

# EMC VIRTUAL DESKTOP INFRASTRUCTURE SOLUTION FOR HEALTHCARE

Enabled by VMware View 4.5 and Imprivata OneSign

## ESSENTIALS

- Improves desktop environment performance by up to 60 percent during boot storms leveraging EMC FAST Cache
- Reduces storage costs by 60 percent using VMware View Composer and EMC advanced storage technologies
- Enables secure roaming for clinical workflows, including strong authentication, simple sign-on, session management, and location-aware desktop personalization and customization
- Increases performance by up to four times on everyday tasks such as virus scans
- Improves the user experience by leveraging a common image
- Centralizes your desktop environment, simplifying management, security, and control while reducing risk of breaches of your protected health information

The EMC® Virtual Desktop Infrastructure Solution for Healthcare—enabled by VMware® View™ 4.5, VMware View Composer 2.5, and Imprivata OneSign®—helps reduce IT costs and complexities while delivering a robust solution for the desktop environment. VMware View 4.5 enables your healthcare organization to reduce operational and management costs by centralizing the desktop environment, while at the same time, increasing data security by removing patient data from the physical desktop and storing it in the data center. With the desktop environment in the data center, patching operating systems and applying application updates can now be delivered more efficiently than traditional desktop updates which require a tedious, time-consuming process across aging network infrastructure. Imprivata OneSign simplifies and secures clinician access to desktop, networks, and applications.

This solution provides a proven, validated architecture to maximize the benefits of desktop virtualization while meeting service-level agreements. Caregivers can navigate seamlessly across healthcare applications regardless of their location to accelerate information-enabled healthcare decisions. Physicians can see more hospitalized patients because they are spending less time logging in and being authenticated, while the increased use of thin clients increases available space at nursing stations. Desktop virtualization also provides healthcare providers a foundation to move forward with their private cloud strategies.

## BUSINESS AND CLINICAL CHALLENGES

Healthcare providers face a number of challenges, including the following:

- Provide secure and quick access with a consistent user experience to regulated patient information
- Reduce the cost and complexity of maintaining multiple applications on numerous workstations
- Support increased service-level demands with fewer resources
- Increase clinical productivity and workflow while maintaining security of their most at-risk patient information

The EMC Virtual Desktop Infrastructure Solution for Healthcare helps you meet these challenges and more.

## EMC SOLUTION

The EMC Virtual Desktop Infrastructure Solution for Healthcare uses a proven architecture that enables you to centralize your desktop environment, where much of your most at-risk information resides. This solution integrates EMC Celerra® unified storage and advanced technologies from EMC, VMware, and Imprivata to optimize performance, improve scalability, and reduce storage costs for the virtual desktop environment.



Nurses Station Desktop



Workstation on Wheels/Thin Client



Laptop or Remote Physicians Office

### Figure 1. Streamline Workflow—Tap and Go

- User taps badge or swipes finger to reconnect to desktop
- Single-click SSO to all clinical applications
- User disconnects from desktop with card tap
- Desktop maintained on server as user roams

Key solution components include:

#### EMC

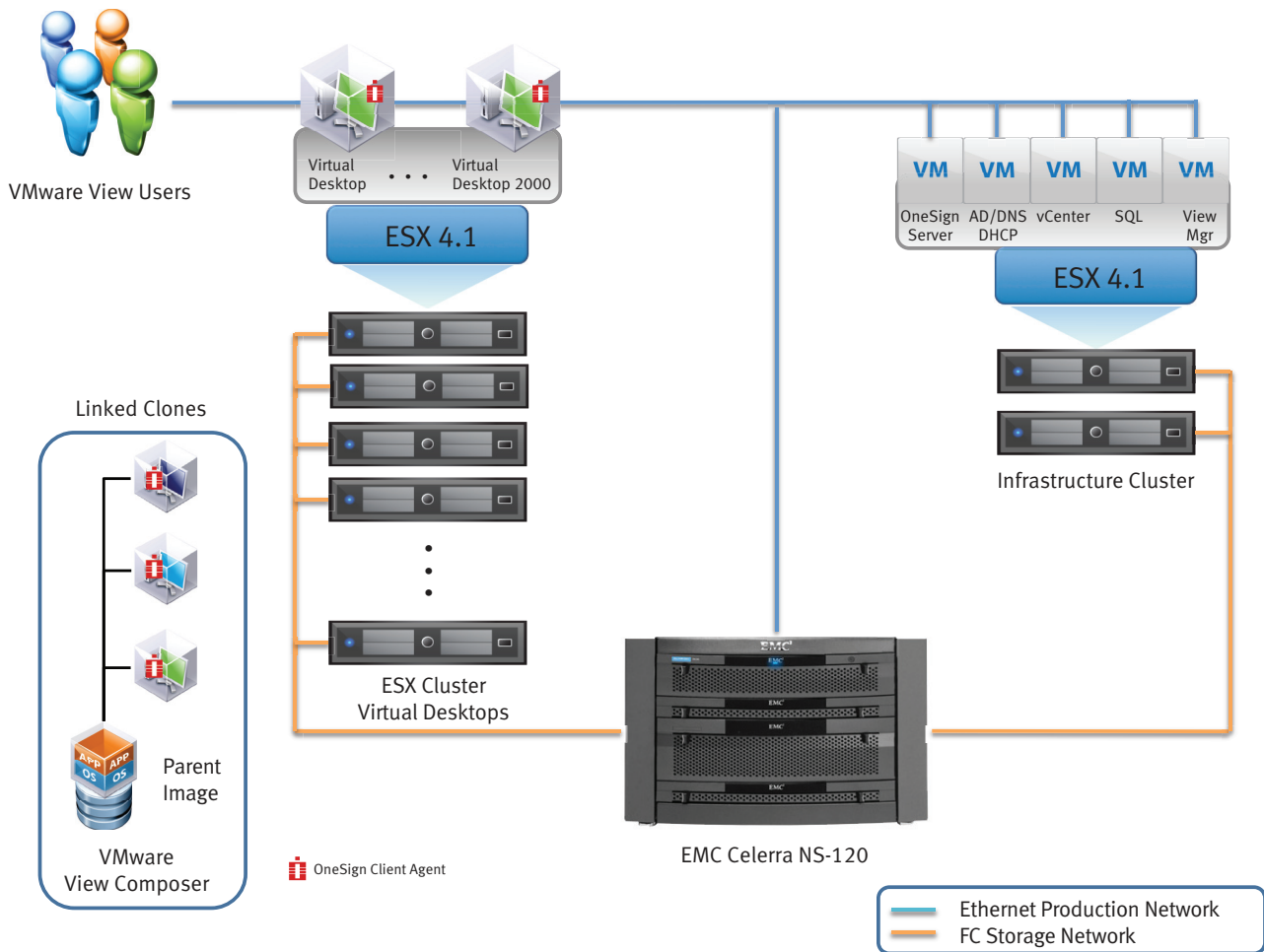
- **EMC Celerra** unified storage, a dedicated network server optimized for files and block access, delivers high-end features in a scalable and easy-to-use package.
- **EMC FAST** (Fully Automated Storage Tiering) tracks I/O and migrates data to the right tier of storage depending on user demand.
- **EMC FAST Cache** enables Enterprise Flash drives (EFDs) to act as an expanded cache layer for the array delivering optimized performance to all workloads.
- **EMC Celerra deduplication, used in tandem with VMware View for primary data**, can deliver the highest storage efficiency for both boot and user data.
- **EMC Celerra with VMware vStorage APIs for Array Integration (VAAI)** enables hundreds of desktops to be created in minutes.

#### VMWARE

- **VMware View 4.5** modernizes the desktop experience to deliver private cloud capabilities for a consistent experience across your healthcare enterprise. Security features enable you to lock down USB ports and ensure that no data is stored on the physical device that could be stolen.
- **VMware View Composer**, a key component of VMware View, creates a master desktop image to deploy across the environment, ensuring consistency across the infrastructure. Management is simplified with ease of patching, updates, and deployment.
- **VMware vSphere™ 4.1 for Desktops** is included with VMware View and continues to be the leading virtualization platform, enabling you to maximize server resources while increasing flexibility and agility.

#### IMPRIVATA

- **Imprivata One-Touch Clinical Roaming** enables the desktop to follow the clinician to any workstation, immediately restoring it to its previous state, eliminating the need to restart each clinical application, and streaming access to patient data.
- **Imprivata OneSign Secure Walk-Away** automatically logs out clinicians when they leave a workstation and re-authenticates them upon return, reducing errors and risk of “unattended records.”
- **Imprivata OneSign Prove ID** enables an application to leverage strong authentication services at any point in the workflow, for example, prior to drug disbursement.



**Figure 2.** The EMC Virtual Desktop Infrastructure Solution for Healthcare enabled by VMware View 4.5 and Imprivata OneSign reduces storage requirements leveraging VMware View Composer linked-clone technology and EMC advanced storage technologies with Imprivata single-sign-on capabilities.

## ENHANCE YOUR SOLUTION

When you deploy information infrastructure solutions from EMC, you benefit from the highest levels of availability, performance, and security required to support your virtualized clinical and business applications. EMC Consulting makes it easy for healthcare organizations to use information to gain efficiencies, optimize processes, collaborate effectively, and transform their infrastructures as they move toward a private cloud. Examples of solution infrastructure enhancements include:

- **RSA® enVision™** offers an effective security and information event management (SIEM) and log management platform that provides collection, alerting, and analysis of log data, enabling organizations to simplify compliance and quickly respond to high-risk security events.
- **RSA Data Loss Prevention (DLP) Suite** enables organizations to discover and classify their sensitive data, educate users, ensure data is handled appropriately, and report on risk reduction and progress toward policy objectives.
- **EMC Avamar® Virtual Edition for VMware** is a source-based data deduplication technology that reduces the size of backup data within and across virtual machines—before it traverses the network or virtual infrastructure and is stored, unburdening your underlying hardware resources, increasing backup performance, and reducing overhead on your help desk.
- **EMC VDI Assessment and Business Justification for Healthcare** is an EMC Consulting service that helps healthcare organizations successfully deploy virtual desktop environments by assessing the real-world implementation of current users and creating (with you) a business justification for the further development of a VDI initiative.
- **VMware vCenter™ Site Recovery Manager** accelerates and ensures successful recovery by automating the recovery process and eliminating the complexity of managing and testing recovery plans.

## ABOUT EMC PROVEN SOLUTIONS

EMC Proven™ Solutions provide rigorously tested reference architectures to help customers accelerate their journey to the private cloud. We leverage strategic relationships with Cisco, Microsoft, Oracle, SAP, VMware, and leading healthcare industry application providers to develop solutions and best practices for real customer scenarios. Our application experts can help you optimize application performance and availability and simplify management of your data center environment. Whether you are just considering virtualization or are well on your way to a fully virtualized environment, EMC Proven Solutions can help you lower the risk of deploying new technologies and ensure predictable, reliable outcomes.

### CONTACT US

To learn how the EMC Virtual Desktop Infrastructure Solution can help your healthcare organization solve your business, clinical, and IT challenges, contact your local EMC account manager, or visit [www.EMC.com/healthcare](http://www.EMC.com/healthcare).

EMC<sup>2</sup>, EMC, EMC Proven, Avamar, Celerra, RSA, RSA enVision, the EMC logo, and where information lives are registered trademarks or trademarks of EMC Corporation in the United States and other countries. VMware, VMware vCenter, VMware vSphere, and VMware View are registered trademarks or trademarks of VMware, Inc., in the United States and other jurisdictions. Imprivata and OneSign are registered trademarks of Imprivata, Inc., in the U.S. and other countries. All other trademarks used herein are the property of their respective owners. © Copyright 2010 EMC Corporation. All rights reserved. Published in the USA. 10/10 Solution Overview H7420