



Many roads. One solution.

Your Business Powered by FlexPod®



Adapt to compete. Build to last.

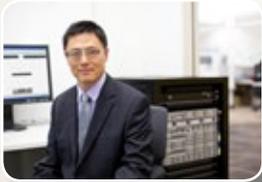
Organisations face tough challenges as they move towards the cloud:

- Increasingly complex virtualised environments
- The need for IT to support greater business agility
- Costly inefficiencies in the data centre
- Risks of delay and disruptions when deploying new technologies

Cisco and NetApp understand these challenges, which is why they have joined forces to create FlexPod: a fully validated, converged infrastructure solution.



FlexPod integrates hardware and software into a flexible architecture that supports a journey to virtualisation and the cloud with minimal risk.



MAXIMISE ROI

Start your journey to virtualisation and the cloud with a three-year, risk adjusted return-on-investment (ROI) of

120%

BOOST EFFICIENCY

Increase data centre efficiency and cut costs. Boost storage utilisation by 200% and system performance by

400%

ACHIEVE CERTAINTY

Cisco and NetApp have prevalidated and pretested FlexPod to work smoothly with more than

40

 designs



Virtualisation anytime, anywhere.

The FlexPod platform is simplified, secured and scalable, making it ideal for server and desktop virtualisation. It has been pre-validated and tested with all leading hypervisors, including VMware vSphere, Microsoft Hyper-V, Citrix XenServer and Oracle VM, simplifying the challenges of desktop virtualisation.

- Support a safe and proven journey to virtualisation and the cloud with FlexPod, built with Cisco UCS B-Series Blade Servers.
- Provision thousands of desktops in minutes on FlexPod with Cisco UCS Manager service profiles and NetApp storage-based cloning.
- Enjoy much lower network infrastructure costs on FlexPod with Cisco Unified Fabric, which requires fewer cables per server and fewer ports.
- Lower storage needs by up to 50% with NetApp storage tiering and deduplication technologies.



FlexPod with Citrix XenDesktop is a preconfigured and validated desktop architecture. The solution is optimized for XenDesktop deployments and combines NetApp unified architecture, advance data protection and provisioning technologies with the Cisco UCS and Nexus Switches to provide a secure and robust platform for desktop virtualization.

FlexPod Datacenter with Citrix XenDesktop enables you to:

- Cut deployment time in half and simplify management
- Support 60% more virtual desktops without impacting user performance
- Accommodate growth by scaling rapidly without any architectural changes
- Lower operating costs by 20% compared to the competition



FlexPod with Microsoft Private Cloud is the optimal shared infrastructure foundation on which to deploy a variety of IT workloads when deployed with Hyper-V as the virtualisation solution:

- Integration that simplifies data centre management with a single console for administering the shared infrastructure, supported by management packs connecting System Center to UCS Manager.
- Automation of tasks in the Cisco-Microsoft environment using Powershell commands developed by Cisco and NetApp.
- Cisco Validated Designs (CVDs) that speed and simplify development in FlexPod.



VMware Horizon View™ with FlexPod provides the foundation for delivering efficient and scalable virtual desktop infrastructure using a pre-validated stack, for ease and rapid deployment, thereby minimising operational challenges and lowering administrative costs. Horizon View also offers the most integration points with vSphere: the best-in-class, market-leading hypervisor platform, which supports the most Guest OSES and has the smallest and secured Hypervisor footprint:

- Benefit from VN-Link integration to manage security and quality of service down to the virtual machine level.
- Improve network throughput up to 30%, increase consolidation ratios and virtualise applications that would previously have been too I/O intensive.
- Optimise your virtualised foundation for security, manageability, performance and lower cost of ownership.

Go further, faster.

The FlexPod platform is the ideal environment for business-critical applications. Only FlexPod has been prevalidated and pretested with these application environments to ensure faster deployment times and ironclad reliability.



FlexPod for Hadoop delivers a validated solution that offers pre-sized storage, networking and compute in a highly reliable, ready to deploy Apache Hadoop stack. Businesses with critical SLAs can easily unlock the potential of the large volume data types generated. Other key benefits include:

- Dynamic expansion of storage with data growth while lowering cluster downtime.
- Seamless data integration with enterprise applications and higher interoperability within infrastructure.
- Accelerated performance with reduced network congestion.

ORACLE®

Oracle Real Application Clusters (RAC) powered by FlexPod allow businesses to securely virtualise nearly 100% of their data centre and business-critical Oracle database. Cisco UCS servers have set world record performance on the Oracle E-Business Suite R12 benchmark. The solution provides:

- Lower Total Cost of Ownership (TCO) for Oracle configurations than traditional data centre and server architectures.
- Host Oracle environments the way you want, with support for leading operating systems and virtualisation platforms.
- Simplifies backup, disaster recovery, provisioning, and cloning processes for Oracle databases.
- Oracle VM offers Sub-Capacity pricing to reduce Oracle DB licensing and support fees and Oracle Templates to greatly reduce the time to load/setup new applications.



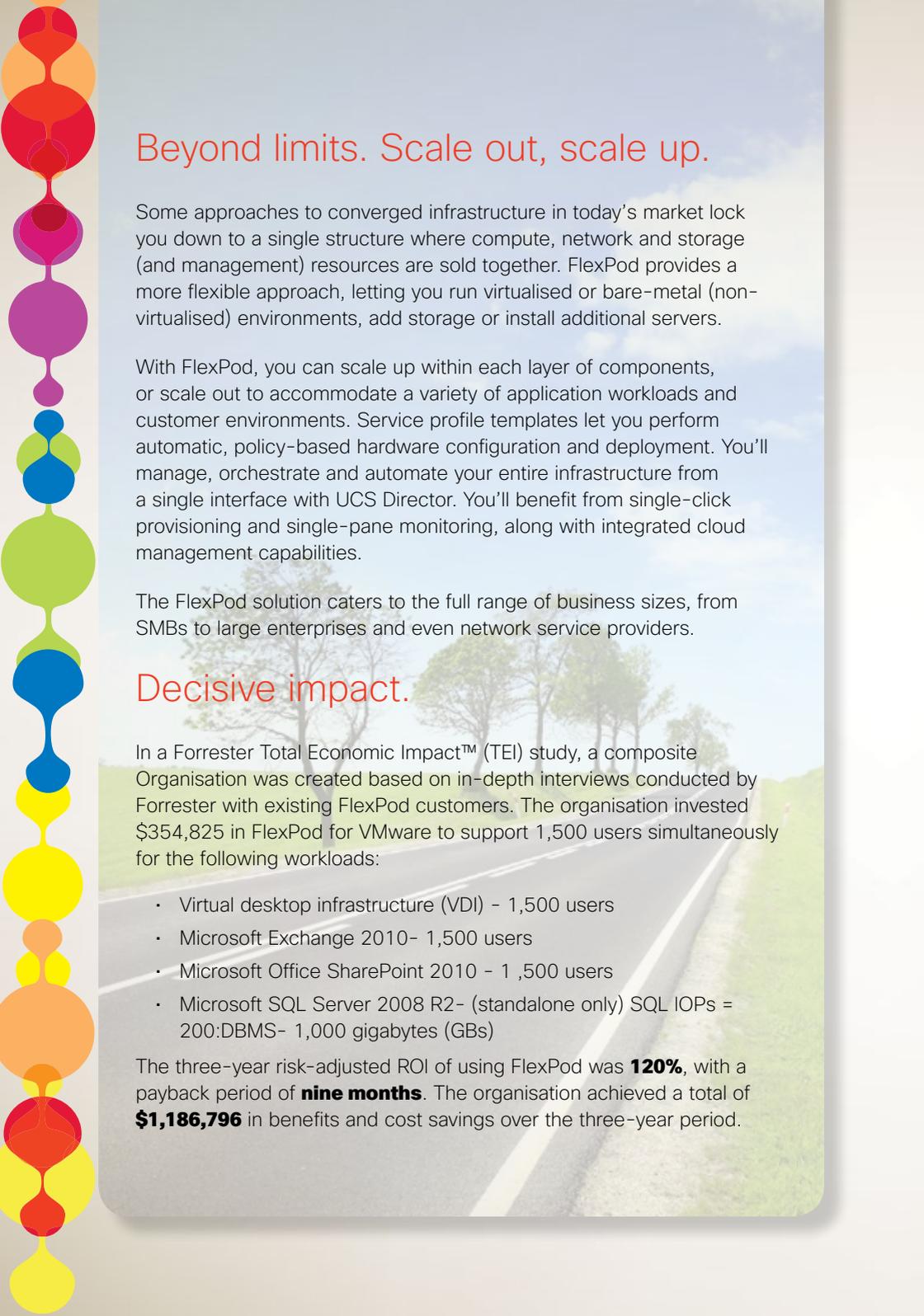
FlexPod provides the building blocks to deploy a flexible data center infrastructure that is ideal for organizations looking for a safe migration from ageing RISC or UNIX based environments. Fully supported by Cisco, NetApp and Red Hat, FlexPod also delivers outstanding performance on real-world enterprise applications. Modernize your infrastructure holistically with this integrated solution that includes FlexPod and Red Hat Enterprise Linux:

- Reduces TCO and provides rapid ROI over legacy platforms with an open and economical platform.
- A clear path to end-to-end, secure, multitenant private clouds.
- Enables fast, inexpensive and trouble-free deployments of test and development environments during migration of your RISC or UNIX environment.



SAP Applications built on FlexPod enables a safe transition to the cloud. The solution is built on virtualisation, standardisation and automation to reduce the Total Cost of Ownership (TCO):

- Offers multiple use cases for SAP including Secure Multi Tenancy (SMT) and automated and fenced SAP system copies.
- Provides secure shifting of SAP databases from virtual machines to physical servers.
- Integrates SAP applications with existing third-party infrastructure management solutions as well as SAP NetWeaver Landscape Virtualization Management (LVM).



Beyond limits. Scale out, scale up.

Some approaches to converged infrastructure in today's market lock you down to a single structure where compute, network and storage (and management) resources are sold together. FlexPod provides a more flexible approach, letting you run virtualised or bare-metal (non-virtualised) environments, add storage or install additional servers.

With FlexPod, you can scale up within each layer of components, or scale out to accommodate a variety of application workloads and customer environments. Service profile templates let you perform automatic, policy-based hardware configuration and deployment. You'll manage, orchestrate and automate your entire infrastructure from a single interface with UCS Director. You'll benefit from single-click provisioning and single-pane monitoring, along with integrated cloud management capabilities.

The FlexPod solution caters to the full range of business sizes, from SMBs to large enterprises and even network service providers.

Decisive impact.

In a Forrester Total Economic Impact™ (TEI) study, a composite Organisation was created based on in-depth interviews conducted by Forrester with existing FlexPod customers. The organisation invested \$354,825 in FlexPod for VMware to support 1,500 users simultaneously for the following workloads:

- Virtual desktop infrastructure (VDI) - 1,500 users
- Microsoft Exchange 2010- 1,500 users
- Microsoft Office SharePoint 2010 - 1,500 users
- Microsoft SQL Server 2008 R2- (standalone only) SQL IOPs = 200:DBMS- 1,000 gigabytes (GBs)

The three-year risk-adjusted ROI of using FlexPod was **120%**, with a payback period of **nine months**. The organisation achieved a total of **\$1,186,796** in benefits and cost savings over the three-year period.

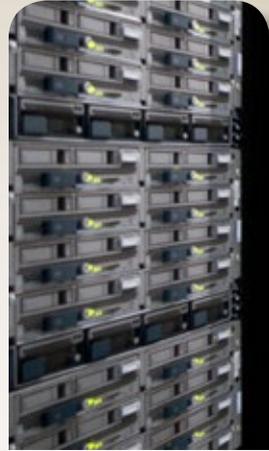
Unified Computing.

FlexPod's flexible architecture integrates hardware and software components that meet the rapidly changing needs of business, including Cisco Unified Computing System (UCS), powered by the Intel® Xeon® processor. Cisco UCS is built to meet today's demands while being ready to accommodate future technologies—including more powerful processors and faster Ethernet standards—as they become available.

Cisco UCS is a simplified architecture for the converged data centre. It dramatically reduces the number of devices organisations must purchase, deploy, and maintain. At the same time, it brings together computing, networking, management, virtualisation and storage access into a single integrated architecture, offering end-to-end server visibility, management and control in both bare metal and virtual environments.

Owners can achieve a smooth, disruption-free transition when they introduce Cisco UCS to their data centres. Cisco UCS also facilitates the move to cloud computing and IT-as-a-Service with Fabric-Based infrastructure.

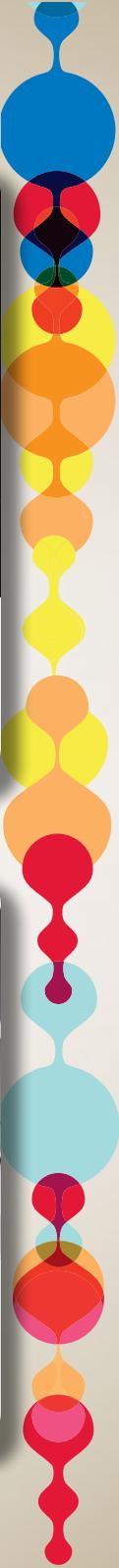
Ultrabook, Celeron, Celeron Inside, Core Inside, Intel, Intel Logo, Intel Atom, Intel Atom Inside, Intel Core, Intel Inside, Intel Inside Logo, Intel vPro, Itanium, Itanium Inside, Pentium, Pentium Inside, vPro Inside, Xeon, and Xeon Inside are trademarks of Intel Corporation in the U.S. and/or other countries.



Cisco UCS B-Series Blade Server and C-Series Rack-Mount platform unify your network, computing & virtualisation resources.



With Cisco UCS, organisations can make a trouble-free move to virtualisation as well as cloud computing.





Unified management.

FlexPod is built upon Cisco UCS Director, which simplifies management through centralized automation and orchestration from a single, unified view. Cisco UCS Director dramatically reduces capital and operating expenses with real-time reporting of utilisation and consumption based on trends set to customer-specific time frames. You can enhance collaboration between computing, network, storage, and virtualisation teams, allowing subject matter experts to define policies and processes that are utilised when resources are consumed. It supports multiple infrastructure stacks in a single data center, as well as across multiple data centers globally. With Cisco UCS Director, you gain:

- Unified management and orchestration of the entire FlexPod infrastructure through a unified, single-view portal.
- Automated single-click provisioning to create, deploy, and reconfigure services, storage, and applications in minutes.
- Continuous capacity monitoring with unified dashboards, reports, and analytics across FlexPod components.
- Integrated cloud management capabilities, including self-service portal, service catalog, orchestrator, capacity management, and chargeback.

Unified fabric.

FlexPod utilises Cisco Nexus Switches, designed to meet changing operational demands of data centers. The switches enable small deployments via bandwidth scalability and multi-row designs, connecting storage and blade/rack mount servers. Additional business benefits include:

- Simplified, converged infrastructure, reducing total cost of ownership by up to 50%
- Simpler mobility for physical and virtual machines, with policy-based compliance for easy deployment.
- Support for the transition to 10 Gigabit Ethernet and centralised fabric management for easier troubleshooting.
- Readily scalable to the complex workloads of virtualisation and the challenges of cloud computing.

Unified storage.

The scope, scale and complexity of today's data-driven world creates new storage demands. NetApp meets these needs with one unified architecture that offers 99.99999% availability with zero planned downtime. NetApp provides in-place controller upgrade without copying data, guarantees the richest set of storage efficiency technologies, and has the fastest snapshot, replication and recovery.



Only NetApp has:

- Unified storage offering secure multi-tenancy.
- A single management framework.
- Unified storage combining non-disruptive operations, proven efficiency and seamless scalability.
- The broadest integration of enterprise ecosystem vendors.
- SAN and NAS data access from a single, unified scale-out platform.

EXTRAORDINARY SAVINGS

Data centres can reduce their footprint by

50%

with the NetApp solution.

EXTRAORDINARY PERFORMANCE

NetApp boosts storage utilisation by

200%

and storage system performance by up to

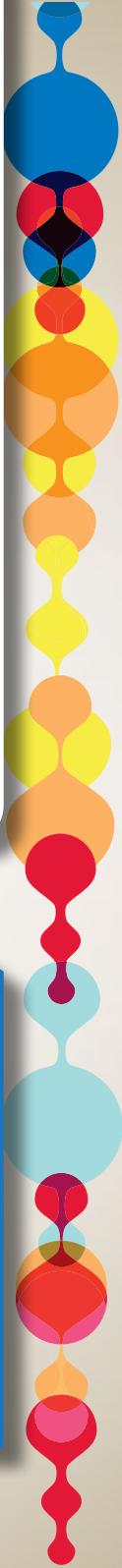
400%

EXTRAORDINARY RETURNS

Owners can achieve up to

166%

ROI as a result of data centre transformation.



Find out more about FlexPod.

For enquiries about FlexPod, contact go-flexpod@external.cisco.com

Cisco: <http://cisco.com/go/flexpod>
1800 134 349 (Australia)
0800 291 129 (New Zealand)

NetApp: <http://netapp.com/flexpod>
1800 780 996 (Australia)
0800 442 742 (New Zealand)

© 2013 NetApp, Inc. All rights reserved. No portions of this document may be reproduced without prior written consent of NetApp, Inc.

Specifications are subject to change without notice. NetApp, the NetApp logo, and FlexPod are trademarks or registered trademarks of NetApp, Inc. in the United States and/or other countries. Cisco and Cisco Nexus are registered trademarks and Unified Computing System and UCS are trademarks of Cisco Systems, Inc. VMware and vSphere are registered trademarks and vCenter is a trademark of VMware, Inc. All other brands or products are trademarks or registered trademarks of their respective holders and should be treated as such. DS-3432-0613

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: www.cisco.com/go/trademarks. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1113)

