

R2CLOUD

HOW TO BUILD DISTRIBUTED GROUND STATION NETWORK
ALONE

ABOUT ME

ANDREY RODIONOV

PROFESSIONAL SOFTWARE DEVELOPER 15+ YEARS

CONTACTS:

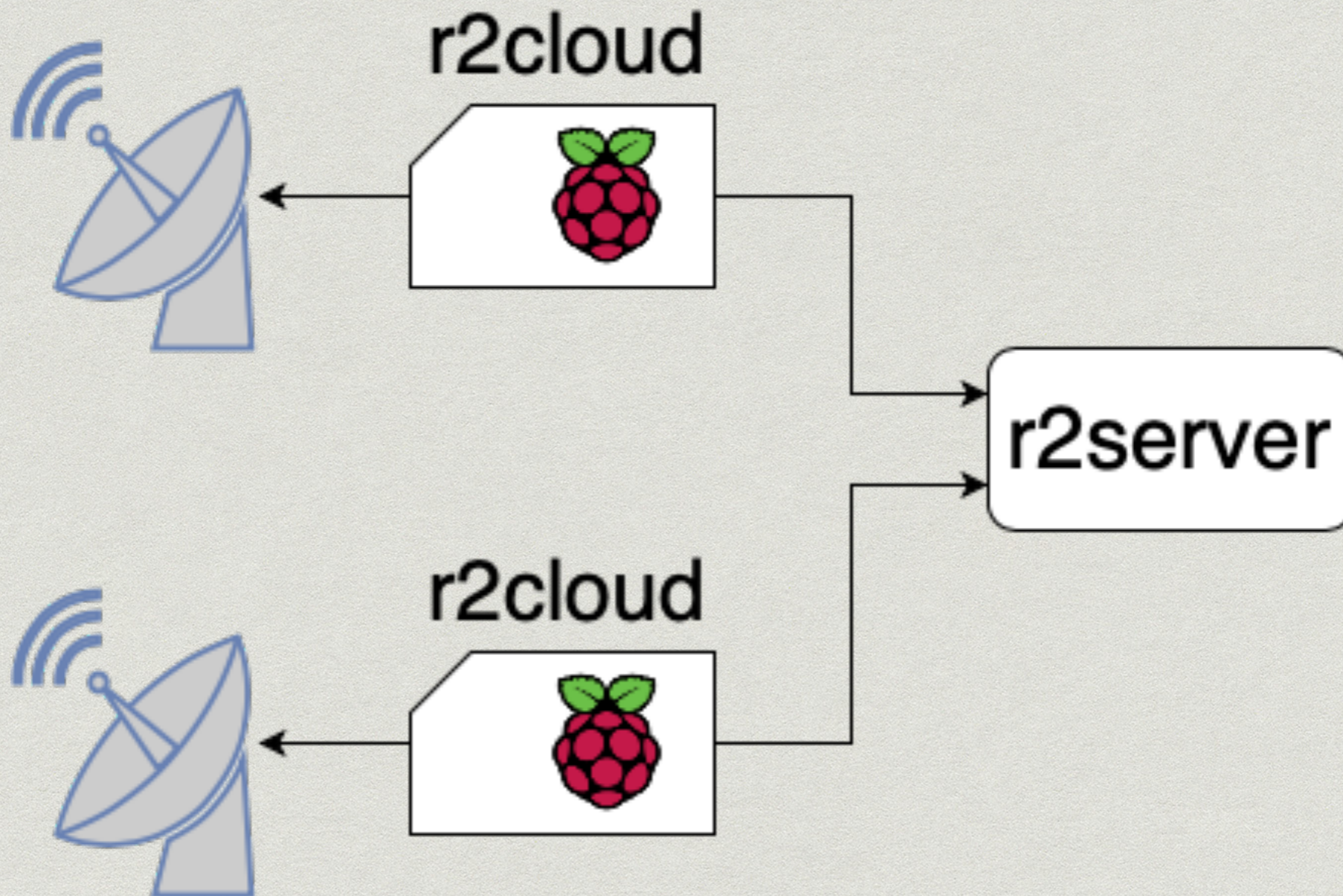
<https://dernasherbrezon.com>

<https://github.com/dernasherbrezon>



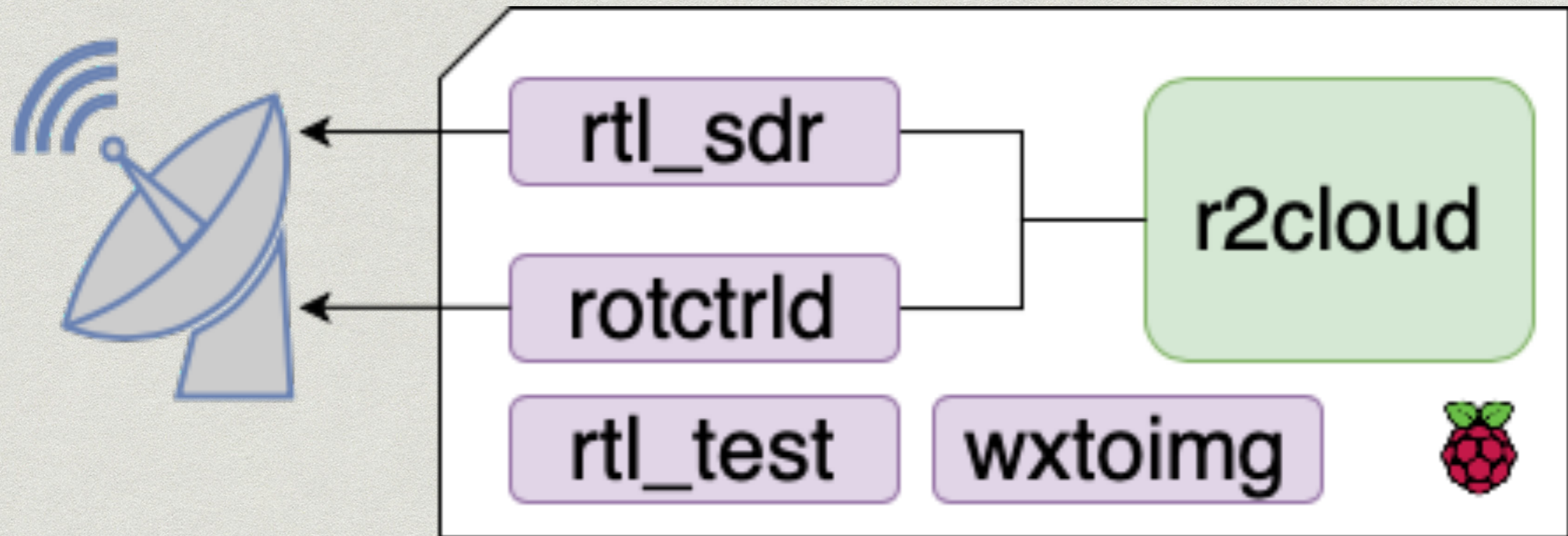
The project

Client-Server architecture



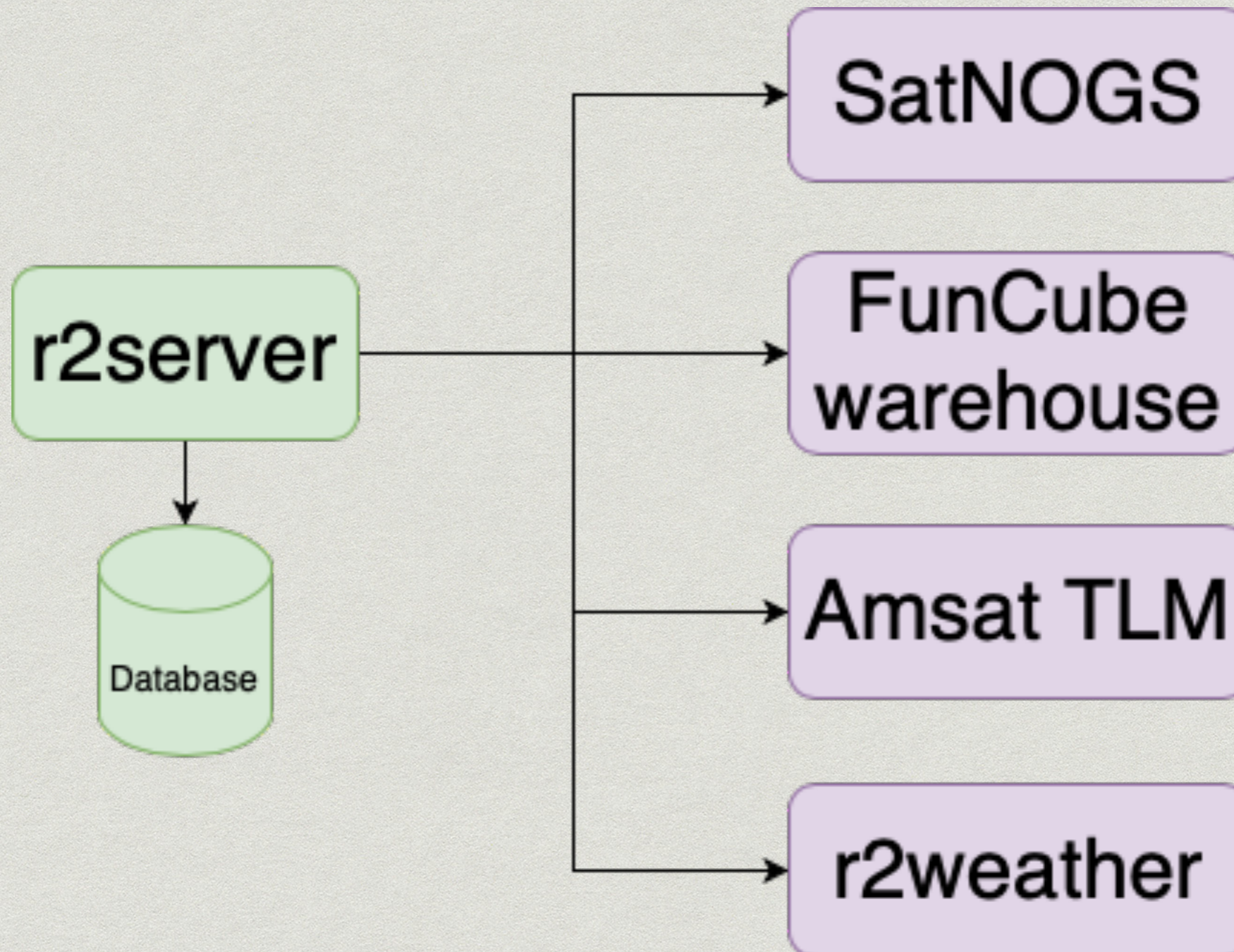
r2cloud

Standalone application. Unattended operation



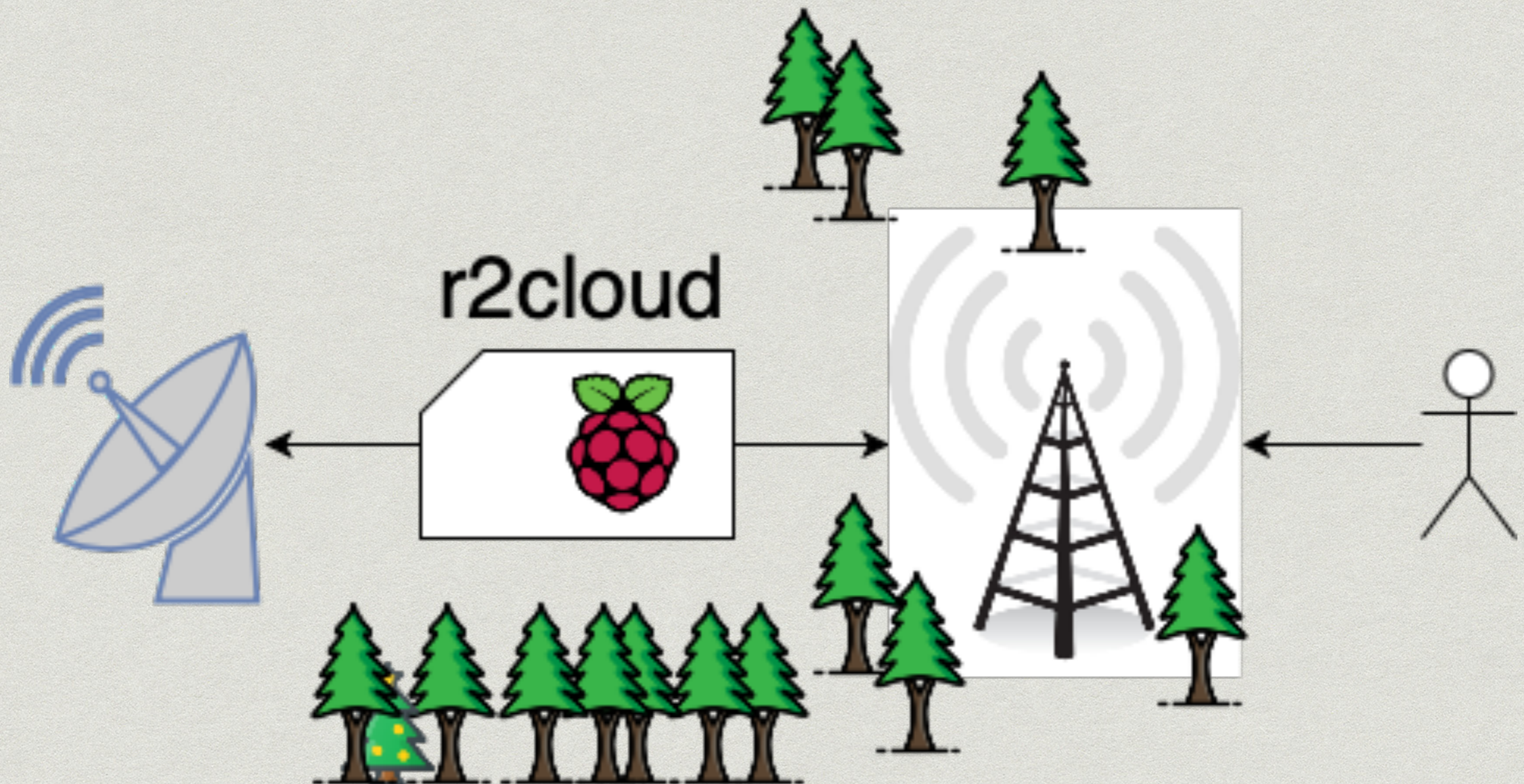
r2server

Easy to share the data



Connectivity

GSM modem in rural areas. Hard to access outside



Design principles

Better to define in advance

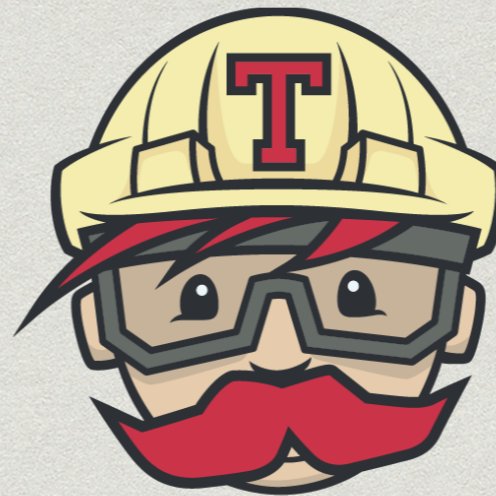
- * Open source
- * KISS
- * Tests
- * Automation

Open source

Peer reviews and free tooling



GitHub



Travis-ci



KISS

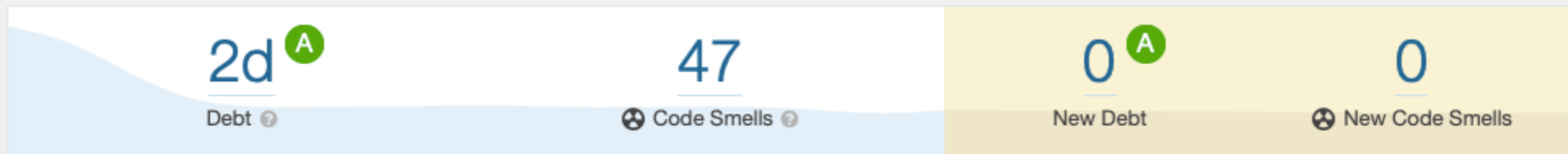
r2cloud - decode satellite signals

Name	Date	Has data
GOMX-1	11:01 31-Dec-2019	
GOMX-1	09:22 31-Dec-2019	
NAYIF-1 (EO-88)	08:29 31-Dec-2019	✓
REAKTOR HELLO WORLD	08:08 31-Dec-2019	✓
JY1SAT (JO-97)	07:43 31-Dec-2019	✓
NAYIF-1 (EO-88)	06:55 31-Dec-2019	
LUME 1	06:38 31-Dec-2019	
METEOR-M 2	06:02 31-Dec-2019	
FUNCUBE-1 (AO-73)	04:37 31-Dec-2019	✓
METEOR-M 2	04:23 31-Dec-2019	
FUNCUBE-1 (AO-73)	03:01 31-Dec-2019	✓

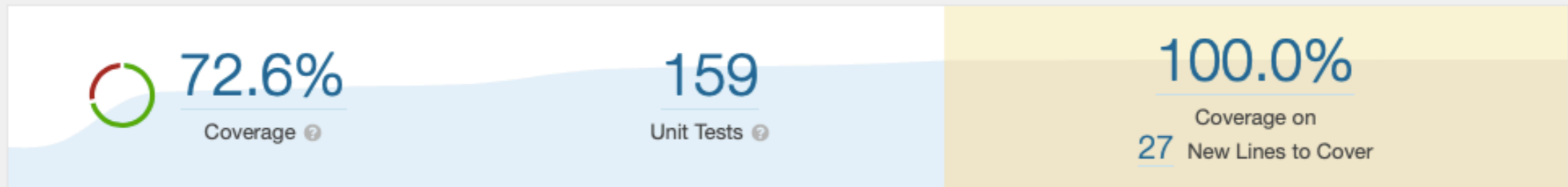
Tests

Stability and simple maintenance

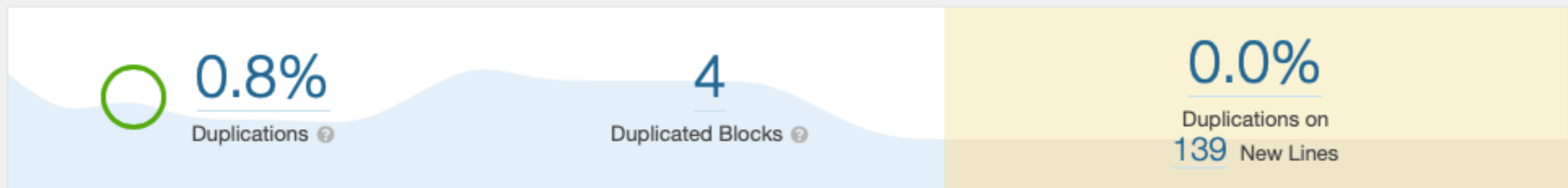
Maintainability [Measures](#)



Coverage [Measures](#)

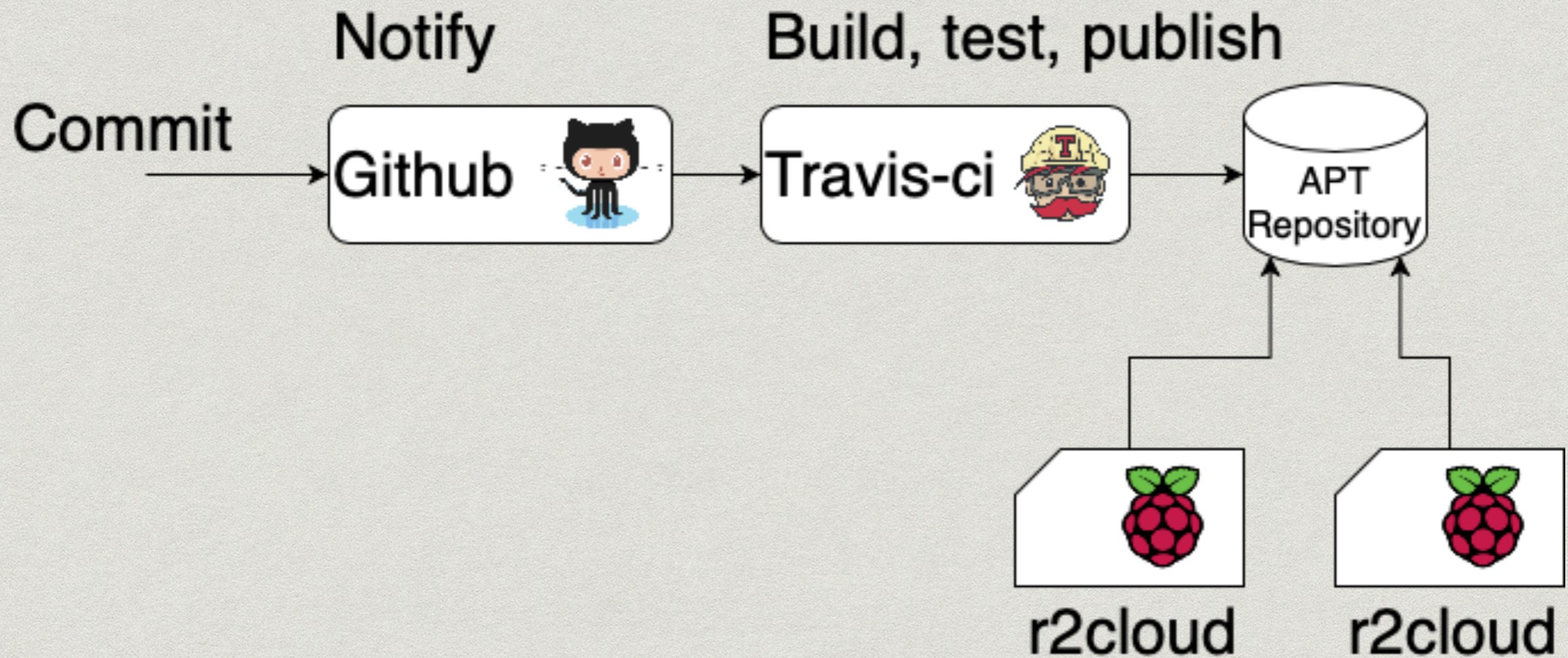


Duplications [Measures](#)



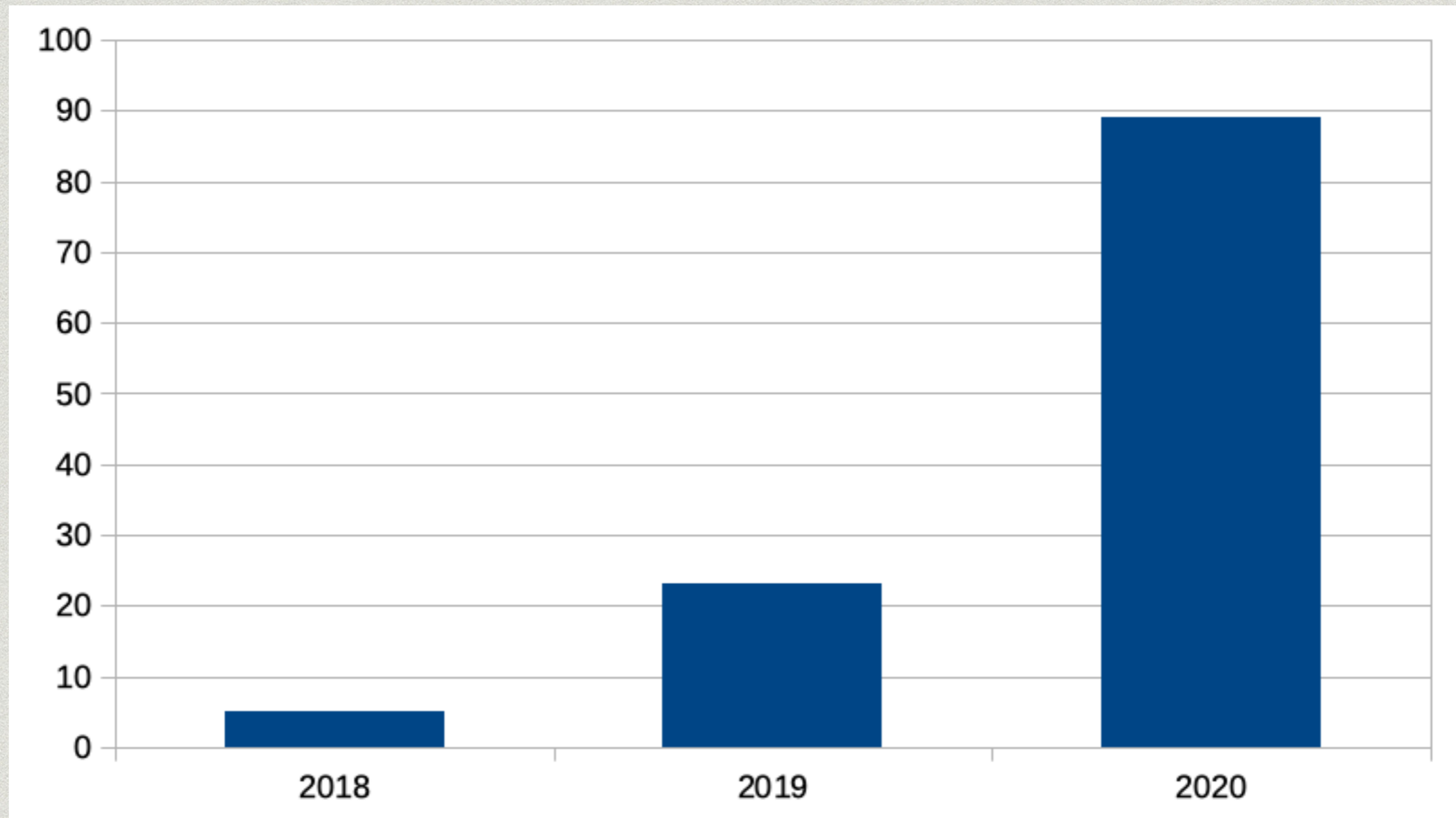
Automation

If tests passed, then r2cloud is ready for release



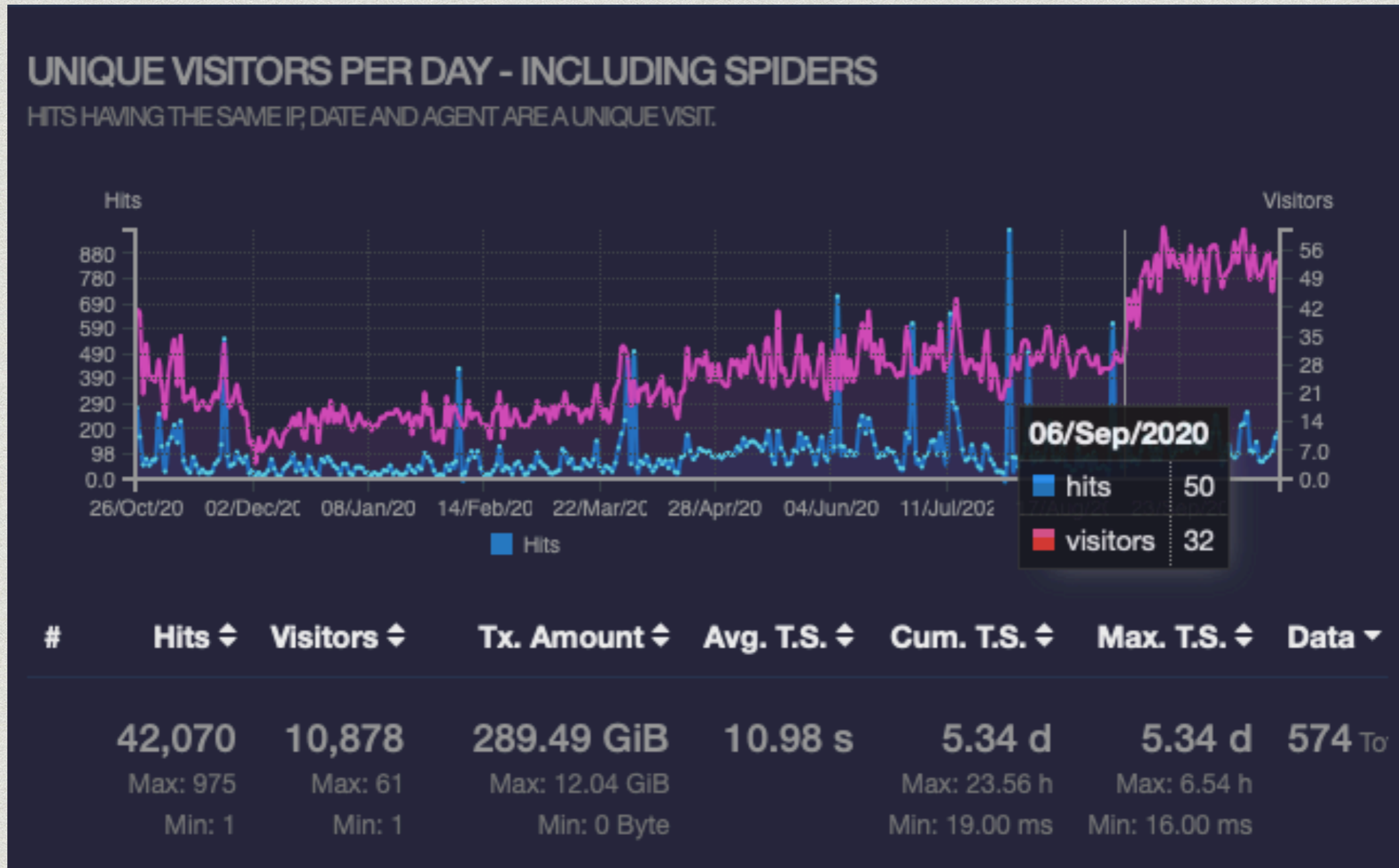
Supported satellites

Number of supported satellites by year



Number of stations

~56 active stations



Contribution

SatNOGS top 50 with simple discone antenna

46	OK2FCO-JN88tw	110366	2020-03-21 08:33:46
47	M7RED-LO33sr	109716	2020-04-05 14:20:17
48	K4KDR-MM87ts	107212	2020-03-03 03:16:31
49	YC3BVG-OJ78dh	105140	2020-01-17 01:30:37

Q&A

R2CLOUD:

<https://github.com/dernasherbrezon/r2cloud>

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