

The Case

for Cloud



HARVARD UNIVERSITY
Information Technology
CLOUD & DEVOPS

Today ...

But imagine ...

QUALITY

Traditional testing normally occurs at the end of the development cycle, making it hard to predict feature quality or release readiness until late in a project's schedule.



Automated testing integrates closely with each step of the development process, allowing for developers to correct failures as they are discovered.

Different teams using different methods collide in both infrastructure and development, leading to conflicting priorities and reduced awareness of overarching goals.



Teams are accountable for planning, task management, and releases delivered in **12-week program increments** in accordance with common objectives and goals.

A separate team must manually shepherd code through release to ensure that quality is met, audit requirements are satisfied, and change management is adhered to.



Tasks are accomplished by a click of a button with the help of automated tools, standard service interfaces, and the continuous integration of application code.

COST

Partners are charged for the resources or services for which they're provisioned — not what they use.



Partners save money by being charged on a pay-as-you-go model for the resources they actually use.

Teams rely on monthly billing to understand what resources they have provisioned, and don't see any savings in usage until a manual decommissioning request is fulfilled.



Real-time insight into resource usage, including the ability to dynamically change an environment as needs dictate or respond to alerts if resources exceed budget.

Operating and maintaining a traditional data center is expensive and cumbersome, creating IT overhead and trade-offs between system administration and business needs.



Infrastructure as code enables **automated delivery of compute resources** without a physical facility, freeing up our workforce and resources to support core Harvard missions.

SPEED

Provisioning new infrastructure not only takes time, but often requires capital investment and the skills of various technology teams to deliver end-to-end IT services.



Teams use standard HUIT support services to **rapidly provision resources** in order to test out new ideas or support evolving project needs.

Applications are developed based on individual teams' skills, leading to inconsistency in architecture, technology choices, and how operational requirements are implemented.



A catalog of standard patterns and services helps teams build and deploy apps using best practices, as well as proactively respond to issues clearly and consistently.

RELIABILITY

It's nearly impossible for a stand-alone data center to achieve and maintain global security standards certification without a significant commitment of time and resources.



Harvard cloud data centers that have achieved **an extensive arsenal of global security standards certifications** without any direct investment.

Recovering our systems in the event of catastrophe or natural disaster is manually intensive and inherently complex.



Systems self-heal in the event of failure or can be quickly initialized, restored, and accessed in another part of the country in the event of a regional disaster.