THE BOT WHO REPLACED ME:

AUTOMATING SRE WITH MULTI-AGENT AI

Alina Astapovich,
Electrolux Group



Classified as
Internal









Classified as
Internal



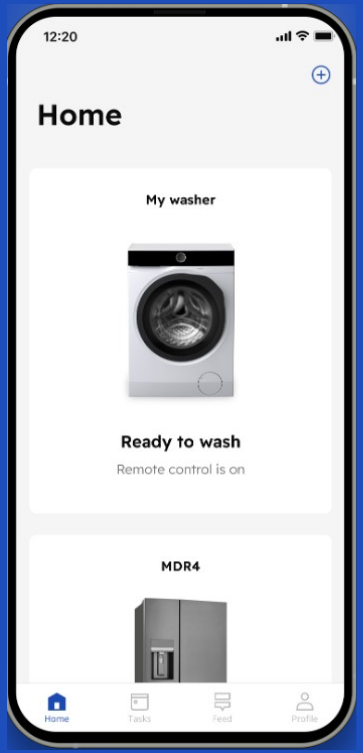
Alina Astapovich

Site Reliability Engineer

- Java Developer -> SRE
- Master’s in Neurotechnologies & Software Engineering
- 📷 + ✈️🏛️ + 🏃‍♀️

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Digital Experience

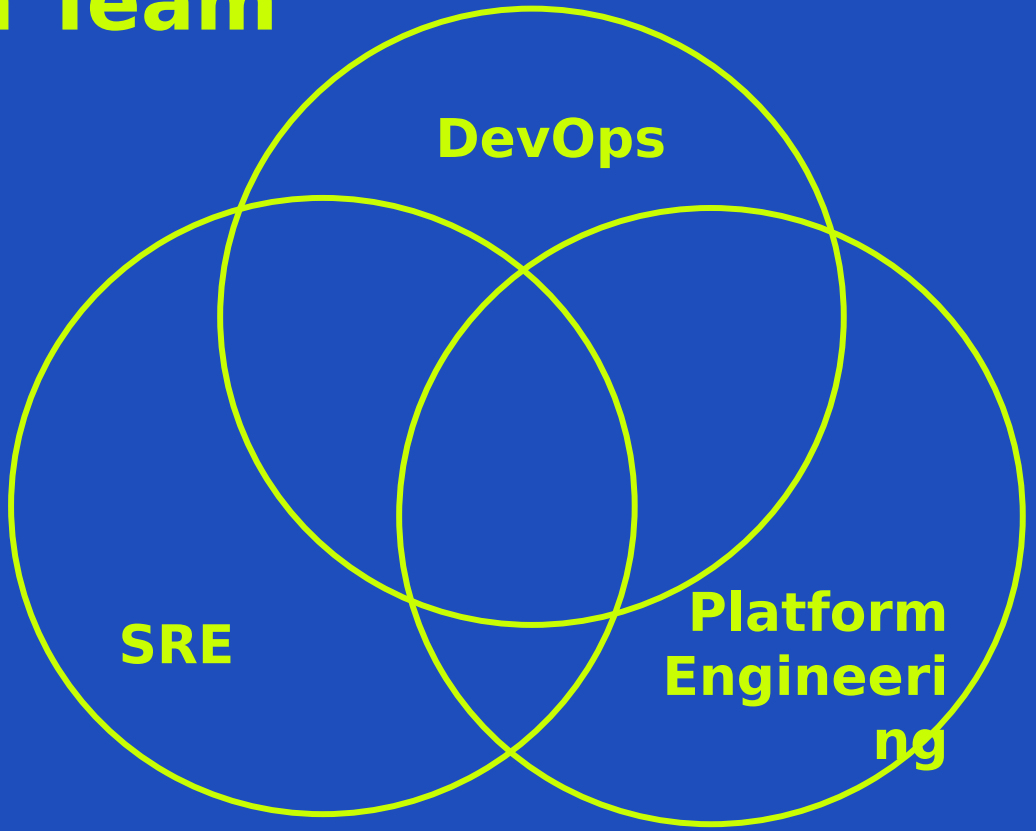






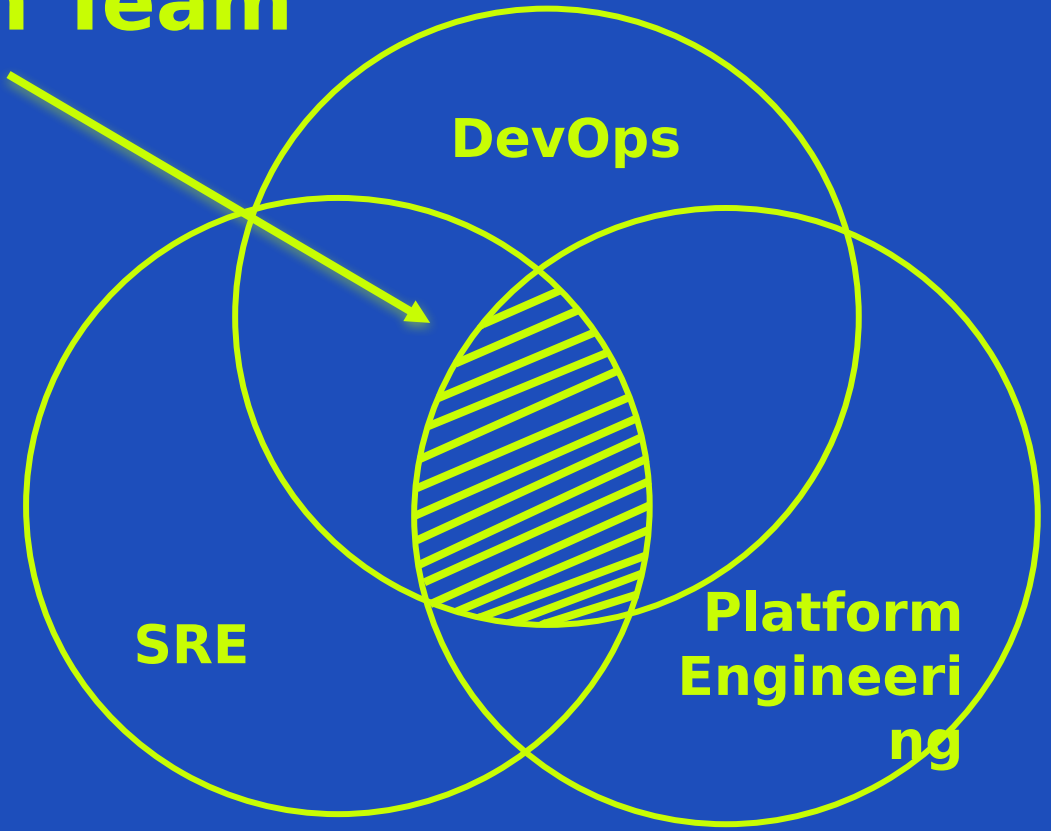
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Platform Team



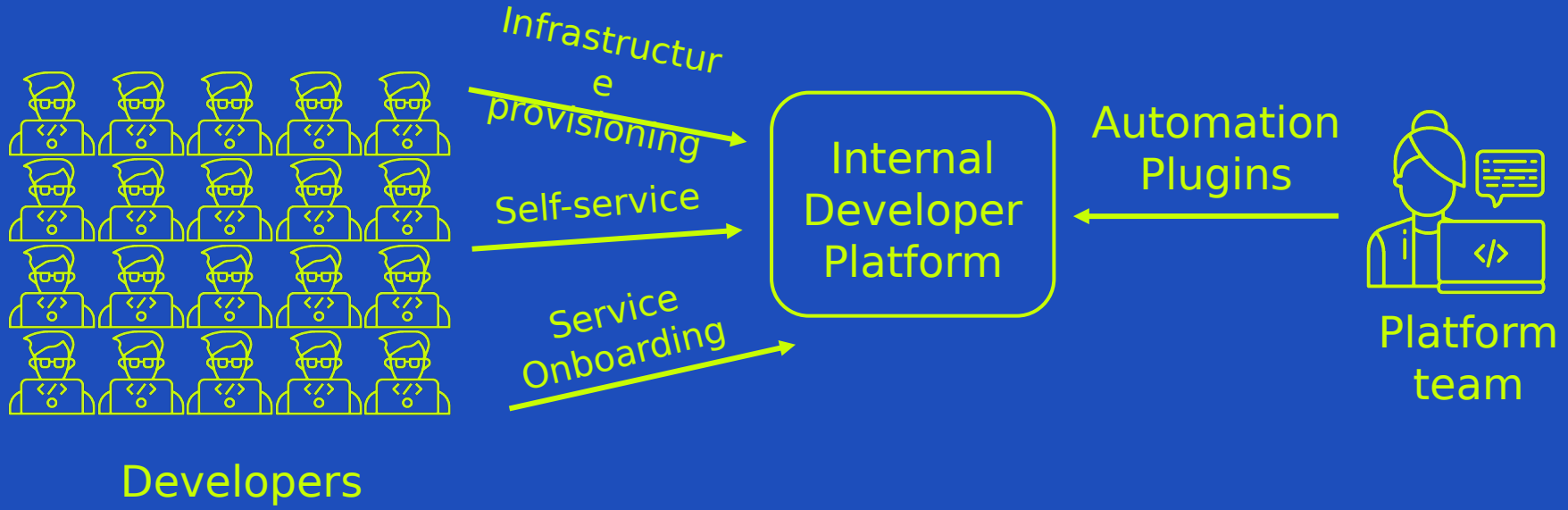
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Platform Team



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Building for Developers



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Building for Developers



Developers

Infrastructure provisioning

Self-service

Service Onboarding

Internal Developer Platform

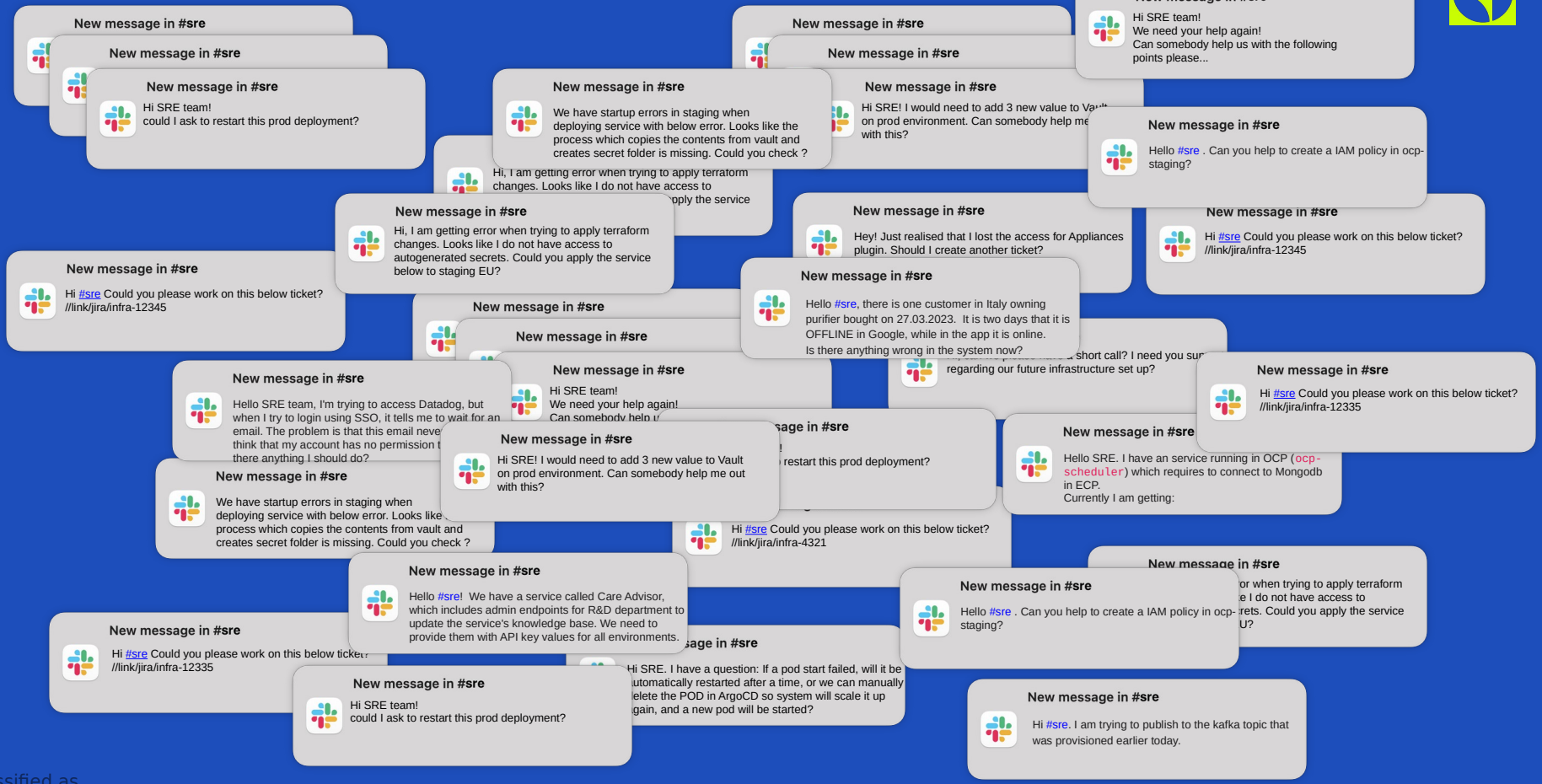
Automation Plugins



Platform team



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WANTED

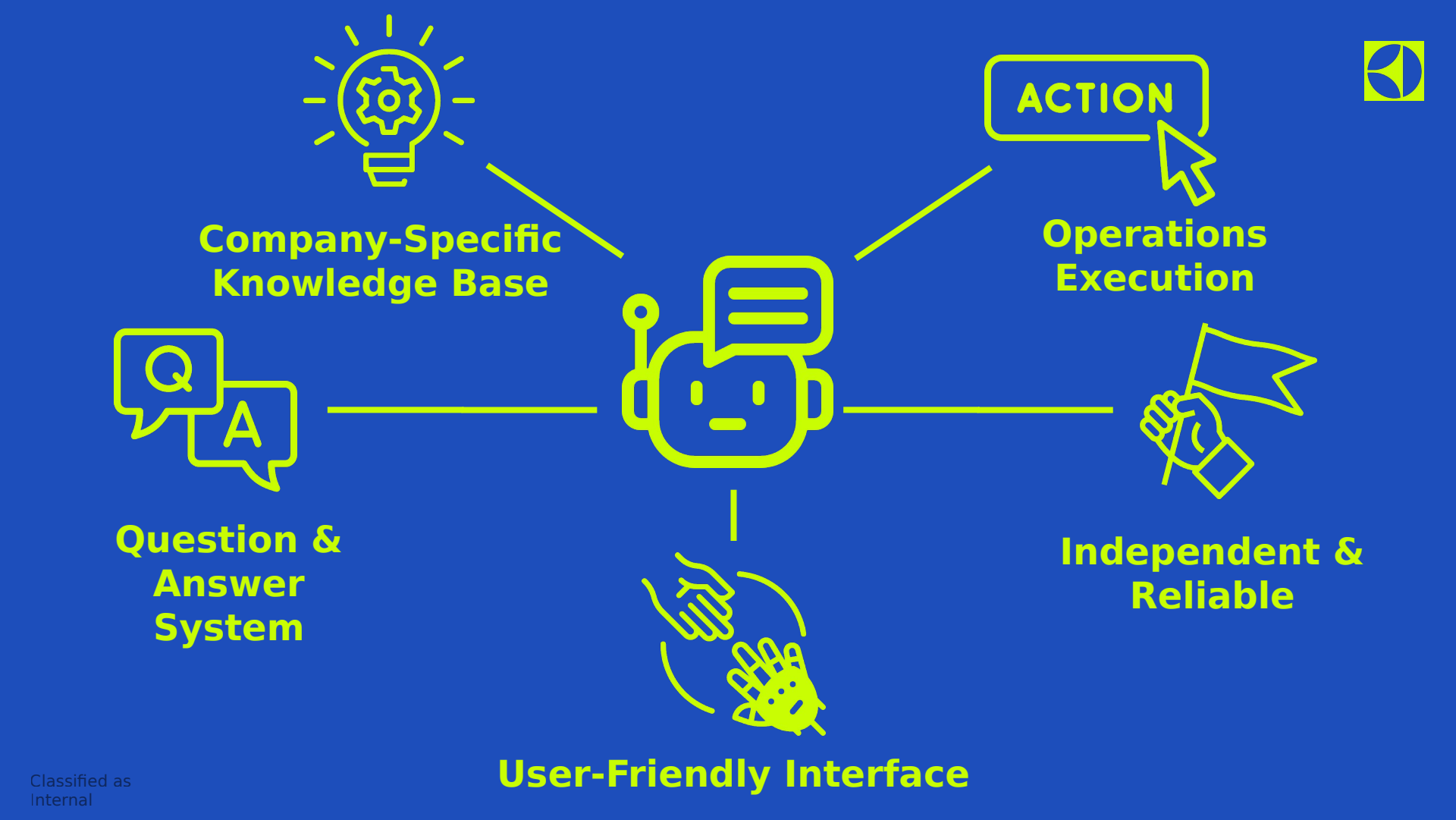
InfraAssistant



ALIVE OR AI

REWARD

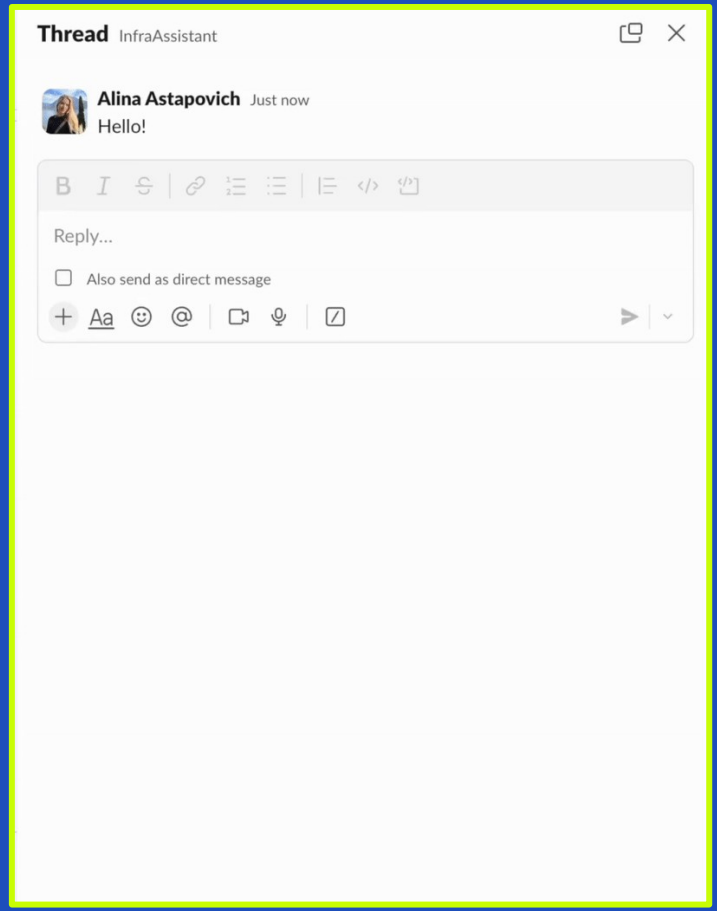
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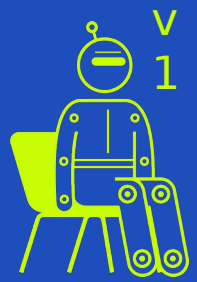
Welcome aboard, InfraAssistant!

- Automatic replies in the support channel
- Communication In private messages



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Theory of InfraAssistant Evolution



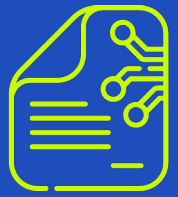
Retrieval-Augmented Generation

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Sources of Knowledge



Communication hub for live teamwork, discussions, information sharing and ongoing reference



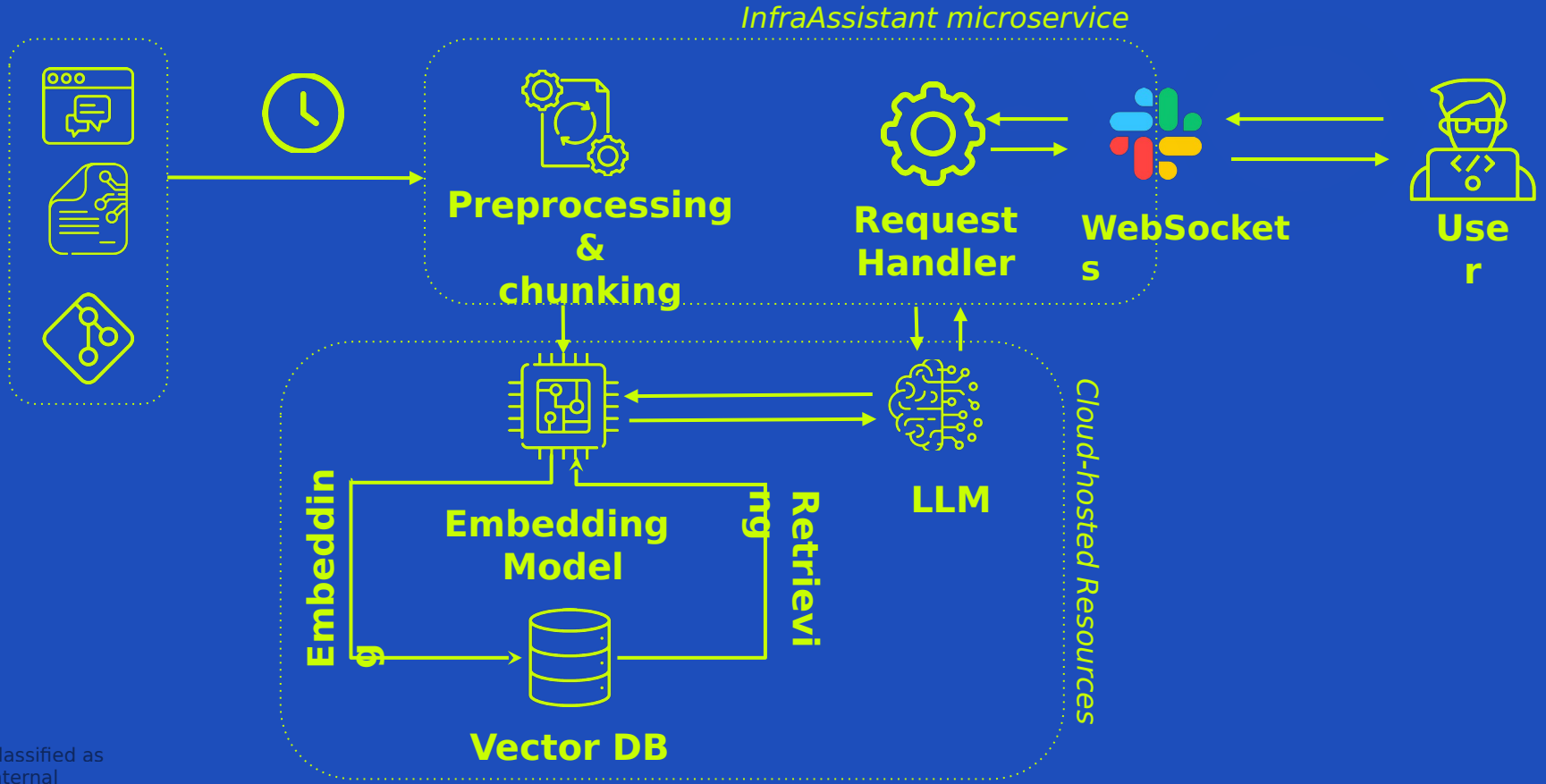
Official documentation, knowledge, and long-term reference



Source code, version control, and collaborative development.

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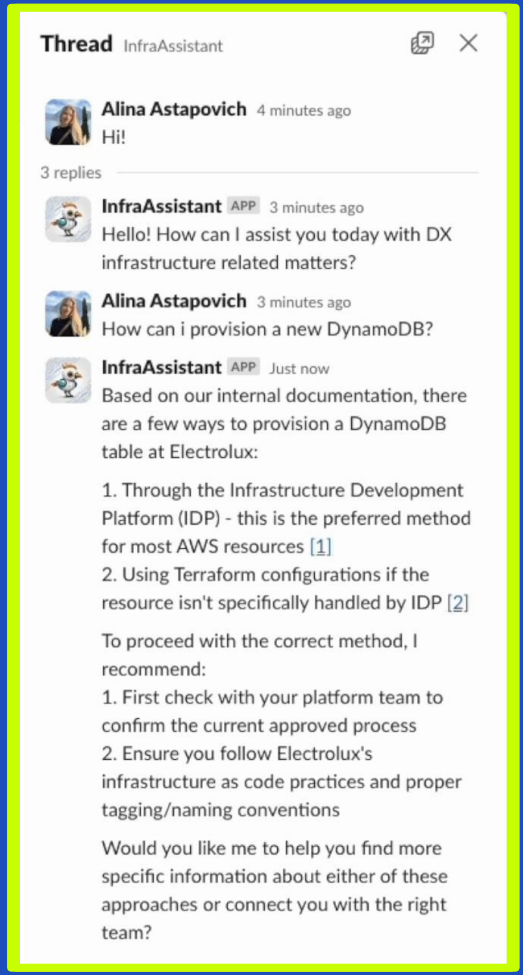
Retrieval-Augmented Generation



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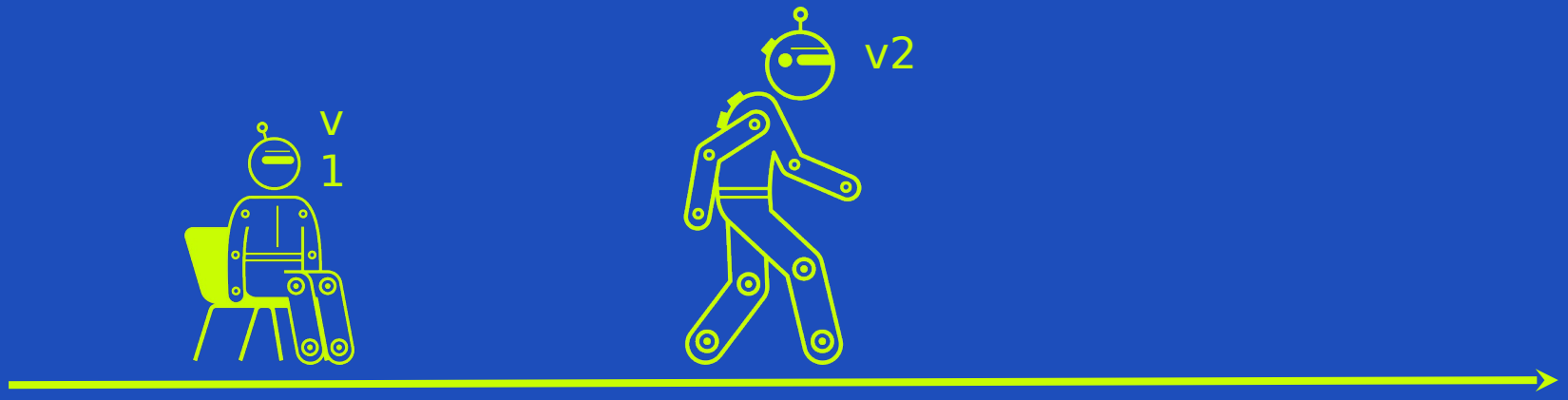
Need help?
Here’s how to ask!

- Based on Organisation-Specific Data
- Show Links To Document Sources
- Highlights Related Threads From the Support Channel



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Theory of InfraAssistant Evolution



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InfraAssistant - agent in action!



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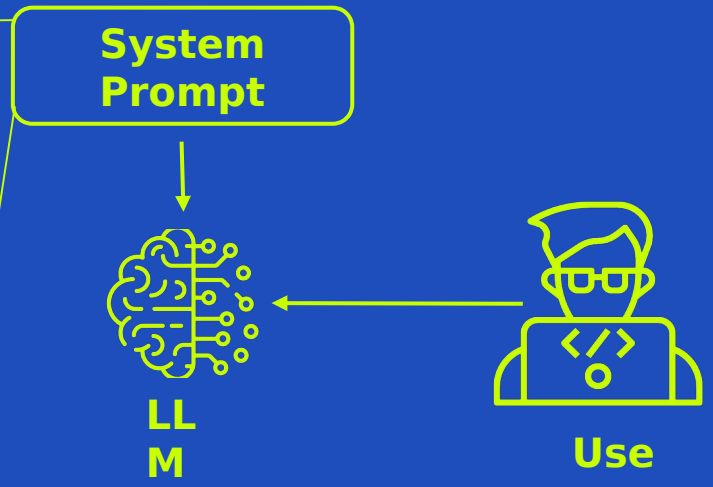
Tool use

You are InfraAssistant - an SRE assistant at Electrolux. Your job is to help answer digital infrastructure related questions. You have access to the following tools:

1. search_knowledge_base(query)
2. get_current_date()

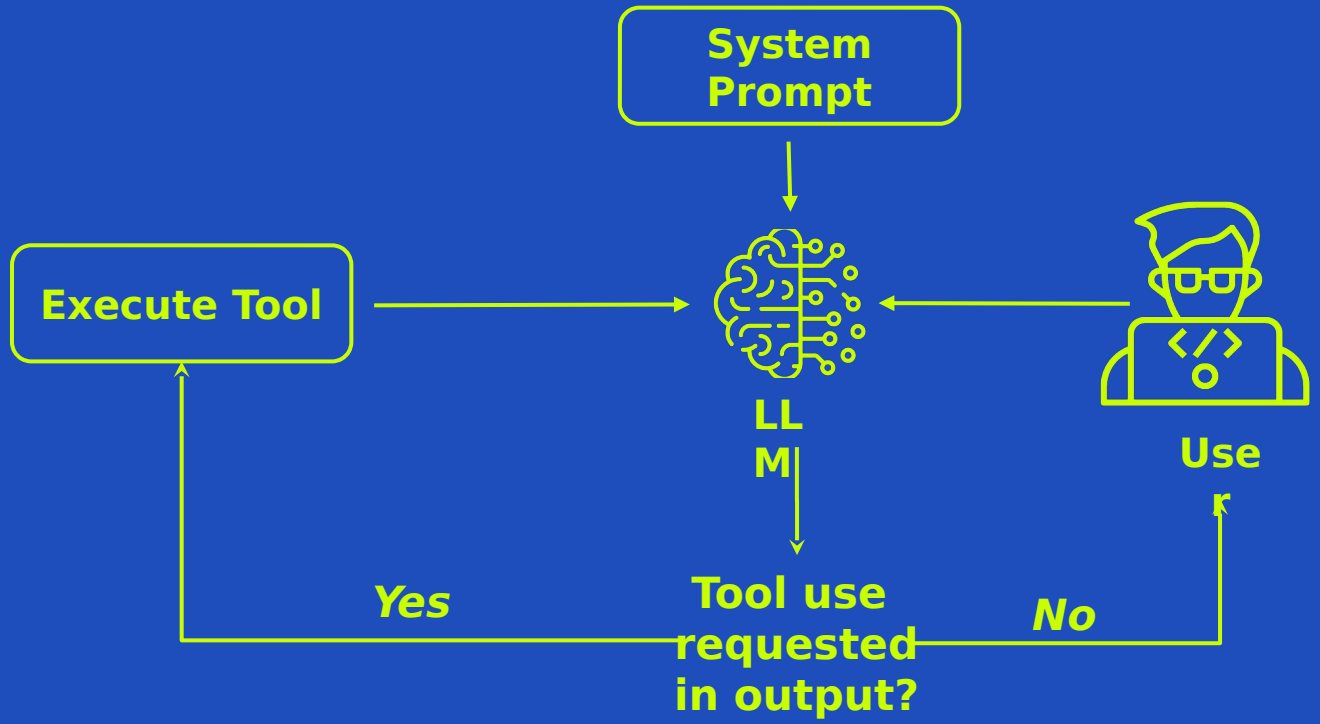
To invoke any tool, use the following format:

```
<tool>
<tool_name>name_of_tool</tool_name>
<tool_input>
                parameter_1: value_1
                parameter_2: value_2
                ...
</tool_input>
</tool>
```



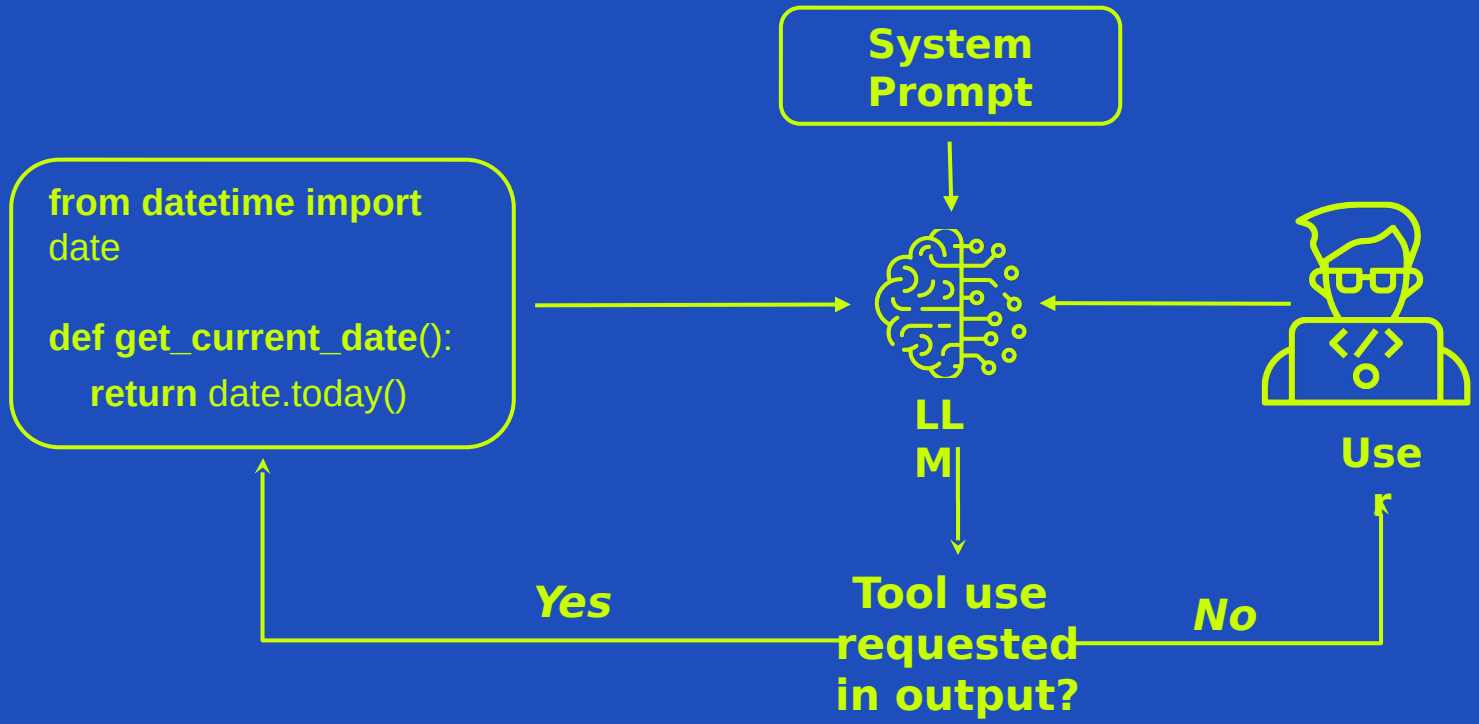
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Tool use



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Tool use



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Challenges



All the tools!

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Challenges



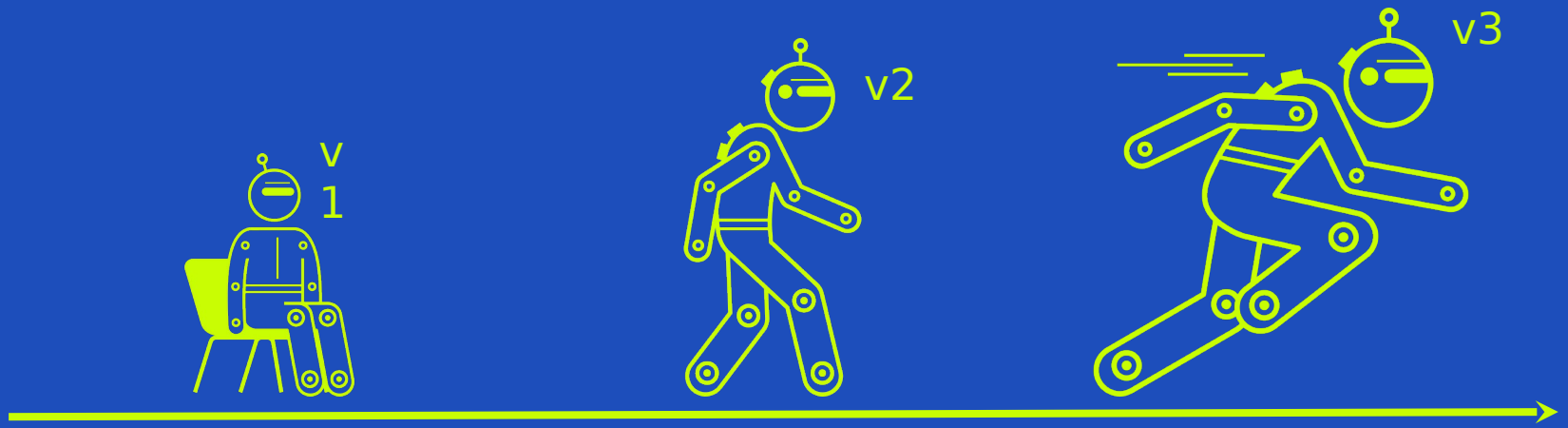
All the tools!



Which one should I use?

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Theory of InfraAssistant Evolution



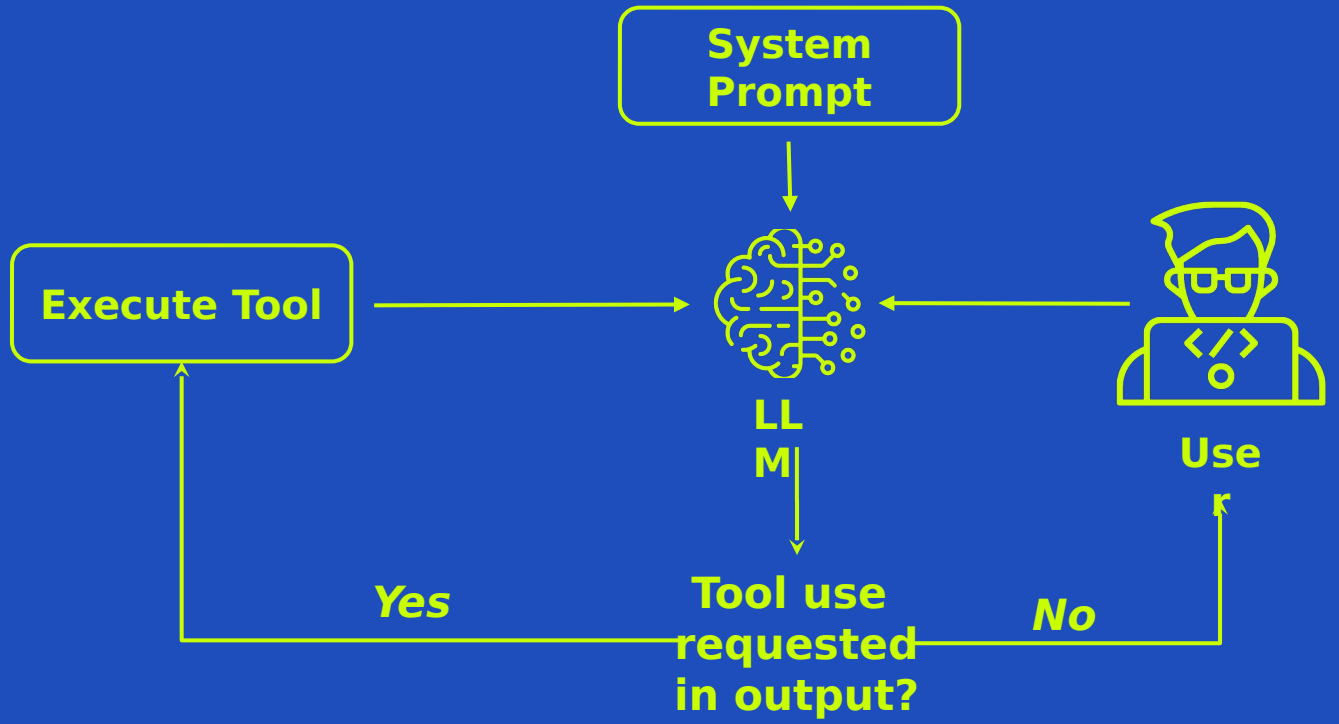
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MULTI-AGENT



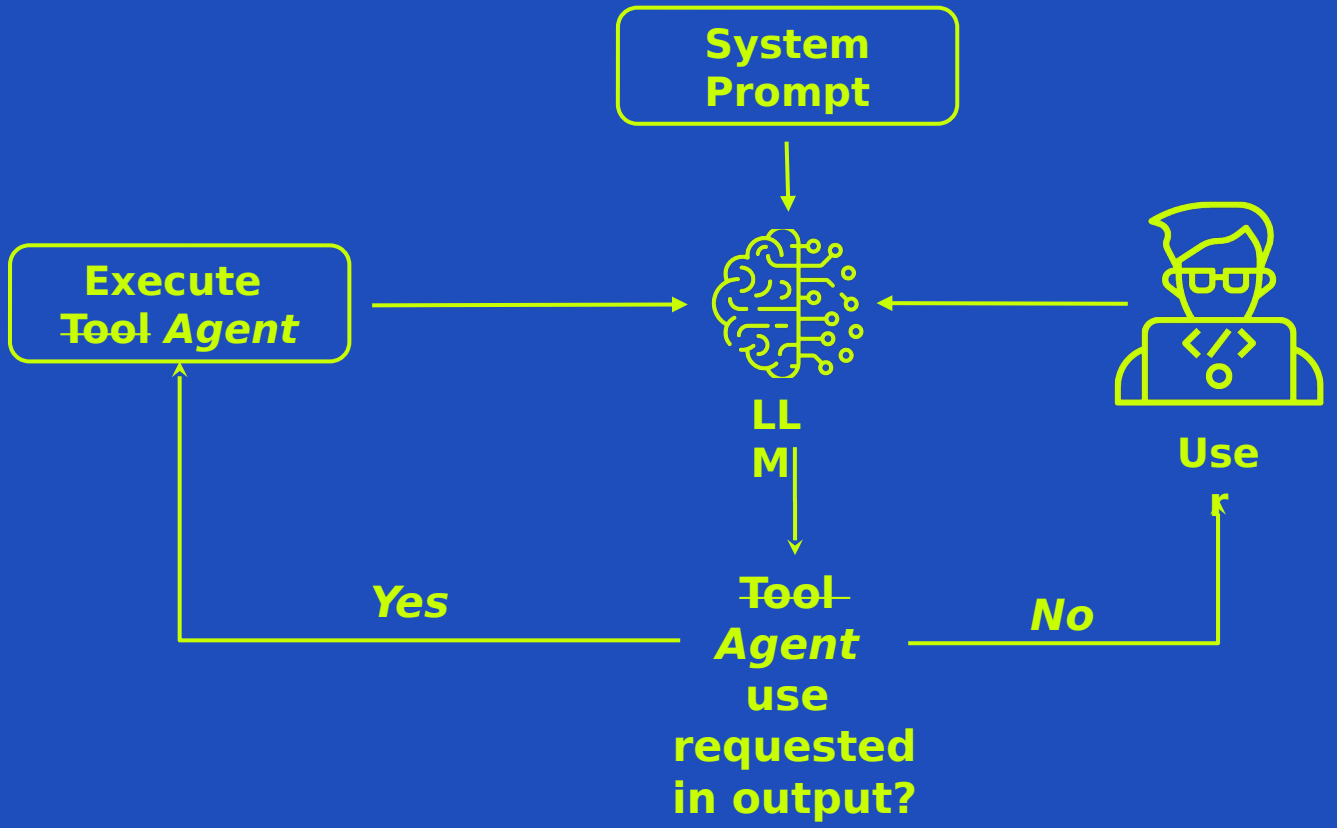
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Tool use?



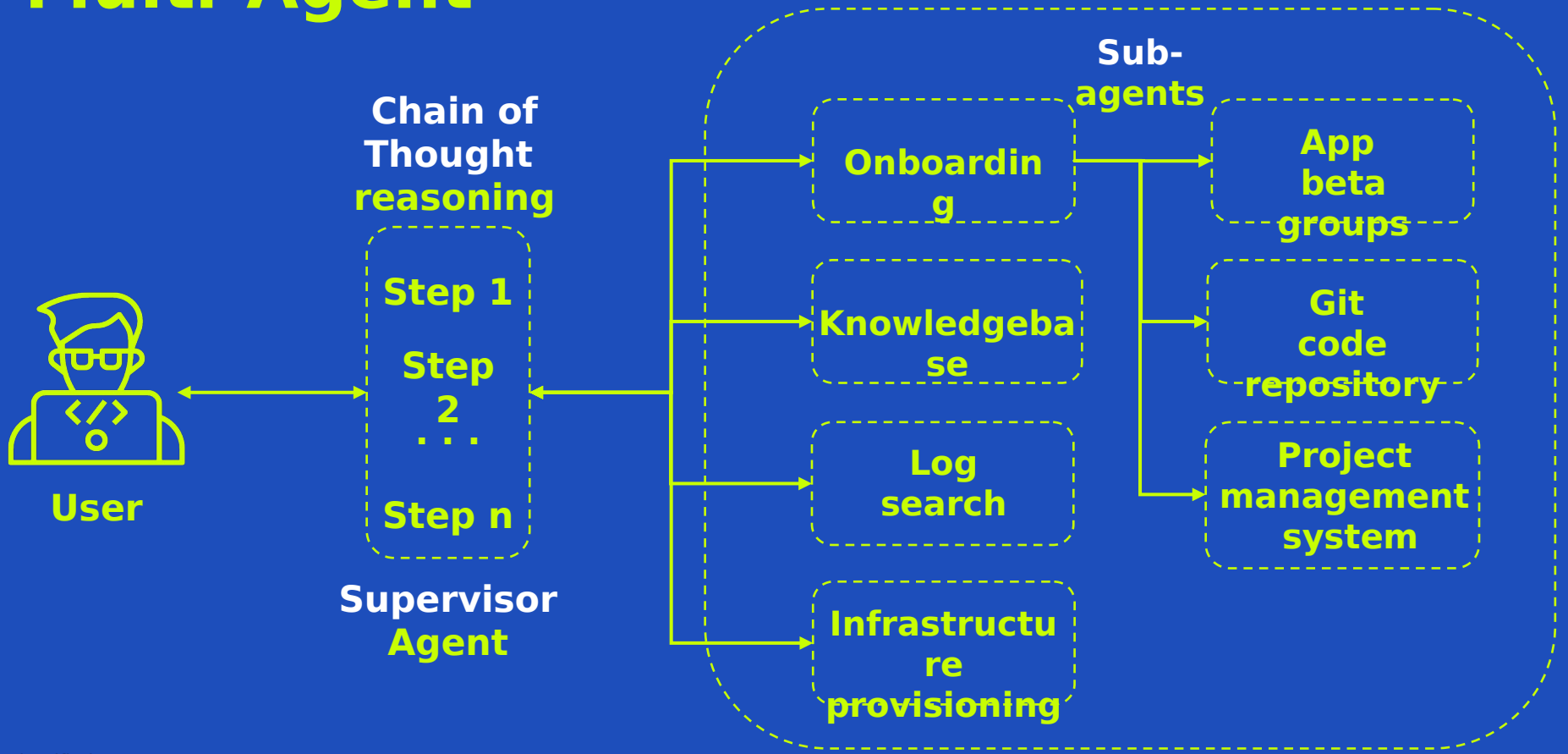
Classified as Internal

Agent use!



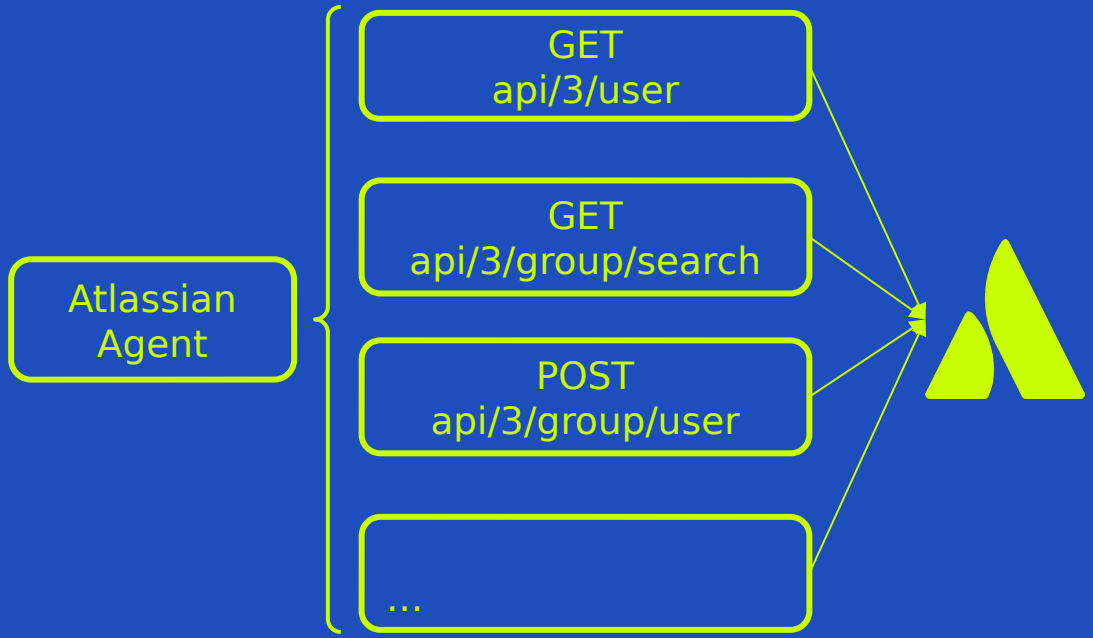
Classified as Internal

Multi-Agent



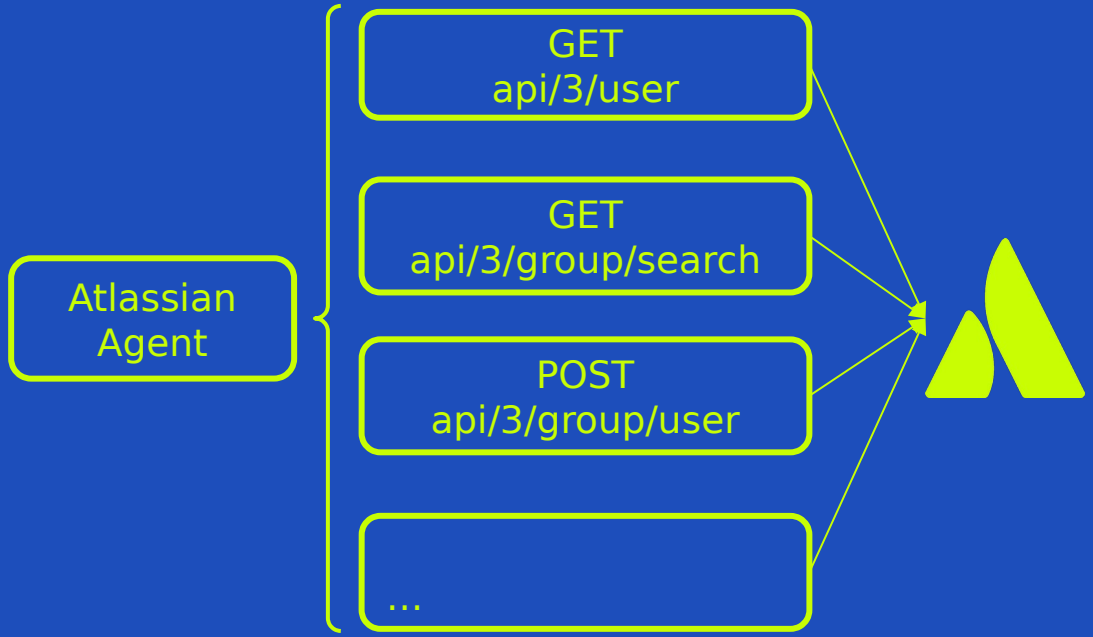
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Access Management



Classified as Internal

Access Management



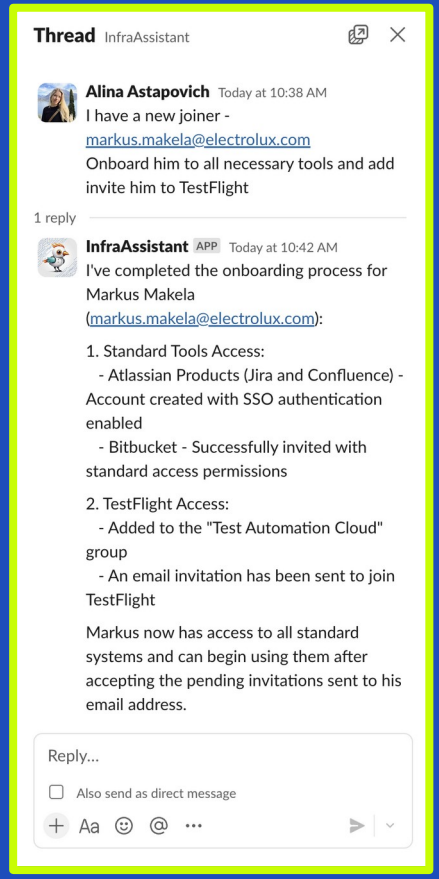


Classified as Internal

Led by Supervisor's Chain of Thoughts

LOGGER NAME
main___


```
{
  data {
    message   dm:input_text='<timestamp>1747211912</timestamp><query>U01CL6S1MM5: I
              have a new joiner -
              <mailto:markus.makela@electrolux.com|markus.makela@electrolux.com>\nOnboa
              rd him to all necessary tools and add invite him to TestFlight</query>'
  }
  is_dm       true
  level       INFO
  slack_id    U01CL6S1MM5
  thread_ts   1747211912.487579
  time        2025-05-14 08:40:44,855
}
```

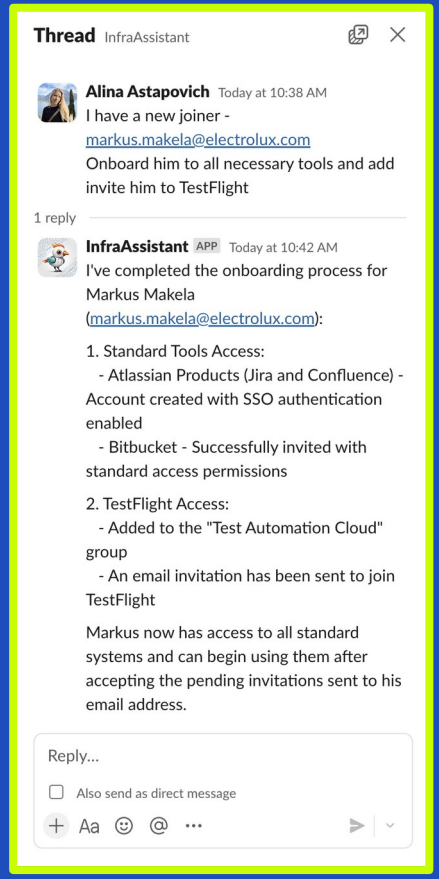
Classified as Internal

Led by Supervisor's Chain of Thoughts

```
message    Delegating to Collaborator: onboarding_supervisor
```

```
message    Instructions: you have maximum 362 s to complete the request. Do not call
           any tools if you are out of time or about to be. Any tool use is a
           minimum 10 seconds. Please onboard a new joiner, Markus Makela (email:
           markus.makela@electrolux.com) to all necessary tools. This is a new team
           member that needs to be given access to all standard systems and
           resources.
```

```
message    Delegating to Collaborator: atlassian_agent
```



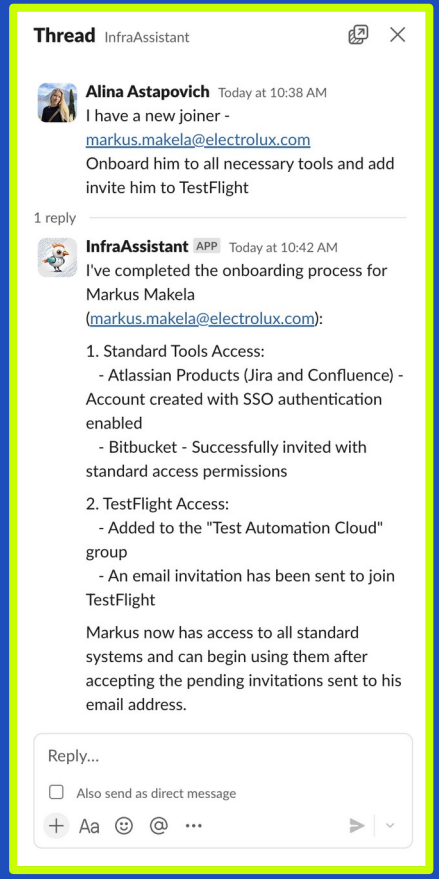
Classified as Internal

Led by Supervisor's Chain of Thoughts

```
message    Thought: Let me break down the request: 1. Need to create a new user:
           Markus Makela 2. Email: markus.makela@electrolux.com 3. Products
           requested: Jira and Confluence 4. Time limit: 490s, each tool call takes
           minimum 10s  First, I'll create the user with access to both Jira and
           Confluence.
}
```

```
message    Tool use: atlassian_agent with these inputs: instructions[Please onboard
           a new team member, Markus Makela (email: markus.makela@electrolux.com),
           to Atlassian products (Jira and Confluence). Provide them with standard
           access and ensure they can use SSO for login. Return the status of this
           onboarding request.] (string)
```

```
message    Delegating to Collaborator: atlassian_agent
```



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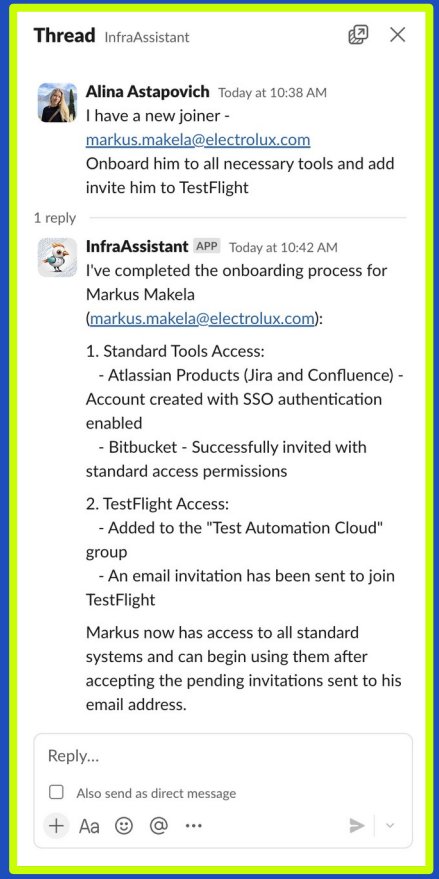
Led by Supervisor's Chain of Thoughts

```
message    Tool use: /rest/api/3/user with these inputs:
```



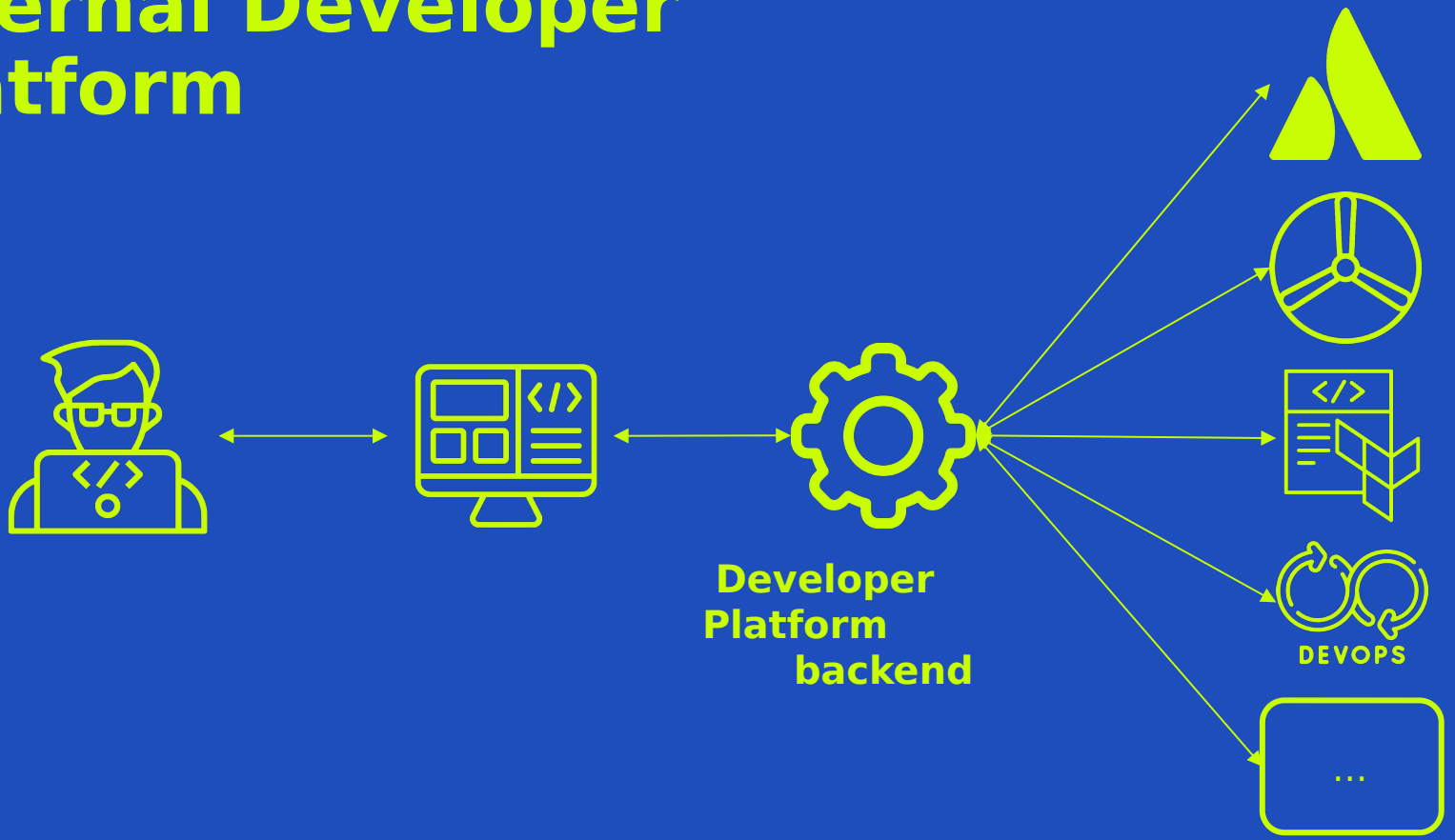


```
message    Thought: The user has been successfully created with access to both Jira
           and Confluence. SSO is automatically configured as it's managed
           organization level. The account is active and set up with the cor
           email address.
```



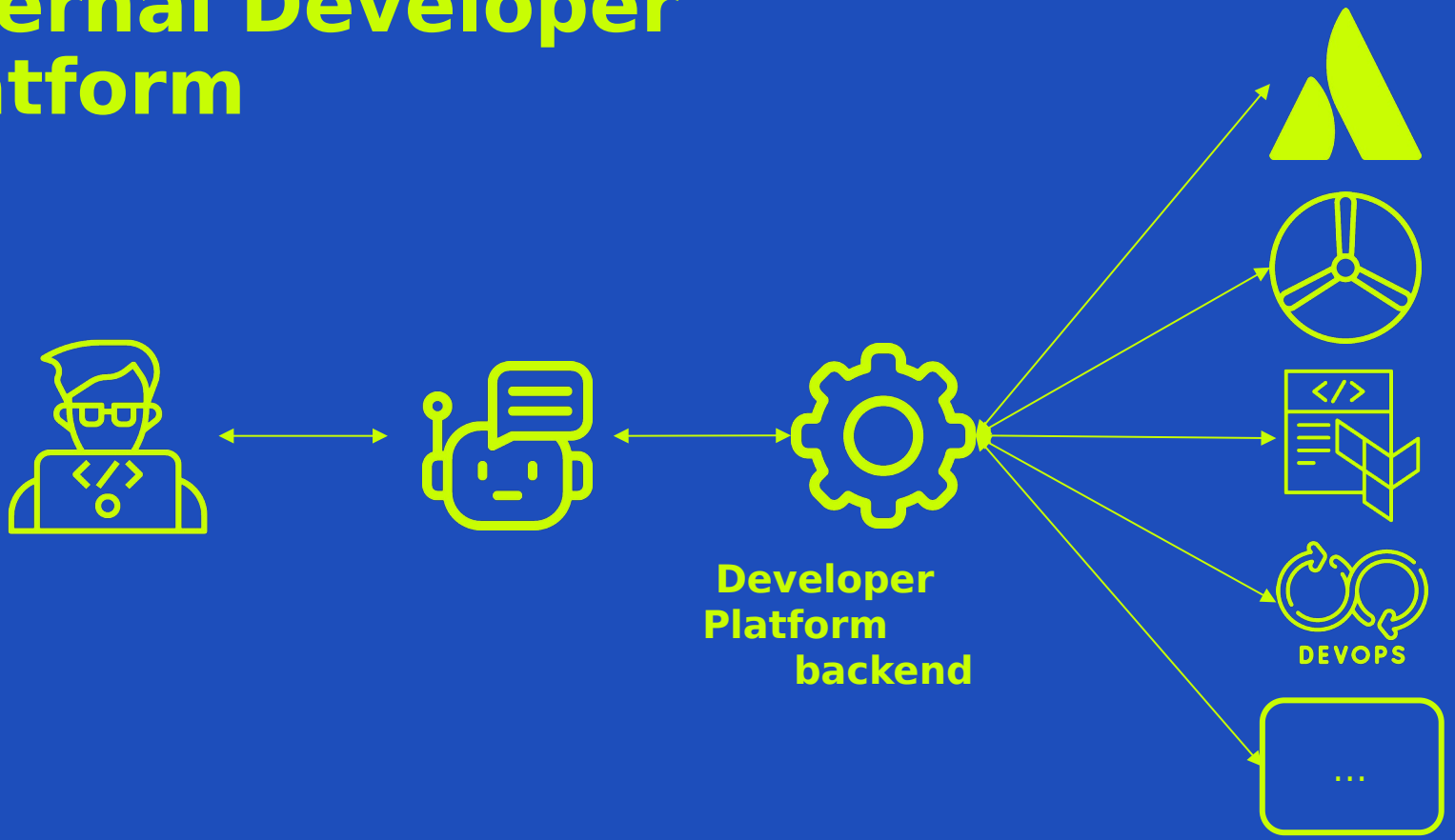
Classified as Internal

Internal Developer Platform



Classified as
Internal

Internal Developer Platform

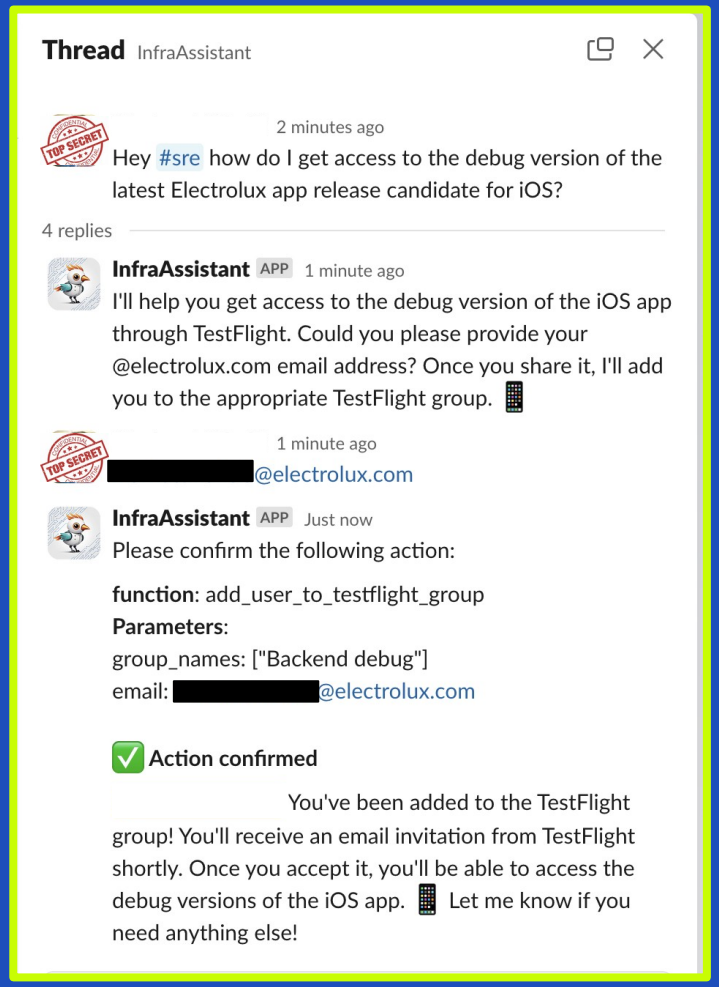


Classified as
Internal

Internal Developer Platform

Functions in use:

```
list_beta_distribution_groups()
list_group_members(group_name)
add_to_distribution_group(email)
```

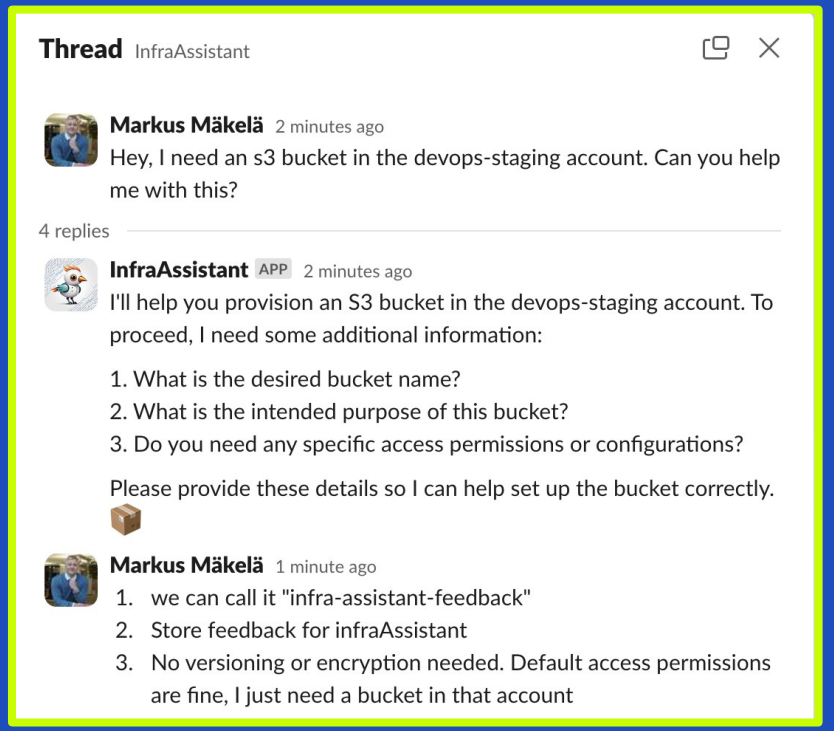


Classified as Internal

Infrastructure provisioning

Functions in use:

```
list_templates()
get_template_schema(template_name)
get_reference_options(reference_type)
provision_resource(template_options)
```

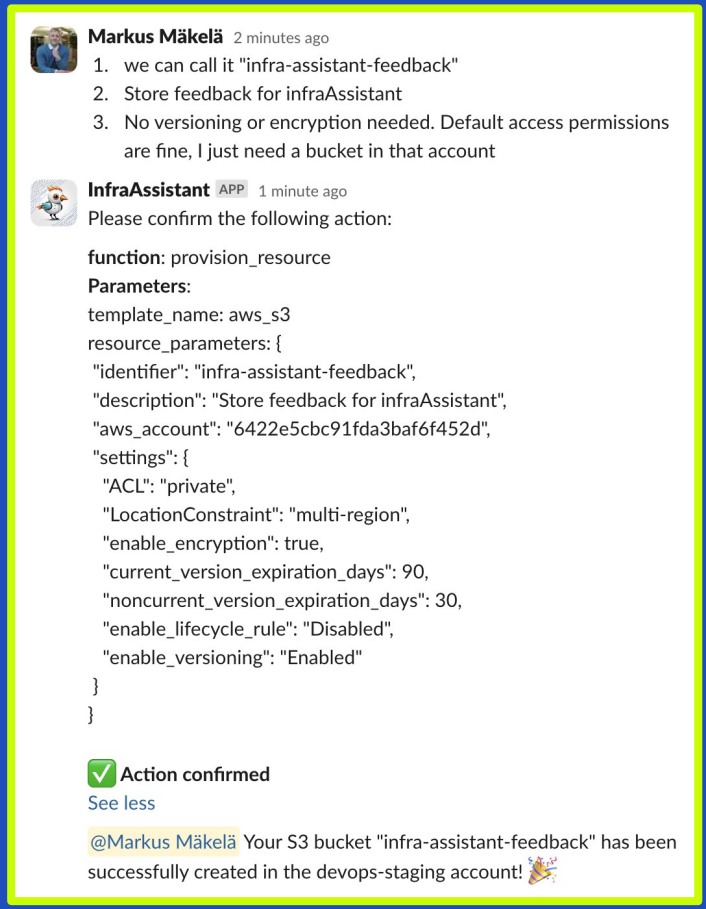


Classified as Internal

Infrastructure provisioning

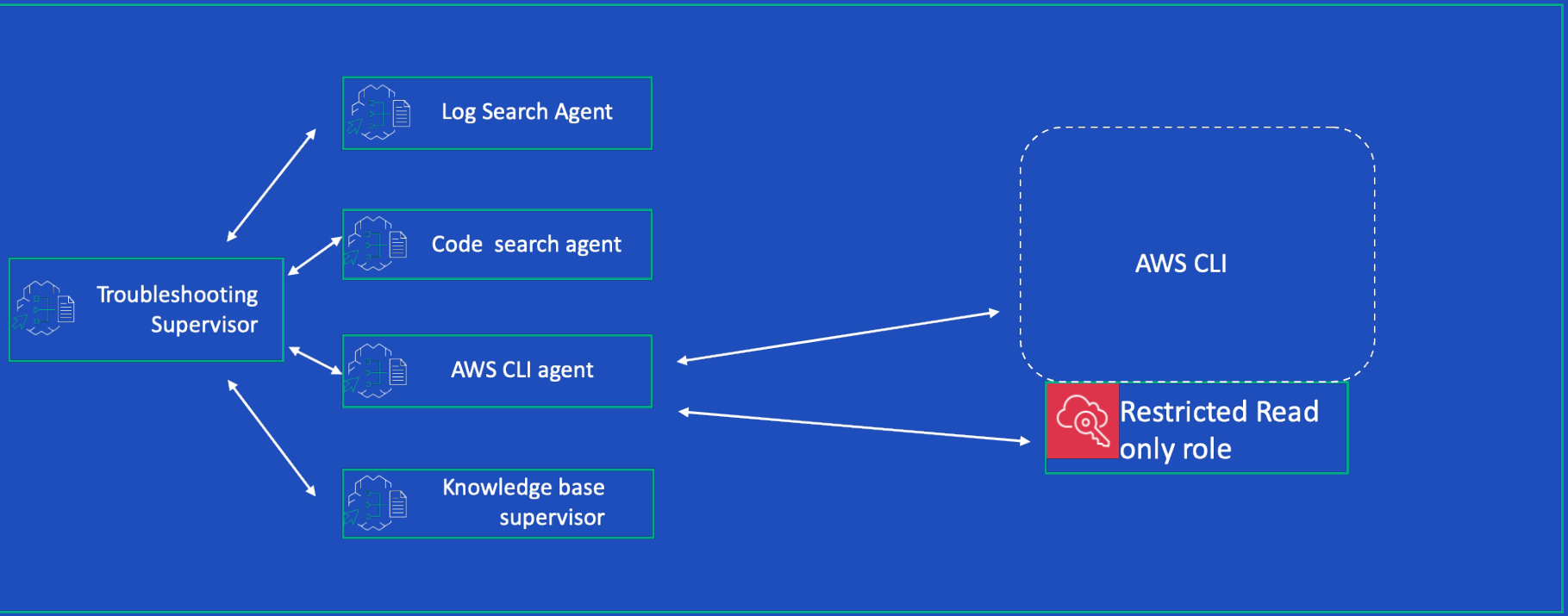
Functions in use:

```
list_templates()
get_template_schema(template_name)
get_reference_options(reference_type)
provision_resource(template_options)
```



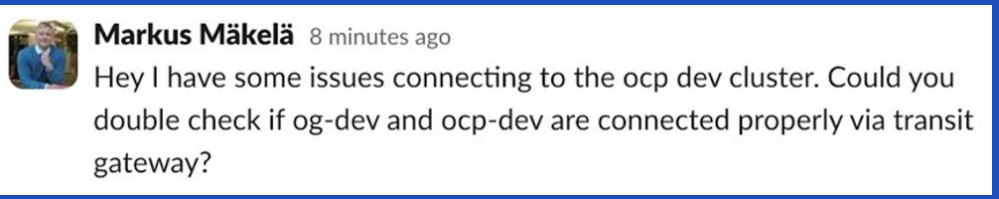
Classified as Internal

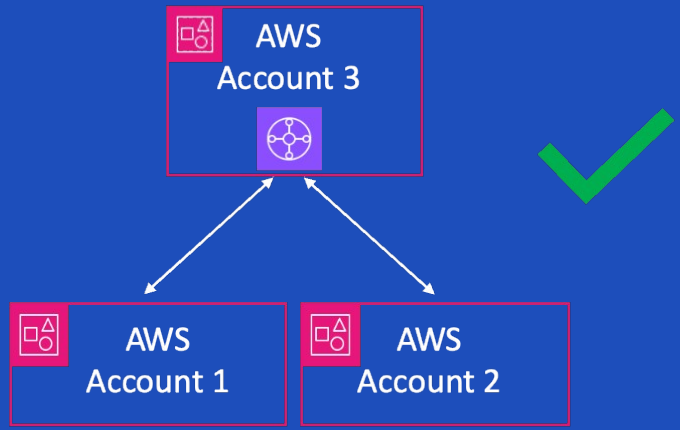
Troubleshooting Agent



Classified as Internal

Troubleshooting Agent





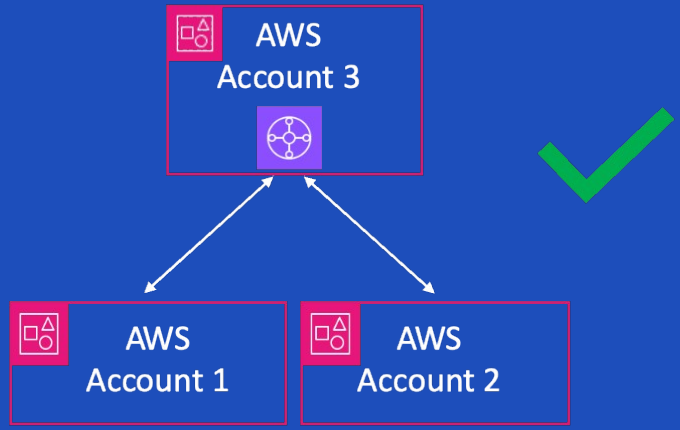
Classified as Internal

Troubleshooting Agent



Markus Mäkelä 8 minutes ago

Hey I have some issues connecting to the ocp dev cluster. Could you double check if og-dev and ocp-dev are connected properly via transit gateway?





InfraAssistant APP Just now

The transit gateway connection between og-dev and ocp-dev appears to be properly configured:

1. Both clusters are connected to transit gateway tgw- (in eu-west-1):
   - og-dev via vpc- ("og-dev-eu-west-1-gateway-vpc")
   - ocp-dev via vpc- ("ocp-dev-eu-west-1-shared-vpc")

2. Both VPC attachments are in "available" state and properly associated.

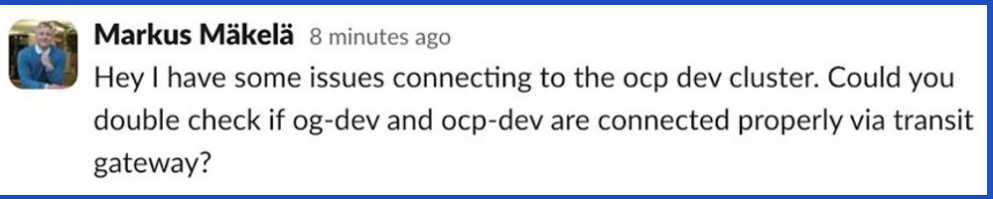
3. Route propagation is working correctly in the transit gateway route table:
   - og-dev CIDR ( ) is propagated
   - ocp-dev CIDR , is propagated

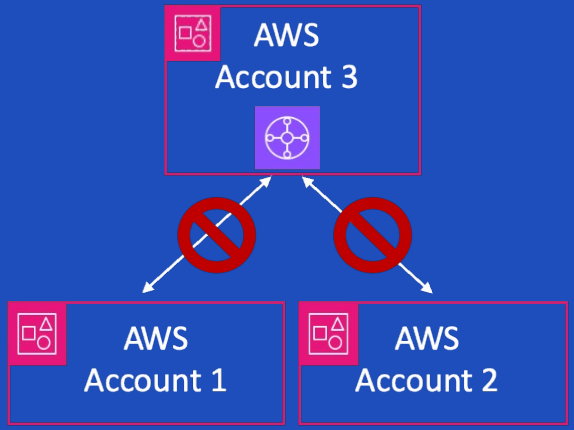
4. Security group on ocp-dev is configured to allow traffic from og-dev CIDR.

Since the transit gateway setup appears correct, your connectivity issues might be related to cluster-specific network policies, application configurations, or endpoint issues within the clusters themselves.

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Troubleshooting Agent





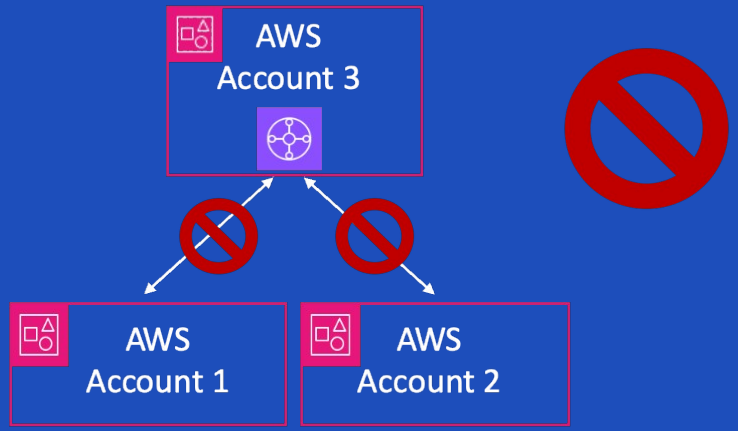
Classified as Internal

Troubleshooting Agent



Markus Mäkelä 8 minutes ago

Hey I have some issues connecting to the ocp dev cluster. Could you double check if og-dev and ocp-dev are connected properly via transit gateway?





InfraAssistant APP Just now

I've checked the connectivity between og-dev and ocp-dev environments and found the following:

The transit gateway configuration itself is properly set up:
- Both environments are connected to the same Transit Gateway (tgw-[redacted]) in eu-west-1
- The VPCs from both environments are attached and in "available" state
- Routes are correctly propagated between the VPCs ([redacted] for og-dev and [redacted] for ocp-dev)

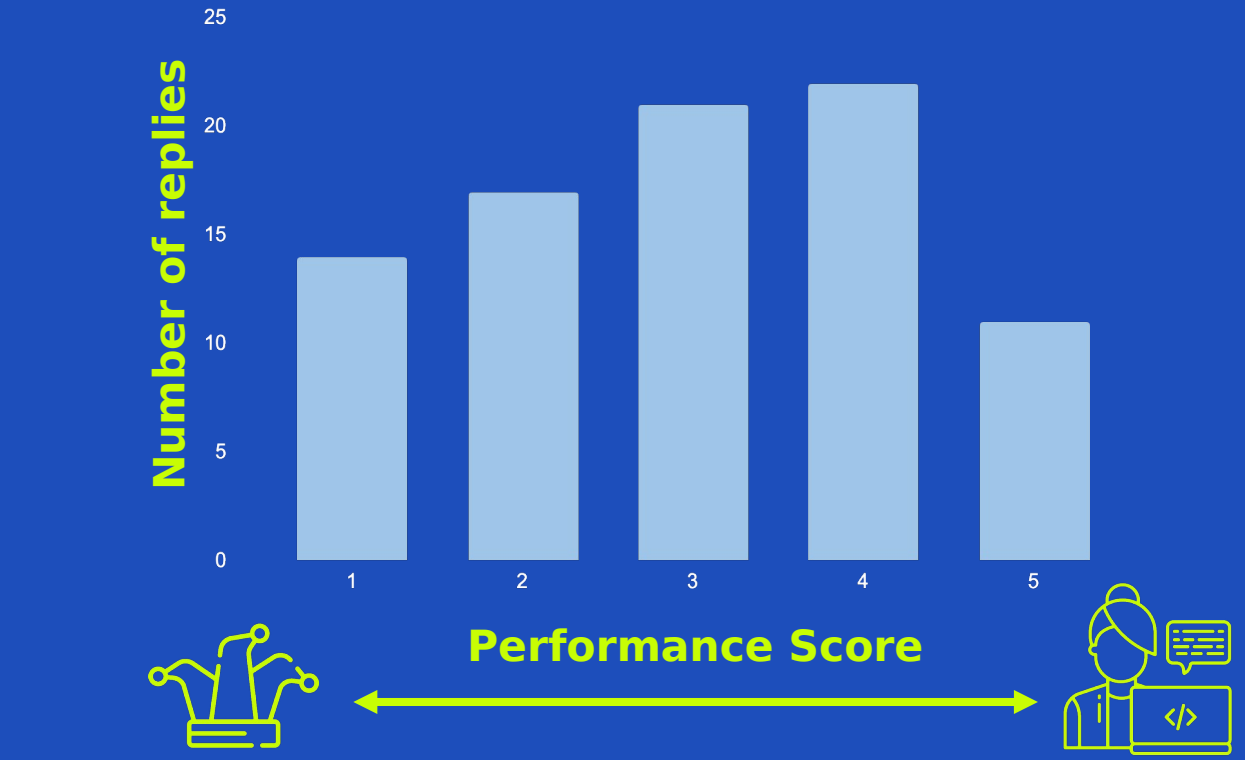
However, I identified the actual issue: security group configurations are blocking the traffic. While the transit gateway is set up correctly, the security groups in both environments don't have rules allowing traffic from the other environment's CIDR range.

To fix this, you'll need to:
1. Add inbound rules to relevant security groups in og-dev to allow traffic from [redacted] (ocp-dev)
2. Add inbound rules to relevant security groups in ocp-dev to allow traffic from [redacted] (og-dev)

Focus on updating security groups for the specific services that need to communicate between environments.

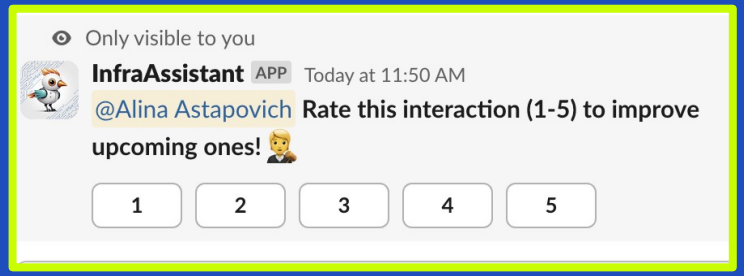
Classified as Internal

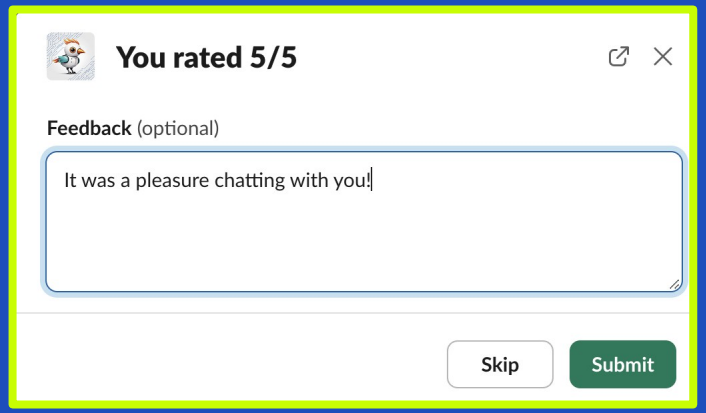
Accuracy of Answers



Classified as Internal

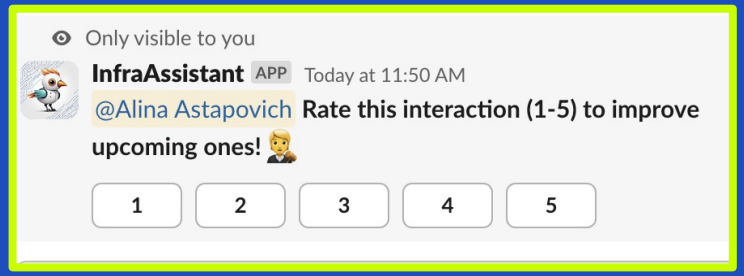
Developers opinion matter!

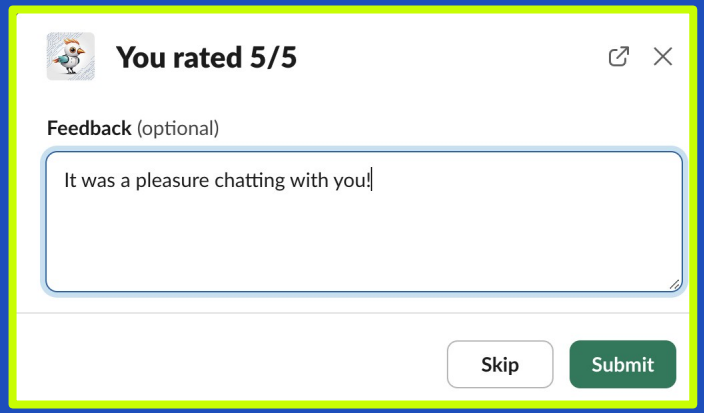




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Developers opinion matter!



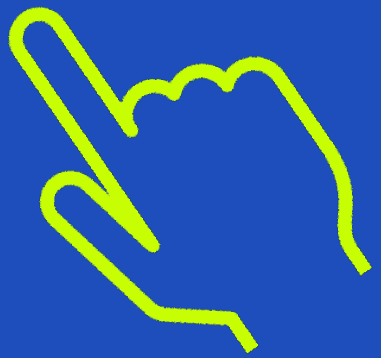


"Very convenient for understanding internal processes but slightly slow"
– DX Developer

"It's a great shortcut to save time versus scrolling through all documentation, easier just to call a bird. It also tags correct people that I wouldn't know I should contact for different causes as a new employee, and it's very useful to see how struggles similar to mine were already resolved before"
– DX Project Manager

Classified as Internal

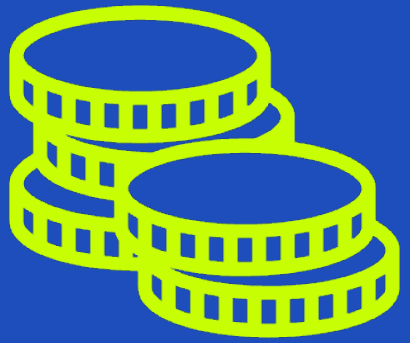
Key Advantages of InfraAssistant



Reduced Manual Toil



Centralized Information Access



Cost Efficiency

Classified as Internal

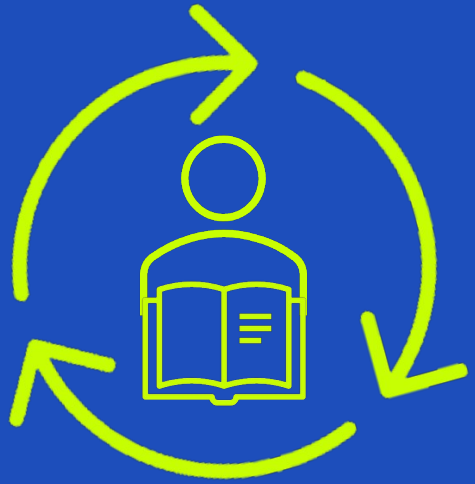
Future Improvements



Reduce Response Delays



Advanced Evaluation



Adaptive Learning & Prompts improvements

Classified as Internal

Let’s stay in touch





Alina Astaprovich

Site Reliability Engineer

Electrolux Group

Open Source Projects

Classified as Internal