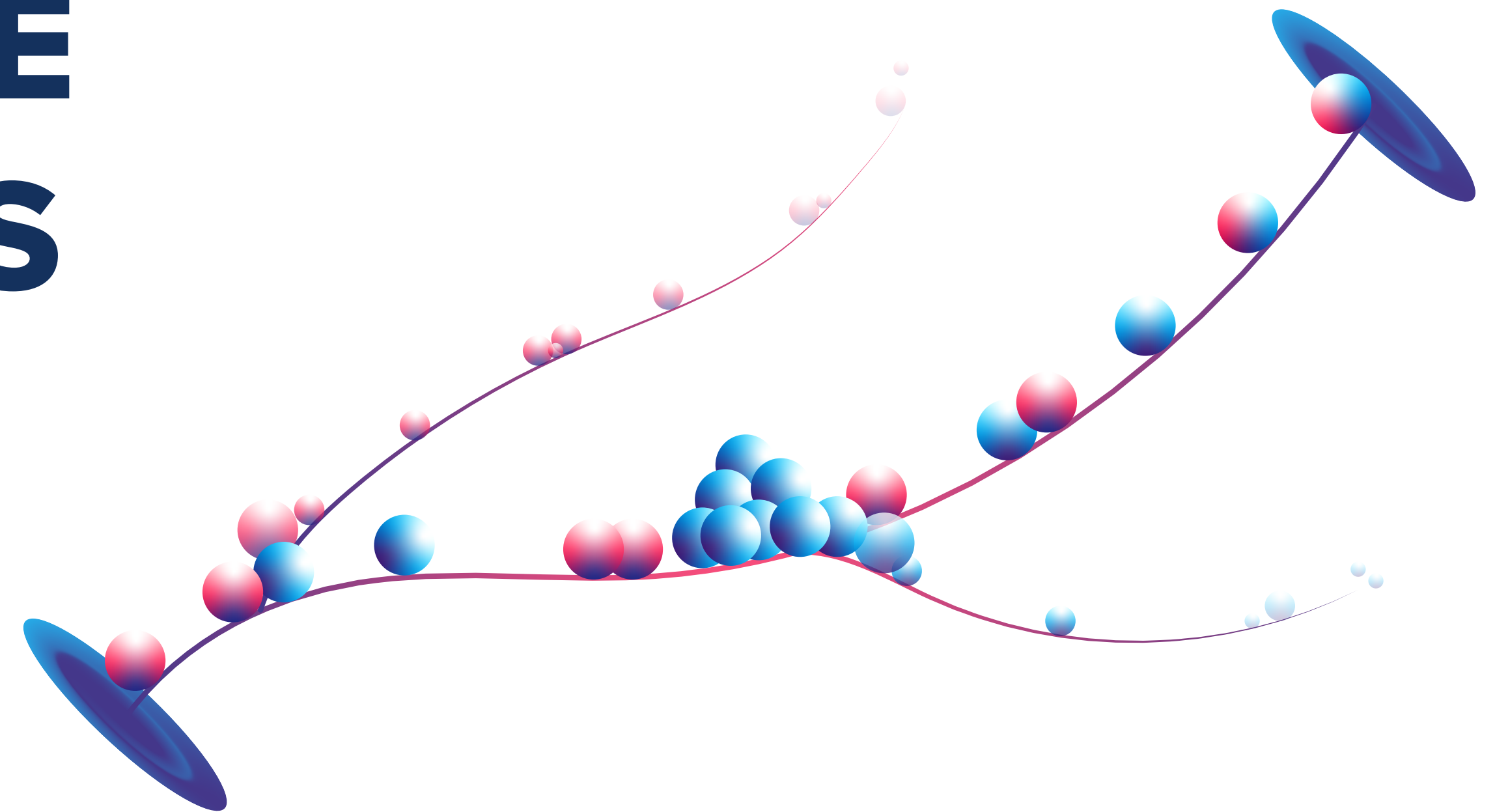


TAKING BACKSTAGE TO NEW FRONTIERS WITH **SIMULATION**



Taras Mankovski, CEO of Frontside Software

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DEVELOPER EXPERIENCE AND BACKSTAGE CONSULTING

Founded in 2005 / Based in Austin, Texas /
Multi-disciplinary engineers

RESEARCH & DEVELOPMENT:

BRIDGE DEV AND QA

- BigTest
- Interactors
- Efection
- Simulacrum

US\$2M+ invested in R&D /
Used by Fortune 500 companies



BACKSTAGE, AS AN AGGREGATOR...

Makes **Local Development** difficult without access to those services.

1. Almost impossible if services are behind a VPN.
2. It can be a Cyber issue when you're aggregating PIID in development

Makes **Automated integration testing** very complicated

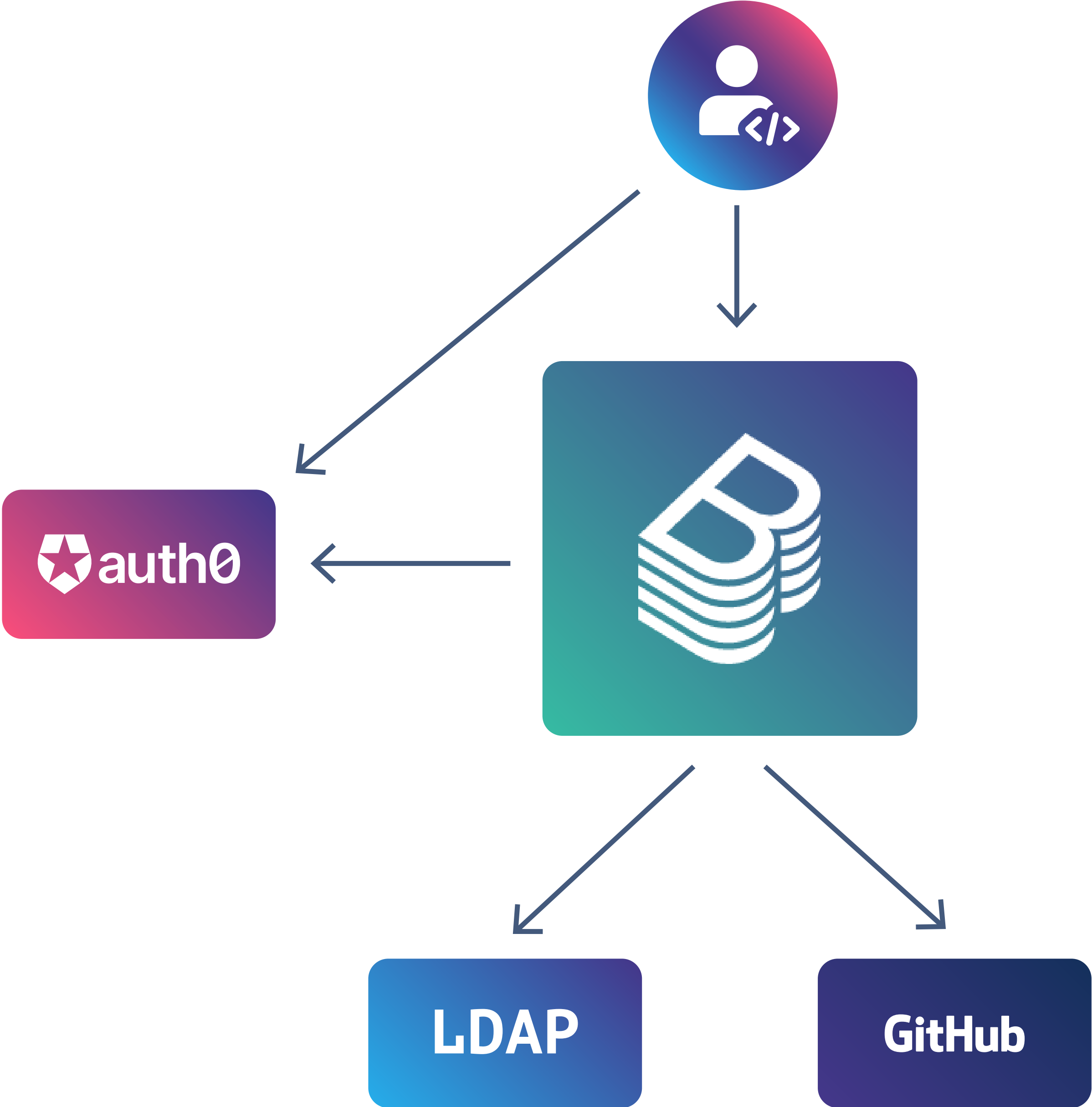
3. Rely on this-party services that your tests can't control.



**IF YOU RUN INTO ALL THESE ISSUES AT ONCE
THERE'S NO WAY TO DEVELOP
WITH BACKSTAGE**

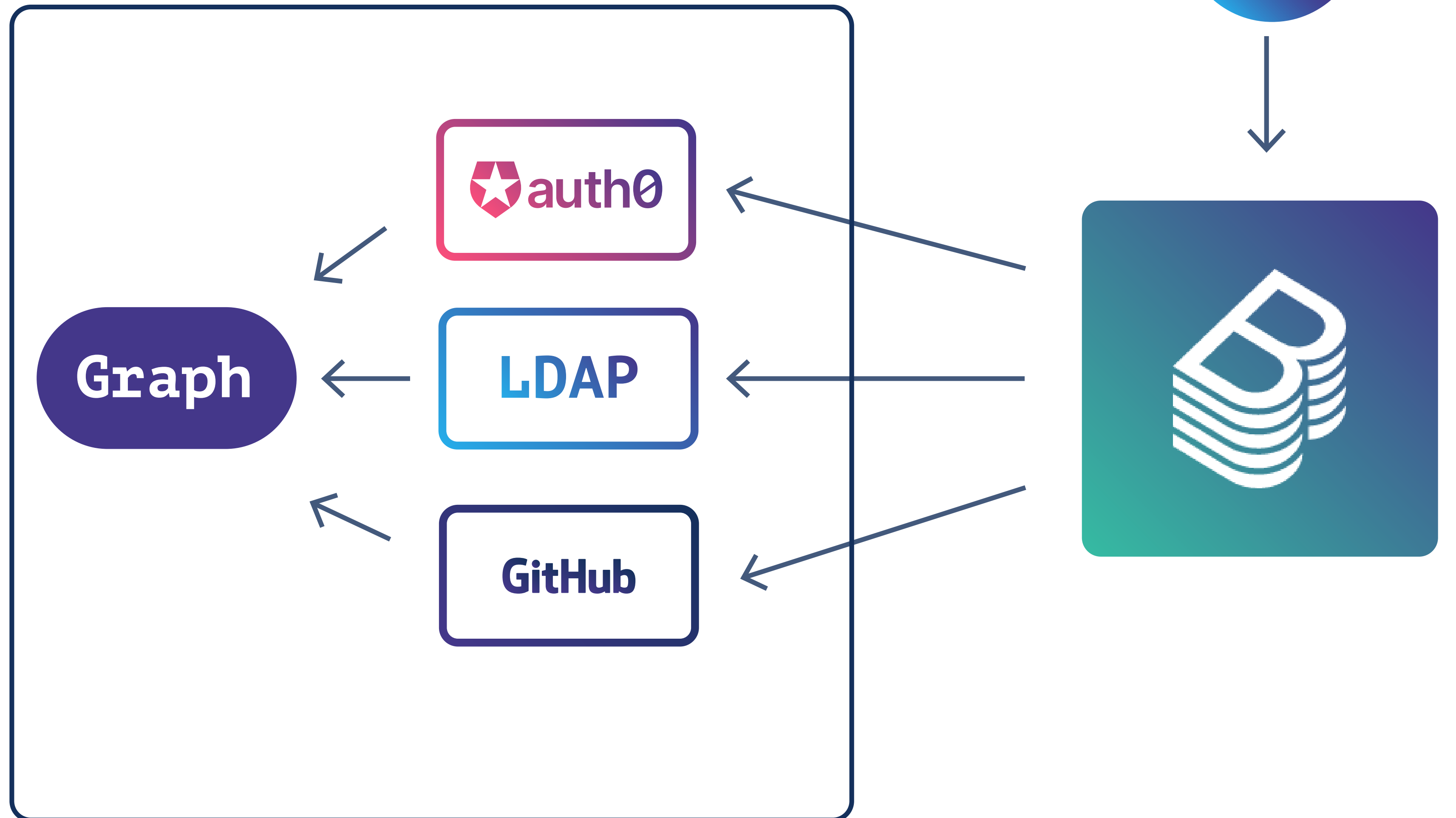


**PRODUCTION /
STAGING /
~~DEVELOPMENT /~~
~~TESTING~~**



DEVELOPMENT/ TESTING

SIMULACRUM'S SIMULATION



**THESE SIMULATORS EXPOSE THE
SAME APIS THAT BACKSTAGE USES TO
CONNECT TO REAL SERVICES**



HTTP



TCP



**GraphQL
over HTTP**



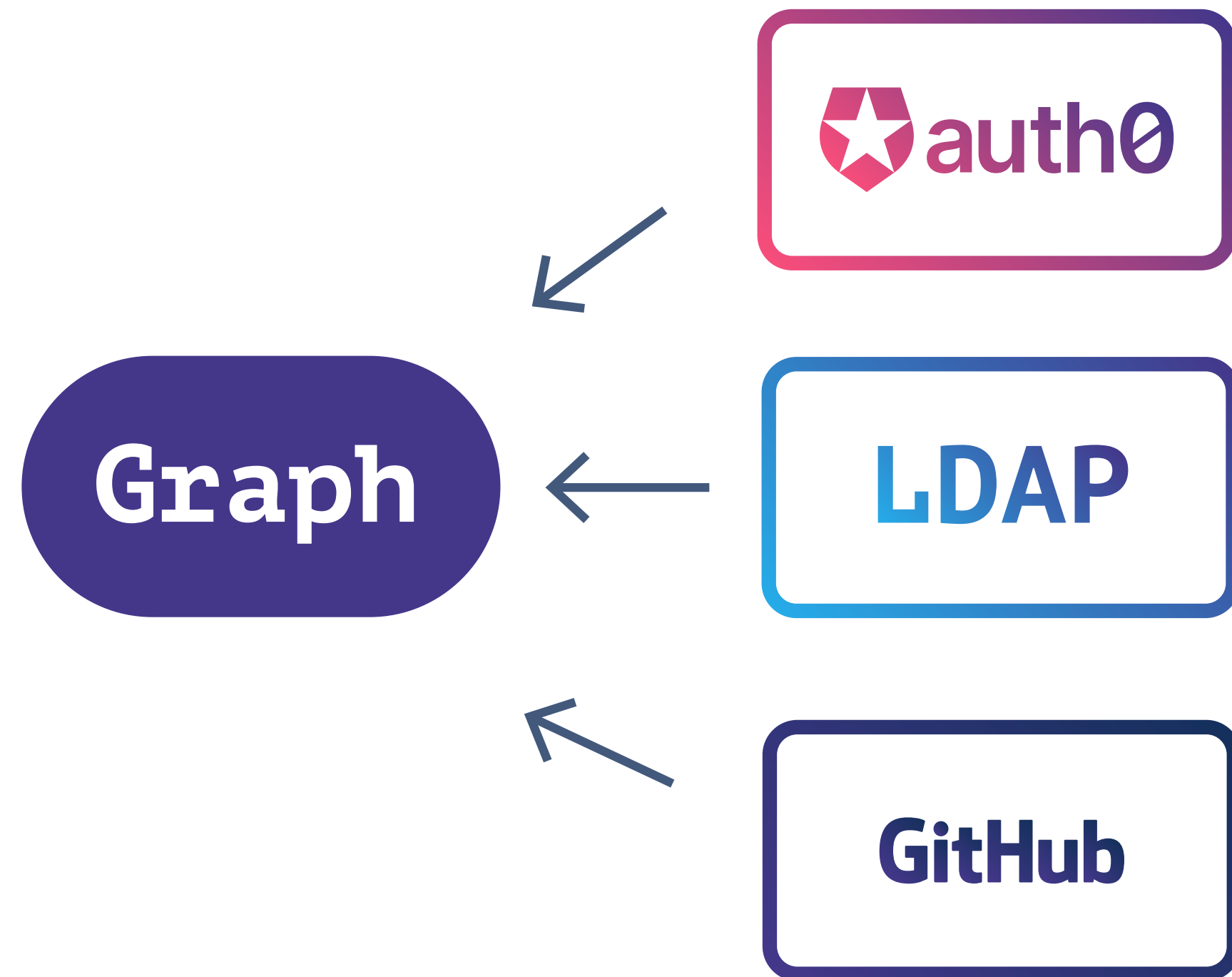
BUT MAINTAINING MOCKS IS DIFFICULT..

**MAINTAINING SETS OF MOCK OF
DATA IN SYNC IS TITANIC**

ie. If a user logs in to Auth0, that user must exist
and match to an ID stored in LDAP and Github

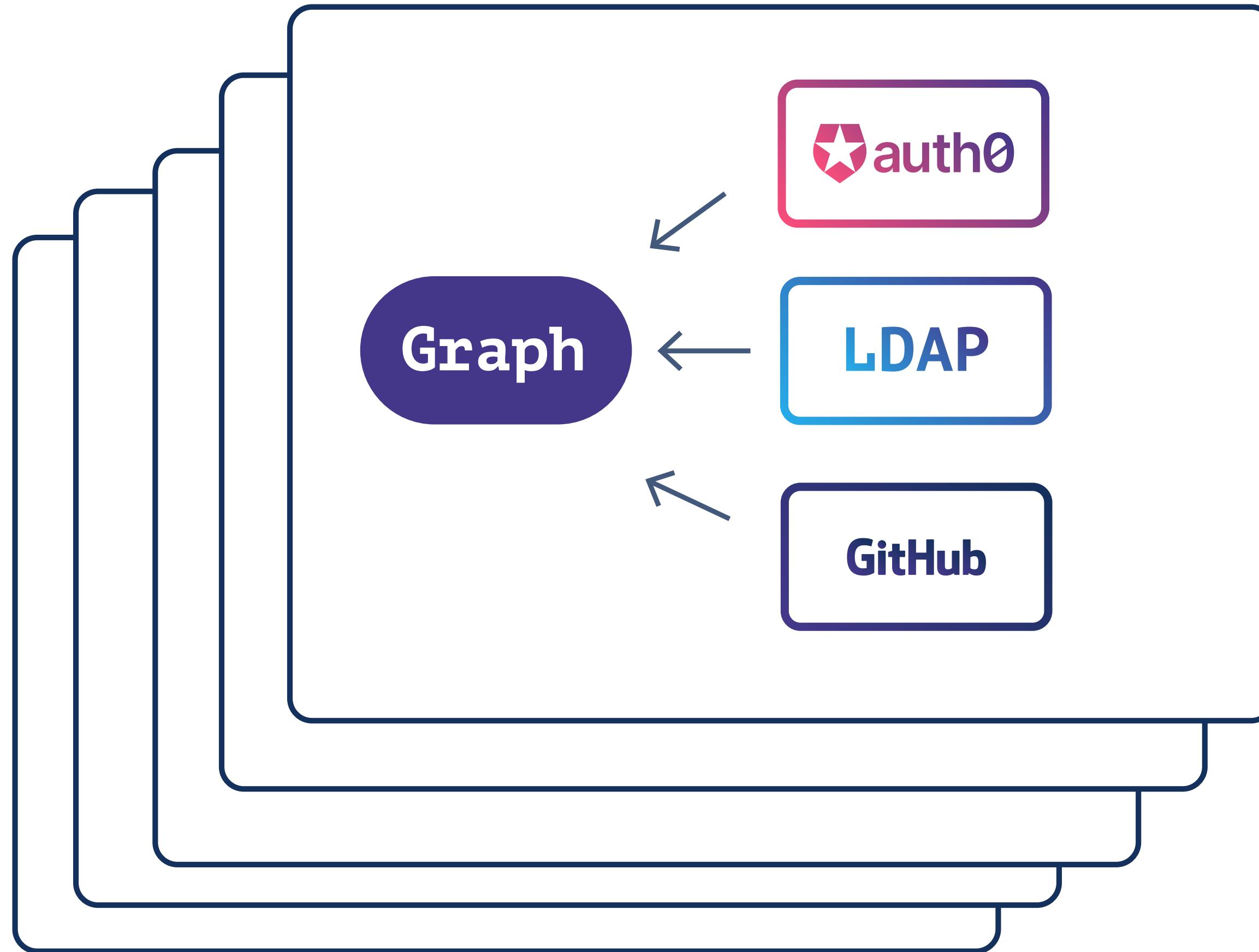


WE CREATED THE SIMULATION IN A WAY THAT ALLOWS ALL OF THE SIMULATORS TO SHARE A COMMON DATA GRAPH



Behind the simulators is a graph of data that represents all of the data that's stored in our client's services





AN IMPORTANT FEATURE: **WE DON'T HAVE TO MANUALLY CREATE THE DATA**

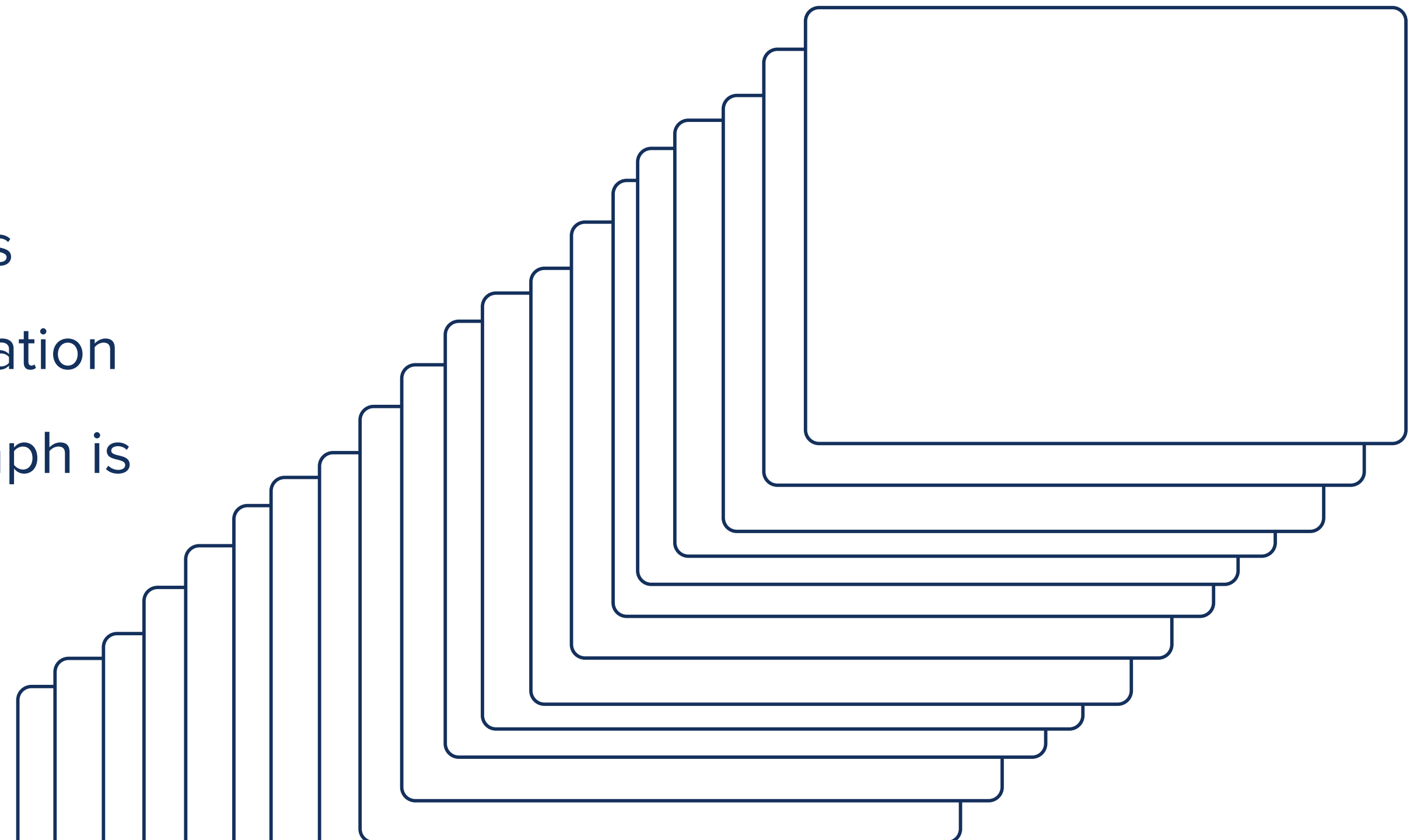
It's automatically generated from
Probability Distributions.

We can automatically create
simulated data that matches the
reality of the organizations we
work with.



EXAMPLE:

- A. The company has X number of employees, and 20% of them are using GitHub Enterprise.
- B. This means that when we create the data, that from users in LDAP, 20% of them will have Github Accounts
- C. From those GitHub Accounts,
 - I. 1% will be members of many organizations
 - II. 5% will be members of 3 or 4 organizations
 - III. The rest will be members of only 1 organization
- D. This distribution is declarative and the data graph is generated from this data.



DEMO

SIMULATION + BACKSTAGE

- Backstage running on simulation
- Changing the number of users and having that automatically pull in more users from LDAP



OUR GOAL

Make it possible to simulate all of the services that Backstage uses in order to:

- Improve the local development experience
- Eliminate dependency on services from local development and tests
- Eliminate PII from development data

Let's talk and we can see how we can bring this tooling to your project.

