The power to do more

Dell Desktop Virtualization Solutions Offering Overview

Dell Desktop Virtualization Solutions are designed to help you get up and running faster, with less risk, and optimal end user experience.

The **Dell Desktop Virtualization Solutions (DDVS)** offering is a comprehensive solution portfolio designed to enable customers to experience the benefits of accessing their applications and data from any Internet-connected device, anytime, anywhere. As simple as it sounds, desktop virtualization is a complex proposition–Dell can help remove the complexity.

Organizations have varying needs so our offering is designed with ultimate flexibility. Whether a customer wants Do-It-Yourself, As-a-Service, or somewhere in between, the Dell portfolio of solutions can meet your needs—in your data center or ours. Our Desktop Virtualization Solutions can be purchased in a traditional capital model, as a fully subscription-based service (monthly based on consumption), or as a combination of both.

Virtual Desktop as-a-Service (vDaaS) — An all-in service that provides fully managed virtual desktops from the Dell Cloud. Leave the management, monitoring and incident resolution to us—you just pay by the user per month*.

Customer Managed Integrated Solution Stack — We've taken the guess work out of creating the right infrastructure mix with our Integrated Solution Stack (ISS). Based on the Dell Cloud Services Infrastructure and leveraging enterprise-class servers, storage, networking, hypervisor and desktop virtualization software, the ISS is internally tested to deliver an optimal IT management and end-user experience. The offering starts with design services to size the ISS for the customer's unique needs. Implementation includes deploying the ISS to the customer location, configuring the desktop virtualization solution, migrating user data to the virtual environment, providing knowledge transfer, and then handing over the management to the customer's operations team. Dell ProSupport for desktop virtualization, resolves issues related to any components of the fully integrated solution.

Dell Managed Integrated Solution Stack — Need help with ongoing monitoring and management? Dell offers the remote monitoring and management of the customer owned ISS in a Dell data center or on the customer's premise. This is a monthly billed, subscription based offering.

Custom — We can design a solution to be housed in your environment, adjusting the reference architecture specifically for your needs or leveraging our rich portfolio of enterprise hardware, PCs, and mobile devices for customers that prefer to host and operate their desktop virtualization solution in a Do-It-Yourself fashion. Implementation services are an option as well.

How we deliver: information-driven decisions to help get it right the first time

When it comes to desktop virtualization, customers often ask us, "Where do we start?" One of the differentiators for Dell in the desktop virtualization space is its end-to-end engagement model and highly prescriptive process methodology that gives you line of sight to success.

* vDaaS pricing and charging models may vary based on individual customer requirements.

Feasibility — Let's discuss the possibilities—meet with the Dell team to determine if desktop virtualization could be a viable solution for meeting your business and IT objectives.

Discovery workshop —The Discovery Workshop is a full-day session between the Dell team and the customer's key stakeholders. The intent is two-fold:

- To gather and document significant information about the existing infrastructure and architecture, geographies, and users to be able to develop a clear understanding of the environment (as is) today as well as the customers short and long-term IT and business objectives (to be).
- To introduce Dell's Economic Impact Assessment (EIA) tool to help the customer establish a preliminary Desktop Virtualization business case.

Blueprint Assessment — During this phase, Dell deploys virtual appliance and agent software on the customer's network to gather detailed data from each desktop targeted for virtualization. The goal is to create a digital footprint of the environment, confirm application and resource utilization and ultimately determine the resources needed to equal or better the experience to which the end user is accustomed with their local desktop. In addition, the outcome of the Blueprint Assessment will highlight which desktops are a good fit for virtualization and which ones are not.

Design & Propose — This phase identifies the hardware, software, storage, and services components necessary to implement a desktop virtualization solution for you. Deliverables include pilot validation criteria, rollout plan, cloud or ISS design, implementation plan, final price, and SOWs.

Implementation — Our consultants work with you to develop implementation and transformation plans based on your specific design. During this engagement, we cover infrastructure requirements, build and configuration, application sequencing, image creation, desktop provisioning, and user migration schedules. Dell can also provide any server hardware, virtualization software, monitoring tools, imaging management, anti-virus software, and applications packaging required to ensure a smooth implementation.

Operate — Following the successful implementation of the solution, we provide ongoing support including management, monitoring, incident resolution as well as periodic health checks to ensure that the infrastructure continues to run effectively.

Discovery Workshop: helping you understand the potential

The DDVS Discovery Workshop is a full day or two half-day sessions between your team and our consultants and specialists. The intent is two-fold: our team will gather significant information about the existing infrastructure and architecture, geographies, and users to be able to develop a clear understanding of the environment as it is today as well as your vision of the ideal future state of meeting strategic IT and business objectives. Second, our team will introduce our Economic Impact Assessment tool to help you establish a clear view of potential costs as well as ways to offset those with savings in key areas that highlight business agility and financial gains that desktop virtualization could bring to your organization overall. This is a collaborative process between you and Dell teams - the result provides substantial input into your Desktop Virtualization business case.

Discovery Workshop objectives

The Discovery Workshop reviews factors that determine solution design, value proposition, the implementation approach, and risk mitigation. In essence, it prepares you to move forward with the Blueprint Assessment activity as well as align the activities to the business objectives. The engagement overview is as follows:

- Review workshop process and outcome expectations
- Coordinate advance review of questions/discussion points
- Communicate required customer participation and target content
- Facilitate the collaborative customer workshop
- Document and incorporate customer input into the Discovery Report
- Set follow-up expectations and next steps
- Create customer Discovery Report and executive summary
- Identify foundational project requirements
- Blueprint Assessment readiness

Discovery Workshop timeline & deliverables

The Discovery Workshop phase is executed over a period of approximately 2 weeks end-to-end. This includes:

- Workshop preparation (1 week)
- Workshop execution (4-8 hours)
- Report production and delivery (1 week)
- Deliverables include:
  - Discovery findings
  - Preliminary Economic Impact Assessment (EIA)
  - Implementation options
  - Indicative pricing
  - Blueprint SOW

Discovery workshop economic business case components

It is extremely important to have a clear view of the areas where existing costs can be reduced as a result of implementing a DDVS model. During the Discovery Workshop, we will work with you to provide an indicative view of potential TCO:

- Potential hardware cost savings
- Improved end-user productivity
- Desk-side support costs reduction
- Energy consumption reduction
- Desktop software and OS upgrades/deployments process optimization
- Security benefits of backup and encryption of desktop data as well as protection of Intellectual Property

Blueprint Assessment: helping you make informed decisions

Our Blueprint Assessment phase utilizes virtual appliances deployed on to your network, and agent software deployed on desktops to gather detailed data from every desktop targeted for virtualization. The intent is to provide accurate information about the environment, including which desktops are considered a good fit for virtualization and, equally, those that are not, which enables the right-sizing of the infrastructure based on the user profile requirements.

Blueprint Assessment generates expansive and detailed data around your desktop estate—information that feeds directly into the implementation model but is also customer IP and, therefore, retained by you, whether or not the Desktop Virtualization implementation moves forward.

Blueprint Assessment objectives

The Blueprint Assessment phase provides us with detailed information describing the desktop estate targeted for virtualization. We will use this information to 1) update the Economic Impact Assessment and 2) create a detailed and accurate implementation plan. Objectives are:

- Assess "As-Is" physical desktop environment
  - OS and hardware configuration
  - User and application activity
  - Desktop performance characteristics
- Qualify desktops for virtualization
  - Good fit – possible fit – poor fit – no fit
  - Application and network performance
- Determine required infrastructure
  - Best location(s) for virtual desktop platform
  - Recommended network enhancements
  - Recommended changes to application and file server locations
  - Resource requirements necessary to provide quality end user experience
- Create virtual desktop design document
  - Implementation approach
  - Scope of end-user desktops for virtualization and profiles
  - Platform locations
  - Need for pre-implementation projects

Dell Desktop Virtualization Benefits

Dell Desktop Virtualization Solutions can provide the following benefits over the traditional desktop model:

Enhanced user productivity

- Increased access to applications and data
- Enhanced application performance
- Reduced login times
- Elimination of extended downtime due to end-user device issues

Simplified management

- Centralized operations to shift the business model to one that enables preemptive management and support
- Support Bring-Your-Own-Device (BYOD) or consumerization
- Software standardization—users access the same golden image
- Software compliance—mitigate unauthorized software installations

Increased data security

- Centralized data storage to reduce data vulnerability and protect Intellectual Property

Business continuity

- Prevention of localized data loss
- Faster disaster recovery

Scalability

- Rapid scaling to meet growth and utilization requirements

Flexibility

- Access a single image from a variety of devices, be it a thin client, laptop, or mobile smart device
- Support of seasonal or temporary workforce needs with fast deployment, reduced cost, and better business agility

Utility cost model

- As-a-service pricing models that help to remove the barriers of entry due to high up front capital expenses

Blueprint phase timeline

The Blueprint Assessment data gathering phase is executed over a period of 5-8 weeks end-to-end. This includes:

- Blueprint initiation and planning
- Assessment tool configuration and deployment
- 15-20 days of data collection
- Data retrieval and report generation
- Business case update

Blueprint Assessment tool

The Blueprint Assessment utilizes a software tool that has two component services: a virtual hub and a desktop agent or connector ID.

The hub, which resides in a Virtual Machine on a physical host server, is the central data collection point and gathers the information received from the agent. The connector ID is installed on each targeted desktop device and sends data to the hub. The result of the data is a Blueprint Assessment report illustrating which desktops are considered a good fit for virtualization, based upon configuration, peripherals, usage model, and network latency amongst other criteria. The report also highlights users that would not be a good fit for virtualization for reasons such as required configuration and usage model, certain graphic-intensive workloads, peripherals not well suited for virtualized environments, or poor network latency.

Design & Propose: laying the path for your success

During this phase, we lay the groundwork for your implementation. Based upon data gathered during the Discovery Workshop and Blueprint Assessment engagements, we can address key elements associated with rolling out a desktop virtualization solution in your environment or Dell's, to help ensure that you meet your technical and business objectives with a quick return on investment.

We draw upon our pre-certified Cloud or Integrated Solution Stack (ISS) successes to design your entire desktop virtualization strategy. Our consultants consider your specific business requirements, geographical span, budget, and timeline; and deliver a detailed document outlining the local and physical design of the solution as well as an implementation plan including vDaaS Dell management integration, if applicable.

Design & Propose deliverables

Deliverables include:

- Pilot validation criteria
- Rollout plan and related timeline
- ISS or Cloud design(s) and applicable options
- Implementation plan
- Executive Summary of the customer objectives and findings reports
- Final price
- SOWs

Implementation: helping you capture the value

Our team creates an implementation and transformation plan based upon the output from the Discovery Workshop and Blueprint Assessment phases. Implementation planning is led by a Dell project manager and covers everything from infrastructure requirements, build, and configuration to application virtualization and sequencing, image creation, virtual desktop provisioning, and user migration schedules and time scales.

The Integrated Solution Stack (ISS) offering is inclusive of the implementation activities that wrap the network, server and storage hardware, virtualization software, and Single ProSupport line into a holistic solution.

Implementation activities

- Implementation initiation and planning and on-boarding iterations
- Deploy and configure the DDVS infrastructure
- Create necessary Active Directory domain account(s)
- Create Active Directory organizational unit (OU) containers for DDVS groups, workstation objects, administration, and management.
- Delegate Active Directory/security roles to the DDVS operations team necessary for support of the platform.
- Perform data migration and profile transfer

Implementation deliverables

- PMI-compliant implementation plan
- Deployed solution
- Service management
- Final customer sign-off

Image management setup

- Complete the base Virtual Image Design Specification document to build the supported virtual desktop standard Image
- Complete the Thin Client Image Design Specification document to build the supported thin client standard Image
- Provide software media, including license keys, for customer-owned client operating systems and applications for images—including any consents required from third-party providers.
- Determine applications available for image integration.
- Create virtual application packages
- Build the standard images according to the Image Design Specification form—(1) base virtual image and (1) thin client image are included as standard in base rate.
- Perform image pilot to test the completed images for proper functionality in the production environment—Scope is dependent upon the number of images, apps, and customer requirements.
- Take corrective action, as appropriate, for issues discovered during the image testing phase.

Operate: helping you manage, monitor, and maintain your virtual desktops

If you've chosen a vDaaS solution, then we will take it from here. In addition to the infrastructure upkeep, the service includes ongoing monitoring and management of the virtual desktops including operating system (OS) and anti-virus patching and application updates, provisioning of new virtual machines, and incident resolution. Uptime and usage reports will be provided on a regular basis.

If you've purchased a customer-managed Integrated Solution Stack, then ProSupport for desktop virtualization will be your support hotline for all of the components in the standard stack. Features include access to senior-level analysts for remote troubleshooting of hardware and software-related issues, application validation assistance (license key management), configuration support for software that is part of the supported solution, and case and incident management.

Find the right users – Understand your current environment and identify the best users to virtualize

Define ROI – Dell's Economic Impact Analysis tool defines potential savings and potential costs

Design the right solution – With a full understanding of your needs, we choose the best-of-breed solution

Manage the solution – You can manage or Dell can deliver on-going management of your DDVS solution

Learn more about Dell's Virtualization Solutions by visiting:
www.dell.com/virtualdesktop

The power to do more