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Cluster recommendation

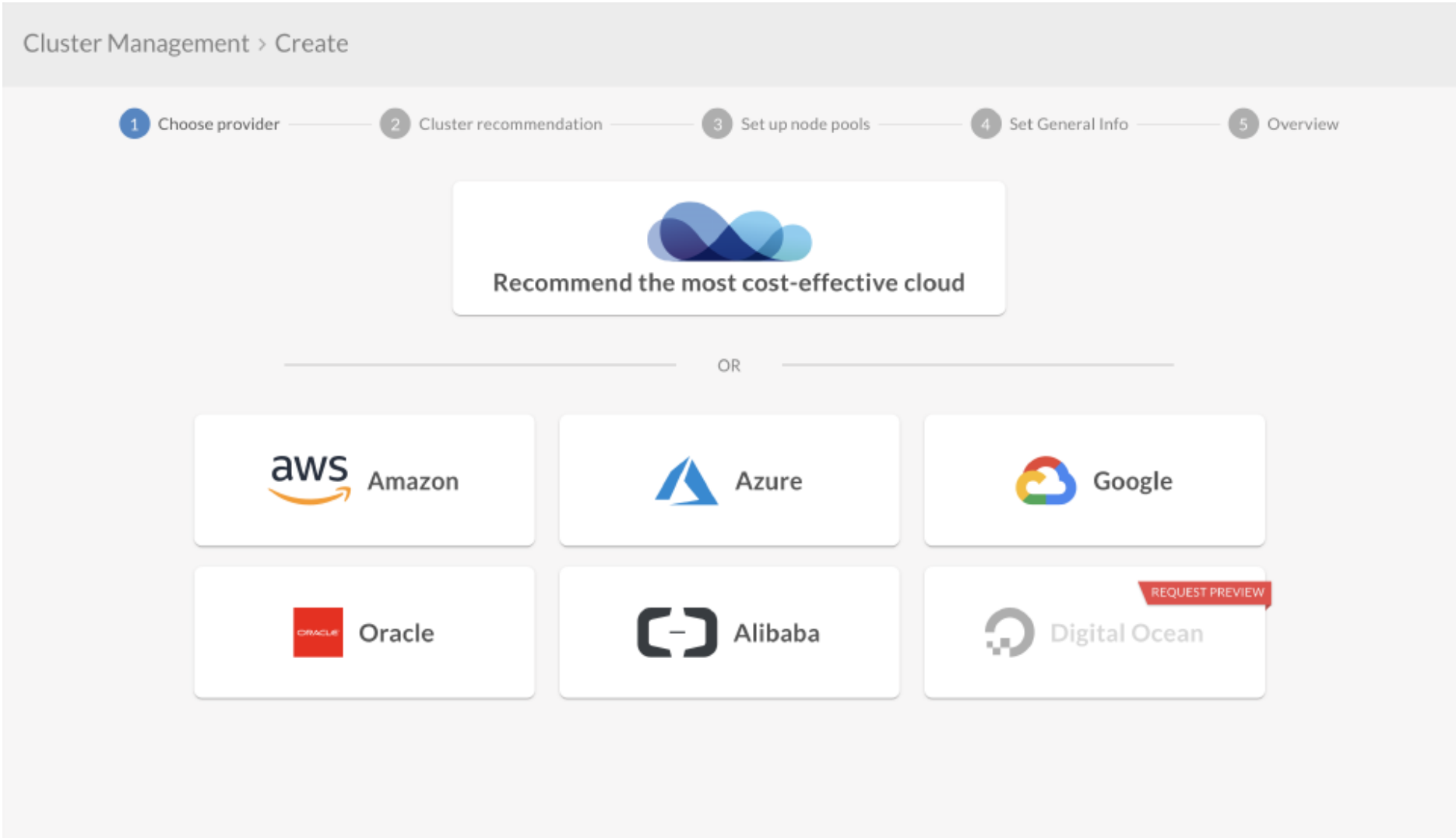
When we want to create a cluster, the first question arises is: *Which cloud and distribution should I use?* . And after we managed to make this decision than how many and what kind of instances our cluster should have to run the application(s) without problems. [Banzai Cloud Telescopes](#) is trying to answer these questions.

This is a cluster recommender application: its main purpose is to recommend cluster instance types and full cluster layouts. The application operates on cloud provider product information retrieved from the Cloudinfo application. It exposes a rest API for accepting recommendation requests.

How to choose cloud and/or distribution

Currently Banzai Cloud Pipeline supports several clouds and distributions. On the web user interface, you have two choices in the beginning of the cluster creation flow:

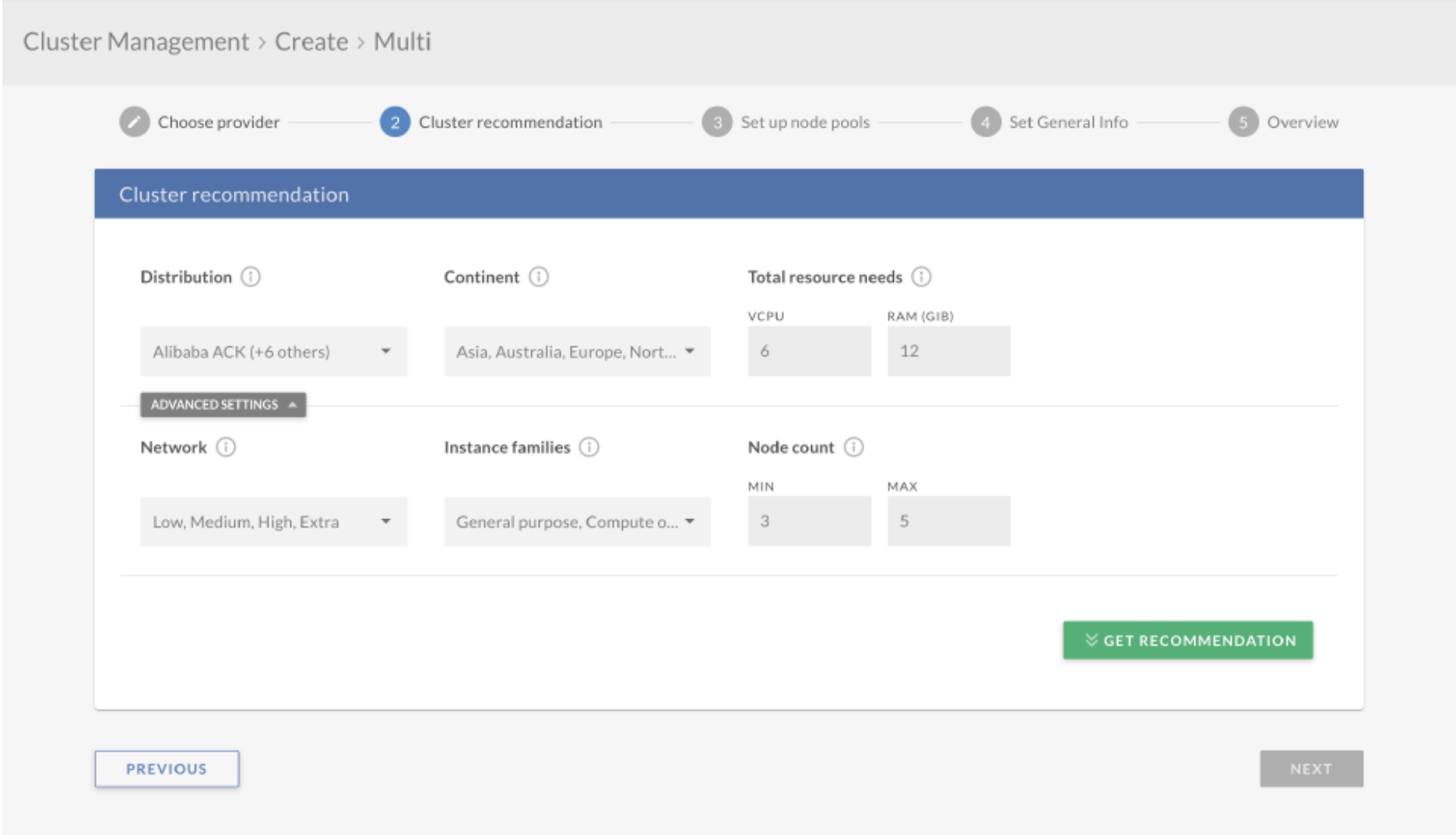
- Choose the preferred cloud provider to compare different offers (distributions)
- Compare the most cost-effective offers across all of the cloud providers



Recommendation inputs

The second step of our create cluster flow is to fine tune the requested resources. The following are the most important input parameters of Telescopes:

- Distribution
- Continent
- Total resource needs
- Network (advanced settings)
- Instance families (advanced settings)
- Node count (advanced settings)



Distribution

[Banzai Cloud Pipeline](#) supports several cloud providers and distributions:

- Amazon + Pipeline Kubernetes Engine (PKE),
- Amazon Elastic Kubernetes Service (EKS),
- Azure + Pipeline Kubernetes Engine (PKE),
- Azure Kubernetes Service (AKS),
- Google Kubernetes Engine (GKE).

If you can't decide that's fine: select all the distributions and the recommender will consider all of them.

Continent

Choose the region of your cloud provider. Consider the placement of your existing infrastructure, the latency between distant endpoints along with the differences in pricing.

- Asia
- Australia
- Europe
- North America
- South America

Total resource needs

We will recommend a cluster layout with worker nodes providing at least the specified number of virtual CPUs and gigabytes of memory in aggregate. Our defaults are 6 vCPU and 12 GiB of RAM.

Network

We will recommend a cluster layout consisting of nodes that deliver the specified level of network bandwidth. Supported network types:

- Low
- Medium
- High
- Extra

Instance families

Use only instances that match the specified criteria:

- General purpose
- Compute optimized
- Memory optimized
- GPU instance
- Storage optimized

Node count

We will recommend a cluster layout consisting of worker nodes in the specified range, 3 to 5 by default.

Result

The output of the recommendation will be displayed as a table, where you can easily compare the offers with different cloud/distribution combinations:

Providers (click to select)	Azure AKS BEST VALUE	PKE on Azure	PKE on EC2	Google GKE	Alibaba ACK BEST VALUE	Amazon EKS
Region	us-east-2	eu-west-1	us-west-2	us-central-1	cn-huhehaote	us-east-2
Processor	6 vCPU	8 vCPU	8 vCPU	6 vCPU	12 vCPU	6 vCPU
Memory	12 GiB	20 GiB	16 GiB	22.5 GiB	24 GiB	12 GiB
Network	Low	Low	Low - High	Medium	Low	Low
Startup time	~ 20 min	~ 20 min	~ 15 min	~ 5 min	~ 30 min	~ 10 min
Node Count	3	3	3	3	3	3
Master cost	-	0.1 \$/h	0.09 \$/h	-	0.15 \$/h	0.2 \$/h
Cost	0.12 \$/h	0.22 \$/h	0.22 \$/h	0.28 \$/h	0.3 \$/h	0.34 \$/h

As illustrated, the Telescopes recommendation is based on optimal price and value within the specified parameters. When you accept an offer, you can fine-tune the cluster layout in the next step.

Further reading

If you want to use your own instance of Telescopes, check the section about [services](#).

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