

## Virtualization with VMware vSphere

### Customer Vertical

Manufacturing

### Summary of Client infrastructure

We have a customer which is a manufacturing company and customer has nearly 20-30 physical servers. They have multiple locations across India.

### Customer Challenges

Customer facing big challenges to manage each server separately and maintenance cost are very huge. There exists a one to one correspondence between a physical computer and the software that it runs. This relationship leaves most of the resources of the computers hugely idle and underutilized, leaving between only 5–15 percent (approx.) of physical server capacity in use. The cost of the space and power required to house, run and keep these systems cool are expensive. All the servers are not the highly available.

### Proposed Solution

We advised to the Customer to deploy industry leading virtualization VMware vSphere solutions have all the features per to customer requirement.

### Benefits

**VMware vSphere Hypervisor architecture** provides a robust, production-proven, high performance virtualization layer. It enables multiple virtual machines to share hardware resources with performance that can match (and in some cases exceed) native throughput.

**VMware vSphere Virtual Symmetric Multiprocessing** enables the use of ultra-powerful virtual machines that possess up to 64 virtual CPUs.

**VMware vSphere vMotion** enables live migration of virtual machines between servers with no disruption to users or loss of service, eliminating the need to schedule application downtime for planned server maintenance.

**VMware vSphere Storage vMotion** enables live migration of virtual-machine disks with no disruption to users, eliminating the need to schedule application downtime for planned storage maintenance or storage migrations.

**VMware vSphere High Availability (HA)** provides cost-effective, automated restart within minutes for all applications if a hardware or operating system failure occurs. VMware vSphere

Fault Tolerance (FT) provides continuous availability of any application in the event of a hardware failure—with no data loss or downtime.

**VMware vSphere Data Protection** provides agent-less backup and recovery for virtual machines with built-in deduplication based on EMC Avamar technology. Upgrade to vSphere Data Protection Advanced (sold separately) for increased scale, advanced backup data replication and guest-level protection for virtualized and non-virtualized Microsoft applications.

**VMware vSphere Replication** is the only hypervisor-based replication engine for vSphere. It performs storage-agnostic replication of virtual machines with flexible RPOs as low as 15 min. Integrates with vCenter Site Recovery Manager (sold separately) to enable scalable, automated disaster recovery orchestration.

**Predictive Analytics** uses self-learning algorithms and Smart Alerts to automatically analyze monitoring data and identify and avoid performance and capacity issues.

**Automation and Guided Remediation** automate common actions through association with Smart Alerts to reduce mean time to incident (MTTI) and mean time to resolution (MTTR). For example, these workflows can be used to automatically delete old VM snapshots when available capacity falls below a critical threshold.

**Unified console** displays key performance indicators in easily identifiable colored badges and provides a comprehensive view into what is driving current and potential future performance and capacity management issues.

**Automated capacity optimization** reclaims overprovisioned capacity, increases resource utilization and eliminates the need for scripts and spreadsheets. Flexible capacity modeling scenarios facilitate capacity optimizations and help plan for resources according to SLAs.

**VMware vSphere Distributed Resource Scheduler** provides dynamic, hardware-independent load balancing and resource allocation for virtual machines in a cluster, using policy-driven automation to reduce management complexity while meeting SLAs.

**VMware vSphere Distributed Power Management** automates energy efficiency in vSphere Distributed Resource Scheduler by continuously optimizing server power consumption within each cluster.

**VMware vSphere Storage DRS** automated load balancing uses storage characteristics to determine the best place for a virtual machine's data to reside, both when it is created and when it is used over time.