

# Architect and design your software-defined infrastructure with confidence



As software-defined and composable infrastructure become part of your core strategy, doesn't it make sense to design it to last? Prepare your organization's software-defined and composable infrastructure with a well-planned and comprehensive design that is tuned to your needs.

**Getting to software-defined state in a structured way**

SDI cannot be delivered purely through a virtual abstraction of compute, storage, and networking. Federating the virtual and physical worlds will be the key, combined with finding the right platform services for the right workloads, as well as managing the data center facilities as an integral part of the data center infrastructure. Also, making the necessary transformations to operational, security, and governance models and processes will ultimately decide how successful a customer can be in this new software-defined landscape.

Such fundamental transformation requires that all stakeholders begin at the same point of departure as well as pausing and adjusting the course at periodic intervals to ensure they arrive at the same destination. To do otherwise is certainly a prescription for failure.

HPE Software-Defined Infrastructure Reference Architecture, a visionary template for how your data center should be future-state configured, defines this destination. It clearly highlights key common functional areas that have to be in place to embrace the move to an SDI fully.

**HPE Architecture and Design Service for Software-Defined Infrastructure**

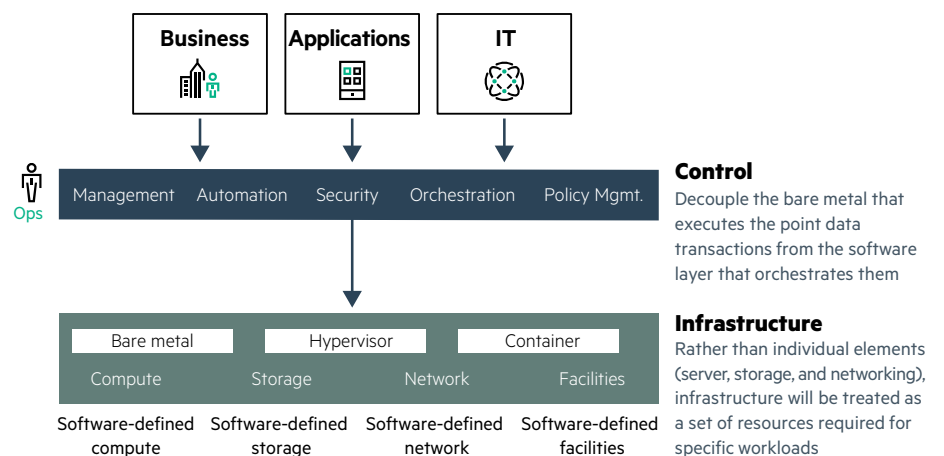
**A strategic architecture for a new era**

Within software-defined infrastructure (SDI), data center assets are controlled by business rules inserted within application policies as well as IT administrators and business users through private and hybrid clouds. This idea economy makes IT assets subordinate to application policies in order to meet dynamic demands of business.

Software-defined policies, business users, and IT administrators invoke service requests in a manner where pools of assets are abstracted in real time to satisfy the application's or business' exact requirements for performance, availability, security, and compliance. Once the request has been satisfied, assets return to their respective resource pools.

To improve your level of success dramatically in transforming to an SDI, Hewlett Packard Enterprise has created a comprehensive architecture and design service that sets your organization on the right course.

**Software-defined infrastructure**



**Figure 1:** HPE Software-Defined Infrastructure Reference Architecture—functional view

HPE Architecture and Design Service for Software-Defined Infrastructure helps you create a global architectural blueprint for SDI that provides:

- Application-driven control
- Administrator control experiences that unify physical and virtual resources
- Converged control plane across both physical and virtual resources
- Unified control policies for end-to-end orchestration and automation
- Converged data center management
- Broad programmatic access to control infrastructure resources using open APIs

## Service framework

### Architecting SDI requires a proven solution architecture methodology

HPE Architecture and Design Service for Software-Defined Infrastructure helps you build a reference architecture for your SDI deployment, and gives you a tailored, high-level SDI design. It uses the HPE Technology Services Consulting (TSC) IT strategy and architecture (ITSA) methodology and the HPE Software-Defined Infrastructure Reference Architecture to build a holistic SDI reference architecture. This architecture is customized to your organization's SDI maturity, business objectives, and requirements.

The service focuses on the functional and technical architecture and the high-level design (HLD) of your SDI solution. It answers "What to build?"; "How much functionality?"; "What can be re-used?"; and "How does it all come together?" questions for your organization's SDI.

The service is structured using the three abstraction layers (application, control, and infrastructure) and the five infrastructure elements (compute, networking, storage, security, and facilities) of the HPE Software-Defined Infrastructure Reference Architecture. It also takes into account the impact on people, process, and operations that an SDI transformation causes.

The HPE Architecture and Design Service for **Software-Defined Infrastructure** can leverage the outcomes of the HPE Transformation Workshop for SDI and HPE Readiness and Roadmap Service for SDI. The service also provides the fundamental building blocks for the next phase of your organization's SDI implementation.

## A structured service approach

**The service consists of four work packages:** a kickoff workshop, a phase focusing on the gathering of the SDI architectural principles, a phase that defines the SDI reference architecture and high-level design, and an executive presentation.

### Define architectural principles to lay out the global guidelines for your SDI

The aim of the SDI architectural principles phase of the engagement is to define and reach agreement on the underlying fundamental principles for the customer's SDI architecture. There's a high-level reference architecture that can be developed based on the principles that are specific to the customer's requirements. The principles guide the strategy and design; consider people, process, and technology; highlight the impact from changes and interdependencies; as well as build a foundation for the upcoming decisions related to SDI.

### HPE Software-Defined Infrastructure Reference Architecture underpins HPE Architecture and Design Service for Software-Defined Infrastructure

The idea economy requires the transformation of data center assets where they are fully automated and orchestrated through software subordinate to user needs and application policies in support of the business goals and objectives.

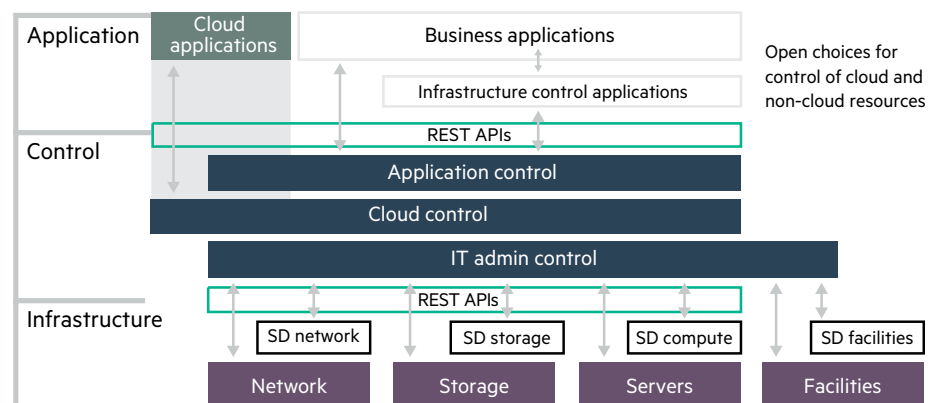


Figure 2: SDI high-level architecture view

### Service deliverables

The service deliverables include:

- One (1) "HPE Architecture and Design Service for SDI" kickoff workshop summary presentation
- One (1) SDI architectural principles presentation
- One (1) SDI architecture and HLD document consisting of:
  - SDI functional reference architecture
  - SDI technical reference architecture
  - SDI high-level design for selected use cases
  - SDI architectural best practices
  - High-level SDI architectural roadmap
  - High-level SDI bill of material including required SDI products and solutions
- One (1) "HPE Architecture and Design Service for SDI" results in executive presentation

Hewlett Packard Enterprise provides project deliverables electronically in the form of Microsoft® Office documents.

### Key questions

The results of this service answer the following key questions:

- What are the architecture principles behind our SDI architecture and HLD?
- What is the functional and technical reference architecture of our SDI?
- Which SDI use cases are we focusing on?
- What is the high-level design for the selected SDI use cases?
- What are the architectural best practices for our SDI?
- What impact will a move to SDI have on our people, processes, and operations?
- What is the high-level architectural roadmap for the creation of our SDI?
- What is the high-level bill of material for our SDI?
- What are the products and solutions we need to build our SDI?

### Develop a global SDI reference architecture and high-level design that will stand the test of time

The SDI reference architecture and HLD are the most important part of the service engagement.

The SDI reference architecture describes the essential elements of your future or desired SDI state at a functional and technical level, focusing on the three abstraction layers and the five infrastructure elements of the HPE Software-Defined Infrastructure Reference Architecture. It is designed to become a living document that will be owned by your IT architecture board.

The SDI HLD focuses on the selected SDI use cases for your organization. It provides a high-level architectural roadmap and bill of material for the selected use cases.

### Service exclusions

The HPE Architecture and Design Service for Software-Defined Infrastructure excludes:

- Business architectural view
- Implementation architectural view
- Detailed design for selected SDI use cases
- Detailed bill of materials in terms of exact number of required solutions and cost
- Detailed financial model in terms of implementation and operation cost

### Service duration

The duration of HPE Architecture and Design Service for Software-Defined Infrastructure is six (6) to eight (8) weeks.

### The HPE advantage

HPE Technical Consulting Services has a wealth of experience in data center modernization and transformations. Our consultants are armed with specialized methodologies and tools developed in-house and honed over many years. What's more, the global resources of one of the world's largest technology company back the HPE solution architects and technical consultants. The Hewlett Packard Enterprise customers find our approach efficient, flexible, collaborative, and valuable.

Hewlett Packard Enterprise has many years of experience with software-defined products having been selling software-defined storage and software-defined networking for many years, and these experiences have informed our SDI approach.

### Disclaimer

A signed statement of work including agreed terms and conditions between Hewlett Packard Enterprise and the customer is required prior to the commencement of any work. Hewlett Packard Enterprise is providing this document for planning purposes only and does not commit HPE to any project scope of work or agreed price for services.

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