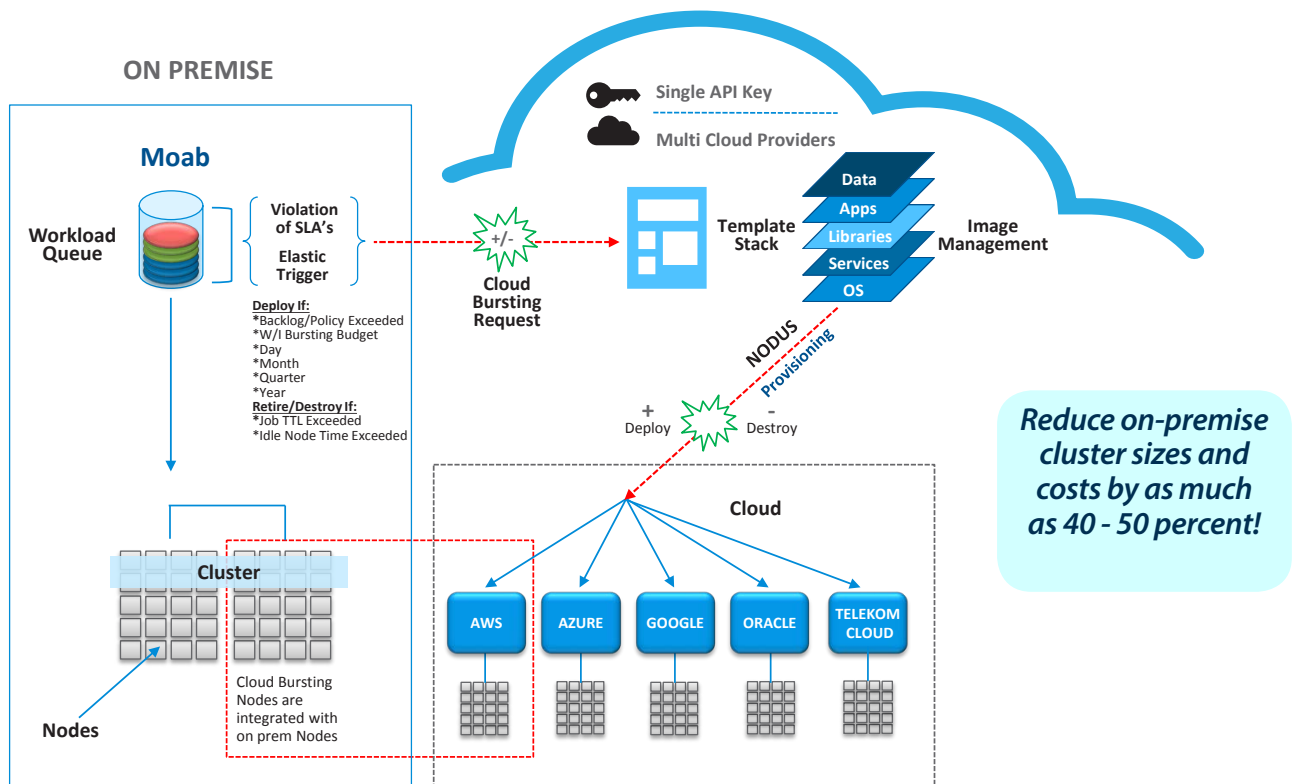# HPC Cluster Refresh

Typically, each HPC organization does a partial or complete cluster refresh every three to five years. Due to the maturity of cloud hardware and software providers, when your organization is refreshing your HPC cluster you need to consider cloud bursting as part of your overall strategy.

HPC organizations that utilize cloud service providers (AWS, Azure, Google, Oracle, etc.) in conjunction with Adaptive NODUS' cloud bursting software can significantly reduce their on-premise cluster sizes and costs by as much as 40-50 percent, and burst the rest of their HPC workload to the cloud, by implementing this hybrid approach.

Each workload that is run in the cloud can be matched with the exact hardware stack that is best suited for that particular workload. This approach will assure all workloads are completed in the timeliest and most cost-efficient manner, typically saving millions of dollars on "on-premise" HPC cluster capital expense. These savings can be moved to a manageable cloud-bursting op-ex cost (pay-as-you-go).

With the reduction of on-premise HPC cluster sizes, additional savings are achieved by reducing power consumption, cooling costs and support personnel.



**ON PREMISE**

**Moab**

Workload Queue

Violation of SLA's

Elastic Trigger

**Deploy If:**
*Backlog/Policy Exceeded
*W/I Bursting Budget
*Day
*Month
*Quarter
*Year
**Retire/Destroy If:**
*Job TTL Exceeded
*Idle Node Time Exceeded

Cluster

Nodes

Cloud Bursting Nodes are integrated with on prem Nodes

+/-
Cloud Bursting Request

Single API Key

Multi Cloud Providers

Template Stack

Data
Apps
Libraries
Services
OS

Image Management

NODUS Provisioning

+ Deploy    − Destroy

Cloud

AWS    AZURE    GOOGLE    ORACLE    TELEKOM CLOUD

*Reduce on-premise cluster sizes and costs by as much as 40 - 50 percent!*

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**Contact a solutions advisor by phone or email, or visit our web site today.**

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