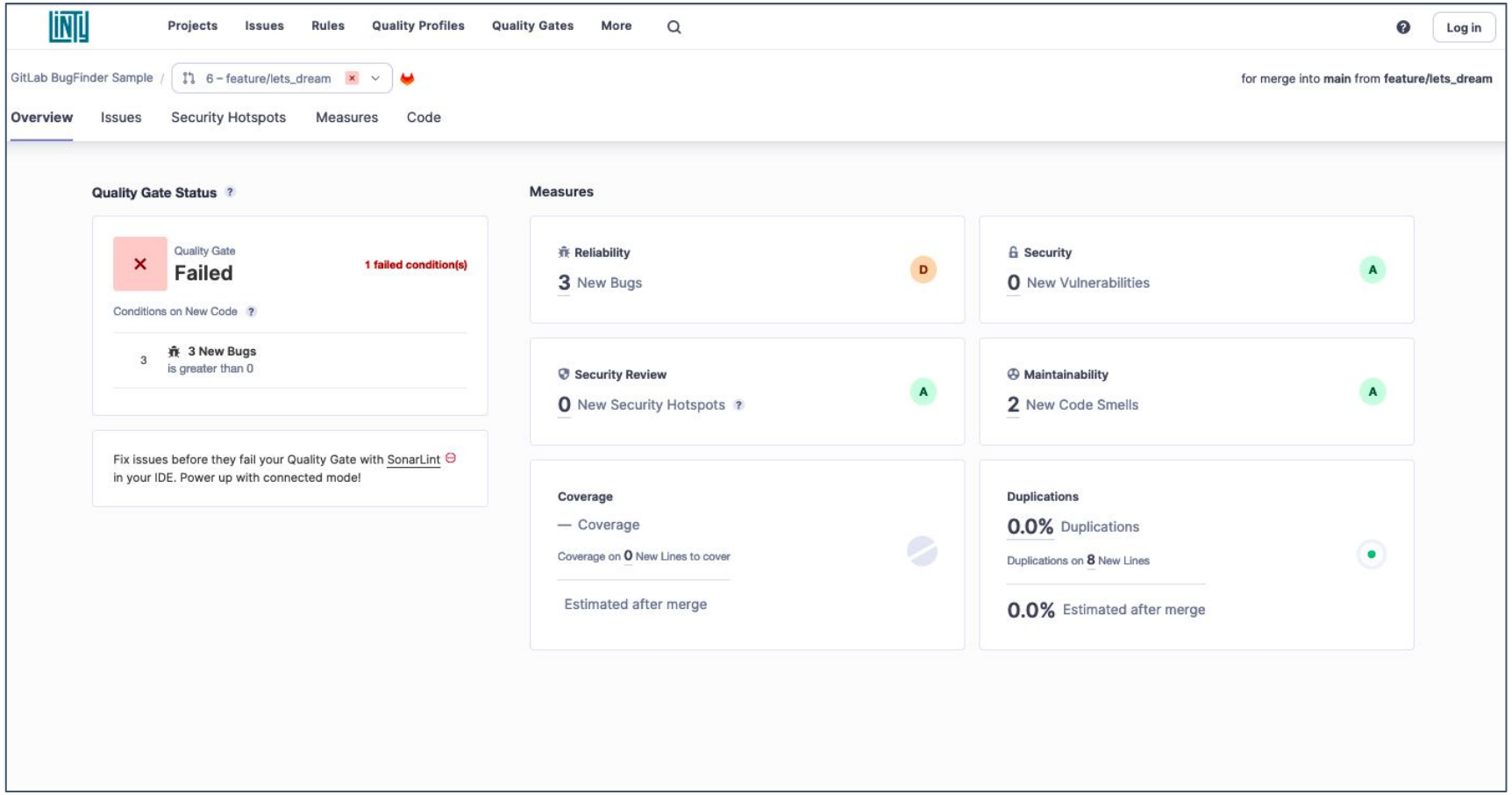


Multi-branch analysis

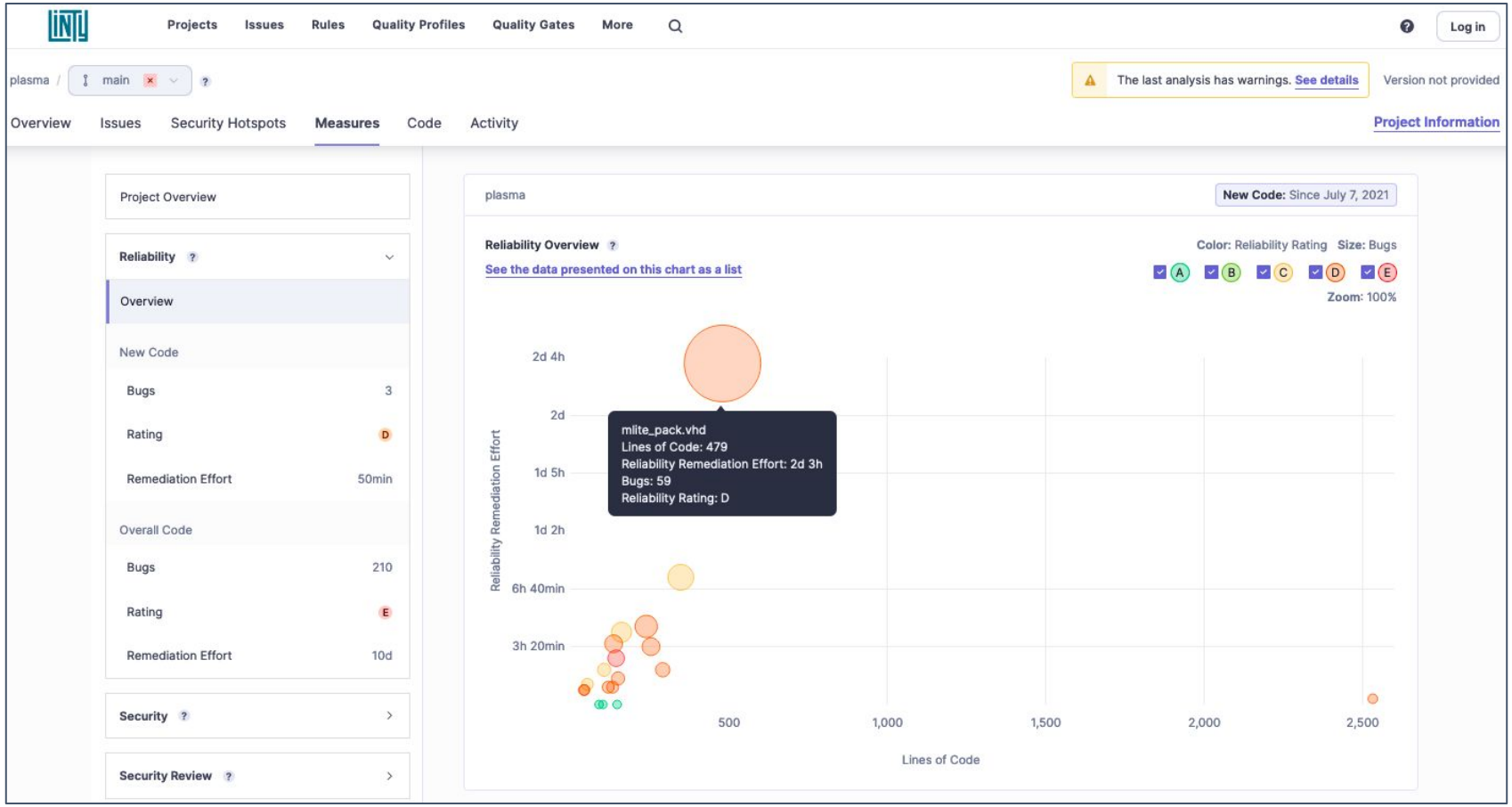


Pull request decoration

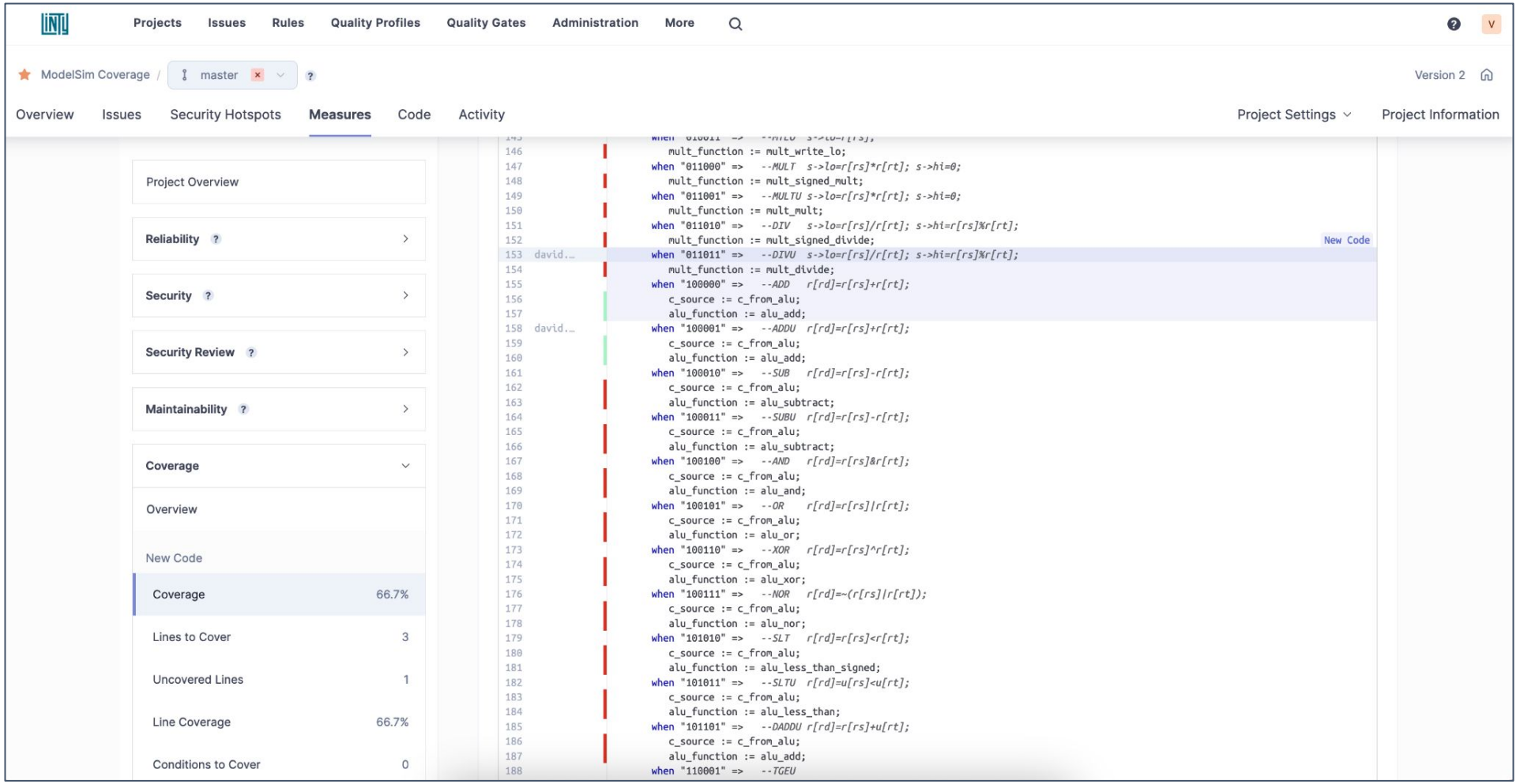
Synthetic dashboard



Synthetic measures



Code coverage on “New code”



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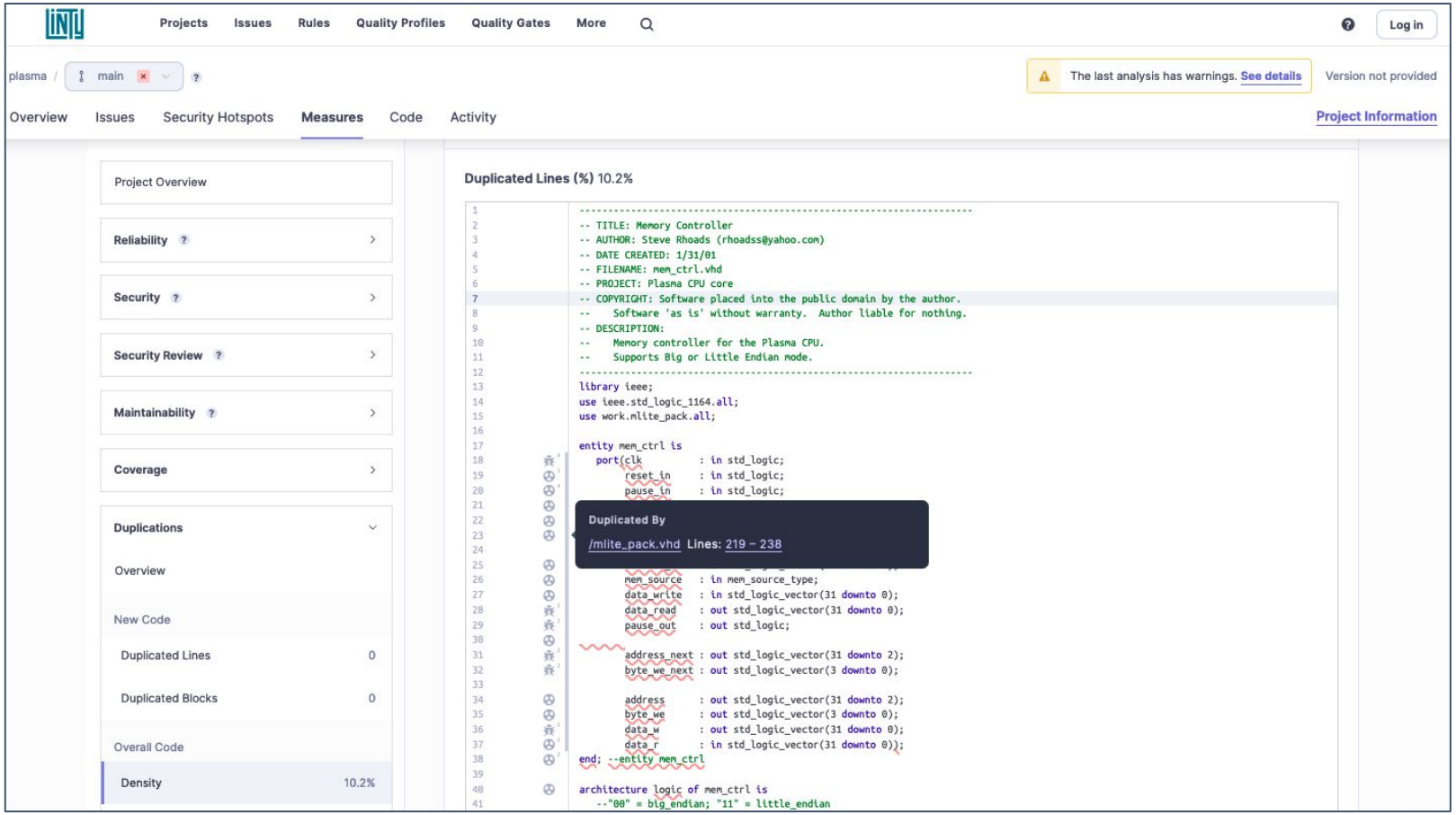
Code duplication



Linty Rules (several hundreds)

- Post-synthesis rules
- Clock Domain Crossing (CDC)
- Finite State Machine (FSM)
- Cyber threats

Coverage of Standards by Linty Rules

Standard	Number of Rules	Number of Automatable Rules	Overall Coverage of Automatable Rules	Full Coverage	High Coverage	Low Coverage	No Coverage
CNES	73	67	78%	47	5	3	12
CNES CUSTOM	55	43	80%	30	5	1	7
DO-254	49	46	74%	30	2	5	9

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