Running Cloudera Enterprise on Nutanix Enterprise Cloud

CLOUDERA ON NUTANIX ADVANTAGES

- Simplify and accelerate pro-visioning for big data projects
- Combine the flexibility and ease-of-management of virtualization with the performance of bare-metal
- Make on-premises infrastructure easy to consume
- Reduce the cost of purchasing, installing, and managing infrastructure for big data
- Increase availability and eliminate planned downtime
- Redeploy infrastructure for big data tasks during off hours such as weekends and evenings

Enterprises are working hard to squeeze more value from every byte of available data, but deploying and managing big data analytics often poses significant challenges for already over-burdened teams.
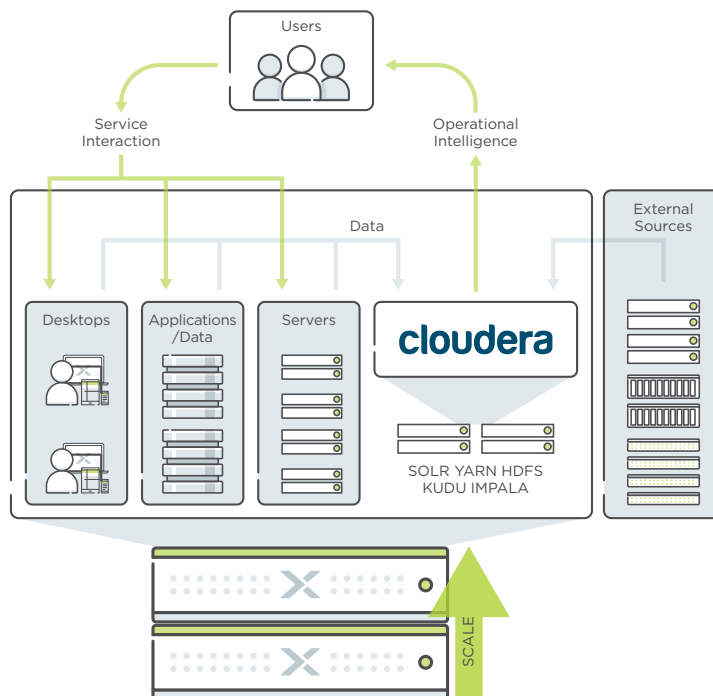
Choosing the right hardware and software is critical for success. Infrastructure must scale with the growth of data and provide the flexibility to switch workloads easily.

BENEFITS OF CLOUDERA ENTERPRISE ON NUTANIX

Cloudera Enterprise running on the Nutanix Enterprise Cloud Platform is the solution to your big data challenges. The combined benefits—and the natural synergy between the two—decreases management complexity while delivering superior flexibility and scalability.

Cloudera Enterprise delivers powerful open source tools and active data optimization for Hadoop that provide faster time to results, easier manage-ment, and uncompromising security.

The Nutanix Enterprise Cloud Platform delivers the simplicity, agility and fractional IT consumption benefits of public cloud, with the control and security needed in the enterprise datacenter. Nutanix's Enterprise Cloud OS software leverages industry's most popular hyperconverged technology to deliver a solution that virtualizes Hadoop for greatly improved scalability and flexibility, reduced upgrade complexity, and improved resiliency.

THE ENTERPRISE CLOUD OS DIFFERENCE

If you deploy your big data environment on bare-metal with local storage, you're faced with a variety of management tasks on each server: software upgrades and changes, firmware upgrades on drives, and so on. This makes it very difficult to keep everything in sync and turns troubleshooting into a lengthy and painful process.

With Nutanix Enterprise Cloud, all infrastructure hardware and software is managed through Nutanix Prism, streamlining common IT workflows and providing a single interface for managing servers, storage, data protection, and virtualization. One-click management reduces the administrative burden and the potential for operator error while eliminating the need for planned downtime. Any task that can be performed via Prism can also be performed using REST APIs, enabling automation.

TAKE FULL ADVANTAGE OF SERVER VIRTUALIZATION

Nutanix delivers the flexibility and simplicity of server virtualization and shared storage without sacrificing the performance of bare-metal servers. Like bare-metal, the server nodes Nutanix software runs on combine compute and storage. Unlike bare-metal, Nutanix simplifies the process of deploying and managing a large number of nodes. In addition, Nutanix uses a security development lifecycle to build security into the platform from the ground up.

By deploying big data projects in a virtual environment, you are positioned to take advantage of the well-known advantages of virtualization, including the ability to deploy and redeploy resources rapidly. Virtualization allows you to have uniform configs/environments and adjust them easily without physical changes.

RUN BIG DATA WORKLOADS ON SHARED INFRASTRUCTURE

Many big data projects still rely on dedicated, bare-metal servers. The result is a completely separate silo of infrastructure that adds cost and complexity. A significant advantage of running Cloudera on Nutanix Enterprise Cloud Platform is that big data projects can run on the same shared infrastructure as other applications, eliminating silos, simplifying infrastructure management, and reducing costs.

BUILT ON A COMMON SET OF DESIGN PRINCIPLES

One of the things that makes Nutanix software-defined platform such a good fit for Cloudera and other big data and analytics applications is that it uses many of the same design principles, including a scale-out, shared nothing design that incorporates data locality for performance and replication factor for availability.

GETTING STARTED WITH CLOUDERA AND NUTANIX

The combination of Cloudera's proven big data solution and Nutanix greatly simplifies the process of starting a big data project. A complete reference architecture is available for Cloudera Hadoop on Nutanix Enterprise Cloud Platform that makes deployment even simpler. Nutanix Enterprise Cloud solutions are delivered as hyperconverged appliances, flexible software, and Xi Cloud Services.
Learn more about Cloudera and Nutanix by reading the reference architecture
Read this eBook you'd like to dive into the broader topic of Big Data

PERFORMANCE: BARE-METAL VERSUS VIRTUALIZED SERVERS

In the past, it was generally assumed that bare-metal servers always delivered better performance than virtualized ones.

However, hypervisor designers have worked hard to minimize overhead and today a virtual machine delivers performance very close to that of a similarly configured physical server. In some cases, virtualized environments have even been shown to deliver better performance than physical servers.

NUTANIX ADVANTAGES FOR BIG DATA

Nutanix Enterprise Cloud OS Software addresses many of the biggest pain points experienced by big data projects with:

One-click software upgrades.
Prism takes the pain and disruption out of upgrades. Intelligent software does all the heavy lifting for upgrades of operating software, hypervisors, and firmware.

One-click remediation. Prism suggests remediation actions for alerts and failures, reducing the mean time to repair and significantly improving availability.

Self-healing. Nutanix maintains two or three copies of all data for resilience. Full resiliency is restored automatically in the background if a failure occurs. This work is distributed across the cluster, minimizing any performance impact.

NUTANIX
Your Enterprise Cloud Platform

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