

Platform
Engineering Day
NORTH AMERICA

Platform as Context: Evolving Our IDP for AI Agents

Gang Luo, Electrolux Group

KubeCon EU 2026

Platform Engineering Day NORTH AMERICA

Platform Engineering Day EUROPE

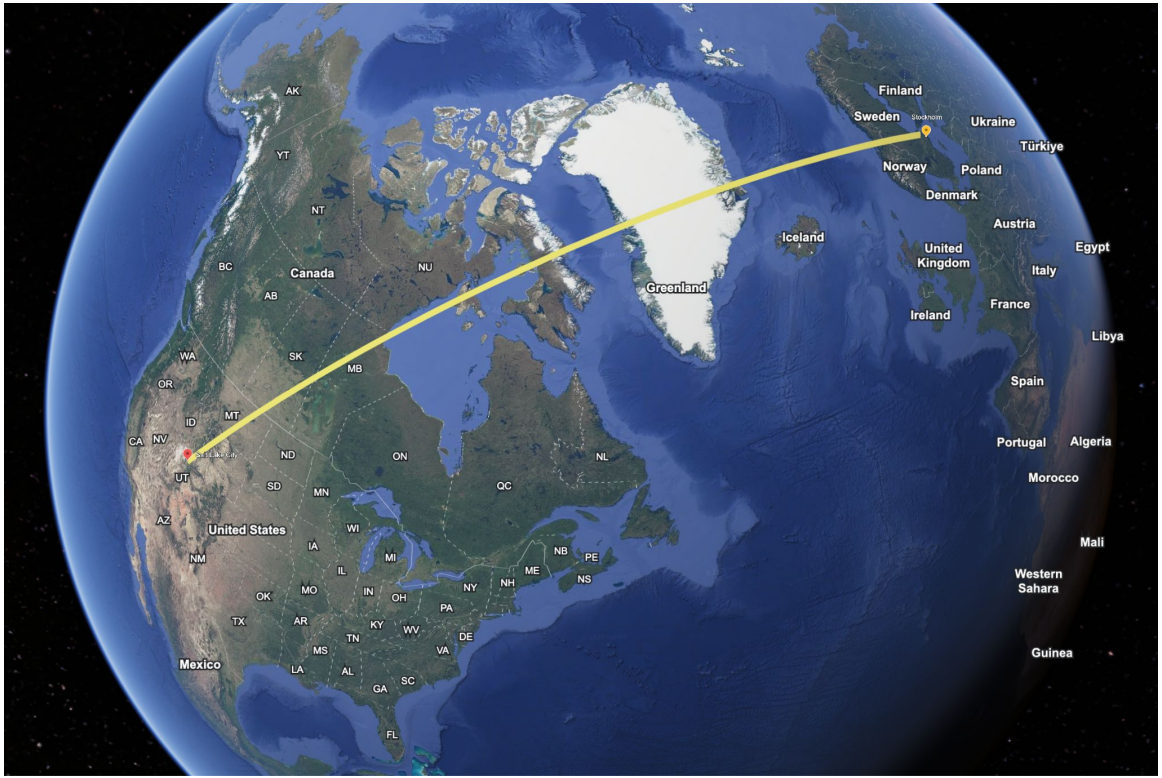
How We Built an Internal Developer Platform and Evolved It Into Open Source

Gang Luo & Kristina Kondrashevich, Electrolux Group



My Journey to Platform Engineering

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Developer

↓

Infrastructure Engineering

↓

SRE

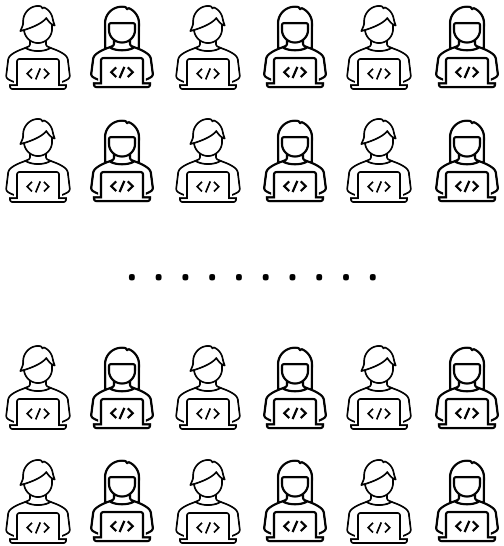
↓

Platform Engineering

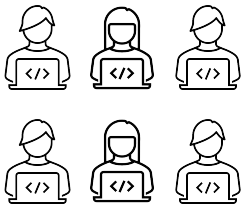
Electrolux Group



The Scaling Problem



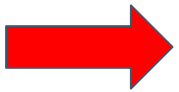
~400 developers



~6 SREs

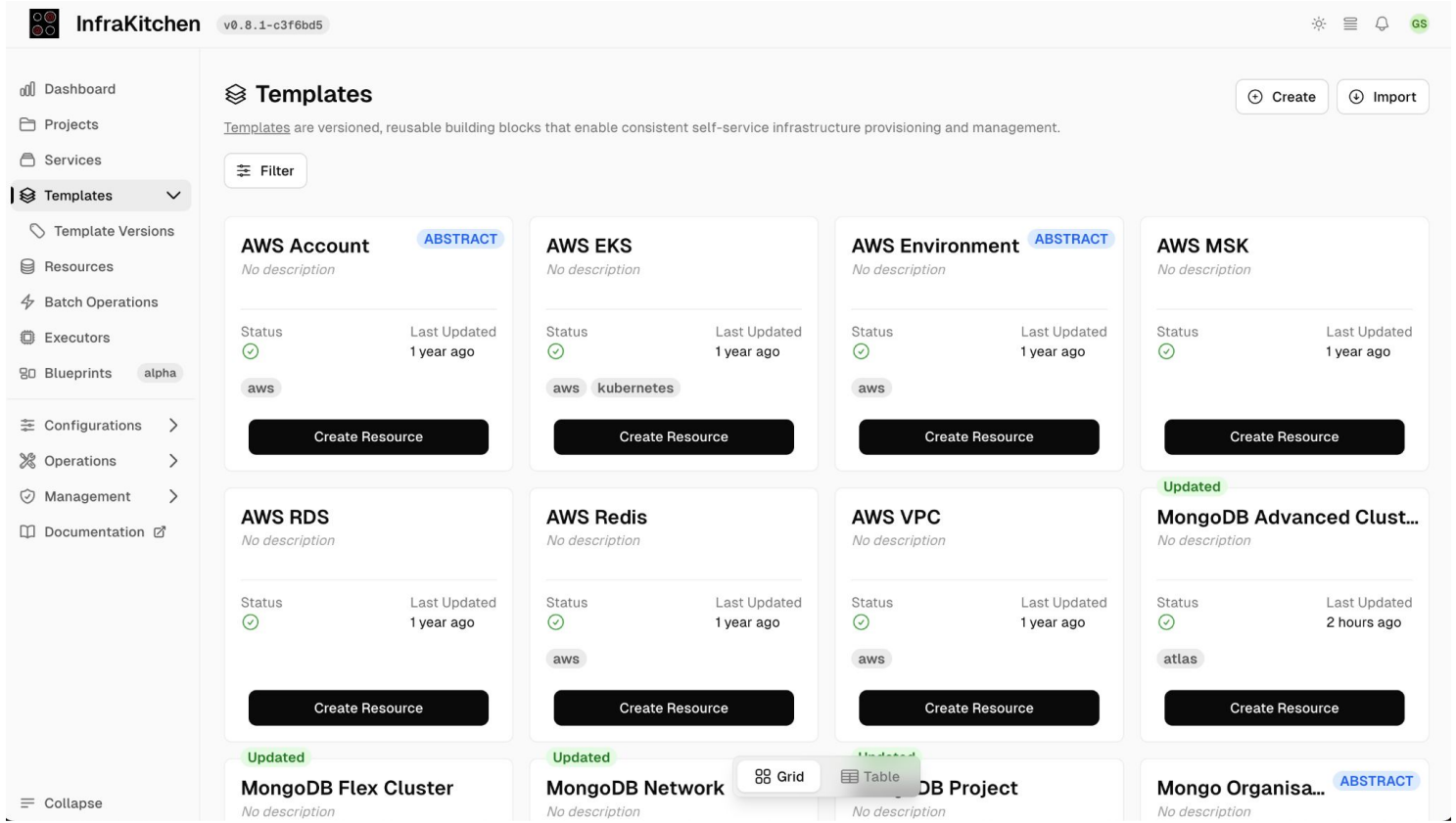
- Git
- Cloud Infrastructure
- CI/CD
- Observability
- Operations
- Incidents

The Bottleneck

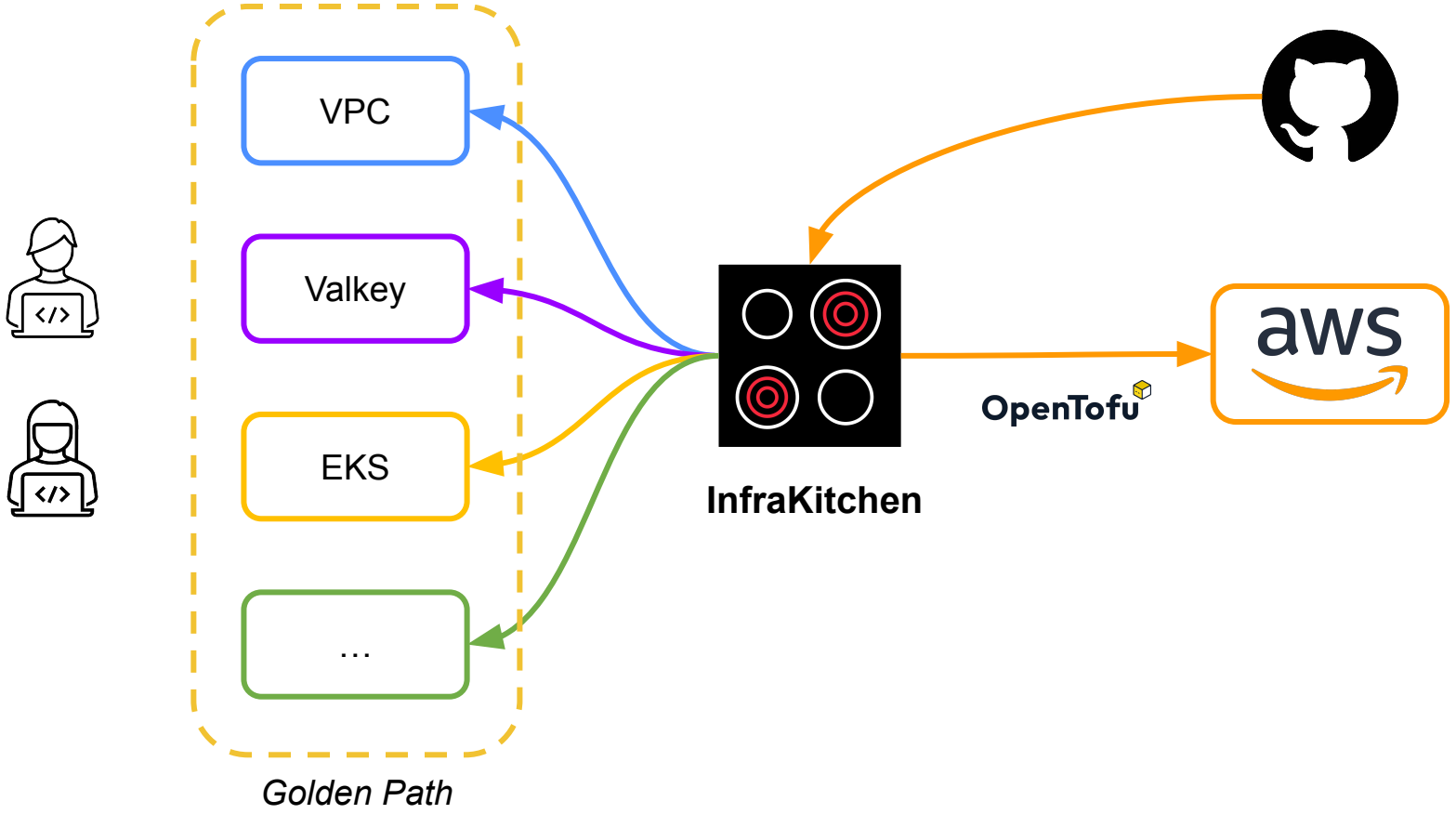
1 database  ~1 week

Our Internal Developer Platform (IDP)

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Our Internal Developer Platform (IDP)



What Developers Get

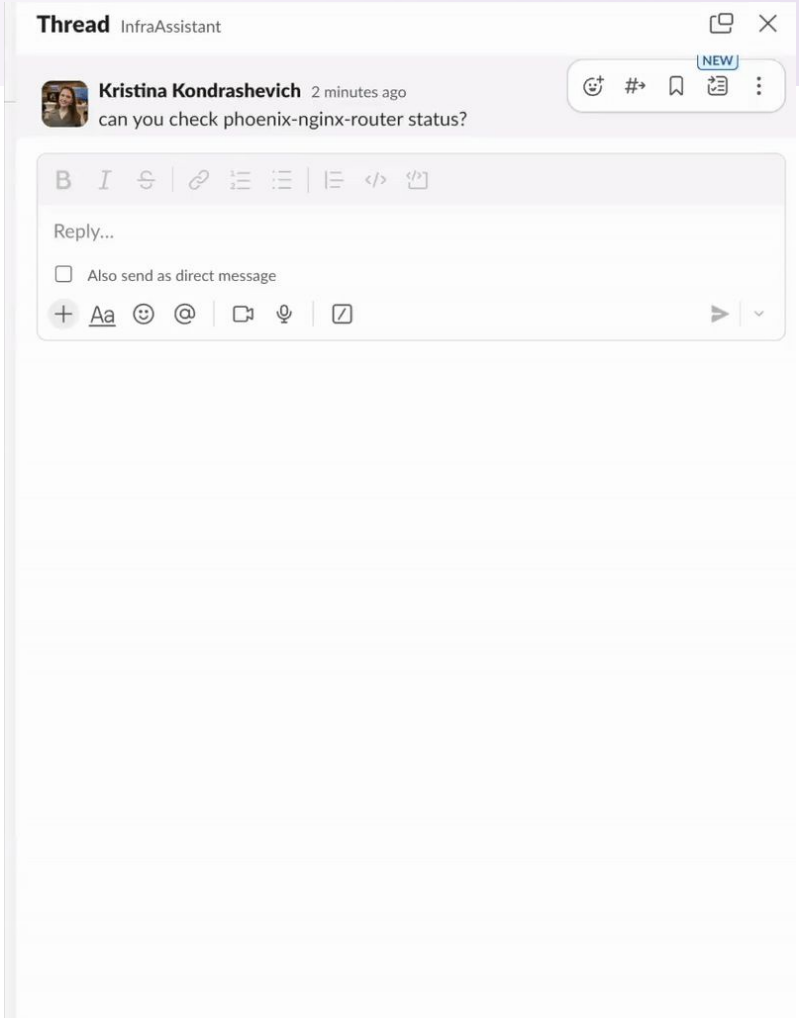
Golden paths

Self-service capabilities

Standardized workflows

Guardrails & consistency

InfraAssistant



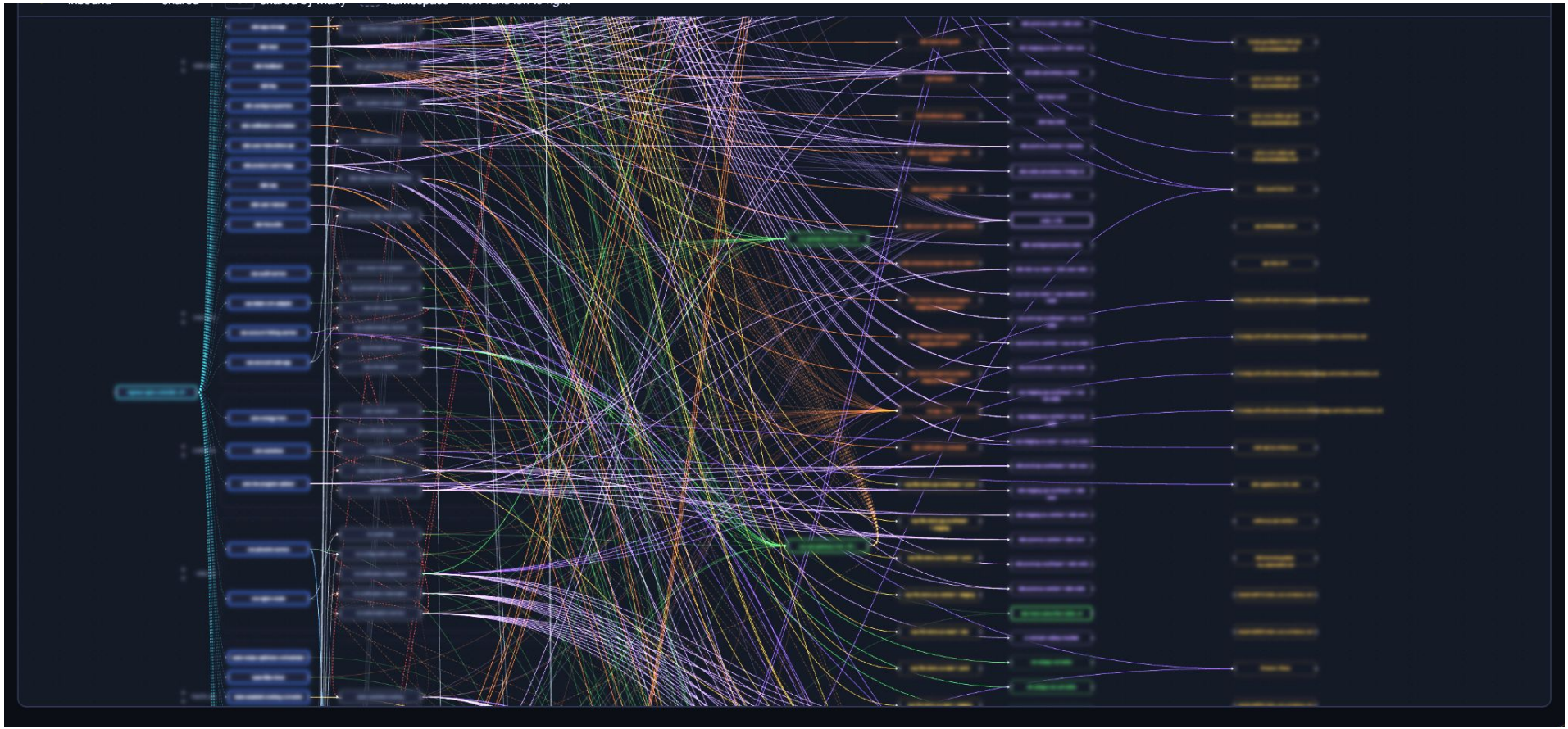
MCP Tools (PoC)

Read Tools

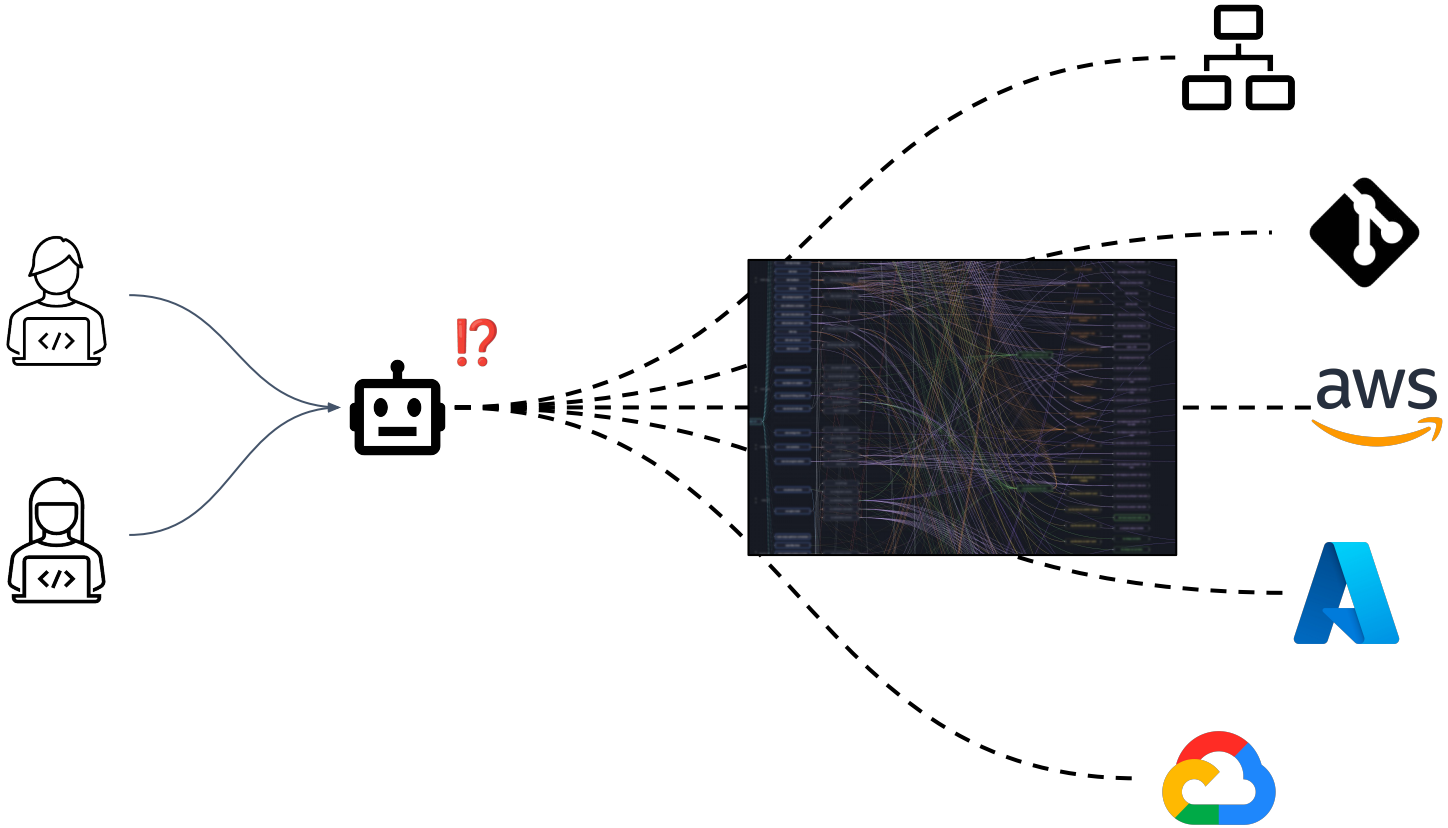
Write Tools
(with gates)

Docs Tools

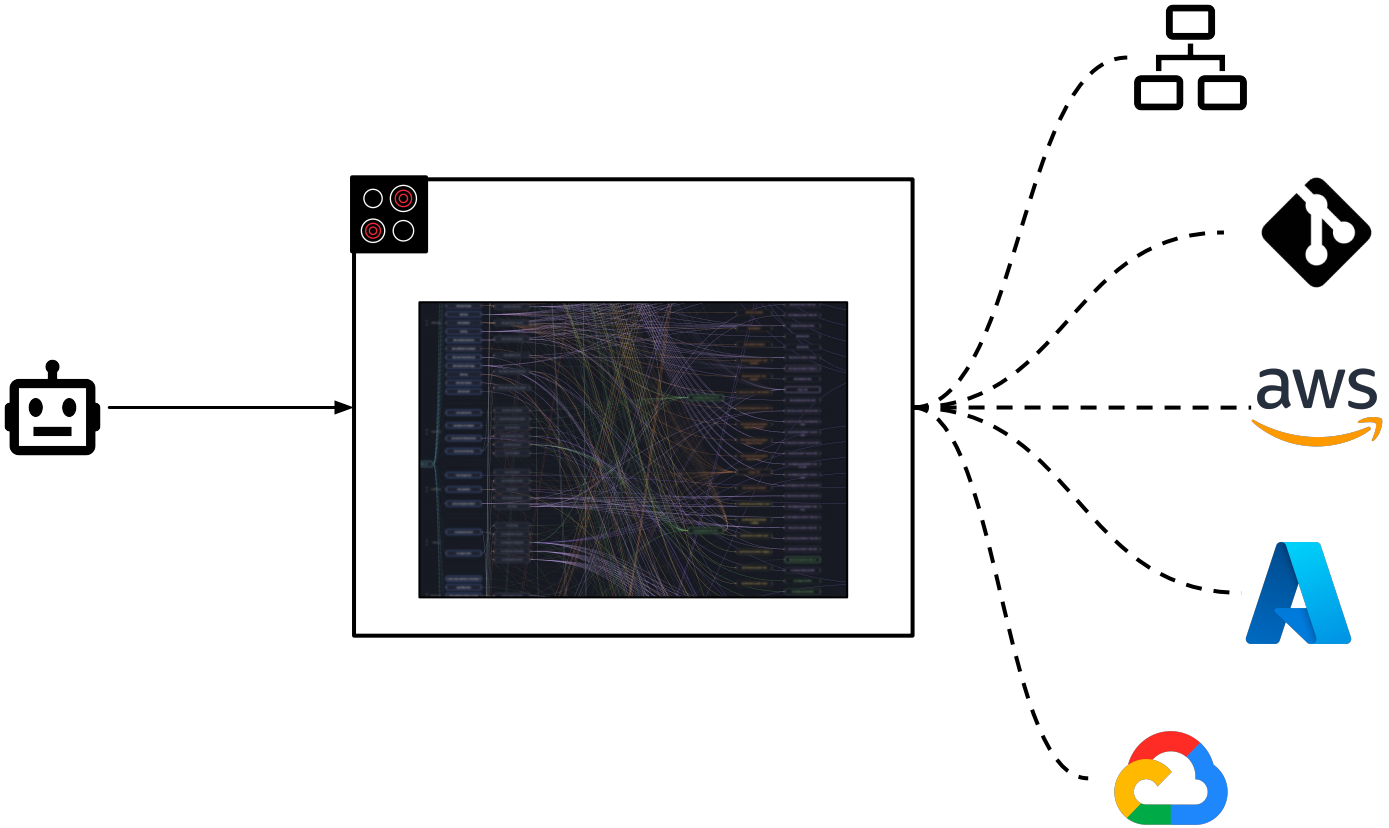
The Complexity



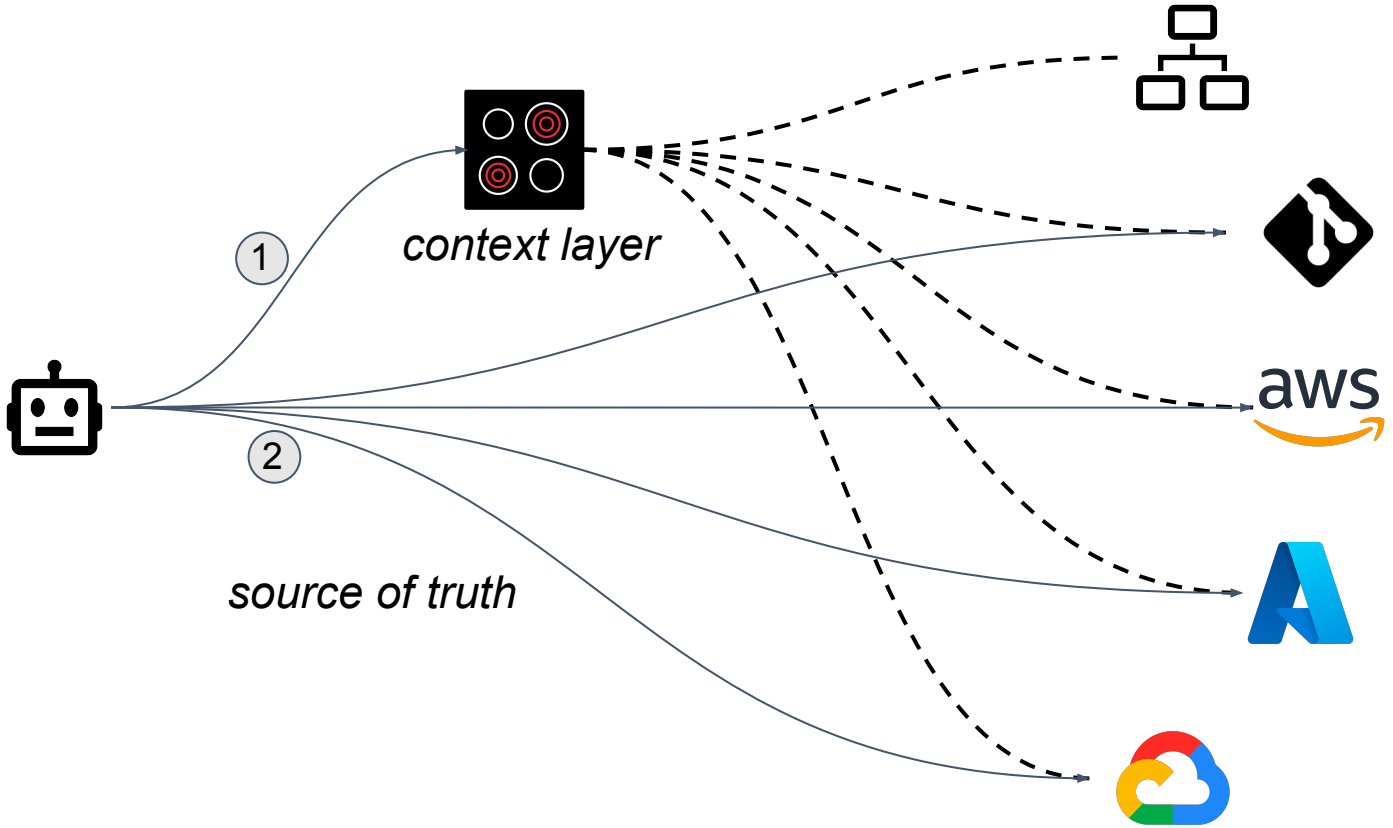
Let's Bring in an Agent



IDP as Context?



The Context Layer



Context

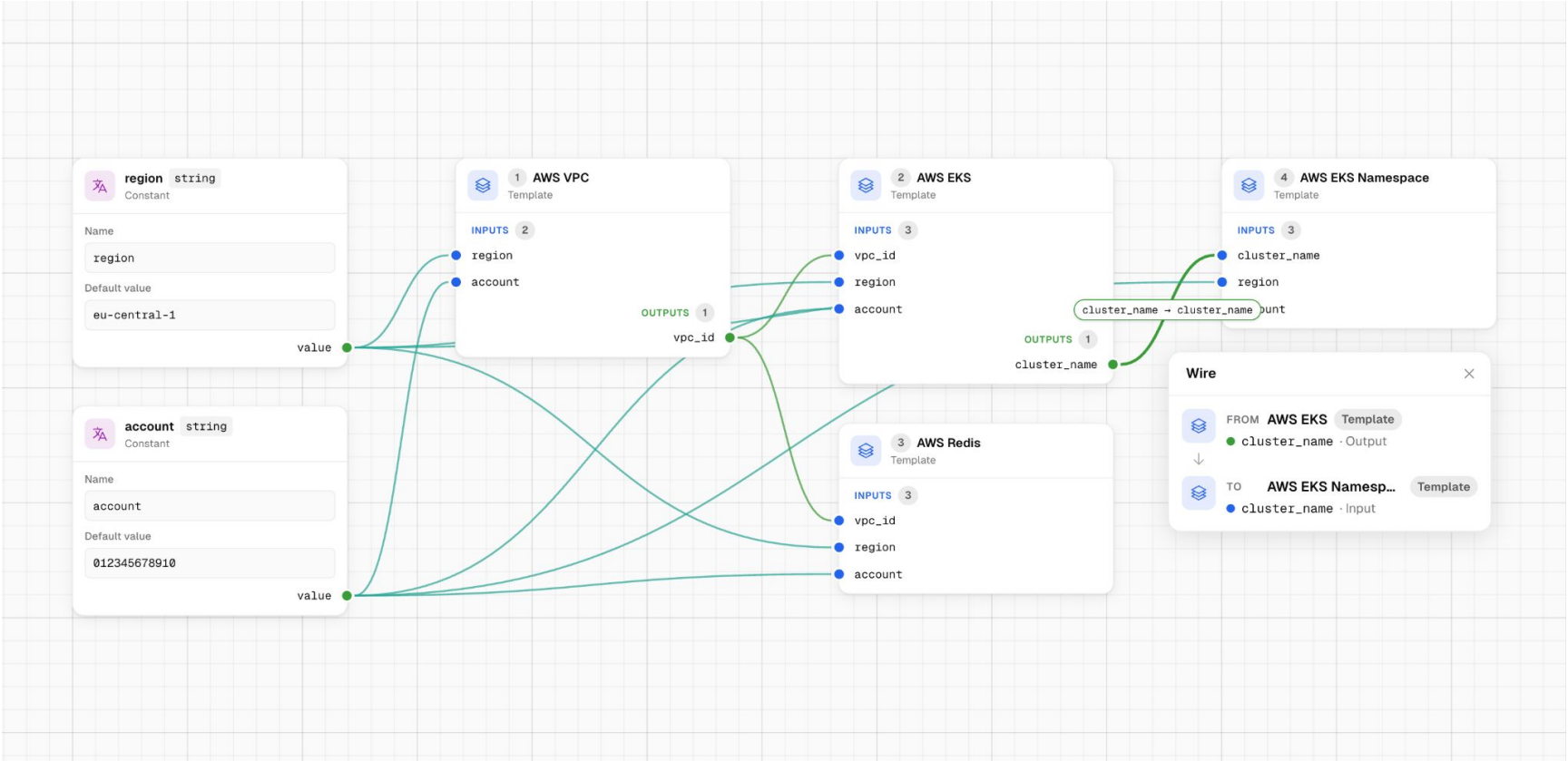


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Context	Sources
Ownership	Docs
Infrastructure	AWS
Dependencies	Git
Deployments	CI/CD
Telemetry	Observability

Infrastructure Graph

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From REST to GraphQL

- [ ] Add read-only GraphQL API for core entities `enhancement` `graphql` `PoC`
  #162 · by RustyRien was merged on Mar 30 Member · Review required · ✓ 6/6
- [ ] Extend GraphQL API to all entities and migrate UI data fetching to GraphQL `enhancement` `graphql`
  #257 · by RustyRien was merged on Jun 4 Member · Approved · ✓ 7/7
- [ ] Replace MCP per-entity tools with GraphQL discovery and query tools `graphql` `mcp`
  #260 · by GitMacke was merged on Jun 11 Member · Approved · ✓ 6/6
- [ ] Notifications, move some endpoints to GraphQL `backend` `frontend` `graphql`
  #265 · by RustyRien was merged on Jun 11 Member · Approved · ✓ 6/6
- [ ] Add GraphQL update mutations and inline editing for core entities `graphql`
  #269 · by RustyRien was merged on Jun 16 Member · Approved · ✓ 6/6
- [ ] Move resource and secret updates to GraphQL with inline editing `graphql`
  #270 · by RustyRien was merged on Jun 17 Member · Approved · ✓ 7/7
- [ ] Add GraphQL mutations for remaining entities and switch UI to GraphQL `graphql` `refactoring`
  #271 · by RustyRien was merged on Jul 2 Member · Approved · ✓ 6/6
- [ ] MCP: switch write tools and resource_tree to GraphQL; add patch_action tools `enhancement` `graphql` `mcp`
  #285 · by RustyRien was merged on Jul 13 Member · Approved · ✓ 6/6

17k tokens

80% ↓

3.4k tokens

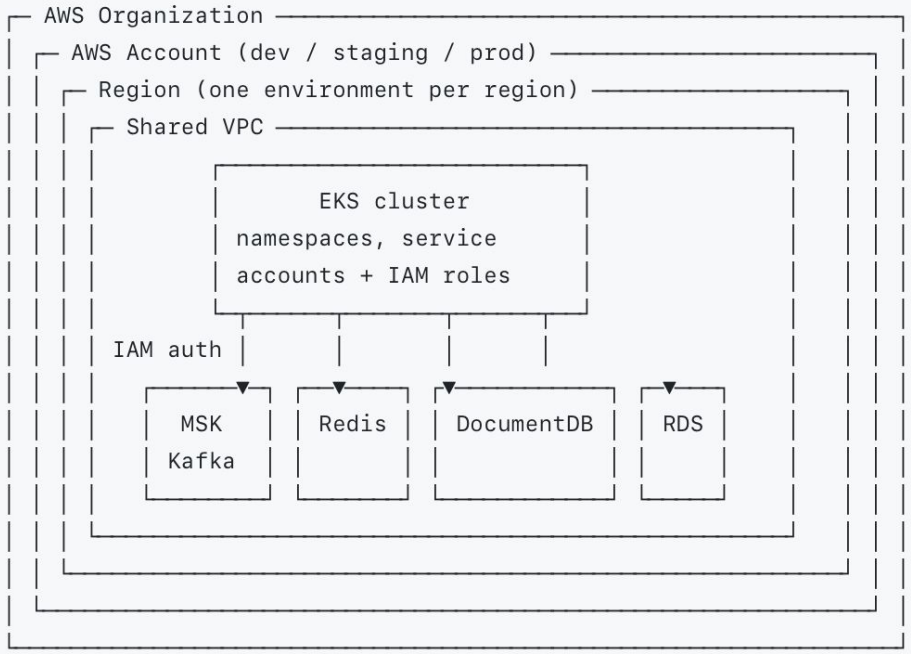
Asking About Infrastructure

What AWS infrastructure does [redacted] use, and how is it architected? Draw an architectu
re diagram showing the key AWS resources and their relationships.

Making Infrastructure Understandable

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Plain text



Context

Context	Sources
Ownership	Docs
Infrastructure	
Dependencies	Git
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Telemetry	Observability

Ownership Context

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Add Projects: shared ownership, default tags/config and workspace for resources #295

Merged RustyRien merged 1 commit into main from add_project on Jul 23

who is the owner?

Relations

Workspace

Not set

Owners

AZ AS CA +4

> Infrakitchen Prod · Get Schema, Infrakitchen Prod · Graphql Query

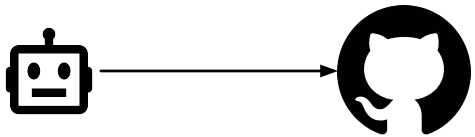
In InfraKitchen, the [redacted] project (described as "[redacted]") has seven owners:

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

Context

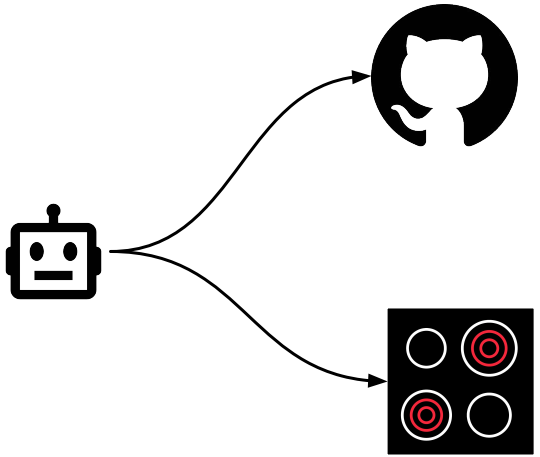
Context	Sources
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Experiments



GitHub only

vs.



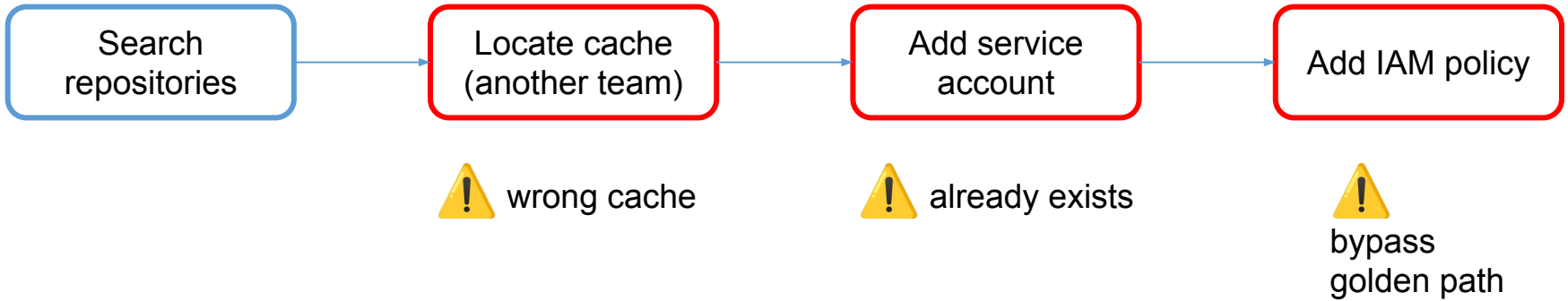
GitHub +
InfraKitchen

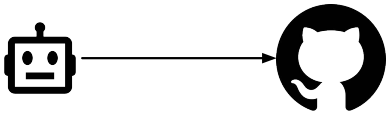
Experiment 1: Add Cache

How do I add cache to service X? Follow how other services do it.

Experiment 1: Add Cache

How do I add cache to service X? Follow how other services do it.



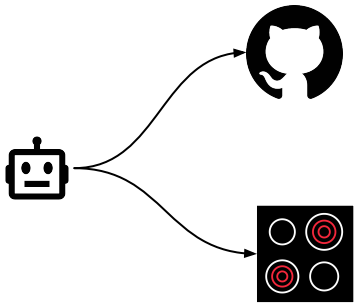


Experiment 1: Add Cache

How do I add cache to service X? Follow how other services do it.



golden path



Experiment 1: Add Cache

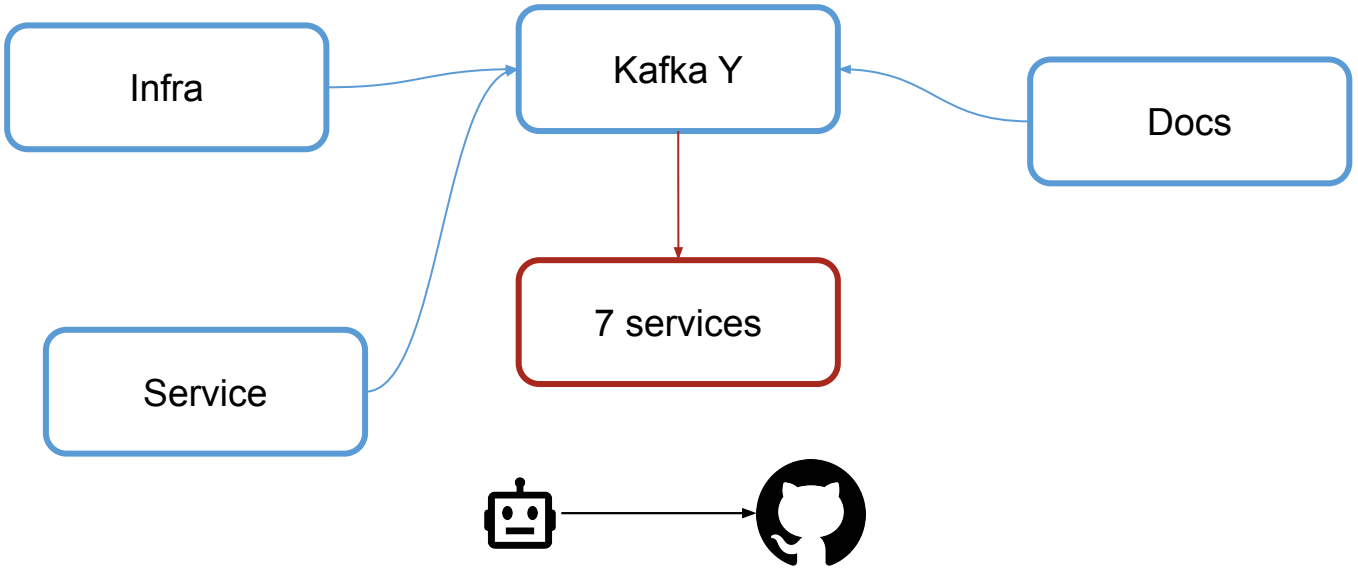
70 tool calls	50% ↓	35 tool calls
1,969,938 tokens	65% ↓	680,194 tokens
$2.71	44% ↓	$1.53

Experiment 2: Kafka Maintenance

What is the blast radius if we do maintenance on Kafka Y?

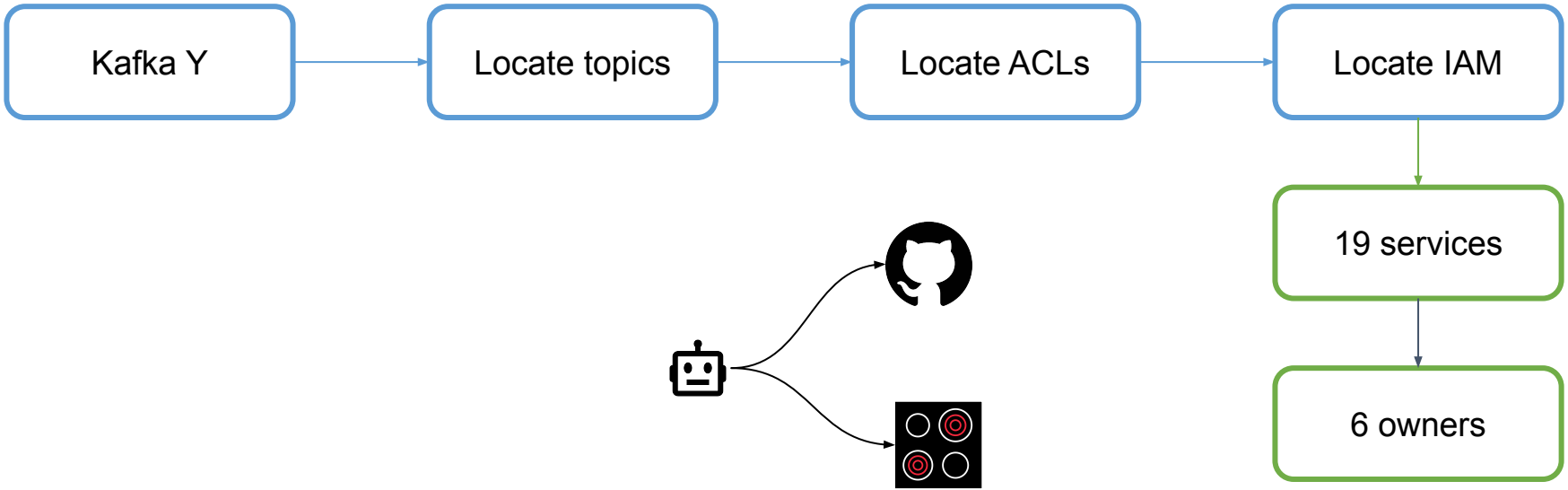
Experiment 2: Kafka Maintenance

What is the blast radius if we do maintenance on Kafka Y?



Experiment 2: Kafka Maintenance

What is the blast radius if we do maintenance on Kafka Y?



Experiment 2: Kafka Maintenance

36 tool calls	53% ↓	17 tool calls
1,366,386 tokens	77% ↓	308,426 tokens
$2.56	58% ↓	$1.08

Experiments



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-44%
Tokens

-26%
Cost

-28%
Time

Question	Agent	Steps	MCP calls*	Total tokens	Cost $	Secs	Δ tokens	Δ cost	Δ time
Cache errors (SRE)	GitHub only	24	32	1,459,790	2.66	349			
	Platform	17	45	759,508	1.87	296	**−48%**	−30%	−15%
Add Redis (developer)	GitHub only	32	70	1,969,938	2.71	511			
	Platform	15	35	680,194	1.53	240	**−65%**	−44%	−53%
MSK blast radius (SRE)	GitHub only	26	36	1,366,386	2.56	464			
	Platform	10	17	308,426	1.08	156	**−77%**	−58%	−66%
PR Kafka impact (developer)	GitHub only	27	46	1,277,057	2.18	412			
	Platform	16	24	684,508	1.55	285	**−46%**	−29%	−31%
MongoDB credentials (developer)	GitHub only	16	17	606,081	1.33	215			
	Platform	18	25	1,003,712	1.76	262	**+66%**	+33%	+22%
Pending approvals (governance)	GitHub only	16	15	626,229	1.48	228			
	Platform	17	32	631,866	1.47	296	+1%	−1%	+30%
Prod region parity (SRE)	GitHub only	16	33	449,189	0.89	197			
	Platform	10	28	241,442	0.95	165	**−46%**	+7%	−16%

Context

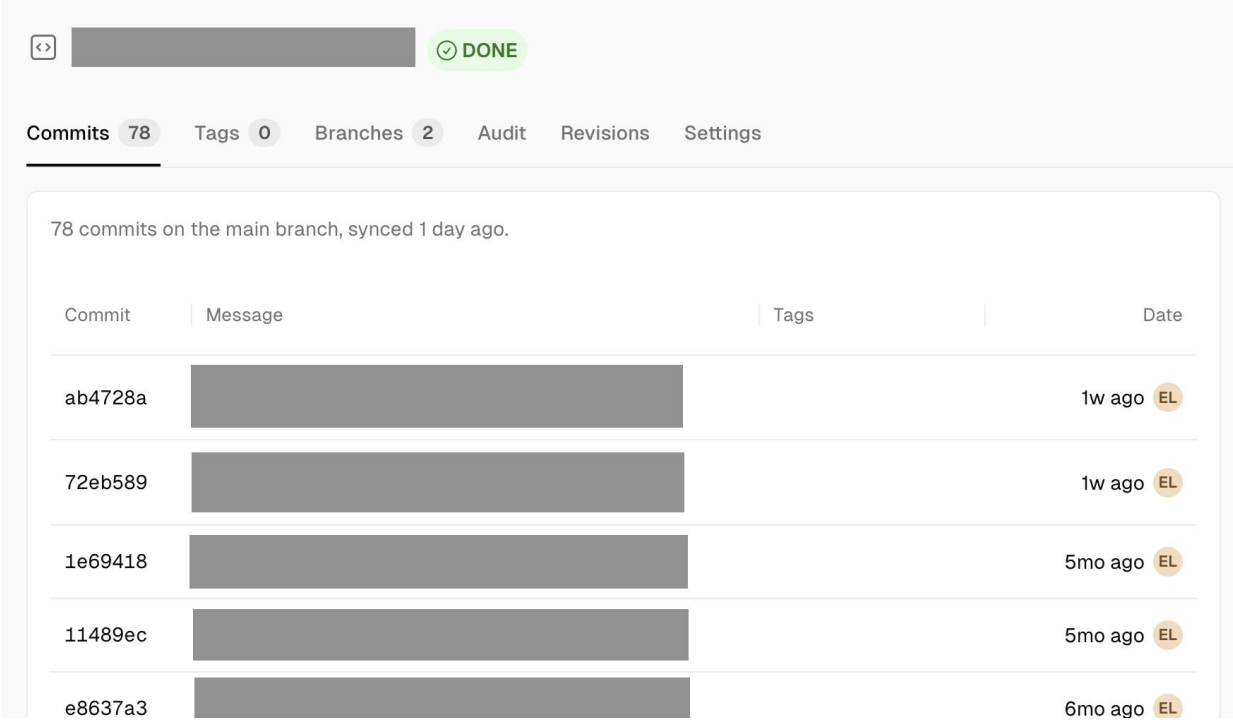
Context	Sources
Ownership	
Infrastructure	
Dependencies	Git
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Self-Service Infra Is Just the Beginning

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Add Service entity (experimental, behind feature flag), scoped to projects enhancement service

#333 · by torokistvan06 was merged on Sep 17 Member · Approved · 9/9



Context

Context	Sources
Ownership	
Infrastructure	
Dependencies	
Deployments	
Telemetry	Observability

Developer Experience

+

Agent Experience

Your Platform Is Your Context

Connect





Feedback



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