

SAIC SOFTWARE-DEFINED INFRASTRUCTURE

Reducing risk and schedule for deploying virtualized,
cloud data centers



SAIC[®]
Redefining Ingenuity

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Federal agencies are seeking to virtualize their IT infrastructure for the operational agility of cloud-based IT-as-a-service. However, the data center architecture and engineering required can be complex and challenging. SAIC offers a validated infrastructure virtualization solution using an approach that demystifies the technical challenges.

Overview

In software-defined infrastructure, the components present in a data center, which include compute, storage, and networking, are virtualized, delivered as cloud-based services, and fully controlled and maintained by intelligent software. The services are delivered along with software-defined and automated operations, management, security, recovery, and extensibility capabilities. Delivery of services can be over a private or hybrid cloud environment.

Software-defined data centers (SDDCs) give government agencies the ability to flexibly configure and provision IT resources with no hardware dependencies. Infrastructure and resource management is determined and automated by software versus manual management by IT personnel to ensure optimization and availability. SDDCs also provide greater ability to share compute, storage, and networking resources across the enterprise and among its users.

Security and disaster recovery are also robust, assuring business continuity and productivity for workforces and customers. Software-defined security gives greater flexibility in setting and automating enterprise network policies and tailoring policies and controls for different types of users and risks.

SAIC's software-defined infrastructure (SDI) utilizes VMware technologies and is delivered using a SDDC architecture that we developed and VMware validated. We are one of only 12 companies globally with a VMware Validated Design (VVD) Certified Partner Architecture—and we are the first and only one whose architecture is certified on latest-version VVD 5.0. We have prescriptive blueprints for comprehensive deployment and operational practices for SDDCs engineered and built with VMware's software-defined compute, network, storage, and management technologies.

We provide standardized, proven, and robust data center designs, de-risking and accelerating customers' SDDC instantiations, deployments, and operations. We take a holistic engineering approach to standing up optimal SDDCs for customers by examining how all of the components will be used. Our VMware Validated Design Certified Partner Architecture is focused on integration and interoperability of all components to meet or exceed Department of Homeland Security design compliance and regulatory and security requirements.

SAIC has embraced SDDCs as an enabling capability in our own organization. We successfully deployed our architecture across our data centers for handling business-critical applications. VMware's Validated Designs team rigorously tested our architecture and verified that it was delivered according to its guidelines and best practices.

Tools and Technologies

SAIC SDI has several key features, including standardized and scalable data center-level designs, applicability to a broad set of customer use cases, and comprehensive documentation.

A differentiating characteristic of SAIC SDI is its modular extensibility to accommodate future advancements. Most reference data center architectures and designs are theoretical solutions and difficult to adapt with the changing IT landscape and customers' business practicalities. Our VMware Validated Design Certified Partner Architecture is scalable to evolve over time with more capable components in the customer solution.

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VMware continuously releases new versions of its Validated Design—its reference set of SDDC tools, components, and blueprints. Our certified architecture leverages the latest version, VVD 5.0, and as VMware puts out new versions, updates, patches, and capabilities, SAIC tests them to ensure integrity and security compliance for the customer solution. We are able to assess and assimilate changes rapidly and work closely with customers on making optimal decisions for seamless transitions. A member of the VMware Validated Design Certified Partner Architecture Program and a VMware Technology Alliance Partner, SAIC has access to the latest Validated Design, tools, resources, knowledge base, best-practices libraries, and technical support.

SAIC combines deep understanding of government missions, experience in government agencies' cloud virtualization and migration engagements, and expertise with VMware technologies. Our SDI is critical to the shift from hardware-dependent to programmatically flexible and extensible IT capabilities. It provides customer-oriented paths to software-managed IT operations automation, microsegmentation of applications and security, DevSecOps, and more.

We provide a consistent, repeatable, and—most important—proven approach to build and operate robust and production-ready SDDCs that VMware has validated. We provide the most comprehensive set of prescriptive documentation for customers, including release notes, architectural details and diagrams, planning and preparation documents, pre-deployment checklists, step-by-step deployment and implementation guides, configuration workbooks, validation workbooks, and operational guidance documents.

The SAIC Difference

SAIC has demonstrated success in supporting numerous government agency IT modernization and digital transformation efforts, including USDA Risk Management Agency with its enterprise cloud computing strategy. This includes cloud architecture design, data center virtualization and consolidation, and legacy application modernization. We continue to execute on USDA RMA's IT roadmap.

As a leading government cloud integrator, our IT teams hold a substantial number of cloud industry certifications. Including VMware Certified Professionals, our staff is continuously trained on leading practices and technologies. SAIC is recognized across the cloud industry for having personnel at the top of competency ratings, who develop innovative and groundbreaking solutions.

We have deployed our SDDC architecture on our own data centers and are ready to apply it for tailored customer solutions. A proven solution provides a significant reduction in risk and schedule, by deploying SDI in a replicable fashion. Our SDI is part of SAIC's infrastructure optimization services and solutions and paves the path to SAIC managed services for operations and management following delivery and deployment.