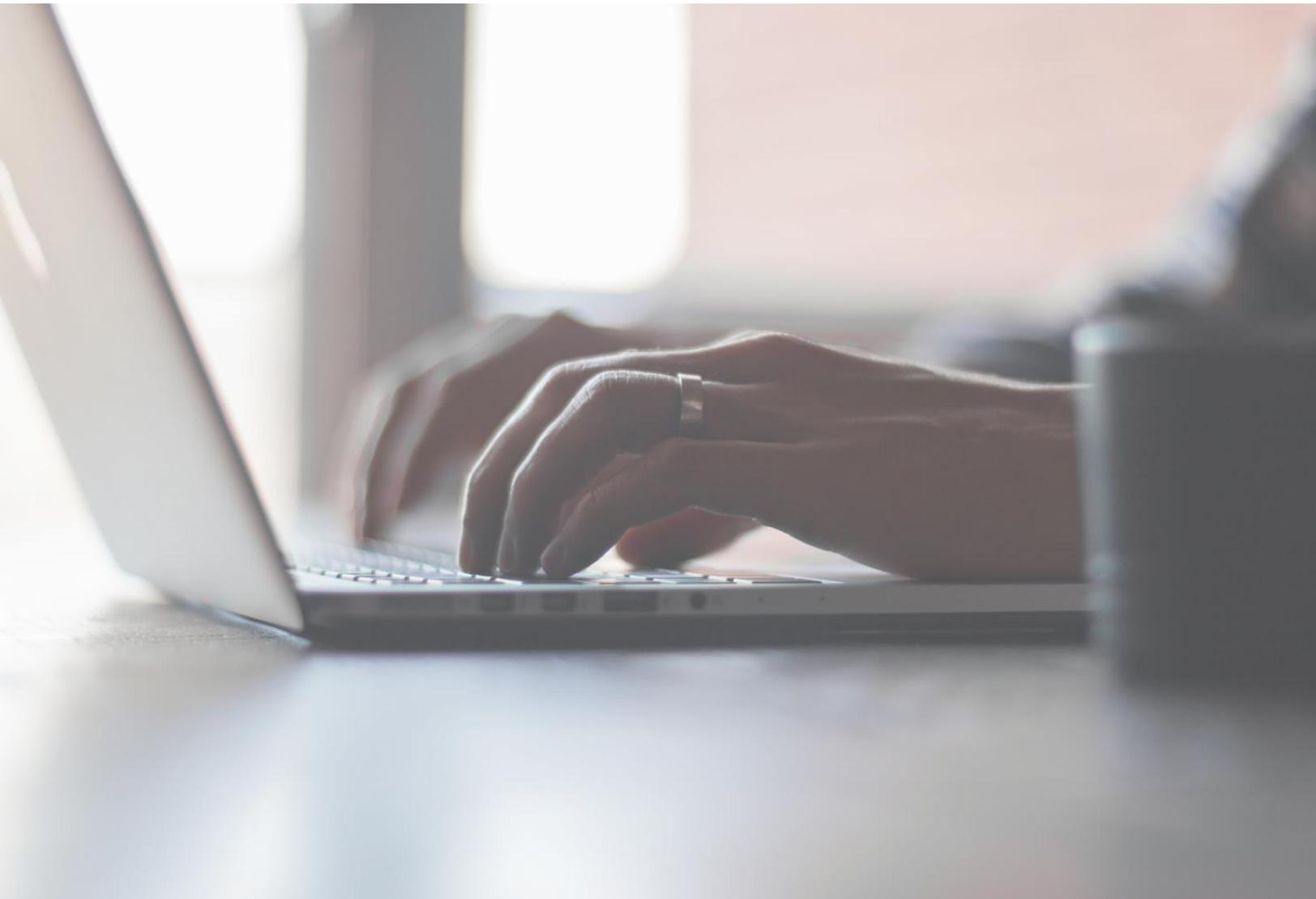# PureCloud® Competitive Advantages

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Contents

1.   Distributed Microservice Architecture

Many older cloud applications are monolithic under the covers. Even though they can serve multiple tenants, they're built as a large set of highly interdependent components. A failure in one component can have devastating impact on another, resulting in service outages for many or even all tenants. The problems are often exacerbated by deployment in proprietary data centers with limited hardware. PureCloud takes a radically different approach. Instead of using a number of tightly coupled components, PureCloud divides its functionality up into hundreds of microservices. Each microservice is stateless and independently load-balanced. Furthermore, PureCloud is built on top of Amazon Web Services (AWS) and deployed in multiple regions around the globe. This approach has the following benefits:

- **A failure in one microservice has no impact on the other microservices.** For example, one microservice might handle voice mail retrieval while another provides outbound faxing and yet another routes incoming customer calls. A problem in the voice mail retrieval microservice cannot affect the other microservices, greatly limiting the scope of potential problems.

- **Each microservice can scale up to meet the current load independently of the others.** Thus one tenant's need to suddenly send a million faxes causes the associated microservice to scale up to meet the demand without impact on other functionality or other tenants.

- **PureCloud isn't limited by the constraints of the equipment in a proprietary data center.** Just as Netflix can release a new TV show without worrying about how many viewers will log in at any time, PureCloud microservices can tap into the essentially limitless capacity of Amazon Web Services.

- **PureCloud can handle organizations of any size.** It doesn't matter whether your organization has 10 users or 100,000. The microservice architecture allows PureCloud to efficiently handle any size organization – and for those organizations to grow their use of PureCloud with absolutely no effort.

- **PureCloud offers unparalleled reliability and disaster recovery**. The entire PureCloud platform is deployed in multiple AWS regions. Each region consists of multiple independent Amazon data centers. This sort of distributed deployment provides the ultimate in geographic fault tolerance and disaster recovery.

- **Interactive Intelligence can update PureCloud on a continuous basis, fixing bugs almost instantly and adding new features at an incredible rate.** The independence of microservices allows Interactive Intelligence to push out bug fixes without fear of inadvertently breaking something else. What's more, Interactive Intelligence can create microservices for new functionality (e.g. web co-browsing) without impacting other services. Such updates can be done without taking down the entire platform – even while millions of customers are actively using the PureCloud services!

The PureCloud microservice architecture combined with HTML 5.0 web interfaces and native mobile apps means that your organization can enjoy the simplicity of zero desktop footprint. No software has to be installed on desktop computers. Equip your entire contact center with Chromebooks and headsets if you like. It doesn't get much simpler than that.

2.   Remote Survivability

All the cloud reliability in the world doesn't mean anything if your Internet connection is down. PureCloud gives you the option of installing a simple cloud-managed appliance on your network called the Edge. The Edge provides basic PBX, IVR, ACD, call recording, and other functionality even if your Internet connection goes out. It also allows voice traffic to stay on your network (no voice over the Internet) thus increasing security and providing pristine call quality. You can have as many Edges as you need at a given site and handle multiple sites located around the globe. Note that this is a deployment option that you can exercise as you like. If you prefer, everything including the telephone lines can be maintained in the cloud. And these two deployment options (local telephony/local Edges or completely cloud-based) are available on a site-by-site basis. For example, use your own telco circuits and local Edges at headquarters while running completely from the cloud at your branch offices – it's up to you.

3.   Secure Integration

One of the drawbacks of many cloud services is how little they can be integrated with the rest of your IT infrastructure. Many require your users to maintain separate passwords and to log in multiple times. Other cloud services can't synchronize with your internal systems such as Active Directory and Exchange, which means that you have to separately create, delete, and administer your users as employees come and go. And frequently integration with CRMs such as Salesforce and Zendesk requires expensive customization and becomes a maintenance headache as your people struggle to keep up with new versions of these products. PureCloud solves these problems with a brilliant approach called the Bridge. The Bridge is a software appliance that can be installed on your network or in the cloud. First it uses certificate exchange and encrypted connections to pair with your organization. Next, it makes use of pre-built plug-ins for dozens of popular systems to synchronize and provide integration with Active Directory, Exchange, SharePoint, Dynamics, Workday, Salesforce, Zendesk, SAP, SQL Server, Oracle, and many others. This allows you to take advantage of all your critical IT infrastructure to reduce administration, keep employee information up to date, and put information about your customers at the fingertips of every employee. And to top it all off, PureCloud provides single sign-on (SSO) capabilities so your employees don't have to remember yet another password or log on to yet another application.

4.   Lightning-Fast Deployment

Another important advantage of PureCloud is how quickly it can be rolled out. We've been building market-leading communications and customer engagement solutions for over twenty years, so we've learned a few things about best practices. We built those best practices right into PureCloud, so you don't have to. We believe that customization is evil, so we allow you to choose from a variety of tried and true approaches just by pointing and clicking. Whether you prefer skills-based routing, cherry-picking, or advanced bull's-eye

routing, we've got you covered. PureCloud includes easy-to-use policy managers for document management, recording retention, call handling, and many other critical aspects of corporate communications and customer engagement. We want your organization as a long-term subscriber to our services, not as an infinite source of professional services revenue. The combination of our easy sign-up, simple telco connectivity via the Edge, painless IT integration via the Bridge, zero client footprint web interface, and built-in best practices allows you to deploy PureCloud to your entire organization in a matter of hours. And this ease of deployment extends to changes in your organization, whether it's adding a new remote location or integrating a whole new company you acquired. PureCloud makes it fast and easy. All PureCloud services are available over the Internet – no expensive MPLS connections are required.

5.   Simple and Flexible Subscription Terms

As much as we've done to make PureCloud a powerful technology, we've tried to make the business side just as disruptive. Other cloud vendors want to lock you into long-term contracts that are almost impossible to break. They try to slant the entire agreement in their favor. They also hide behind a complex pricing structure that allows them to nickel and dime you to death. We decided early on to take a different approach. We set our primary goal as eliminating every reasonable objection we could think of, trying to reduce the friction of the entire process. It's in our interest because we don't have to waste time negotiating over legal trivia and things that are likely to never happen. The approach we ended up with is this. Pay us for what you use each month. Use our services for as long as you like. Quit whenever you like. It's that simple. We want to be the easiest company you'll ever do business with. We'll bank on the quality of the application services we provide and bet that you'll be so impressed that we'll continue to be partners for a long, long time. With this approach, the risk is on us, not you.

6.   Consumerized Interfaces

PureCloud features attractive, modern web and mobile interfaces that have undergone extensive user experience design. This makes PureCloud as easy for your employees to learn and use as Facebook and other popular web apps. And with zero desktop footprint, all your employees need are up-to-date web browsers such as Chrome, Firefox, Safari, IE, and Edge.

7.   Location Independence

All your employees need in order to access PureCloud is an Internet connection and a web browser. This makes it easy to handle remote employees and work-at-home agents – no complex VPNs or expensive MPLS connections required. Disaster recovery planning becomes trivial. Your employees can work from anywhere, so your organization keeps on operating even in the face of natural or man-made disasters.

8.   Truly Global Capabilities

PureCloud's architecture allows it to handle organizations with any number of sites situated around the globe. PureCloud is currently deployed in AWS regions in the U.S., Ireland, Australia, and very soon Japan. Over the course of the next year, PureCloud will be

deployed in additional AWS regions such as Brazil, Germany, China, India, and Canada. This geographic distribution allows PureCloud to respect data sovereignty laws and meet the needs of the largest multinational organizations. In addition, PureCloud has been localized into twenty languages and offers built-in speech capabilities for English (North American, U.K., and Australian), French (Canadian and European), Spanish (North American, South American, and European), German, Dutch, Brazilian Portuguese, and Mandarin. Keyword spotting is available in additional languages such as Turkish, Polish, and soon Italian.

9.   Enterprise-Grade Security

One of the big knocks against cloud applications is the possibility of security breaches. While nothing is perfect, we've gone to extraordinary lengths to make PureCloud secure. We benefit from our use of AWS which gives us data centers that are already certified for SSAE-16, PCI, HIPAA, FEDRAMP, SOC, and many others. Of course, we encrypt all the traffic between the cloud and your organization. But that's just the beginning. Most other cloud vendors concentrate on keeping intruders out but have little protection if they get in. We go so far as to encrypt all the traffic inside the cloud. We also encrypt all our data at rest. This is what allows us to pass stringent certifications like HIPAA unlike our competitors. We also do constant automated intrusion detection as well as periodic certification tests using well-known companies such as Trustwave. As mentioned previously, you can keep all voice traffic completely encrypted on your own network by means of our Edge appliance. And soon, PureCloud will even give you the option of storing call recordings locally so that even those never pass outside your firewall. With PureCloud, your valuable internal and external communications can be as secure as you want them to be.

10.   Flexible Communications Options

You can think of PureCloud as a cake with three layers. At the base is a delicious foundation of modern enterprise collaboration capabilities – rich organizational directory, chat rooms, instant messaging, video conferencing, and full mobile device support. Next is a layer of classic enterprise communications with full IP PBX, voice mail, conferencing, and fax capabilities. And topping it all off is the sweetest set of customer engagement functionality on the market (more on this below). One great aspect of PureCloud is that you can have the whole cake or just pick the layers you want. For example, you can use PureCloud's customer engagement capabilities in conjunction with your existing enterprise collaboration tools (e.g. Microsoft Lync, Skype for Business, etc.) and with your current IP PBX (e.g. Cisco Call Manager, Avaya PBX, Microsoft Lync, etc.). Or you can use PureCloud for the whole solution – from enterprise collaboration to corporate communications to customer engagement. Larger organizations typically start with customer engagement and expand into the other areas as it makes sense for them. Many smaller organizations are able to get rid of a messy jumble of other systems (along with the associated expense) and replace them entirely with PureCloud.

11.   Optional Telco Voice Services

PureCloud is one of the few cloud communications services that gives you the option of managing your own telco relationship with local trunks coming into your locations or

leaving the telco work to us. PureCloud® Voice is a set of advanced telco services that can provide toll-free numbers, DID numbers, inbound and outbound circuits, and other telecommunications services that can be provisioned right from our web site. And PureCloud Voice has connections to multiple carriers, so we can easily route around failures so that you're not completely reliant on a single carrier. Our voice services are offered at competitive rates and are included in a single bill along with your application services.

12.   Complete Omnichannel Routing

Allowing customers to initiate interactions by phone, e-mail, and web chat is now table stakes for any customer engagement product. PureCloud provides that capability with almost no effort on your part. You can easily open all those channels of communication and then queue and route them by language, required skills, etc. Interactions of all types can be monitored in real time by supervisors, recorded for quality monitoring, and analyzed using whatever sort of business intelligence tools you like. PureCloud's built-in document management can be used to create libraries of responses that can be generated automatically based on word-spotting or other semantic analysis. And of course, agents can easily access these response libraries and include vetted information in their responses to customers whether the interaction is by phone, e-mail, or web chat. However, PureCloud's omnichannel capabilities go behind these three traditional channels to include social media (Twitter, Facebook, etc.) and soon various messaging apps including SMS, Facebook Messenger, WhatsApp, WeChat, etc.

13.   Advanced Multimodal Interactions

While omnichannel routing is great, it's no longer enough. The communications world is evolving at a dizzying pace and customers are demanding even more. It's no longer sufficient to allow your customers to choose one of a variety of interaction channels. Increasingly, they want to use several at the same time! We call these "multimodal interactions" because they might involve a phone call, a web chat, and a co-browsing session on your web site at the same time. For example, a customer might call into your toll-free number with a question about ordering something from your web site. The agent they talk to might then give them a code to enter on the web site that launches a co-browsing session during which the customer and agent see the same thing and take turns driving. Such a co-browsing session might be launched from an initial web chat as well. PureCloud has these capabilities and more, including customer/agent video. With PureCloud you can keep up with rapidly changing customer expectations, using all these modern technologies to create extremely personal and engaging interaction opportunities. We're even working with virtual reality tools that will soon allow customers and agents to walk through virtual spaces (homes, apartments, cruise liners, department stores, etc.) together. The possibilities are limited only by your imagination. And everything about these new multimodal interactions can be supervised, tracked, recorded, and analyzed just as with regular single-mode interactions.

14. Outbound Interactions

PureCloud isn't just for handling inbound calls and omnichannel interactions. It includes powerful outbound capabilities including preview dialing, progressive dialing, and predictive dialing. Web-based campaign management makes it easy to upload contact lists and to use them in a way that adheres to all applicable regulations. PureCloud includes support for do not call (DNC) lists and call-backs. Sophisticated call progress detection provides the industry's most accurate answering machine and live speaker detection, with patented "fingerprint" technology utilizing a database of thousands of tones and messages from telephone systems around the globe. PureCloud even allows for agentless dialing campaigns for emergency notifications, right party contact, and other applications.

15. Quality Monitoring

PureCloud makes it easy to monitor the quality of the service your organization provides. It begins with stereo recording of calls so agent and customer audio are maintained in separate channels. What's more, PureCloud records e-mails, web chats, and other types of interactions, so you always have a complete picture of what transpired. PureCloud's policy manager allows you to determine how long recordings of different types are kept – which can be several years if that's what you need. And a built-in evaluation workflow allows you to create customized evaluation forms that supervisors can use to grade performance for feedback to agents.

16. Graphical Scripting

PureCloud includes an intuitive script builder that allows you to create graphical scripts that can automatically be presented to agents on outbound or even inbound interactions. Scripts can incorporate information from databases or about the current customer in order to be completely personalized. And information collected during interactions can be used to update the underlying call lists and databases. The same graphical scripting interface is used to build evaluations for quality monitoring.

17. Real-Time Supervision

PureCloud allows supervisors to understand the current state of operations at a glance and to automatically be alerted to unusual conditions. Supervisors can employ both a simple browser-based interface or a specialized iPad app that allows them to walk around the contact center floor and see what's going on. PureCloud allows supervisors to monitor every customer/agent interaction whether it's a phone call, e-mail, web chat, or something else. Supervisors can watch queue statistics in real time in order to verify adherence to SLAs and can set alerts as desired. Agents can use the built-in collaboration capabilities of PureCloud to ask questions and even share their desktops with supervisors for extra help. Interactive Intelligence is working on the use of artificial intelligence to create a "virtual supervisor" that can assist human supervisors in spotting potential problems before they become an issue.

18. Powerful Workforce Optimization

With PureCloud, there's no need to purchase an expensive third-party WFO suite. Agents can see their schedules right within the main browser interface. Supervisors can view the

same information for all the agents in their charge and make changes with simple drag and drop operations. Short-term forecasting and automatic schedule generation that cover skills-based and omnichannel routing allow your contact centers to be run in the most efficient manner possible. In coming months, the PureCloud WFM features will be extended to include advanced functionality such as capacity planning, shift trading, shift bidding and much more.

19.   Unrivaled Data Analytics

With easy access to the essentially unlimited storage of AWS, we designed PureCloud to store just about everything that happens because that information can be extremely valuable if used correctly. So PureCloud not only logs every customer-related event (incoming/outgoing interaction, hold, transfer, conference, queue action, etc.) but also maintains an audit trail of every change made to your configuration along with who made it. PureCloud includes an incredible array of interactive, graphical visualizations that allow you to monitor your entire operation in real time. But that's just the start. PureCloud uses Pentaho to allow for endless business intelligence analysis and even provides direct data access for use with the BI tools of your choice.

20.   Open REST-based API

PureCloud is built atop an extensive web API that allows you to easily access all the data and functionality of PureCloud within your own applications. Using this API, incorporate PureCloud functionality for collaboration, communications, and customer engagement in whatever web and mobile applications you like. This API also allows you to get at all your data and use whatever sorts of tools you prefer to slice and dice it.

21.   Our Own Cost-Effective Technology

Rather than license expensive technology from third parties – or force you to – we decided to build our own. This started years ago when we decided to build our own speech technology, which now means that PureCloud includes multi-lingual speech recognition and text-to-speech for free. We also built our own technology for voice recording, screen recording, workforce management, speech analytics, co-browsing, document management, and graphical scripting – just to name a few. This all means that we don't have to pay a lot of licensing fees to third parties for these technologies. It also means that our application services are more integrated, easier to administer, and easier to use. What it all comes down to is that we can offer your organization an incredible array of functionality at a very reasonable price and yet maintain a good level of profitability for our continued growth. That's the very essence of partnership.

22.   An Extensive Pipeline of New Capabilities

Interactive Intelligence has been among the leading innovators in communications technology for over 20 years. We invest heavily in research and development, and we're not about to stop. PureCloud customers will see a steady stream of new features in coming months that range from mobile video to knowledge management. New cloud service options will include workflow, customer management, trouble ticketing, and community

portals. All of these capabilities will be made available without any need for painful upgrades, migrations, or other actions on the part of customers.

23.   Rich Self-Service Facilities

We invested heavily in the creation of a web site that uses written articles and videos to explain every aspect of PureCloud so that you can be as self-reliant as you care to be. The PureCloud Resource Center contains thousands of articles, videos, and code samples that allow you to understand PureCloud at a deep enough level to administer and maintain it yourself. The Resource Center even documents best practices so you can benefit from techniques that have proven effective at thousands of other organizations around the globe offering market-leading customer service. PureCloud also provides diagnostic utilities to help you pinpoint problems on your network and identify connectivity issues to expedite problem resolution and avoid finger-pointing. Finally, Interactive Intelligence operates a 24-hour, multi-lingual hotline that you can access at any time to receive expert help and advice.

24.   A Worldwide Ecosystem of Partners for Support, Services, and Technology

Interactive Intelligence has built a network of hundreds of partners around the globe that can help you get the most out of your PureCloud subscription. Some of these partners can provide local service – experienced resources who can work shoulder-to-shoulder with your employees to deploy, configure, administer, and maintain PureCloud. Many offer "white glove" support services that make running your business on top of PureCloud almost effortless. Others specialize in integrating PureCloud with the rest of your IT infrastructure – for example building new plugins for the PureCloud Bridge to synchronize data between PureCloud and various proprietary systems you currently utilize. And finally, a growing number of technology partners offer services that extend PureCloud in meaningful ways. For example, Lesson.ly provides e-learning capabilities tightly integrated with PureCloud that allow supervisors to create training modules that can be pushed to contact center agents when they're not busy.

The Author

DONALD E. BROWN, M.D. co-founded his third software company, Interactive Intelligence, in October 1994 and has served as Chief Executive Officer since April 1995 and President since inception. Dr. Brown also serves as Chairman of the Board, a position he has held since July 1998. Dr. Brown has been a director since inception. In March 1988, Dr. Brown co-founded Software Artistry, Inc., a developer of customer support software that became a public company in March 1995 and was subsequently acquired by IBM Corporation in January 1998. At Software Artistry, Dr. Brown served as Chief Executive Officer and director from inception through September 1994. Dr. Brown's first software company was acquired by Electronic Data Systems, Inc. in September 1987. Dr. Brown graduated from the Indiana University School of Medicine in 1985. He also holds two additional degrees from Indiana University, an M.S. in computer science and a B.S. in physics. Dr. Brown is currently completing an M.S. in Biotechnology at Johns Hopkins University. He is the father of eight children and an avid pilot and rock climber.

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