

Cloud Checklist:

Identify What Type of Cloud is Right for Your Federal Agency



For federal agencies, deciding which public and private clouds are right for each workload is a complex issue. The decision you make today should anticipate the realities of tomorrow. For example, if you want to push deployments out to your network's edge, it's important that your software solutions don't limit future options.

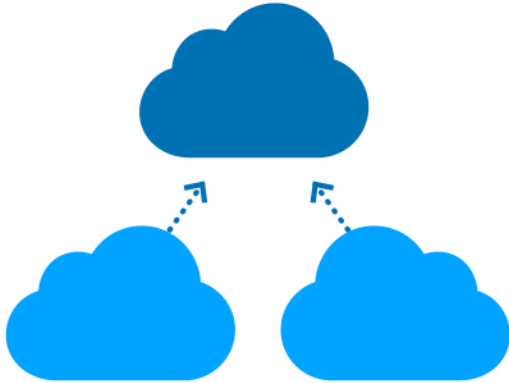
To be sure, each type of cloud has its advantages, and there are common denominators that can facilitate your ability to move seamlessly among clouds.



Hybrid cloud

What it is: An IT architecture that incorporates some degree of workload portability, orchestration, and management across two or more environments.

Advantages:



- ✓ **Flexibility.** Hybrid allows agencies to move between on-premises and cloud solutions by providing a common set of infrastructure and platforms, simplifying how applications are deployed, automated and managed.
- ✓ **Standardization.** Apps running on the same stack run the same way.
- ✓ **Automated management.** Managing many emerging and existing environments can get complicated, but a common thread running through hybrid setups allows for automation to support policy enforcement, predictive maintenance and security.

Tips and Tricks:



DON'T

use multiple management solutions across the agency's infrastructure and application suite.



DO

choose an orchestration strategy to create cohesive workflows wherever they run.



DO

use a consistent architecture that works across cloud types and data centers and is the preferred deployment option for cloud-native apps.



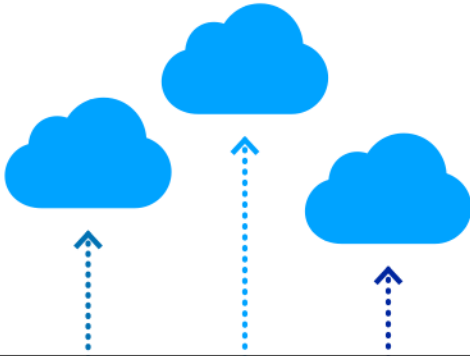
DON'T

spend time architecting and implementing open-source components into proprietary foundations. Leverage a full stack, open-source application platform.

Multicloud

What it is: More than one cloud deployment of the same type— public or private— sourced from different vendors.

Advantages:



- ✓ **Options.** Shift workloads from provider to provider based on pricing, demand or need to integrate new features available only through another proprietary app.
- ✓ **Low latency and high availability.** Host some workloads in regional clouds close to where users are, rather than make them wait to access what they need while outside agency headquarters.
- ✓ **Failover.** Multicloud can serve as a scalable backup for data, workflows and systems in the event of an outage.

Tips and Tricks:



DON'T

let shadow IT – hardware or software deployed independently from the IT team – become so large that it creates a multicloud.



DO

use Linux containers that can move apps among clouds while retaining full functionality.



DO

understand that no single cloud can do everything well.



DO

use automation to simplify complexity inherent in multicloud.

Edge

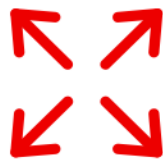
What it is: Computing that takes place at or near the physical location of either the user or the source of the data.

Advantages:



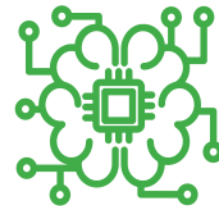
- ✓ **Speed.** The close location of computing services gives users faster, more reliable services.
- ✓ **Artificial intelligence.** Agencies can get real-time, comprehensive views of their physical or digital environment with Internet of Things sensors that rely on edge computing.
- ✓ **Consistency.** Developers can use the same tools regardless of whether an application is in the cloud or at the edge.

Tips and Tricks:



DON'T

sweat scalability, because edge deployments can range up to thousands of sites and interoperate with technologies from multiple vendors.



DO

apply AI and machine learning to optimize benefits of the edge and manage the web of devices, containers and connections.



DO

use application programming interfaces to access real-time data close to the point of generation.



DON'T

avoid containers, which support edge applications' modularity and immutability.

Overwhelmed by the options? Your agency doesn't have to go it alone.

Presidio Federal has decades of expertise in providing cloud solutions for federal agencies. Red Hat is the leading provider of enterprise open-source solutions, including Linux and container technologies. Let them guide your agency on a path that meets today's needs while positioning you well for future success! To learn more, please visit <https://presidiofederal.com/partners/redhat/>.

