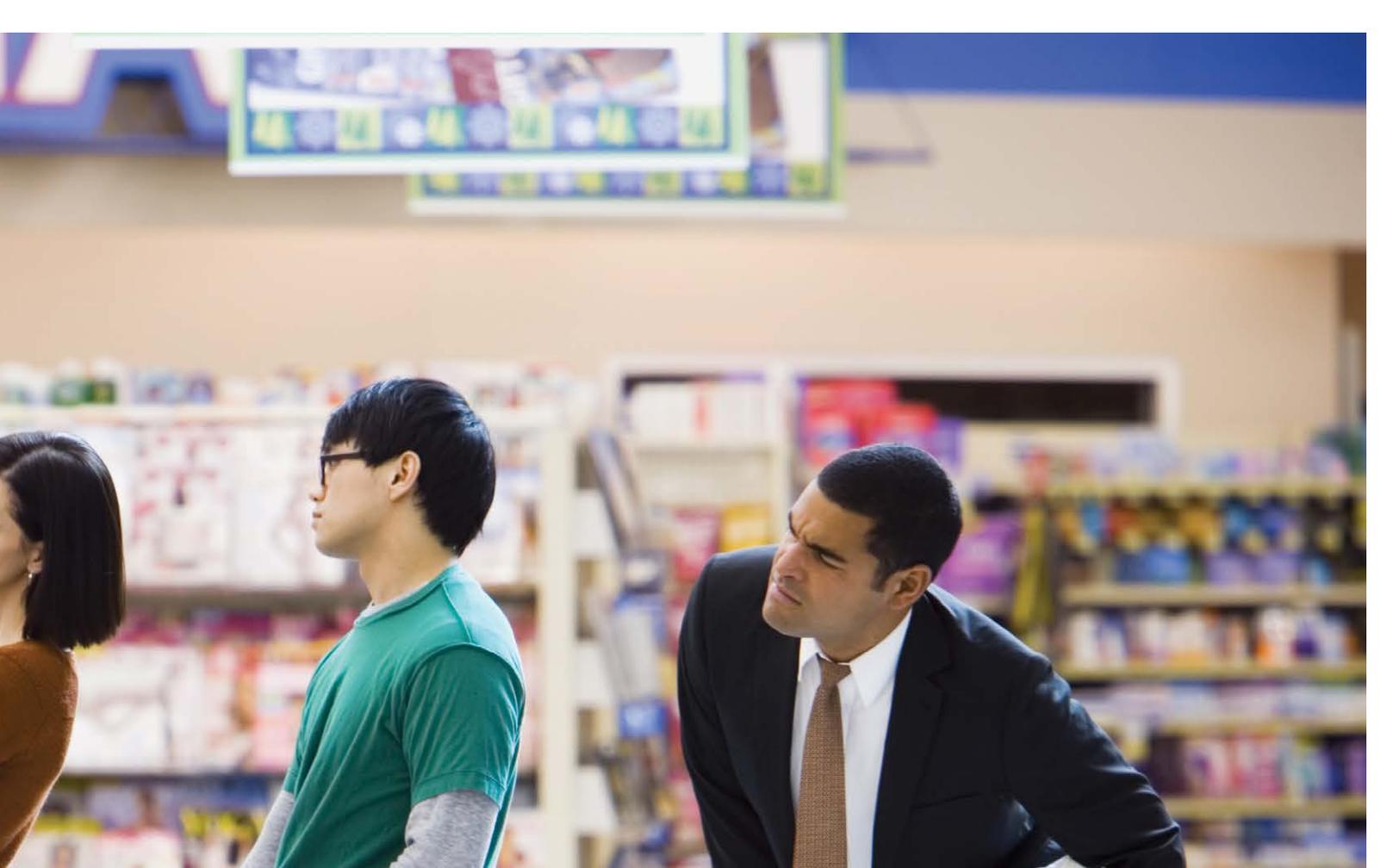


EVOLVING THE PHYSICAL STORE WITH NCR SOFTWARE DEFINED STORE ENABLED BY ZYNSTRA

For more information, visit ncr.com, or email sales@ncr.com.







LEGACY INFRASTRUCTURE CAN HOLD RETAILERS BACK

One of the biggest challenges retailers face today is dealing with legacy IT infrastructures in-store that simply can't keep up with the pace of the business — they're too complex, too patched, too expensive to maintain, too outdated. This leaves retailers in a quandary: they need more modern POS capabilities, but the costs to replace their hardware, software and peripherals are enormous. Most retailers simply can't invest in a complete IT overhaul; but can't stay relevant with their existing investments.

If you're hampered by POS lanes that each have their own separate hardware, software and peripherals, it can feel almost impossible to upgrade the entire system to a modern, flexible, innovative platform. Yet it's essential if you want to maintain loyalty and consumer engagement in the "anytime, anywhere" shopping environment of today.

So, when you think of your ability to meet today's demands and prepare for tomorrow's, is your store technology where you need it to be? Or are you feeling stuck by your own infrastructure?



GET THE FREEDOM TO MODERNIZE THE STORE WITH EXISTING IT INVESTMENTS

NCR Software Defined Store enabled by Zynstra is the smart way to offer the innovative experiences your customers want without having to replace your entire store IT infrastructure. It's the only virtualization solution made for retail and designed specifically to optimize store system performance.

Now you can deliver the personalized, future-facing capabilities your customers expect while radically reducing the cost to serve in-store, with NCR Software Defined Store enabled by Zynstra.

It's a unique solution that virtualizes back and front office store systems with intelligent automation to deliver an agile, secure and connected store where cloud services and mobile applications can easily be added to augment your existing technology to keep up today and stay ready for tomorrow.

ONE AND DONE

What sounds better: upgrading one lane at a time — or upgrading one store at a time? We like the latter, too. That's the power of NCR Software Defined Store enabled by Zynstra.



**Before NCR Software Defined Store
Enabled by Zynstra
(traditional POS deployment)**



Peripheral Mgmt
Hardware
Application
OS for Application

A typical POS terminal includes software and an operating system (OS) license deployed on the terminal hardware, including what's needed to run peripherals. This is multiplied for each terminal — often 1,000's of POS per retailer.

**After NCR Software Defined Store
Enabled by Zynstra
(with POS virtualization)**



Zynstra Intelligent
Edge Client

Zynstra Intelligent
Edge Client

Zynstra Intelligent
Edge Client



Peripheral Mgmt
Hardware Application
OS for Application

POS software, OS license and CPU power are removed from each terminal to a virtualized edge server (Intelligent Edge.) This significantly reduces per-terminal costs, helps optimize performance and simplifies maintenance.



HOW IT WORKS

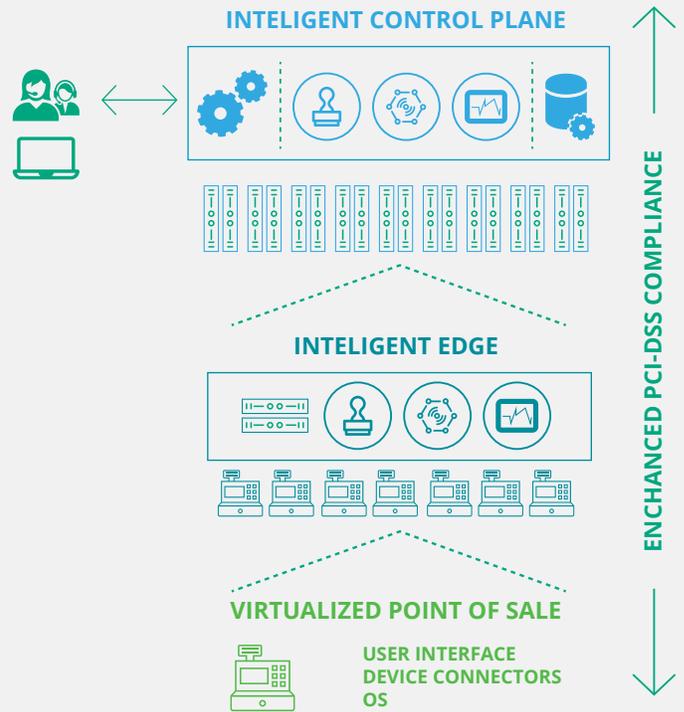
NCR Software Defined Store enabled by Zynstra is a lightweight client operating system and server architecture that moves the workload of each store endpoint onto a virtualized store server that integrates with a centralized, cloud-based controller.

Each endpoint now operates through the same virtualized server, so hardware and operating system requirements per endpoint is eliminated.

For the POS, the solution reconnects peripherals to the virtualized application so that cash drawers, barcode scanners, scales, printers and the like can continue to operate as they always have, even without any changes. The devices are connected to the physical POS terminal, even though they are managed through the centralized solution.

Best yet, virtualization is invisible to the end user — your associates will see the exact same interface as the original POS terminal. But you'll see improved performance since you're no longer bound by the limitations of the hardware on each terminal. And, system maintenance is simplified and streamlined, as a single update can be pushed across the entire enterprise from the centralized controller.

SOLUTION ARCHITECTURE



INTELLIGENT AUTOMATION

NCR Software Defined Store enabled by Zynstra comprises two main components: The Intelligent Control Plane, which exists in the cloud, and the Intelligent Edge, which exists at each store. Together, these components provide the infrastructure to virtualize systems inside the store, and can be expanded to virtualize additional store systems.

Zynstra Intelligent Edge virtualizes your store systems and includes basic infrastructure services, configured for each store's unique requirements. This component includes the IT services and virtual machine resources needed to host store systems, such as server. Installed on your choice of hardware, the architecture is designed for retail, significantly reducing the physical footprint of your IT inside the store and driving operational efficiency.

Zynstra Intelligent Control Plane is a cloud-based controller that centrally manages all of the store-level Intelligent Edge devices, enabling the provisioning, management, control and updating of hundreds or thousands of virtualized edge servers and server workloads across your complete retail estate. Offering high availability, local backup, scalability and more, it simplifies and accelerates what would otherwise be complex IT tasks, while ensuring a consistent, secure IT environment in every store.

GAIN THE FREEDOM TO REDIRECT IT BUDGETS TOWARDS INNOVATION

Maintenance of store systems is not only expensive, it's complicated — especially when there's a variety of endpoint hardware across the enterprise.

Traditional deployments that involve software installed on each terminal require substantial resources to maintain - with the required work multiplied often into the tens of thousands depending on the number of endpoints across a retail enterprise. Plus, in many cases, operating system (OS) lifecycles require hardware replacement, even when the hardware itself has plenty of life remaining. Moving to a virtualized POS decouples software from hardware and avoids these end-of-life challenges, enabling you to innovate for the future.

A MEANS TO AN END(POINT)

There are a lot of physical and logical endpoint connections — and we've solved them all. From scanners and scales to stripe readers and cash drawers, all of your endpoints continue to work as they have, no changes required.



A woman with long brown hair, wearing a black puffer vest over a red shirt, is looking down at a payment terminal. A young boy with brown hair, wearing a blue and red plaid shirt, is also looking at the terminal. The background is a blurred store interior with shelves and lights.

Security That's Simplified

Retailers must have secure technology platforms that can reliably keep sensitive information, such as consumer data and payment transaction data, secure. The cost of maintaining PCI-DSS compliance with ever-changing security standards is expensive and time-consuming. With a traditional, disconnected IT ecosystem, security patches must be deployed individually on each device, making the costs considerably higher than with a virtualized environment.

VIRTUALIZATION PURPOSE-BUILT FOR RETAIL

Often, we study innovations that are working in other industries and find ways to use them to make retail better — more efficient, strategic and engaging. That means you get the benefit of the world's best solutions combined with our deep understanding of retail to move your business forward. The way we approach virtualization is no different.

A proven technology that's been available for more than a decade, virtualization has been widely used in data centers to reduce capital and operating costs. These traditional virtualization solutions are designed to optimize and simplify data centers, balance CPU usage across a bank of servers, and for automation and storage.

This is very different from the needs of a live retail ecosystem, where there may be hundreds or thousands of distributed, remote devices across multiple locations.

Virtualization tools designed for data centers are simply not designed with the distributed management and control required for the retail store, nor the workloads and specialty equipment (such as POS peripherals) used in-store. When retailers do try to force traditional virtualization solutions into their retail ecosystem, they can experience workload challenges — including costly and lengthy implementations.

How your stores can benefit from NCR Software Defined Store Enabled by Zynstra



Security & Control

Centrally maintains store applications, reducing maintenance costs and yielding greater control.



Total Cost of Ownership

Extends the life of hardware and consolidates server requirements, driving enormous cost savings.



Customer Service

Allows mobile devices to be multi-purpose to empower associates to deliver a higher level of customer service.



Speed of Innovation

Creates an open and scalable IT ecosystem that makes it easier for retailers to test and deploy new innovations.



A VARIETY OF DEPLOYMENT OPTIONS TO MEET YOUR NEEDS:

Line Busting (mPOS): Bring the checkout to the customer

Turn any mobile device into a PCI-compliant, tablet-based POS to provide a higher level of customer service during peak periods. It's a fast, cost-effective and flexible way to help deliver a frictionless checkout experience to the customer even when the store is busy. Pop-up stores, tent sales...it's all possible.

Virtualized POS (vPOS): Manage all POS terminals on a single store server

Eliminate bulky hardware and associated computing power from each terminal. New lanes can be added, or failing lanes can be replaced with much less sophisticated hardware.

You'll reduce your total cost of ownership, reduce maintenance hassle, deploy fixes easily and deliver innovation to your customers much faster.

Your staff won't see any difference and all your endpoint peripherals — scanners, printers, scales, payment terminals, cash drawers, stripe readers, ancillary displays, etc. — will continue to operate without need for replacement or upgrade.

Virtualized Store (vStore): Manage all store systems virtually

With a fully-virtualized store, devices can be multi-purpose. For example, a mobile tablet used for operational analytics can also become a line-busting POS during busy periods. Even systems already centralized at the store, such as kitchen production, fuel controllers and back office systems, can be virtualized to provide a single point of control to realize maximum cost savings and business flexibility.

GOT LONG LINES OR PEAK TIMES?

Your sales associates can break away from the POS terminal with a tablet, bringing the POS to the customer, and creating a great experience.

THE TIME TO BEGIN EVOLVING YOUR STORES IS NOW, LET US HELP.

With NCR Software Defined Store enabled by Zynstra, you can truly achieve a connected, agile store, innovating not just the POS but all store systems to better serve your customers. Move from a static, "one problem at a time" mindset and instead create a dynamic, flexible IT ecosystem that's ready for anything. What's more, you'll be investing in the infrastructure to easily move to the cloud when you're ready to innovate even faster with even lower total costs of ownership. With NCR, it's easy for you to invest in tomorrow while seeing more value from your infrastructure today.

MOVE FASTER TOWARDS DIGITAL-FIRST RETAIL WITH NCR

Extend the life of existing IT investments

...

Eliminate software dependency on hardware

...

Significantly reduce maintenance costs

...

Simplify and streamline security compliance

...

Improve store system performance

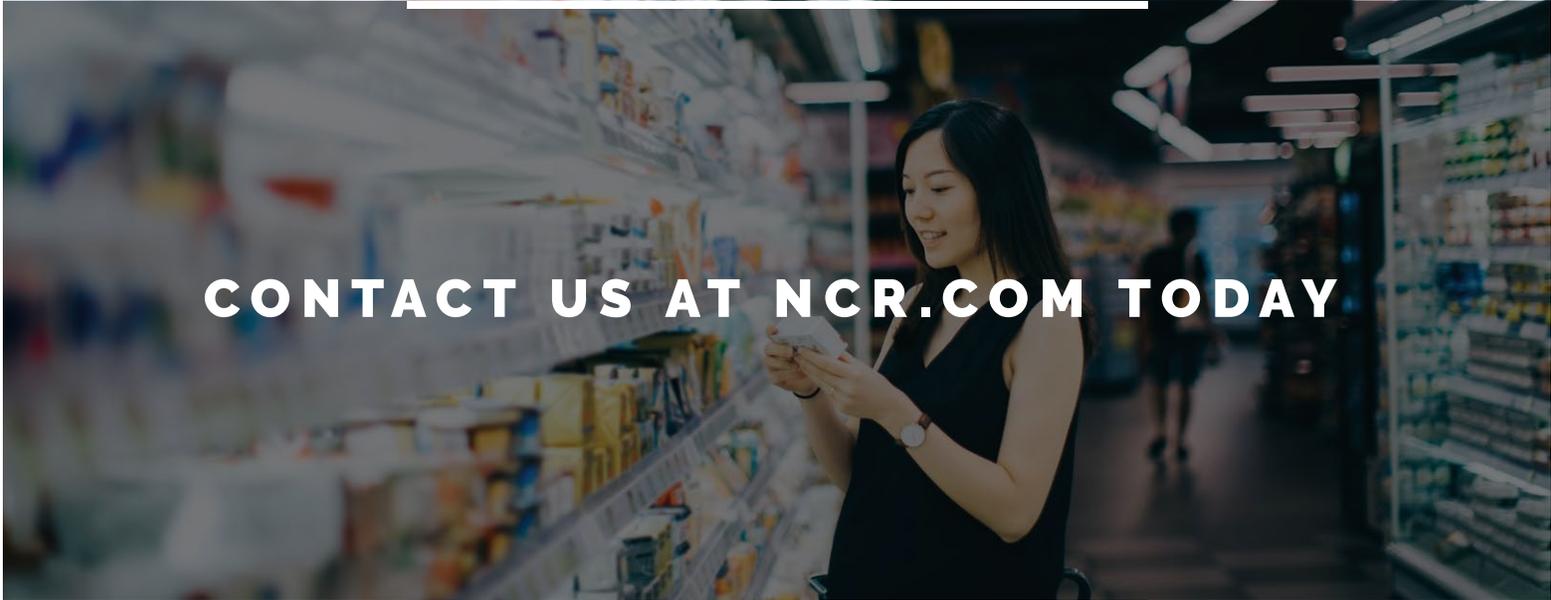
...

Achieve a flexible and scalable retail platform

...

Add new features, updates and upgrades - fast





CONTACT US AT NCR.COM TODAY

WHY NCR?

NCR Corporation (NYSE: NCR) is a leading technology company that enables, improves and brings unexpected value to every interaction between consumers and businesses. Our best-in-class software, hardware and services enable more than 700 million transactions daily across the retail, hospitality and banking industries.

Headquartered in Atlanta, Georgia, NCR has over 30,000 employees and does business in 180 countries. NCR is a trademark of NCR Corporation in the United States and other countries.

ABOUT ZYNSTRA

Zynstra enables retailers to deliver superior customer and employee experiences through faster innovation and radically reduces cost to serve in-store. Purpose built for the edge, our powerful software optimizes existing store technology and enables digital transformation. Zynstra virtualizes back and front office store technology, with intelligent automation to deliver software defined stores. Specific virtualization solutions include Store, POS, mobile POS Tablet, Kiosk, Self-Checkout and Enhanced PCI-DSS Compliance. Zynstra delivers its patented retail edge software for the world's largest, most distributed, innovation-driven enterprises. With Tier 1 PCI-DSS compliance Zynstra is committed to security excellence at the edge. Zynstra is backed by Octopus Ventures, one of Europe's leading investors in fast-growth companies, focused on backing unusually talented entrepreneurs.

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