

Exploring portable, accessible HPC through open- source



Hello!

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Alces Flight works in HPC integration and managed services

The glue for physical and cloud-based components and environments in HPC.



Join the community FREE!



womeninhpc.org

W4DC
WOMEN IN HPC



The Mission of OpenFlightHPC

OpenFlightHPC is an online resource for HPC workload knowledge using packaged Alces platforms in order to help spread the word of how useful they can be and simplify general HPC adoption.

1. Embracing Open Source

Empowering the next generation of
research in HPC



History of OpenFlightHPC



2015 - Reproducibility Initiative

HPC Community pursues research which can be replicated

1

2019 - OpenFlightHPC

Open-Source project launched at SC19

3

2022 - Flight Solo

Rapid HPC environments via image deployment

5

2009 - "Flight Concept"

Multi-Platform HPC environment creation

2

2016 - Fight Compute

Rapid deployment of HPC environments on public cloud

4

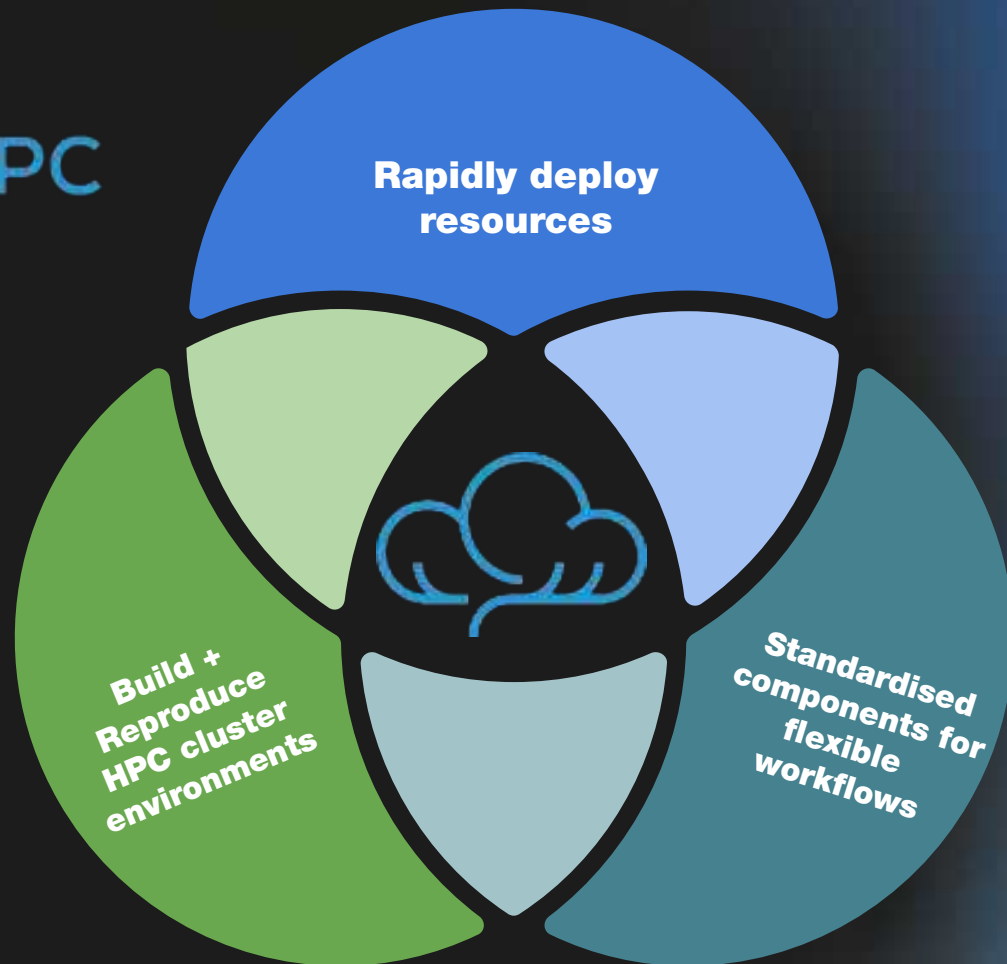
2020 - COVID-19

HPC computing initiatives shift focus to pre-and-post AI/ML

6

TODAY - Sustainability

Making HPC accessible to the next generation



What OpenFlight means to HPC...

... and to the team at Alces Flight.



No Lock-In

OpenFlightHPC works across platforms and vendors.



Removes Barriers

Streamlines many of the steps needed to deploy cluster environments.



Out-of-the-box
Functionality

You can deploy easily and without customisation.



Flexible

Easily change or modify components - add/edit scripts over time.

2.

Who uses OpenFlightHPC?

**Where open-source makes an
impact**



Who uses OpenFlightHPC?



Researchers

**Ephemeral, Portable
HPC**



System Administrators

R&D, Digital Twin



HPC Service Providers

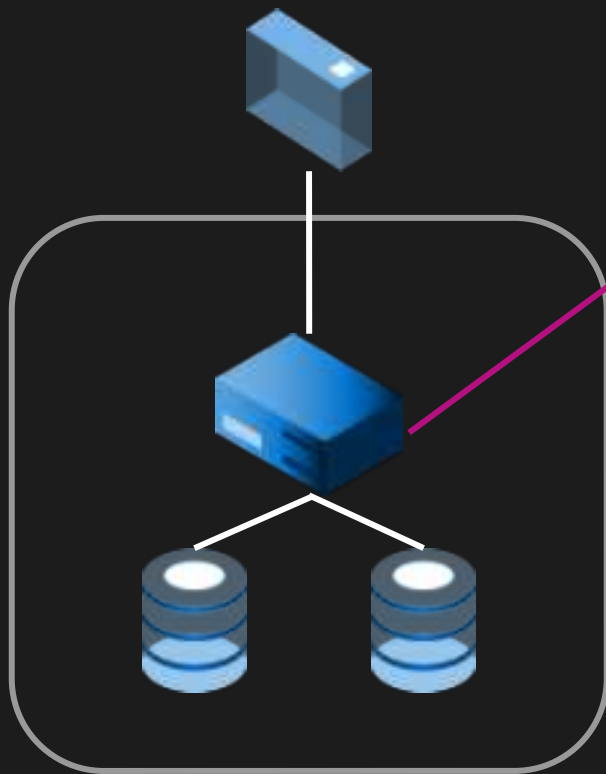
**Rapid Resources,
Private Cloud**

3. OpenFlightHPC Demo

The shift to accessibility



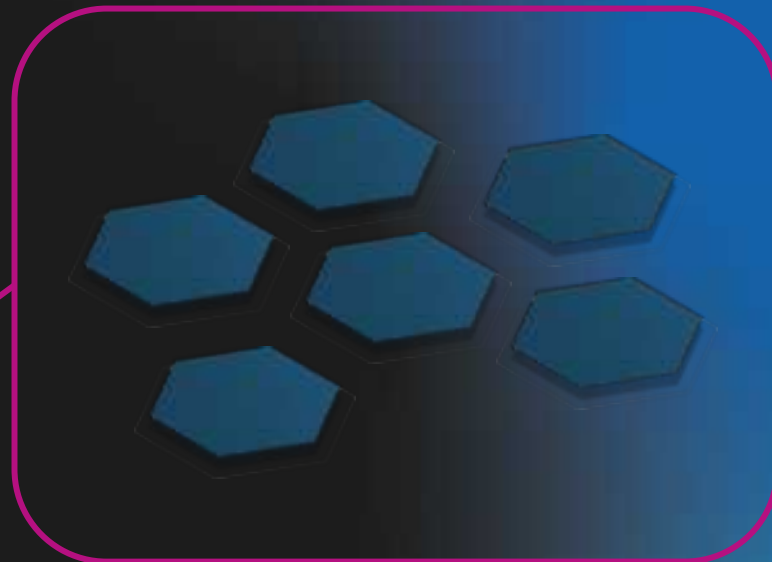
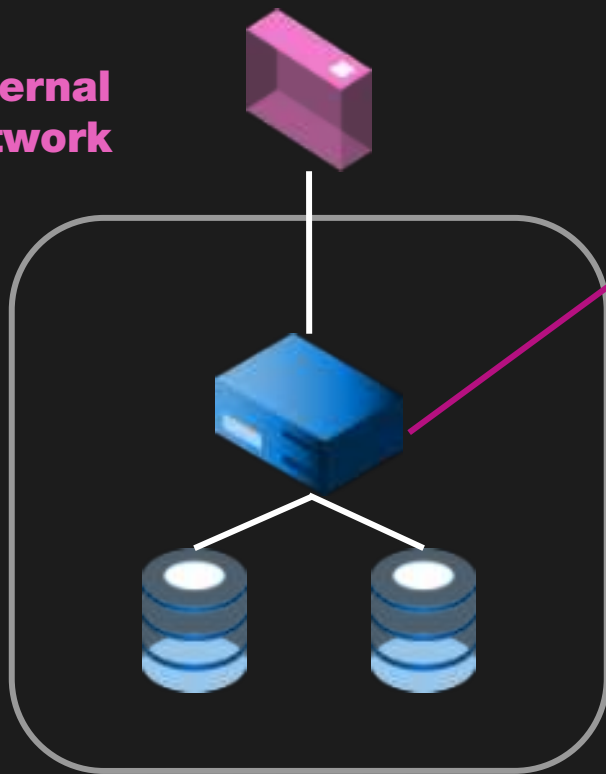
Composable HPC



Simple Alces Flight Project Cluster

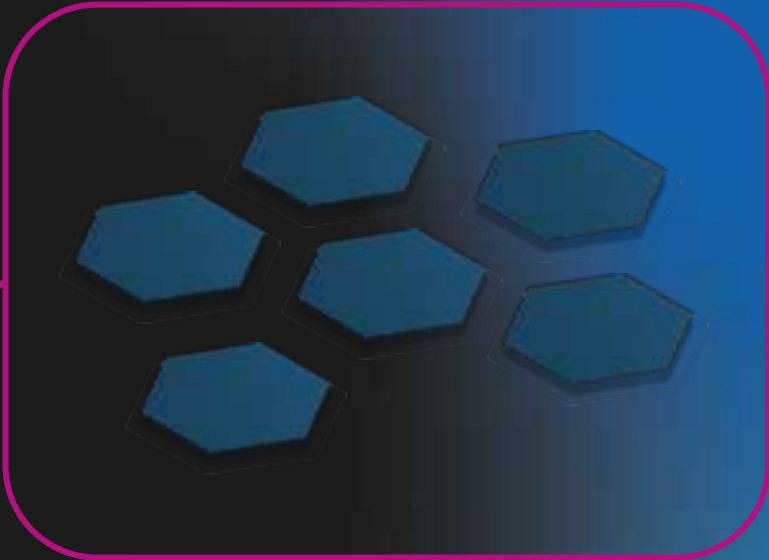
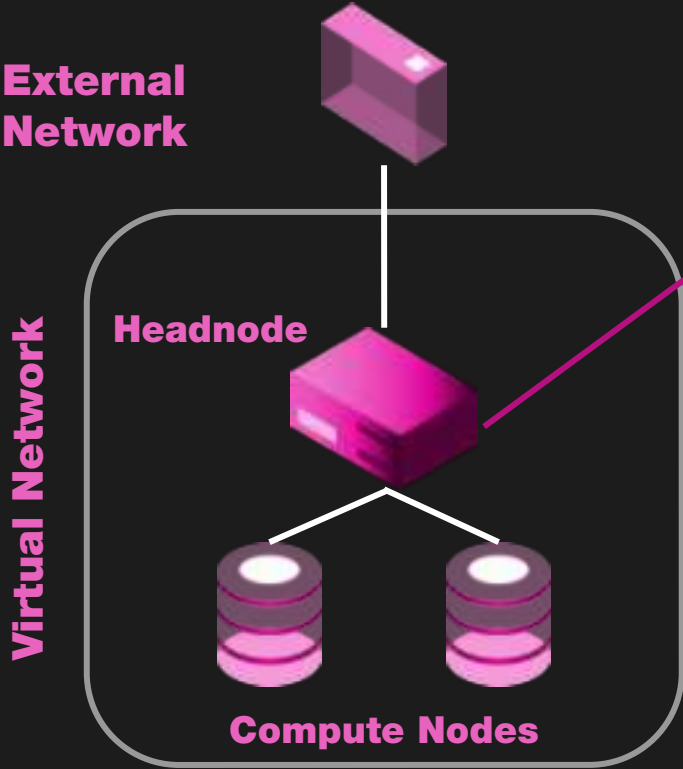
Composable HPC

External
Network



Simple Alces Flight Project Cluster

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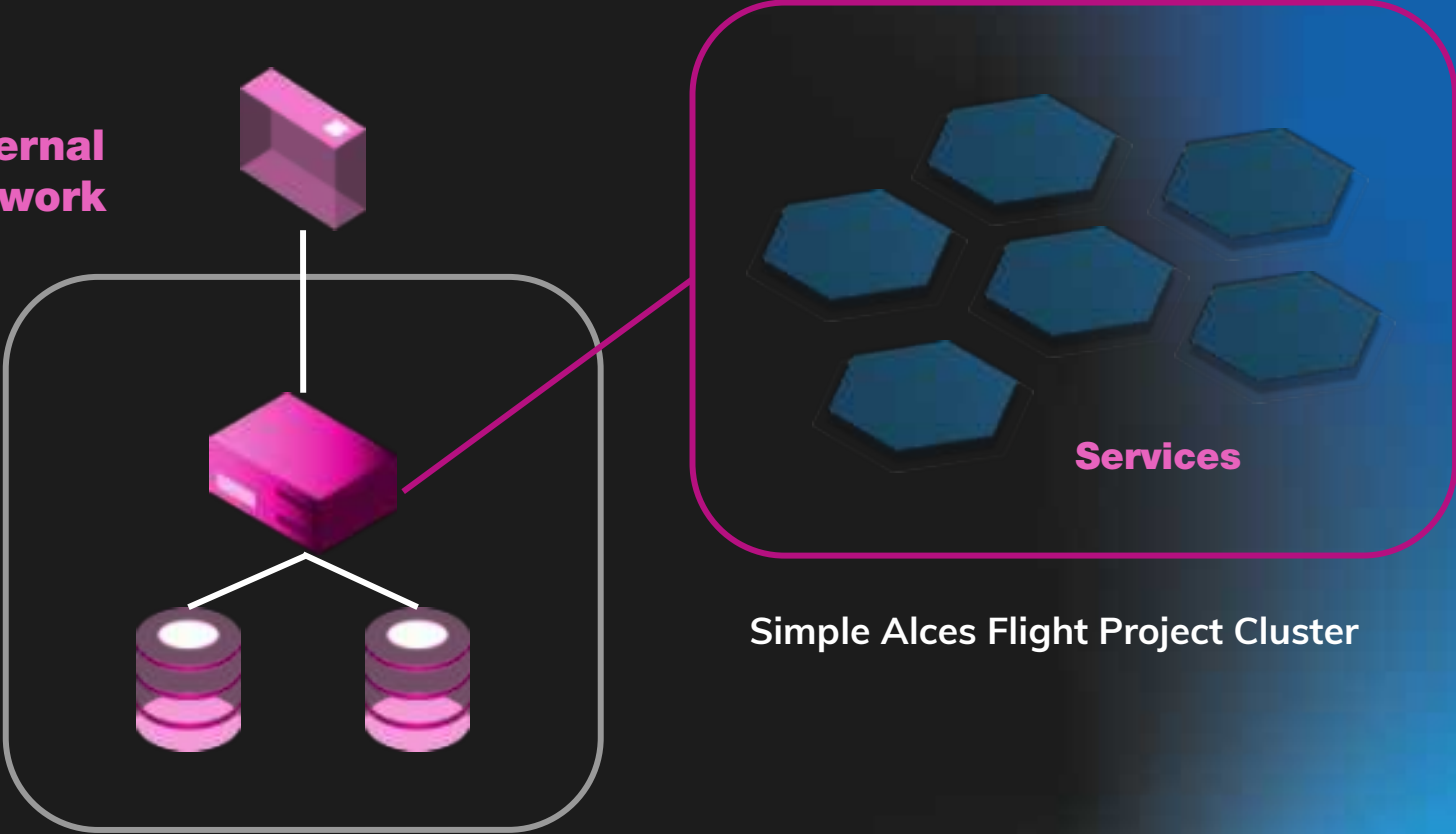


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Composable HPC

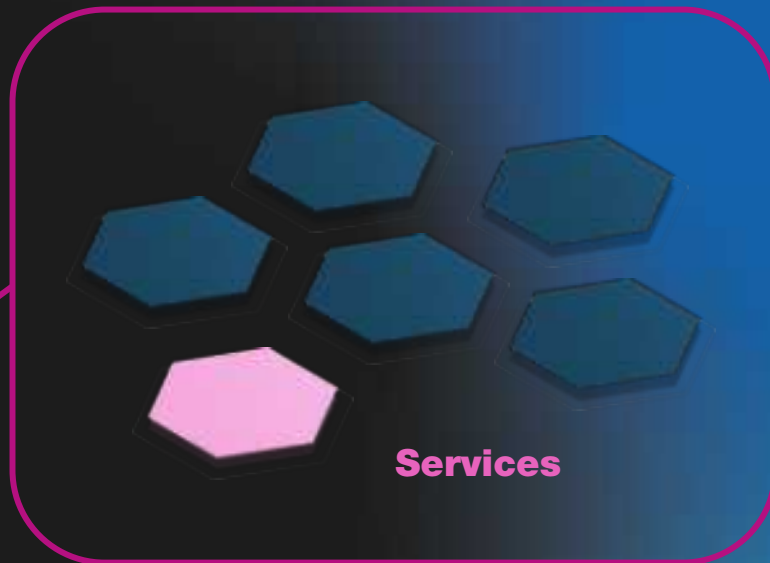
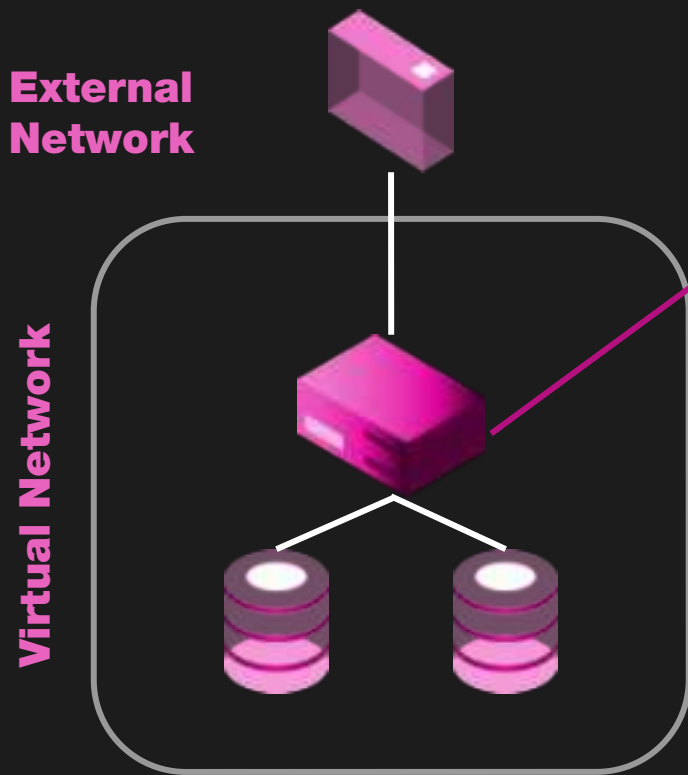
External Network

Virtual Network



Simple Alces Flight Project Cluster

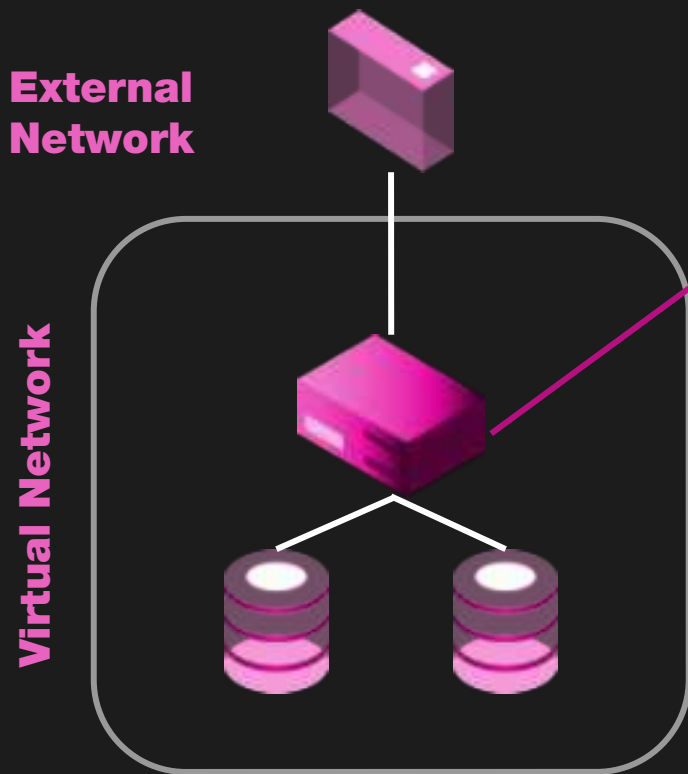
Composable HPC



Simple Alces Flight Project Cluster

- **SSH/SCP/RSYNC**
- **Flight User Suite**
- **Flight Web Suite**
- **Queue System**
- **Shared Storage**
- **User Management**

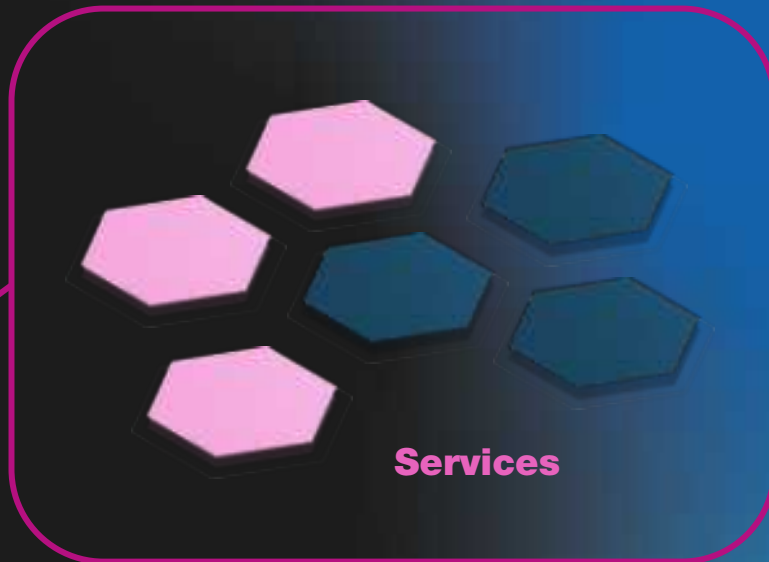
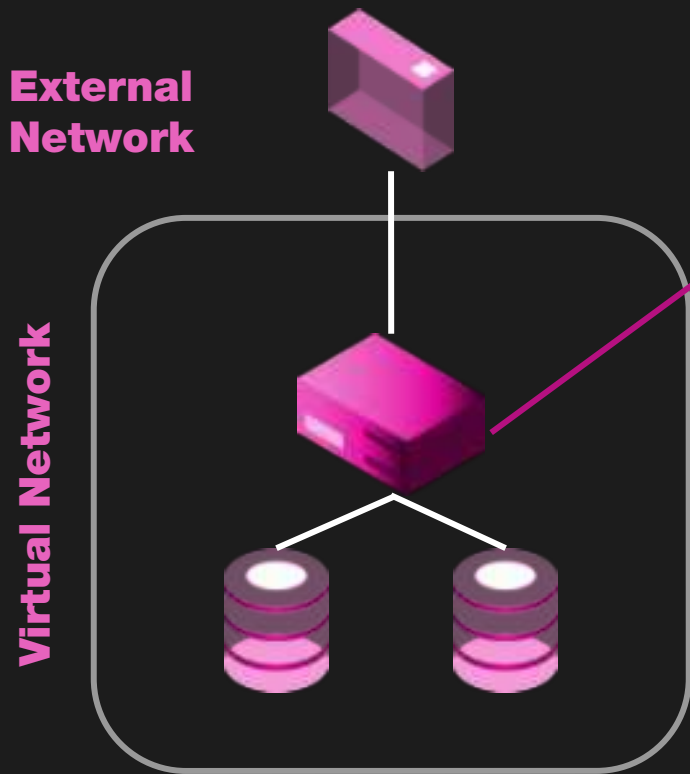
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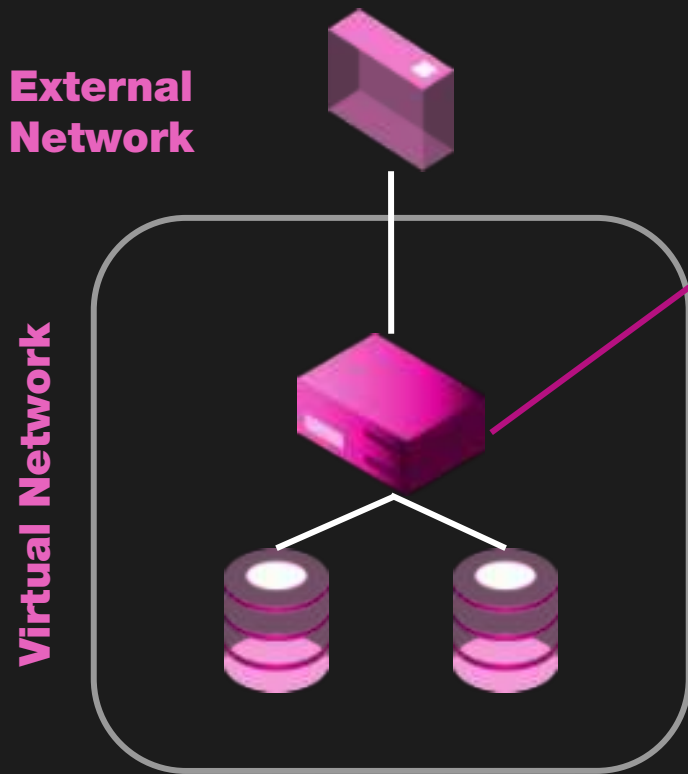
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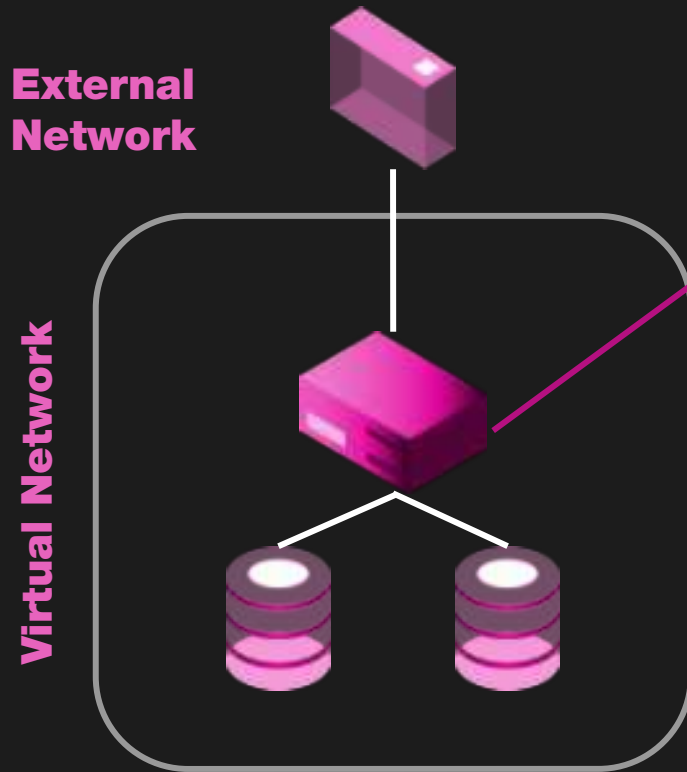
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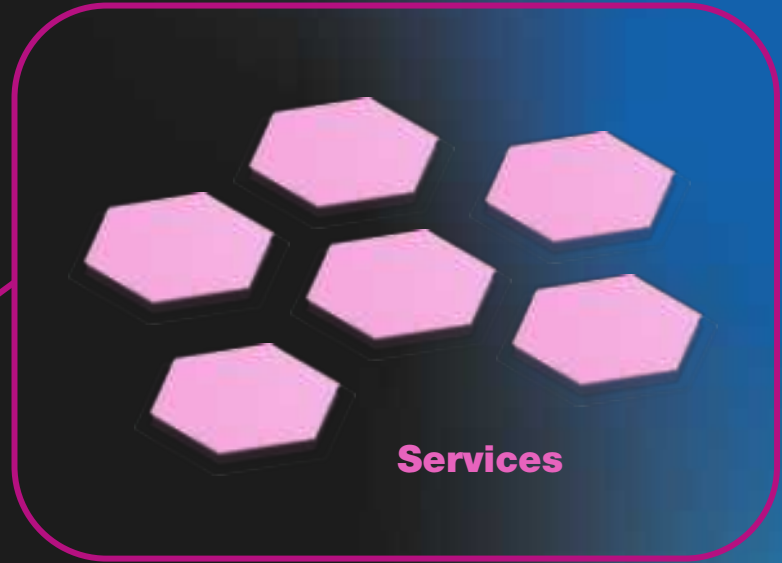
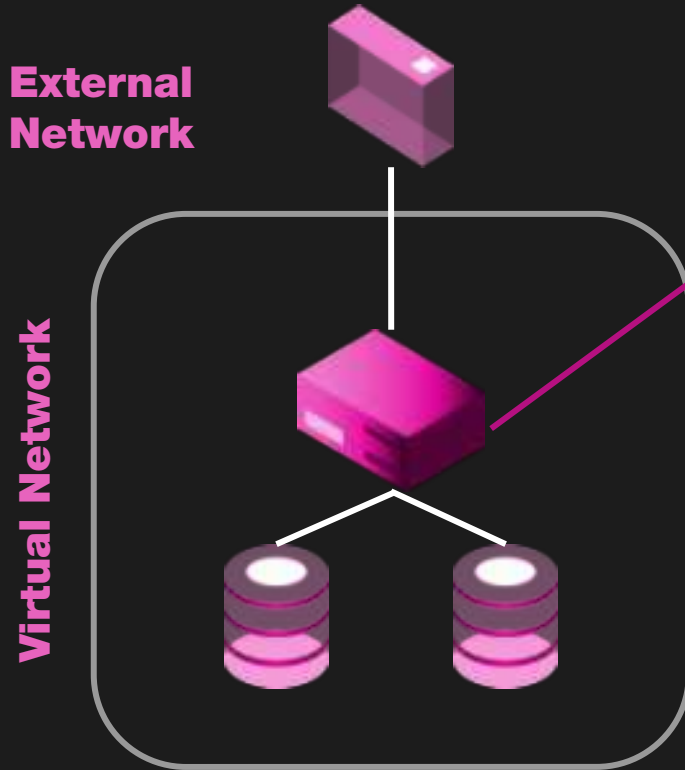
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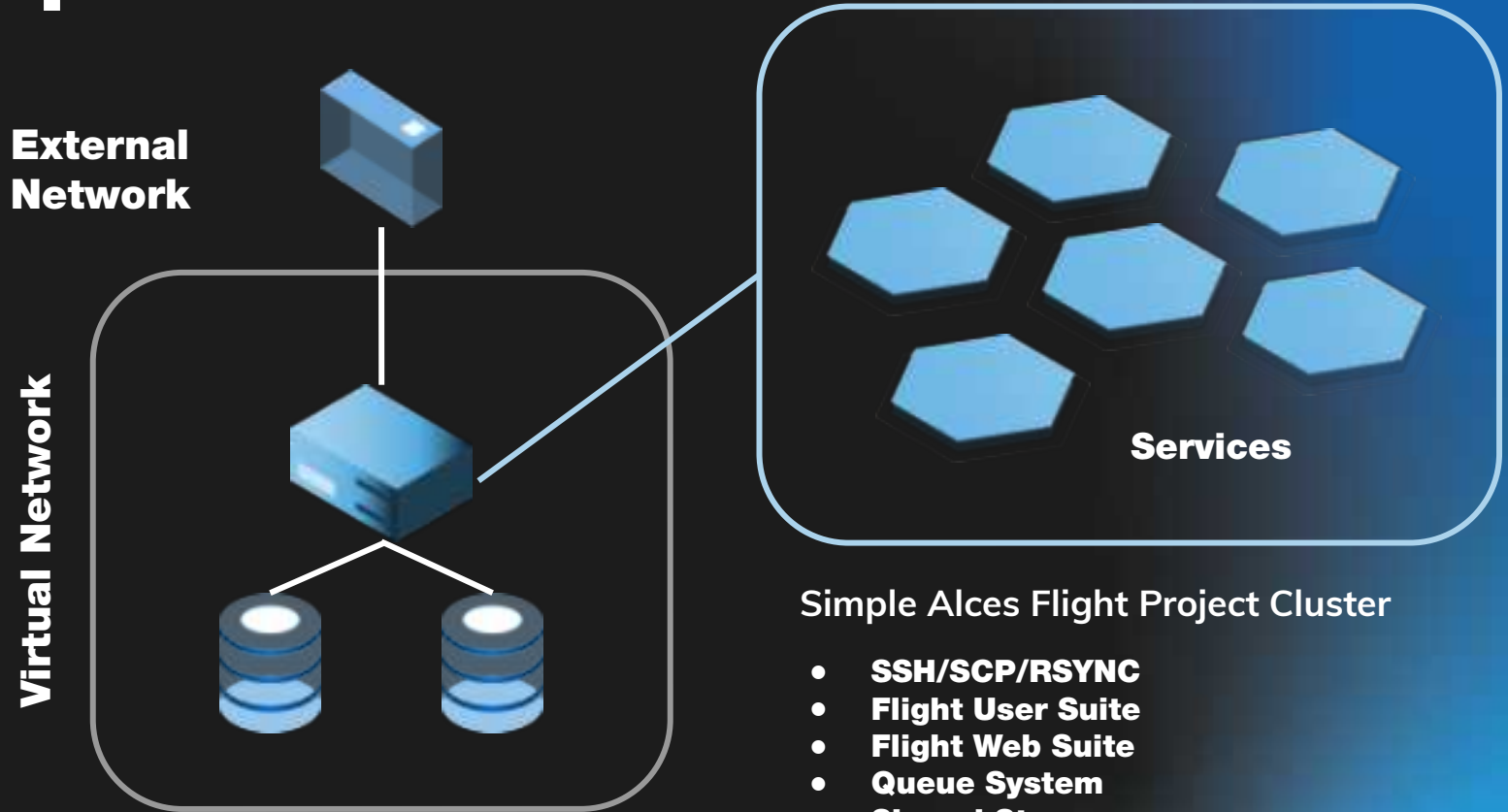
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4. Summing Up...

Next steps



Get involved in OpenFlightHPC



◊ <https://www.openflighthpc.org/>

◊ **Currently Includes:**

- **Cluster Build Methodology**
- **Flight Solo**
- **Tools + Workflows**



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Join us at ISC23!



Booth #A113



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Questions?



Thank you!

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