PURESTORAGE®
Uncomplicate Data Storage, Forever

WHITE PAPER

FlashStack for Personas Guide

Understand how FlashStack will be used and how it can solve customer needs, all from perspectives relative to specific personas.

Contents

Introduction

As we move our sales efforts toward a Solution use-case/Platform focused approach, it helps to understand how Pure products are used in the field and how we can meet users' needs.

There have been guides released internally to help focus on specific personas, which help our sellers understand each user's role, along with the components and usage that are most relevant to each.

Due to the abilities of FlashStack to include all products within the Pure portfolio and to run nearly any workload that customers require, we may need to focus on the most significant selling points of FlashStack for each persona.

This guide intends to describe the benefits of FlashStack for user personas.

Additional resources include links to available guides to assist when presenting to each persona.

Personas

In this guide, we are focusing on a specific set of personas that we are addressing.

Persona List

- Architect (Datacenter/Platform/Infrastructure/IT)
- Storage Admin
- VMware Admin
- Backup Admin
- Application Developer
- DevOps/Platform Engineer
- Capacity Planner
- IT Manager
- CIO/CTO

Focus & Discussion Points for Each Persona

Architect (Datacenter/Platform/Infrastructure/IT)

Customer architects are responsible for the multiple data centers and public cloud environments that run their organizations' infrastructure. As the technical lead for a customer IT team, they focus on the macro-level view of the infrastructure at whatever scale they run, from a single data center to a global environment.

These architects focus on standardization and availability for their infrastructure; they can leverage the ease of deployment of the FlashStack platform, typically in an automated fashion, and the capabilities of centralized management wherever possible.

The architect will be interested in seeing the operations capabilities within FlashStack leveraging automation. For Cisco UCS, this is policy-based management managed within the new Cisco Intersight SaaS platform or performed through various tools, including PowerShell, Python, and Ansible. For a network with no policy-based control, organizations most likely leverage management with Ansible and templating; otherwise, they also use the Cisco Data Center Network Manager utility for fleet management of their network devices. For Pure Storage, this will be based upon the power of Pure 1 for metrics & capacity. They also benefit from the Purity OS, where the customer will be working against the same core API for managing all arrays and CBS instances within the public cloud. These Pure components can also be managed with PowerShell, Python, or Ansible.

Storage Admin

Storage Admins are primarily focused on the capacity and performance of their arrays. We want to show the accessibility of this data with Pure 1 from anywhere. They benefit significantly from Pure, allowing them to manage all of their arrays from Pure 1 without requiring VPN connectivity.

There is also an excellent win for storage admins by allowing all users to view the capacity and performance instantly. This visibility into all arrays is possible without anyone having to collect data to manage an additional spreadsheet or report for gathering this data. Also, there is no additional overhead on the arrays due to a storage admin having to leverage a tool or script to gather metrics from each array.

With the policy-based nature of Cisco UCS, the storage admin can also be granted access to the boot & storage policies of each server. Typically, a user reporting a storage issue is unaware of which array they are consuming for their workloads. This access allows the server admin or storage admin to determine this information by looking at the boot targets, the initiators from the service profile, and the zoning in a fiber-channel environment to find the array in question.

VMware Admin

The VMware Admin is the most likely persona other than an architect to need visibility into most of a customer environment. Depending on the size of the customer, they may not be responsible for managing servers, networks, and storage but are likely to be the largest consumer of each platform.

Within UCS, the VMware Admin will most likely have at least view-only access to their server profiles to be able to determine boot volumes & storage mappings, but these are a server-focused view. This user benefits significantly from installing our VM Analytics tool to get visibility into the connectivity path from each VM (or VM disk) to the server and then to the datastore and underlying volume on the array. The free tool will not only give visibility into these data flows when troubleshooting, but it gives an excellent at-a-glance view of many components of the environment while still being shown in a context most relevant to this persona. The Data Center Network Manager utility can provide another layer of visibility and monitoring for network gear specifically.

Also, suppose the customer is leveraging Cisco Intersight with a Premier license. In that case, the VMware Admin has visibility into the servers and storage platform from a single interface within Intersight, and they benefit from the ability to orchestrate both. Once the Intersight Assist virtual appliance has been deployed into a customer environment and connected to vSphere & Pure Storage, the VMware Admin has access to workflows which eases typical operations.

Backup Admin

For the Backup Admin, much of the architecture of FlashStack makes their operations simpler overall. For example, with the use of policies and the unified fabric of the UCS platform, it is effortless to deploy physical servers to perform the functions of a backup data mover (proxy/media agent). It is also easy to map those servers to the production data, which they need to back up, and ensure they run with local storage for decreased dependencies for failure scenarios.

Additional visibility from the VM Analytics platform can show a Backup Admin the actual VM workloads running within the environment to assist with targeting and as a visual check for compliance of their backup scoping.

Pure 1 helps the backup admin get visibility into the production volumes and files in use, and ensure that the backup platform is accessing all the data it needs to ensure complete data protection.

Application Developer

While an Application Developer may not focus on the infrastructure and the underlying hardware, they need to understand the performance that is delivered to their workloads and what visibility they can get into their resources.

This persona can leverage Pure 1 for access to determine their volumes' performance, especially if vVols are leveraged within a virtual environment. The VM Analytics tool also gives end-to-end visibility to an application developer for their workload hosts/VMs, without requiring subject matter expertise or access to servers, networking, and storage.

Suppose you also add the capabilities of Portworx and PDS into the mix. In that case, we are genuinely enabling the Application Developer to consume the resources they require in a manner that makes sense to them by giving them APIs to be able to manage their operations. Furthermore, this access and provisioning method can easily incorporate into their standard workflows, without domain-specific knowledge of managing the underlying infrastructure.

DevOps/Platform Engineer

To a DevOps or Platform Engineer that bridges the gap between hardware & software, along with enabling automated operations & testing for an IT organization, many relevant components of the FlashStack platform are relevant.

Overall, the most significant benefit for the DevOps/Platform Engineer is that this persona can consume the entire FlashStack platform through automation. Cisco UCS's stateless & policy-based nature means that servers can be provisioned and deployed through many automation methods. The API-first basis of Pure Storage means that storage can be deployed to workloads in an automated fashion as well. Finally, Portworx takes this capability into the Kubernetes layer as well, all via automation. In the future, Pure Fusion will help to elevate these functions at a fleet level.

These engineers can also enable a larger organization to have a pool of UCS compute resources at their disposal, allowing them to build out a server to run any operating system they require, whether it is a hypervisor or bare-metal OS. In addition, with the UCS platform being built upon policies and templates, it is possible for server profiles with appropriate identities and fabric zoning to be created ahead of time. Then any user given permissions can assign these profiles as necessary for the project/workload to be run, allowing for switching profiles as needed for differing use cases.

While networking can be more challenging to manage due to the lack of standardized APIs for management, network automation has become the typical means of deployment & management for most large environments. With Ansible coming to the forefront as the preferred method for managing network hardware, it is not difficult for the DevOps/Platform engineer to take on these functions for the underlying network

connectivity needed for the customer data center. Additionally, once Cisco Intersight has more fully integrated Nexus Dashboard into the SaaS platform, we will start seeing API-focused management of Cisco network gear, making these functions even easier to manage by this persona.

All of the underlying hardware can be deployed and operated in an automated platform, meaning the DevOps/Platform engineer can easily deliver an entire infrastructure to their organization. They can even leverage Infrastructure as Code or GitOps to manage their environment in a truly automated end-to-end fashion.

Capacity Planner

The capacity planner may not be an individual user depending on the size of a customer organization, but rather this may be a function performed by one or more individuals based on their specific focus of project, workload, or technology.

For the Cisco UCS environment, customers get a quick and easy view of the current resources available within their compute & storage environments within Cisco Intersight. Through Intersight, a customer also has the option to license Workload Optimizer (built upon the old Turbonomic product) to be able to perform application level capacity planning, cost analysis, and compliance checks across private & public cloud environments.

For Pure Storage, naturally, we have Pure 1 to give visibility into every array for the current capacity and performance. In addition, if a customer has the VM Analytics tool deployed, they also have live visibility into their virtual environments for capacity planning from the hypervisor level. By combining these tools with workload simulations from Pure 1 & Meta, we give most customers every tool they need for quick & easy capacity planning with no additional cost or overhead.

IT Manager

For an IT Manager, the benefits of FlashStack lie in the management capabilities and role-based access for their team of engineers. The components of the FlashStack platform are not restricted to proprietary command-line or web-based tools that restrict how the environment is managed. Instead, specific users can be given access to servers, networks, and storage as it fits the organizational & operations structure of a customer.

The Cisco UCS environment access can be provisioned for full administrative access or be granted in a role-specific fashion limiting access to specific functions such as physical or logical server operations, network operations, storage operations, power management, or even read-only access. Pure Storage can also have role-based access control allowed from full administration to read-only, these components give users full administrative capabilities or restrictions based on job responsibilities or skillset.

Typically, in all but minor organizations, servers & storage are managed by different individuals or different teams. Since the FlashStack platform is not leveraging proprietary tools and management interfaces, customers can continue to manage the network components as they do today.

The ability to manage in a policy-based and automated manner still means that the IT Manager can be confident that their teams can operate the platform without investing in resource-intensive proprietary tooling. Also, not requiring full administrative permissions to be granted to all engineers helps to limit the risk of the entire environment being a single failure domain that every engineer could impact.

CIO/CTO

The CIO/CTO level executive does not care about most of the details of the FlashStack platform. Instead, their concerns are addressed by the benefits to their staff with regards to deployment & ongoing operations. We reduce complexity in the deployment of FlashStack with efforts such as SmartConfig, Cisco Validated Designs, and Infrastructure as Code. These methods also make the lifecycle of the FlashStack platform both more straightforward and cost-effective than other converged or hyper-converged platforms that they could purchase.

The CIO/CTO will also be focused on understanding how their IT staff can help to enable the business to deliver on their desired business outcomes quicker. To do this, they need quicker deployments, less downtime, and to deliver new capabilities faster over the platform's lifetime.

With the ability to leverage policies and automation, administrators can pre-configure all the required components so that new hardware can be brought online as soon as it is plugged in. There are no single points of failure in a properly deployed FlashStack environment, based on the stateless & highly available nature of every component and the architecture. This redundancy means that equipment outages or even upgrades can be performed without causing an impact on the infrastructure.

The benefits of this architectural design and each component of FlashStack also mean that a wide array of capabilities and upgrades can be delivered to an environment, whether that requires GPUs, increased bandwidth, or more performant server, network, or storage components, all without downtime.

Finally, to help a CIO/CTO understand the benefits of this platform jointly developed by Pure Storage & Cisco, we can show them the Cisco Validated Design program. In this program, we spend months and many hours of engineering resources to create use case-focused designs, which provide an end-to-end solution design from component-level BOMs through deployment and finally up to performance testing of application workloads. These designs are focused on delivering documentation of how the platform can be leveraged to meet real-world customer needs, without costly investment from the customer to learn the components and deploy, and without the risk of any incompatibilities based on the platform, as support backs every validated design.

Conclusion

Hopefully this guide helps to provide a brief overview of how to help address the needs and interests of the personas included in this guide, to help them understand the value of the FlashStack platform for them and their organization. This guide will be updated with additional resources and points relevant to these personas as necessary.

About the Author

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