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# WELCOME TO YOUR MODERN DATA CENTER

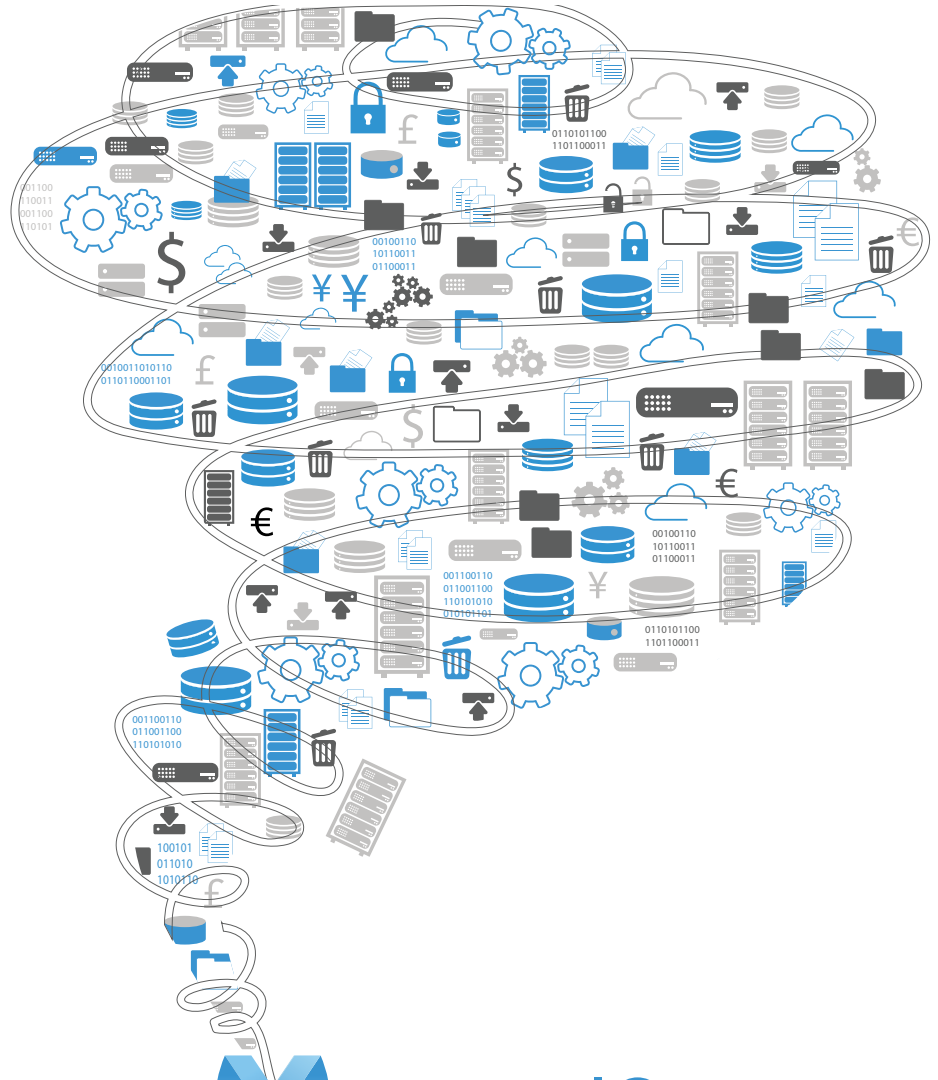
Transformed by XtremIO  
The World's #1 All-Flash Array

# XTREMIO – MUCH MORE THAN SPEEDS AND FEEDS. IT'S ABOUT BUSINESS TRANSFORMATION.

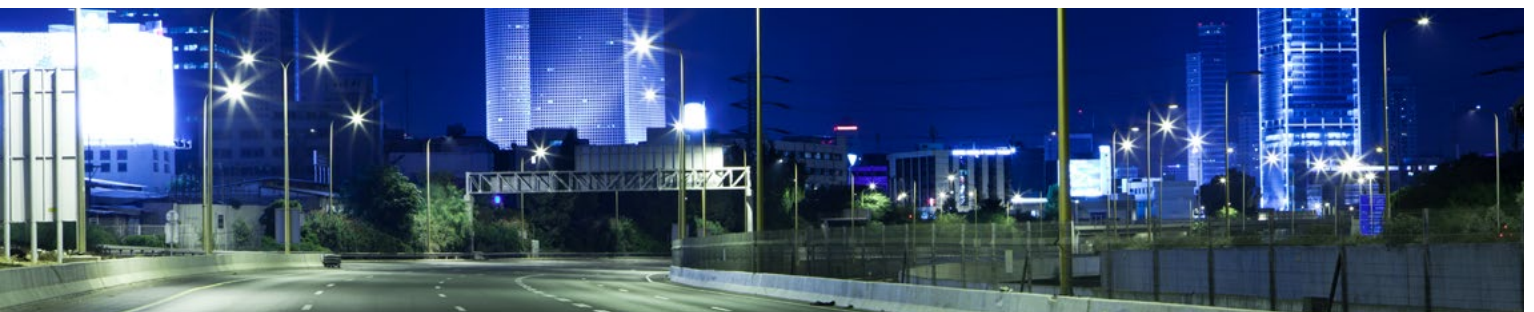
Your data center struggles with competing requirements from your lines of business and the finance, security and IT departments. While some executives want to lower cost and increase efficiency, others want business growth and responsiveness. But today, most data center teams are just trying to keep up with application service levels, complex workflows, and sprawling infrastructure and support costs. These processes are anything but agile, often requiring:

- Up to 10x the storage footprint to support a single application across its production and non-production lifecycles
- Hours or days to generate analytics on what you need to know now
- Long development and testing cycles where only partial data sets and user loads are used in order to contain costs

If this seems familiar to you, data storage is likely a bottleneck in your business. There's a solution. **With XtremIO all-flash arrays (AFAs), you can have a dynamic data services platform.**



XtremIO: Storage reinvented to unlock innovation and agility





# WHAT'S A MODERN DATA CENTER? ONE THAT MOVES AS FAST AS YOUR BUSINESS.

- In IT circles, agility is a common but elusive goal, especially when you are managing initiatives such as private/hybrid cloud, Database-as-a-Service, VDI or broad consolidation for Oracle, SAP and Microsoft applications. To be agile in a complex environment, your storage must be able to:

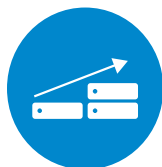
- **Consolidate workloads** to get the performance and scale to run everything on a single array with headroom for tomorrow's application demands.

- **Eliminate storage "sprawl"** through advanced copy data management features, and deliver all-flash performance across entire workflows, not just for production.

- **Automate storage and application processes** so you can quickly and easily create copies, map them to appropriate servers and refresh development and test instances at will – all instantly and without a hiccup in performance.

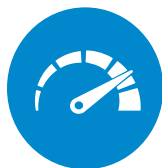
Only XtremIO offers these capabilities in an all-flash array. And with them comes a new world of possibilities that have never been attainable until now.

## Modern data center benefits from XtremIO



### Infrastructure

- Linear scale-out performance – always consistent, sub-millisecond
- Pooled storage and on-demand expansion
- Mixed-workload consolidation across production/ non-production and workflow applications
- Incredibly easy to use – nothing to configure or tune Applications



### Applications

- Exceed the toughest SLAs for consolidated and growing workloads
- Enable real-time analytics and agile dev/test
- Self-service operations for infrastructure and application teams
- Unparalleled array-based copy data management



### Business

- Data-center-driven business innovation
- Up to 50% lower OPEX and CAPEX
- 2x longer storage product lifecycles

### Hollard Insurance Group gets agile

"The ability to consolidate the BI platform for our HBM division onto XtremIO has proved so successful that we are now planning on consolidating all BI, data and analytics workloads onto XtremIO, eliminating separate physical environments for BI and analytics."

-Marc Nicholson

[See full case study video](#)

# TOP USE CASES FOR XTREMIO ALL-FLASH ARRAYS

The solution areas and use cases for XtremIO AFAs continue to proliferate. Customers often begin with a single workload, but once they experience the transformational workflow first hand, they come back for more. **In fact, about 50 percent of XtremIO's typical sales come from repeat customers.**



## Private/hybrid cloud and mixed workloads

XtremIO enables the first true database-as-a-service and application-as-a-service solutions. Whether it's private cloud, hybrid cloud or a physical environment, XtremIO transforms them all together. [Visit our private/hybrid Cloud Solution page.](#)



## Databases and analytics

XtremIO provides a revolutionary scale-out Database storage platform that consolidates and accelerates production, dev/test, and BI/analytics Workflows with incredible data reduction and copy Services. XtremIO transforms databases including Oracle, SQL Server, DB2, NOSQL databases like MongoDB and Cassandra, and analytics platforms such as SAS and Splunk. [Visit our databases and analytics page.](#)



## Software DevOps

XtremIO can dramatically lower build times, increase testing coverage, launch products faster and improve deployment sprint, test and iteration cycles. [Visit our software DevOps solution page.](#)



## Enterprise Business Applications

Sap, Oracle, and Microsoft applications power virtually every business, but they struggle with performance at peak times. XtremIO delivers consistent performance with sub-millisecond latency, enabling you to meet all your SLAs 24 X 7 X 365. [Visit our enterprise applications page.](#)



## Virtual Desktop Infrastructure (VDI)

XtremIO enables complete enterprise-scale (VDI) for all your users across all desktop types. It offers a consistent local-flash user experience coupled with data reduction efficiencies that make it more cost effective than traditional storage. New initiatives including BYOD, 3D graphics, or Desktop-as-a-service (DaaS) are easy with XtremIO's scale-out performance and radical simplicity. [Visit our VDI solution page.](#)



## Microsoft Exchange Server

Exchange server Are you experiencing mailbox and message Volume sprawl? XtremIO instantly makes your Exchange server environment more agile and Scalable. It fundamentally changes how the Exchange application and databases consume Capacity, resulting in unprecedented efficiency, Workflow speed and consistent user performance. [Visit our Exchange Servers page.](#)



## Electronic Medical Records (EMR)

XtremIO delivers what epic, Meditech and Cerner customers have sought for years: consistent, predictable latency at massive scale, under huge loads, with multiple consolidated instances for the most productive healthcare experience and regulatory compliance. [Visit our EMR solution page.](#)

## All of the above and more

Many XtremIO customers combine multiple mixed workloads in their agile data centers. Every day, XtremIO customers are discovering new use cases and solution areas. What will you innovate?

### CLAL Insurance recovers \$900,000 in lost business and productivity

This leading insurance company was challenged by Monthly and annual reporting, which prevented its Customers and 600 internal users from accessing The system for approximately a whole day each Month. By setting up a virtualized environment with Dell EMC XtremIO, VPLEX and RecoverPoint, reporting times improved dramatically. [Read the case study.](#)

# SOLUTION SPOTLIGHT: TRANSFORM YOUR DATABASE AND BUSINESS APPLICATION WORKLOADS WITH ICDM.

## Case study: Moen modernizes it's SAP workloads with iCDM

The #1 US kitchen and bath faucet manufacturer consolidates its SAP landscapes with XtremIO to deliver improved storage efficiency, performance, and business decision making.

### Performance

Before: Inconsistent performance with performance threshold misses

*With XtremIO: 37% decrease in SAP dialog response time and a 9x increase in SAP batch performance*

### Efficiency

Before: Hours to create full clones of SAP landscapes and large amounts of SAP storage driving up data center footprint

*With XtremIO: 75% reduction in SAP copy time, 16x capacity reduction, and 70% reduction in floor space requirements*

### Productivity

Before: lost developer productivity waiting for 2 day sandbox refreshes.

*With XtremIO: 4-hour sandbox refresh process with high performance copies for development environments.*

## Integrated Copy Data Management (iCDM):

The XtremIO all-flash array consolidates your mission-critical application landscapes, eliminating storage sprawl and delivering the modern data center. Far more than just performance, it enables consolidating production and copy data using integrated copy data management (iCDM) to unlock 1) competitive agility with real-time analytics & accelerated development/test, 2) infrastructure agility, and 3) TCO with 50% lower CapEx and OpEx.

Only XtremIO can deliver all this with its unique XtremIO Virtual Copies (XVC) scale-out architecture, and in line always-on data services. Storage is no longer the bottleneck, but enables database lifecycle acceleration, SAP landscape consolidation, private/hybrid clouds adoption, software Dev/Ops, VDI, and Healthcare EMR optimization.

And XtremIO's unique AppSync integration delivers application automation and orchestration services that allows your team to deploy as many copies as frequently as they want. The result is not only simplified infrastructure at much lower costs, but true workflow agility across the entire application lifecycle.

### Reporting

Before: Reports take 2-3 hours to complete

*With XtremIO: Reports are run in minutes. Improved inventory planning and production efficiency via access to more accurate and timely data*

### Business Process Impacts

- Redesigned backup infrastructure and DR plan.
- On-demand self-service portal created for database copy requests.
- Moen can now run "what-if" testing without impacting production.
- Improved inventory planning and production efficiency via access to more accurate and timely data

## Typical database storage vs XtremIO with iCDM

Limited copies	→	Limitless copies
Partial copies	→	Full datasets for superior testing
Brute-force copy creation	→	Instant creation through advanced copy data management
Static refreshes	→	Dynamic, instant refreshes to the latest production copy
Manual processes	→	Application orchestration and automation

# SOLUTION SPOTLIGHT: TRANSFORM PRIVATE CLOUDS AND APPLICATION-AS-A-SERVICE.

Even for the most sophisticated private cloud operations, legacy storage keeps your application and infrastructure teams in reactive mode. XtremIO's flexible private cloud platform allows you to consolidate applications and data, providing consistent and predictable scale-out performance for all workloads and all end users.

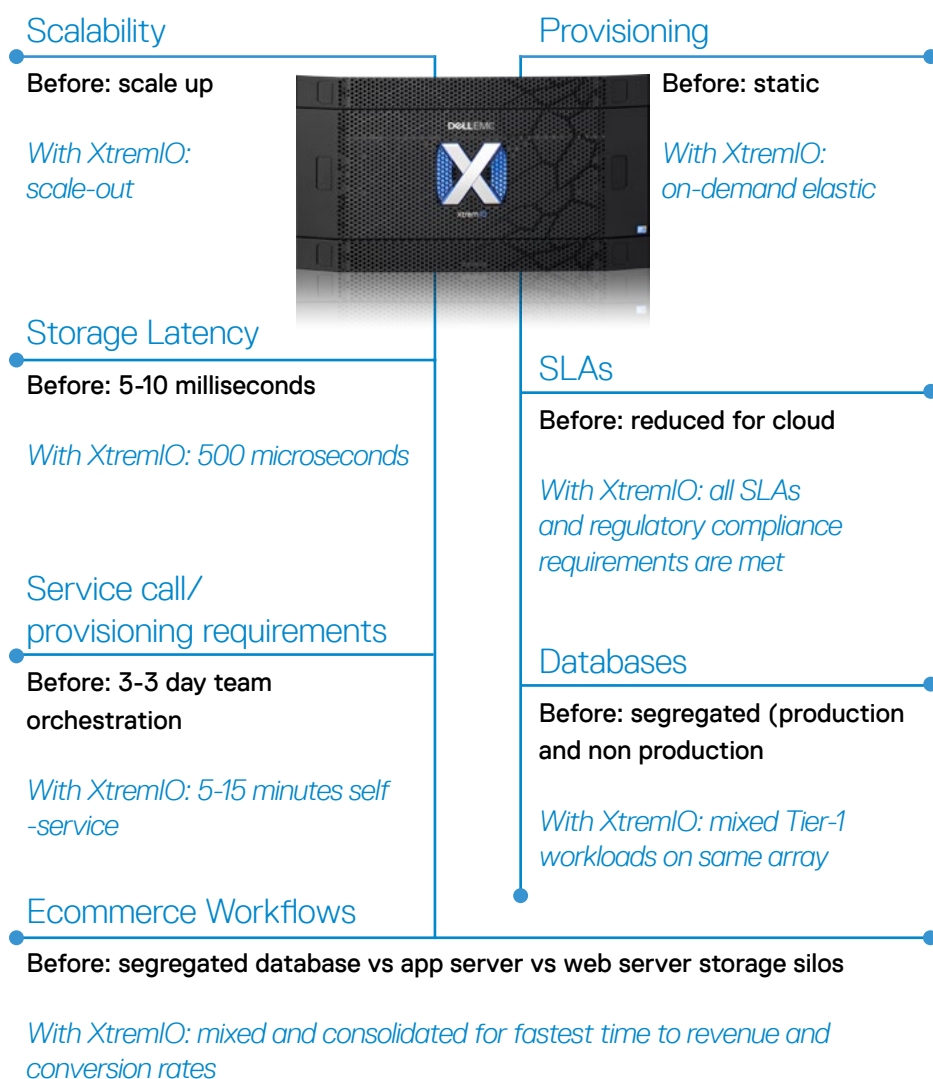
XtremIO supercharges virtualization and DevOps initiatives. Fie bring new capabilities to your software platforms, such as rapid VM cloning and recycling, and deliver optimal, dynamically responsive programmable and automated ccontinuous development processes. In addition, Database-as-a-Service, SAP-as-a-Service, and all Applicationas-a-Service workflows are easier and more scalable, agile and cost-effective than you ever thought possible

"XtremIO gives us confidence to deploy and consolidate critical applications on virtual or on premise infrastructure with zero performance penalty and complete transparency. Storage admins can easily make changes and do not need to know where the assets are located."

-James O'Neil  
Director of Infrastructure, FNTS

## Case study: First National Technology Solutions (FNTS) provisions integrated clouds built on XtremIO

A leading Midwest managed services provider enables clients to manage their cloud storage assets as easily as on-premise and achieve unprecedented value.



# WHAT MAKES DELL EMC XTREMIO #1 WORLDWIDE? **THREE INNOVATIONS.**

In recent industry research, Gartner named XtremIO the [top selling all-flash array](#) vendor and also positioned the company as a [Magic Quadrant Leader](#). Wikibon highlights the major differences across the architectural generations of AFAs, with XtremIO recognized as the [most comprehensive fourth-generation array on the market](#). XtremIO delivers not just the fastest, most reliable AFA in the industry, but also offers patented technology that delivers three revolutionary storage breakthroughs.

## Analysts Rate XtremIO



[Magic Quadrant for  
Solid-State Arrays, 2016](#)



[Worldwide All-flash  
Array and Hybrid  
Flash Array 2014-2018  
Forecast and 1H14  
Vendor Shares](#)



[EMC XtremIO: A leader  
in All-Flash TCO](#)

### 1 The industry's only linear scale-out architecture

Earlier-generation AFAs can scale up, but with decreasing efficiency. Only XtremIO can scale out to multiple n-way active controllers with linear increases in IOPS, bandwidth, and of course capacity—all with the same consistent sub-millisecond latency. How? With XtremIO's patented Intelligent Content Engine™, which uses a data fingerprinting process that inherently keeps the array balanced. So you don't have to.

### 2 Inline, always-on data services

XtremIO applies the principles of in-memory computing to the storage layer so that thin provisioning, deduplication, compression, data protection, encryption and copy services occur in real time at any scale, with no performance penalty. Only XtremIO's unique in-memory metadata architecture can accomplish this feat. Now you can finally forget about risking your SLAs with post-processed data services, system-level garbage collection and outdated snapshot technologies that hinder performance.

### 3 Integrated Copy Data Management (iCDM)

Only XtremIO can manage copy data in memory, inside an AFA. XtremIO instantly creates full size, full performance, yet entirely spaceefficient volume copies. Now your entire environment, including production and non-production instances, can be efficiently managed on a single array with amazing economics. Give your application and infrastructure teams breakthrough workflow and business process agility by eliminating time-wasting, performance-sapping, and capacity hungry brute-force copying techniques. Now they can work on more value-added projects and innovation.

XtremIO's iCDM enables  
Ochin to redefine the  
software development  
lifecycle of Epic EMR  
environments

"XtremIO improved workforce productivity tremendously. In minutes, we can have a full Caché environment online, be ready to apply the latest ICD-10 or Epic code, and start testing."

-Paul Matthews  
Chief Technology Officer, OCHIN

[Read the case study](#)

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# THE XTREMIO X-FACTOR: WORLD-CLASS DATA CENTER SERVICES

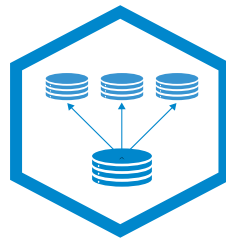
Business continuity has become an integral and essential part of any successful business. The need to provide a powerful, scalable and yet simple disaster and operational recovery solution is at all-time high.

Native replication technology is implemented by leveraging the content-aware capabilities of XtremIO Virtual Copies (XVC). This allows efficient replication by only replicating the changes since the last cycle. In addition to efficient BW management to optimize the amount of I/O that the replication can support.

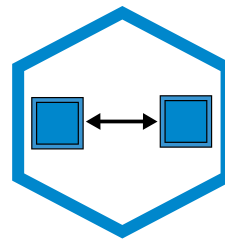
Native replication for XtremIO offers unique and superior values, including:

- Simple replication management and configuration of the VMware ecosystem from a single console
- Sub-minute RPO and immediate RTO
- Space efficiency and fast data synchronization leveraging XVC
- Bi-directional, Fanin/Fanout replication
- Homogeneous (XtremIO) and heterogeneous replication between XtremIO to VPLEX, VMAX and VNX arrays

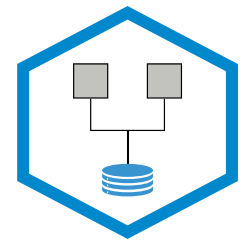
## Business Continuity



Native Application



Continuous Availability



Multipathing

XtremIO business continuity solutions also offer unique continuous availability and multipathing options which deliver:

- Active/active geographically dispersed clusters with zero RPO and RTO
- Increased performance as workloads can be shared between sites
- High availability and performance optimization of multiple paths in a high performing storage environment

With native integrations across Dell EMC's portfolio, XtremIO's business continuity services can be managed at the infrastructure, hypervisor, or application layer, and are protected with the richest business continuity offerings in the market.





XtremIO exposes its agile and efficient copy services to application teams via a unique suite of application and infrastructure management capabilities. This allows application administrators to manage XtremIO Virtual Copies (XVC) in an “application aware” fashion. It also allows taking (and deleting) application consistent XVC’s according to a pre-defined schedule and to subscribe applications to a “service plan” with out-of-the-box integration for VMware, Oracle, SQL Server and Exchange environments.

Dell EMC ViPR Controller is a software-defined storage platform that abstracts, pools, and automates a data center’s underlying physical storage infrastructure. It provides data center administrators with a single control plane for heterogeneous storage systems.

**Only XtremIO and Dell EMC enable you to transition from a siloed storage management approach to deeply integrated and automated workflow processes.** Vblock is a converged infrastructure platform that combines storage, compute and networking resources in a single product. Leading the innovations path, Vblock 540 is the industry’s first all-flash-based converged infrastructure system for high- performance mixed workloads. And these are available through traditional deployments or as a private or hybrid cloud. XtremIO transforms your application workflows, saving critical amounts of time and money and even enabling application admin selfservices for your agile data center.

## Application & Infrastructure Management



Storage awareness  
into Microsoft  
environments



Application-  
aware copy  
management



VMware integration  
and automation



End-to-end  
performance  
monitoring



Integration  
into Oracle  
environments



SAP storage  
management

## Converged Infrastructure



VCE Vblock 540: Converged infrastructure with integrated management and support — for the most demanding workloads.

# OVER 65% OF THE FORTUNE 100 TRUST XTREMIO TO TRANSFORM THEIR WORKLOADS.<sup>1</sup> SO SHOULD YOU.

Flash storage is much more than just accelerating a siloed workload. It's about consolidating many applications throughout their production and nonproduction lifecycles in the most agile and efficient storage infrastructure model ever. And with the ability to expand your scale-out array on-demand, with no application downtime, you can multiply your workloads organically and consolidate additional workflows as they arise. At last, there is a truly future-proof storage option that doubles the storage lifecycle.

**To remain agile while maintaining consistent performance, you need XtremIO.** Let us show you how our unique architecture and inline-all-the-time data services deliver data-center-driven innovation, cost effective capacity, and enterprise availability to enable your agile data center. Visit [www.dellemc.com/xtremio](http://www.dellemc.com/xtremio).

<sup>1</sup>Based on internal analysis, October 2016





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To learn more, contact your local  
representative or authorized reseller.

Dell EMC  
176 South Street  
Hopkinton, MA. 01701  
[www.dell EMC.com](http://www.dell EMC.com)



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