PLEBNET.DEV

BUILD THE FUTURE

Welcome

Agenda 21 Jan 2024

- LNBits Overview
- Architecture
- Swagger API + Extensions
- Resources + Examples
- Questions?

CAVEAT

Keep in mind these slides are only a brief overview, these are only a few viewpoints.

Development moves fast, slides created in Jan 2024

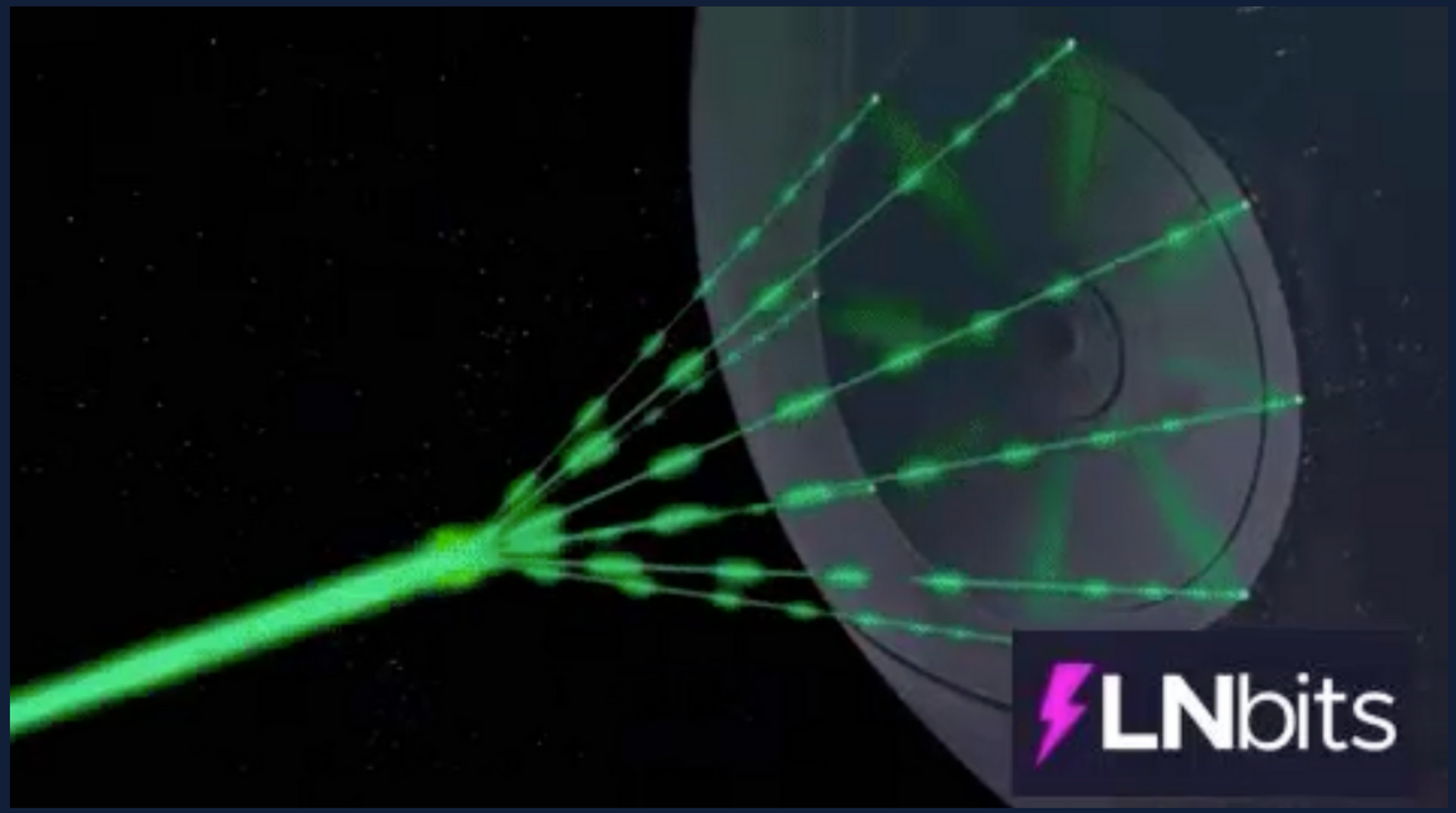
Background

- 2017 - BTCPay Server
- 2020 - LNBits
  - originally started by software hobbyist benarc
  - golang (fiatjaf) and python versions
- 2022
  - golang version obsoleted, feature growth, wiki
  - Python development dominates here and elsewhere.
- 2023
  - only FastAPI Python + VueJS Maintained
  - full time devs on project today

2024 LNBits

- Current State
  - Evolving into more mature software,
    - with experienced code reviews, rapid release cycle
  - Large Extensions library and active Wiki
  - NIX Integration - 1 click install bitcoind, cln/lnd, etc.
  - LN node mgmt integration
  - Username/Password Authentication
- Future - Why you should pay attention:
  - *LNBits could obsolete Umbrel, RTL, Thunderhub and BTCPayServer as a single All-In-One solution*

Memes



https://imgur.com/RxkBn3m meme credit @DarthCoin

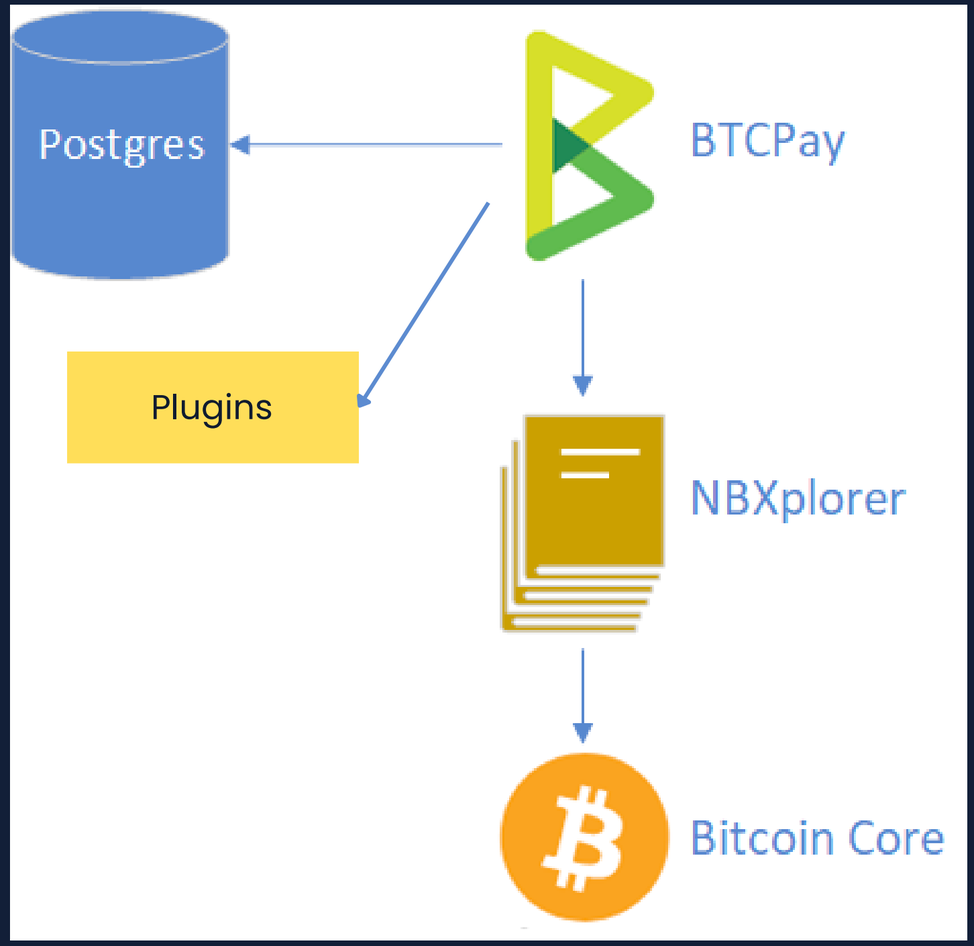
BTCPay Architecture

Pros

- Very solid performance and stable.
- Well documented with many integrations
- Used in industry widely
- Existing hosts will run it for you, e.g. lunanode and voltage.

Cons

- Must use Docker, many containers.
- Requires .NET, C#, Vuejs, NBXplorer, bitcoind, run as full node or pruned, plus L2
- Time consuming to setup env for development - 30min - 1 hr
- VPS Cost if pruned node ~10-$20/month up



LNBits, Layer 2 1/2

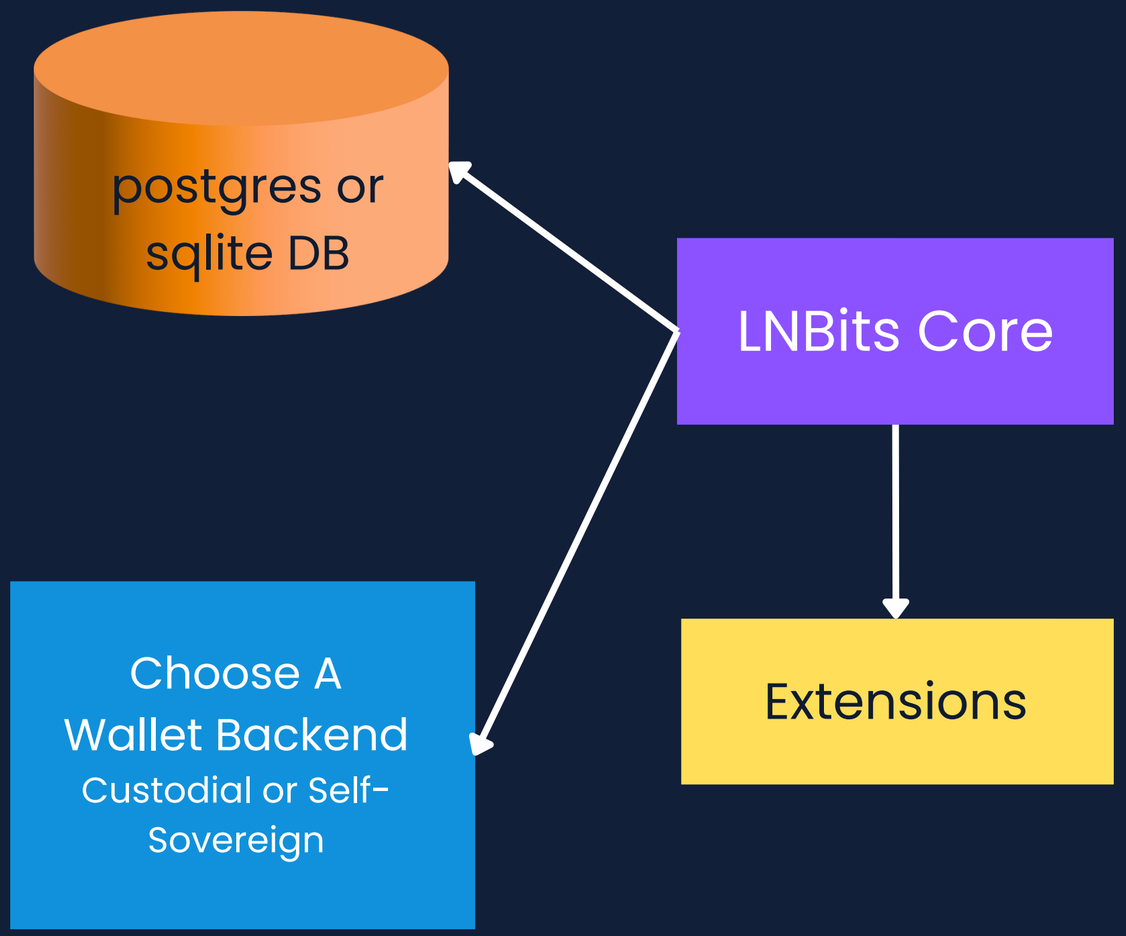
What is LNBits? It’s multiple things:

- First - Infrastructure Software for App Developers
- Second - LNBits is also Accounting Software for Layer 2.
    - The wallets are not real wallets, it is for keep tracking of each user for a specific application or for an Uncle Jim model.

Tools for developers are included

- Swagger API
- Extension Building overview

LNBits Architecture

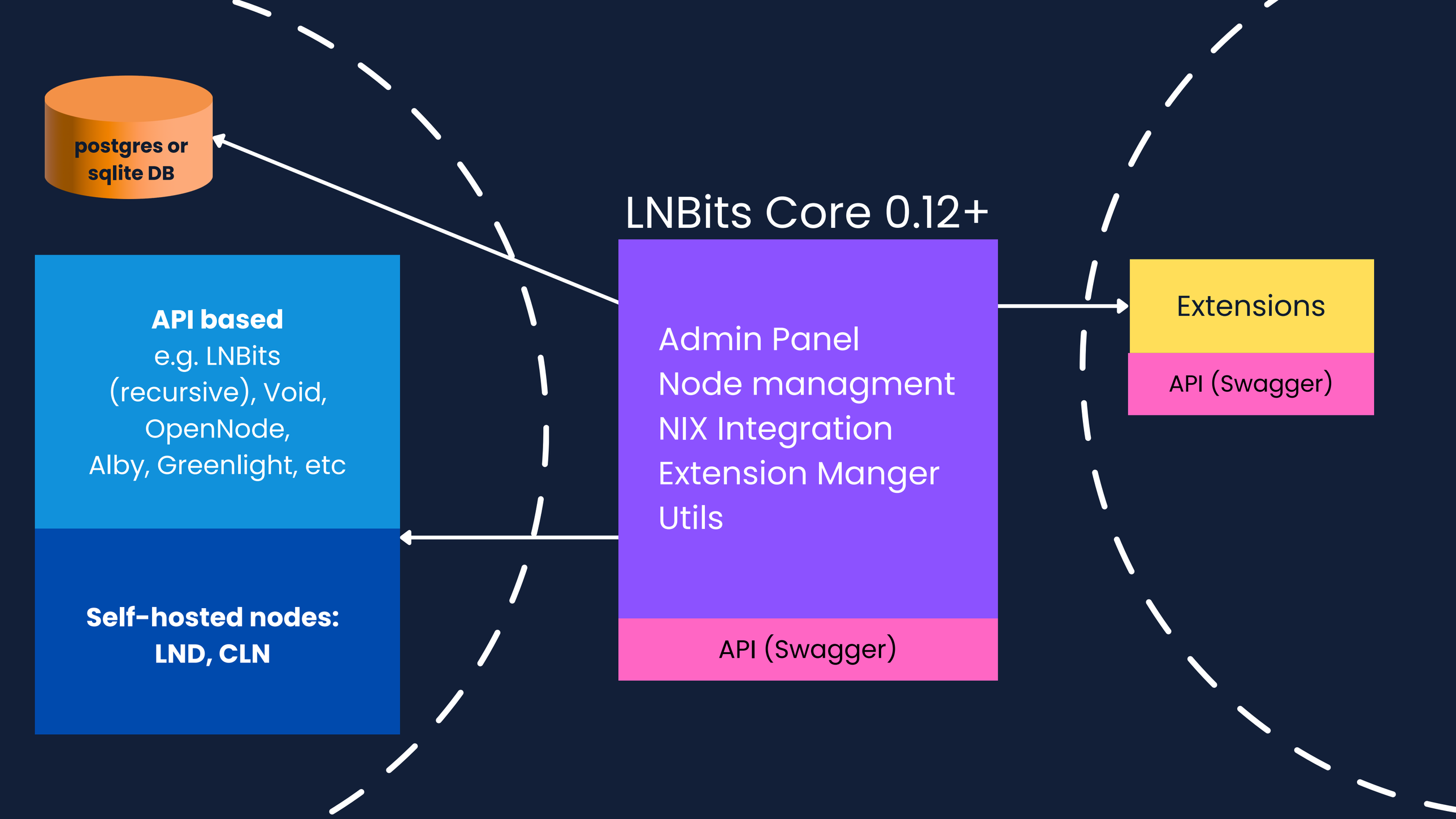


Pros

- MODULAR, Simple Architecture.
- Fast dev env setup, <5 min uptime
- Multiple choices for DB and Wallet, Void Wallet for testing.
- Python, Vue JS +Quasar
- Docker not required. Inexpensive.

Cons

- Still young software, continuously evolving. In beta stage, so error potential is higher.
- Primary focus is on L2 not L1
- L1 is supported in some extensions


postgres or sqlite DB
LNBits Core 0.12+
API based
e.g. LNBits (recursive), Void, OpenNode, Alby, Greenlight, etc
Self-hosted nodes: LND, CLN
Admin Panel
Node managment
NIX Integration
Extension Manger
Utils
API (Swagger)
Extensions
API (Swagger)

Some Gotchas

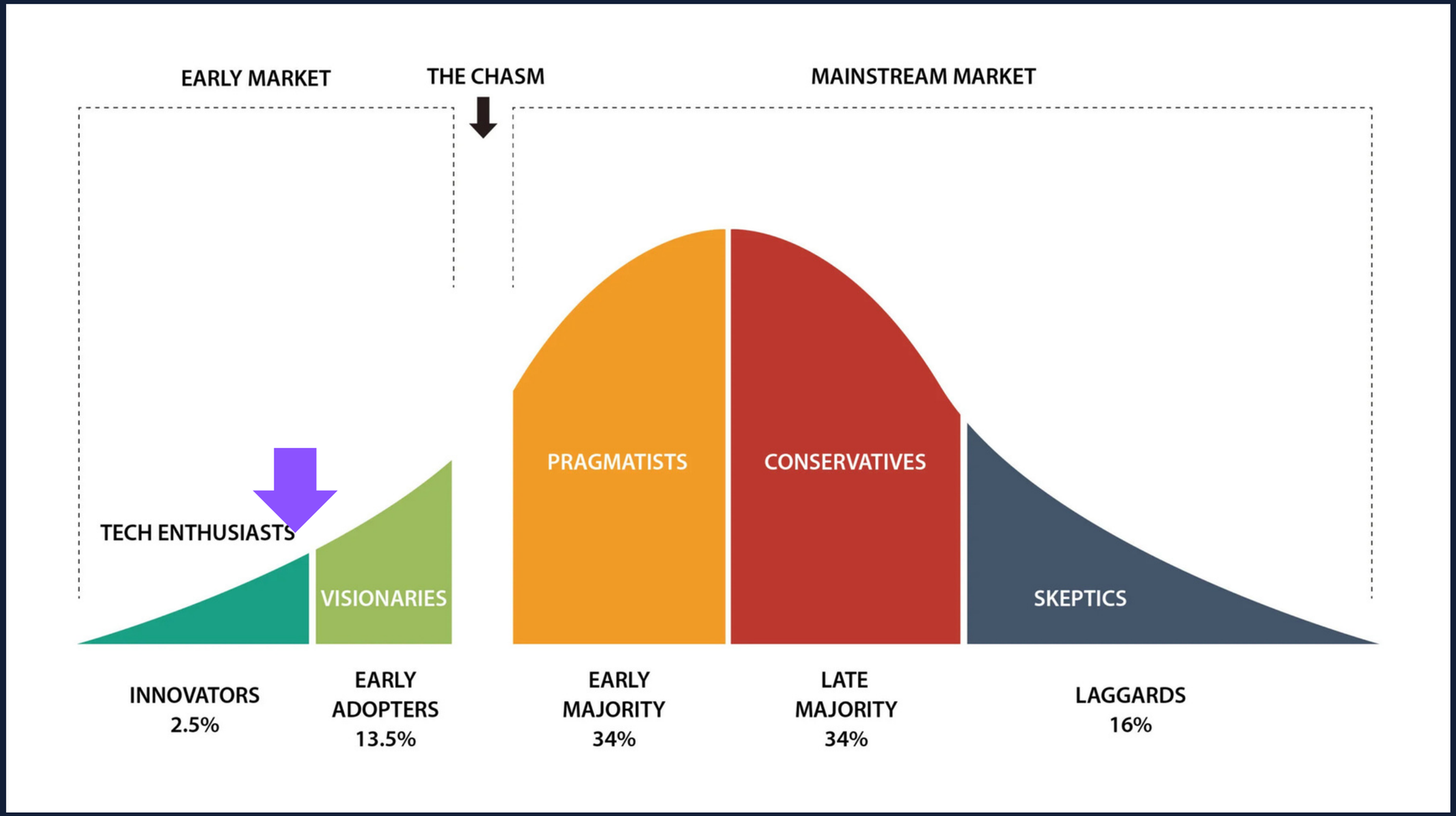
What are some?

- **API Key misuse common:** invoice vs admin key
- Manifest system for Extensions - can be confusing
- sqlite vs postgresql - know why.
- some features are so new; no documentation at all.
- Bugs will appear, if serious file an issue asap.
- Vetted vs Unvetted Extensions

Some Tips for Beginners

- Try to Run LNBits and use the API
- With Python
  - master async and aiohttp
  - PEP8 also see this clip
  - Poetry
- Learn the difference between BOLT11, LNURL, lightning addresses and zaps - see October Talk
- Lots of future industry opportunities - Wordpress analog

Some Industry Thoughts

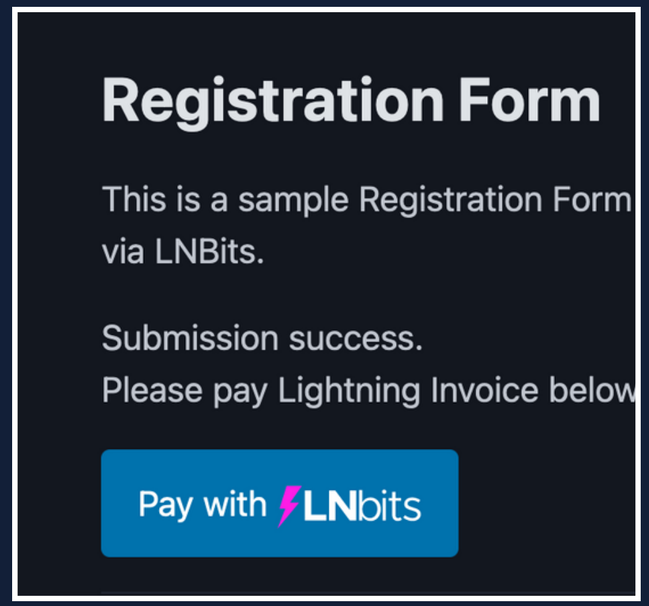


Demos

What is this?

- Swagger API - Micro apps and demos
  - satspaysession,
  - simple-registration-form

- Extension Building -
  - Example Extension Repo
  - Manifest system



Resources

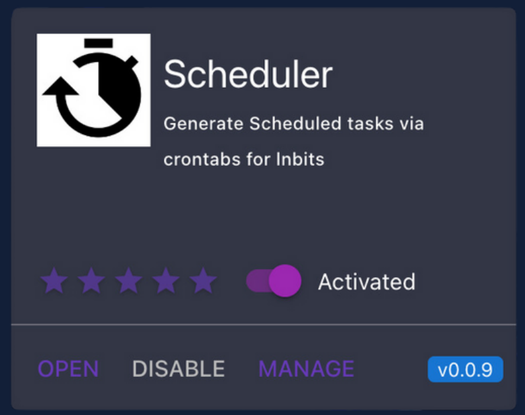
What are they?

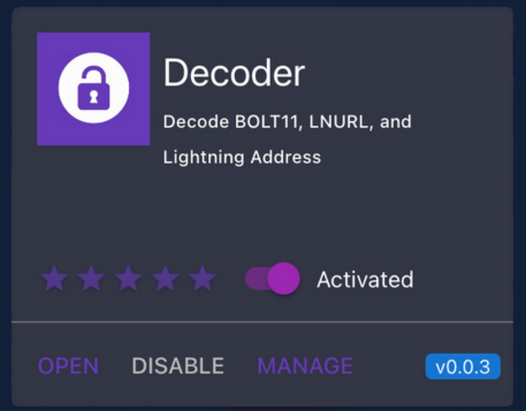
- Testnet LNBits
  - https://testnet.plebnet.dev - Please use this!
- Testnet lightning faucet
  - https://htlc.me
- LNBits Telegram - ask for help here first
  - https://t.me/lnbits
- LNBits specialist help
  - Book a session at cal.com/bitkarrot

Selected Contributions

from Bitkarrot

- Lightning Address Ext. - Now integrated in LNURLp ext.
- Scheduler Extension
- Decoder extension
- pyLNbits SDK
- getAlby integration
- plenty others, just ask





This is a Fact, Not a Postulation!

Questions?

2024 Focus

Where I will be focused this season

- Heads Down building and Code Review
- Last workshop until ....TBD
- Seeking collaboration with active builders, testers, documenters