INDUSTRY CLOUD – IS IT REALLY GROWING?

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Objective

Cloud transformation is no longer a new buzzword in enterprises because it is everywhere. A new relative term **"Industry Cloud"** is popping up rapidly across the enterprises. Industries like finance, healthcare, retail, insurance, manufacturing & telecom are looking for more vertical focused cloud solutions for their end users and that is the whole essence and motivation behind building Industry cloud solutions. Let us do a deep dive and understand what industry cloud is? How and why is it shaping up? What are the current state challenges with industry cloud and the practical solutions? Let us evaluate if the industry cloud is really a future of cloud transformation, or it is just a myth?

Overview of Industry Cloud

- Industry cloud is not a new kind of cloud, platform, or technology, it is just a unique and special pattern of creating a cloud with focus on industry specific vertical custom solutions or products on top of existing cloud platforms. This vertical line of business (LOBs) oriented customized industry cloud solutions or products helps the organization in their overall IT (Information Technology) modernization and transformation.

- Industry-specific digital customized solutions have unquestionably become the cloud's next wave. Industry cloud can be defined as a vertically focused hi-tech solution that serves as a standard technical building block for transforming customer's digital journey to the new age enterprise grade business capability.

- Technically industry cloud-based solutions focus on creating more focused business value and impact within the boundaries of that specific industry like finance, insurance, manufacturing, healthcare etc. Instead of expanding the breadth of that industry.

Why do we need Industry Cloud?

- Focus of Industry Cloud is the **"vertically aligned integration"** with the industry specific business capabilities including business processes and major business functions. This vertical movement gives more precise and custom solutions for the organizations.

- Industry cloud is specifically designed to handle industry-specific compliance and other major regulatory constraints such as data privacy and data protection standards, legal aspects, retention policies and regulatory rules and guidelines.

- The approach of Industry cloud is noticeably clear. Customers will not spend time on connecting to various products, solutions, and platforms for their needs, they would like to choose single customized industry cloud platform for solving their business problems. Cloud providers like AWS (Amazon Web Services), GCP (Google Cloud Platform), Azure, Oracle, VMware and major IT companies like Infosys, Deloitte, SAP, IBM, Salesforce, ServiceNow, Veeva, Goldman Sachs, Infor, Workday & Guidewire are now focusing on building such unique solutions.

- Industry cloud helps and support clients and consumers to connect via a broad range of services and ecosystem of business partners, third party vendors and cloud service providers that supplies an extensive large array of business services. Organizations will eagerly use Industry cloud hosted services to develop agile based creative business blueprints, it will quickly increase their business competencies in respective areas.

- The hyperscalers **(AWS, Azure, GCP & Oracle)** are investing substantial part of their IT revenue in Industry cloud-based offerings with core technology focus on AI (Artificial Intelligence), blockchain, analytics, data lake, digital twin, IoT (Internet of Things), 5G, AR/VR based capabilities to fast-track enterprise's digital transformation roadmaps.

Industry Cloud- Market Trends

Industry/vertical clouds are picking up amazingly fast in this digital transformation arena. Let us see some of the major market trends

- AWS Announces Amazon HealthLake, Amazon HealthLake enables healthcare organizations to store, transform, and analyze all their data in the cloud

- Microsoft recently rolled out its first ever industry cloud, it is known as Microsoft Cloud for Healthcare, it combines various capabilities across Microsoft tech stack (e.g., Dynamics 365, Microsoft 365, Power Platform & Azure) to help in improving the care management and health related medical data insights. Microsoft Cloud for healthcare also provides trusted, integrated business capabilities that make it simpler to improve the overall healthcare experience of the patients. And outcomes-focused AI solutions from Microsoft + Nuance help you innovate for the future.

- IBM Cloud IBM's industry cloud for Financial Services continues its expansion with additional banks and other ecosystem channel partners.

- Microsoft Cloud for Financial Services is now generally available.

- SAP's industry cloud simplifies access to innovative vertical solutions across industries

- Deloitte has developed a health platform ConvergeHEALTH™. It offers life sciences and health care technology solutions that connect patients, providers, researchers, regulators, and payors to make value-based, personalized health care a reality.

- Deloitte has also announced a product called FinservDEEP™. It is A ready-to-deploy platform of advanced analytics and artificial intelligence (AI)-enabled products, tools, and solutions to help financial services firms accelerate and scale new human-machine capabilities for deeper insights and enhanced customer experiences.

- Deloitte Digital's RetailMe, powered by Salesforce, is designed to help retailers create connected experiences.

- Gartner says Industry Clouds is the Next Wave of Cloud Services. As per July 2021 report.

- Google Cloud helps manufacturers achieve their IT modernization and digital transformation targets with 100% secure, data-decision driven business solutions that reshape entire product development lifecycle, factory to floor level operations along with intuitive customer experiences.

- Azure industry solutions Address your organization's unique challenges. It helps you innovate, make data-driven decisions, and increase efficiency while taking advantage of your existing investments.

> "
> When we build these industry-specific solutions, they're highly differentiated," Kurian said at the Goldman Sachs conference. "No one has that capability and that allows us to sell not just to IT but to business-owners.
> "
>
> **Thomas Kurian**
> *CEO Google Cloud*
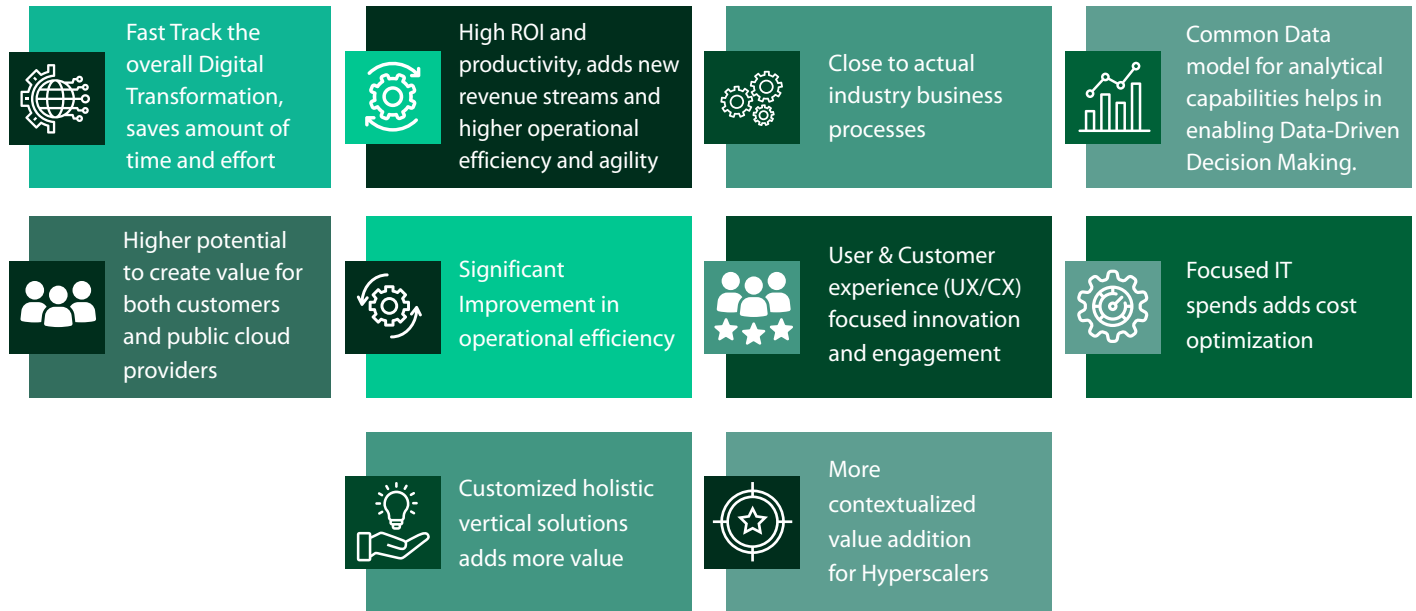
Popular Sectors for Industry Cloud

Industry cloud is becoming popular in every sector. Some of the major popular sectors are as follows. Healthcare and Financial services are most popular in this space.

- Healthcare & Life Sciences
- Banking & Financial Services
- Retail
- Popular Sectors for Industry Cloud
- Insurance
- Manufacturing
- Oil, Gas and Energy

Benefits of Industry Cloud

The focus of Industry Cloud is that it addresses some of the extremely specific business challenges w.r.t security, data privacy policies, legal aspects, regulatory compliance, monitoring & governance areas. Industry Cloud has an added advantage over the regular cloud computing models because it understands data, industry standards, business processes, patterns, legal aspects, regulatory and compliance policies associated with a specific vertical or industry.
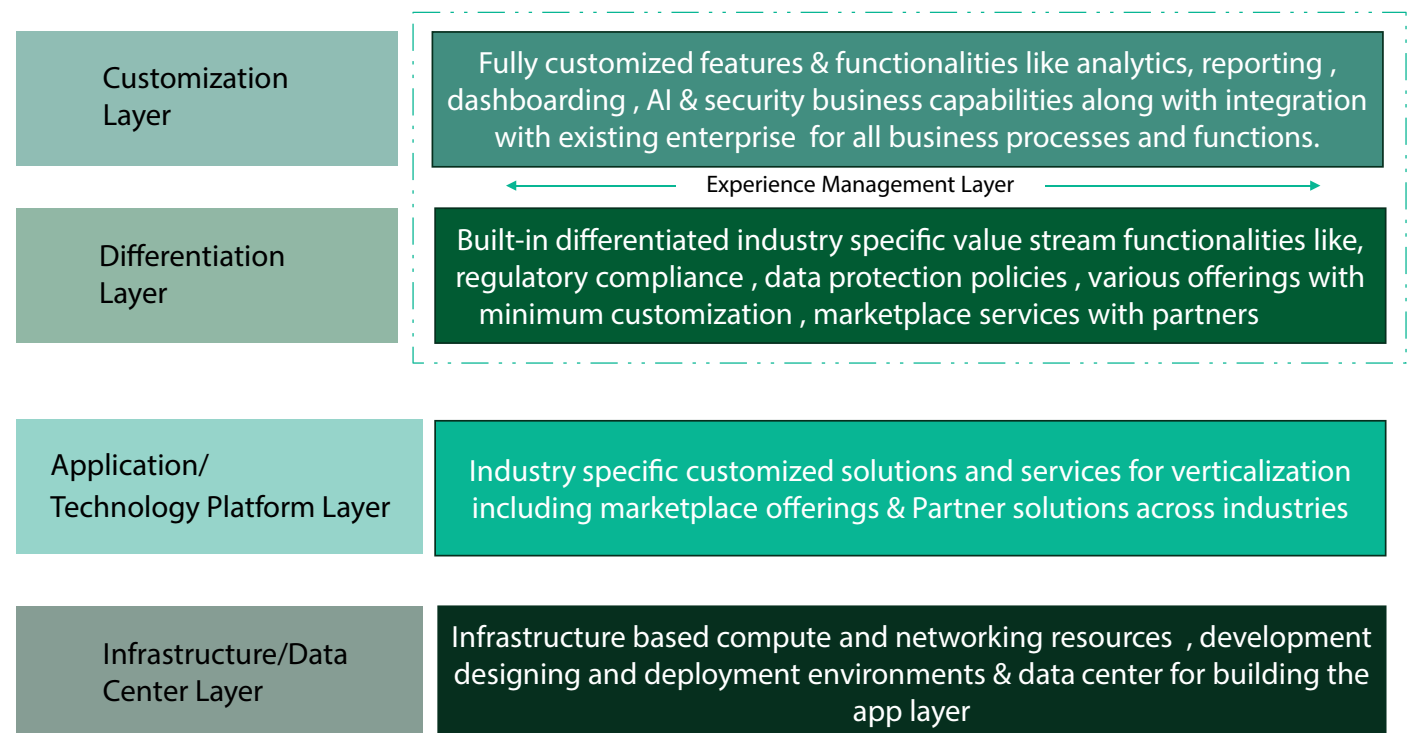
Some of the major benefits are as shown here:

Fast Track the overall Digital Transformation, saves amount of time and effort	High ROI and productivity, adds new revenue streams and higher operational efficiency and agility	Close to actual industry business processes	Common Data model for analytical capabilities helps in enabling Data-Driven Decision Making.
Higher potential to create value for both customers and public cloud providers	Significant Improvement in operational efficiency	User & Customer experience (UX/CX) focused innovation and engagement	Focused IT spends adds cost optimization
Customized holistic vertical solutions adds more value	More contextualized value addition for Hyperscalers		

Industry Cloud- Conceptual Architecture

We can visualize the industry cloud conceptual architecture in the diagram below. It consists of 4 layers

- Customization Layer
- Differentiation Layer
- Application/Technology Platform Layer
- Infrastructure/Data Center Layer

Customization Layer	Fully customized features & functionalities like analytics, reporting , dashboarding , AI & security business capabilities along with integration with existing enterprise for all business processes and functions.

Experience Management Layer

Differentiation Layer	Built-in differentiated industry specific value stream functionalities like, regulatory compliance , data protection policies , various offerings with minimum customization , marketplace services with partners

Application/ Technology Platform Layer	Industry specific customized solutions and services for verticalization including marketplace offerings & Partner solutions across industries

Infrastructure/Data Center Layer	Infrastructure based compute and networking resources , development designing and deployment environments & data center for building the app layer

Industry Clouds- Are they making our digital journey smoother?

- Today, each industry or enterprise would like to create unique business capabilities which are specific to their businesses, it helps them stay focused, innovative, and differentiated. The role of industry cloud here would change the focus of the overall cloud conversation model from a cost to a business growth enabled narrative by evaluating and finding a new array of business opportunities that can be considered for immediate action.

- With the evolution of Industry Cloud, public computing will transition to becoming the core foundation for IT enabled business innovation instead of just being a regular technology soap for delivering business applications.

- Industry clouds will certainly redefine the foundational baseline for long term impact on various cloud strategies and cloud adoption models as they are gradually blurring the lines between established cloud hosting and deployment service models such as infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS).

- Industry cloud will certainly empower the fast-paced rapid IT transformation and innovation for new business capabilities and business models along with significant impact on cost $ and revenue streams for its end users and consumers.

- Industry cloud is playing the middleware catalyst role of future state cloud adoption trends and will certainly accelerate the digital transformation journey of most of the big and small-scale organizations.

- Based on the above facts we can confidently say that **"Yes, Industry Cloud is making our transformation journey smoother and easier."**

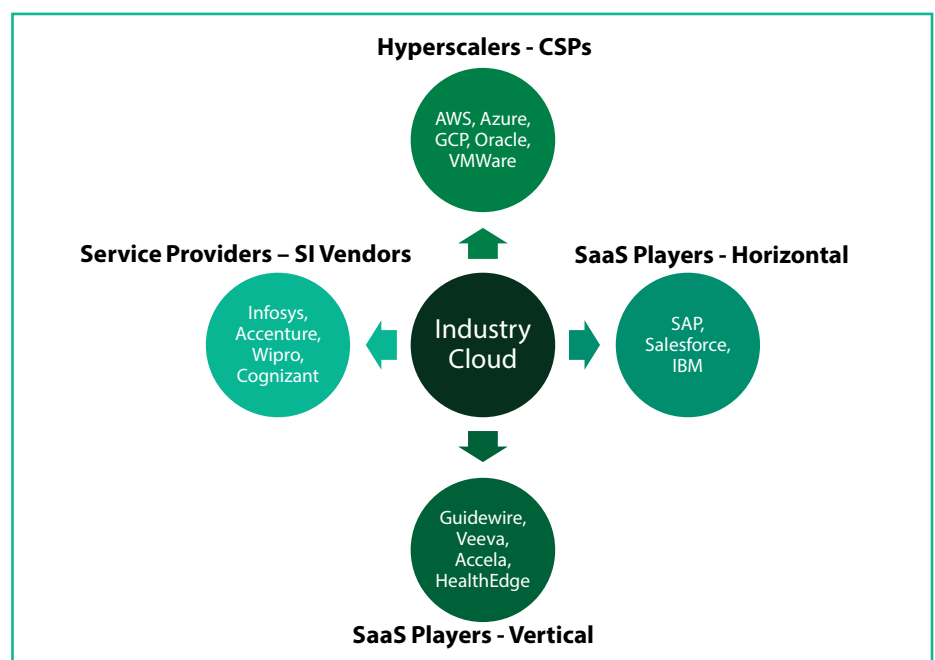# Industry Cloud – Solution Providers Landscape

There are 5 unique types in which the primary and secondary cloud providers, vendors and partners are moving ahead in their industry cloud journey. Let us explore each one of them

- **Business related specialization model** All the vendors and their reposition collections of existing as-is horizontal layer offerings with a major focus on vertical alignment.

- **Marketplace offerings** All the major cloud vendors open a large marketplace of internal and external third-party offerings from where end customers can choose required customized services as per their appropriate business needs.

- **Compliance & Security focused model** in this model the primary focus stays on horizontal capabilities but with extensive support for the specific compliance and security-based business capabilities targeted majorly for heavily regulated industries like healthcare, insurance, finance etc.

- **Vendor owned development model** A vendor or service provider owns and creates the products & services specifically targeted for pre-identified verticals.
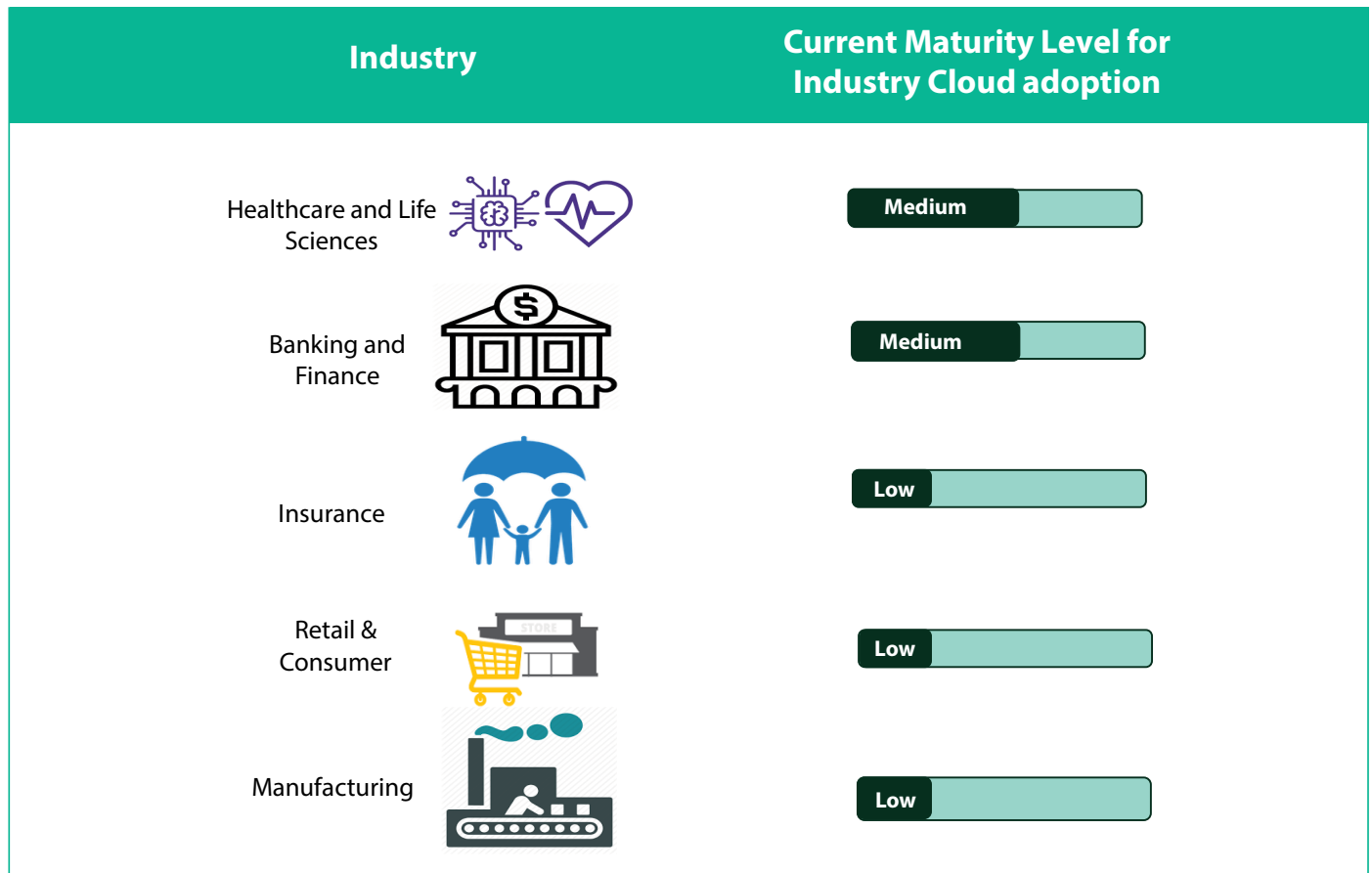
- **Co-development model** Cloud providers or vendor works with a 3rd party company in an industry vertical to co-develop an offering and then publicize and market it more broadly for selling the co-developed products.

Vertical industry offerings are the key trend among the leading cloud service providers. There are various cloud solutions providers approaching Industry cloud offerings in their preferred way. Some of them are listed below

- Top CSPs (Cloud Service providers) / Hyperscalers – AWS, GCP, Azure, Oracle & VMware

- Horizontal SaaS players - SAP, Salesforce & IBM

- Vertical SaaS players - Guidewire, Veva & HealthEdge

- Service providers – SI (System Integrator) Vendors - Infosys, Cognizant, Accenture & Wipro

Current Maturity Level for Industry Cloud adoption

Industry	Current Maturity Level for Industry Cloud adoption
Healthcare and Life Sciences	Medium
Banking and Finance	Medium
Insurance	Low
Retail & Consumer	Low
Manufacturing	Low

Summary and Key takeaways for Enterprises

Industry cloud is in its evolution phase, so it is just a beginning of story, we have a longer complex path to traverse in future before it becomes a mainstream offering from the service providers. Current cloud service providers offerings are limited to infrastructure, compute, storage, and networking, they do not have out of the box (OOTB) customized industry specific solutions to offer and that is the gap which they must fill in next couple of years to be in the game.

Major cloud service providers like AWS, GCP, Azure and Oracle and ISVs like Salesforce, SAP, Veeva and IBM have already started their Industry cloud journey and some of them are far ahead in the game. AWS and Microsoft have already announced their healthcare

offerings. Google cloud is heavily investing in building new industry specific business capabilities. Google Cloud for manufacturing is one such popular offering for manufacturing industry.

Eventually all the providers (CSPs, ISVs, SaaS vendors) must invest in solutions to meet specialized industry requirements. It is certainly going to be a bit of a painful journey for the next couple of years but down the line business execution approach and its associated growth will become evident. As the industry and this space evolves, we would see a tough war between CSPs, ISVs and SaaS vendors.

With the advent of industry specific cloud offerings on the ground we need not waste a lot of time for no reason each time we build the new application instead a

common out of the box (OOTB) solution would be readily available for business to consume. Since the maturity is still low, the enterprise clients must critically evaluate options before making decisions on the industry cloud. They need to identify and build a robust decision framework to decide between CSPs and ISVs. With this approach enterprises can move approx. 30-40% faster in their IT modernization and digital transformation engagements.

The industry cloud will be seeing the depth of your verticalizations and focused customization-based business capabilities building models to address customer pain points. AI, ML (Machine Learning), Blockchain, 5G, Analytics, AR/VR will be some of the primary technology constructs for industry-specific solutions

As a takeaway, enterprises should follow these business principles

- **Adopt flexibility:** Enterprises need to be flexible enough to work as a strategic partner with CSPs, ISVs and SaaS providers then only they will be able to take full advantage of new offerings.

- **Be careful & choose the right partner:** Enterprises need to be extremely cautious before they choose their channel partners to sell or co-develop their industry cloud offerings.

Enterprises need to carefully evaluate them and assess their business relevance. Solution options, cost and licensing models, discount options, profit sharing models, workforce & talent availability. Along with software engineering considerations enterprises should also check for cultural fitment including the business processes

- **Accept the current and build for future:** As the industry cloud offerings market disrupts and various newer leaders and service offerings appear,

organizations need to be very open-minded while evaluating their current technology landscape with tech debt and tech rationalization considerations to adopt the best-in-class industry-specific solutions for their businesses. Industry cloud provides major element of business aligned portfolio rationalization to simply the current landscape and look for adding industry solutions in a non-intrusive manner from a technology implementation perspective.

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