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WHY MICROSERVICES ARE CRITICAL TO YOUR CONTACT CENTER'S SUCCESS

Table of Contents

Microservices have become a de facto standard for new cloud applications. But is microservices just a meaningless buzzword, or does it really matter for contact center solutions?

The answer is a resounding, "Yes, microservices do matter."

As we'll explore in this guide, microservices should be a critical part of your contact center solution architecture to help ensure 24x7 uptime, scalability and reliability.

Making Sense of Microservices vs. Monolithic Architecture

When you're evaluating contact center solutions, vendors might tout that their applications are built using microservices architecture. However, as Serenova Vice President of Platform Ryan Proudfoot cautions, "It's critical to understand exactly what microservices are and why they're important to your particular contact center's operations because there's a great deal of misinformation floating around that can make it confusing and difficult to properly compare solutions."

Cloud applications built using microservices are structured as a collection of small, autonomous services. This is in contrast to a traditional monolithic architecture, which is developed as a single unit.

Proudfoot compares both approaches by using the metaphor of a house. "With a microservices architecture," he says, "you can build the core rooms first, such as the kitchen, living room and master bedroom, then add other rooms later as you need them. The structure of the house makes renovations—like adding more bedrooms or a home office—easier as needs change.

"With a monolithic architecture, however, once the house is built, it's difficult to update to meet changing needs. Adding a room would require modifying the entire house. Building a new bathroom, for example, would be challenging because the existing plumbing lines wouldn't be routed to accommodate. It's similar with monolithic contact center applications: they are large and cumbersome with many highly interdependent components. This presents many business challenges for your contact center."
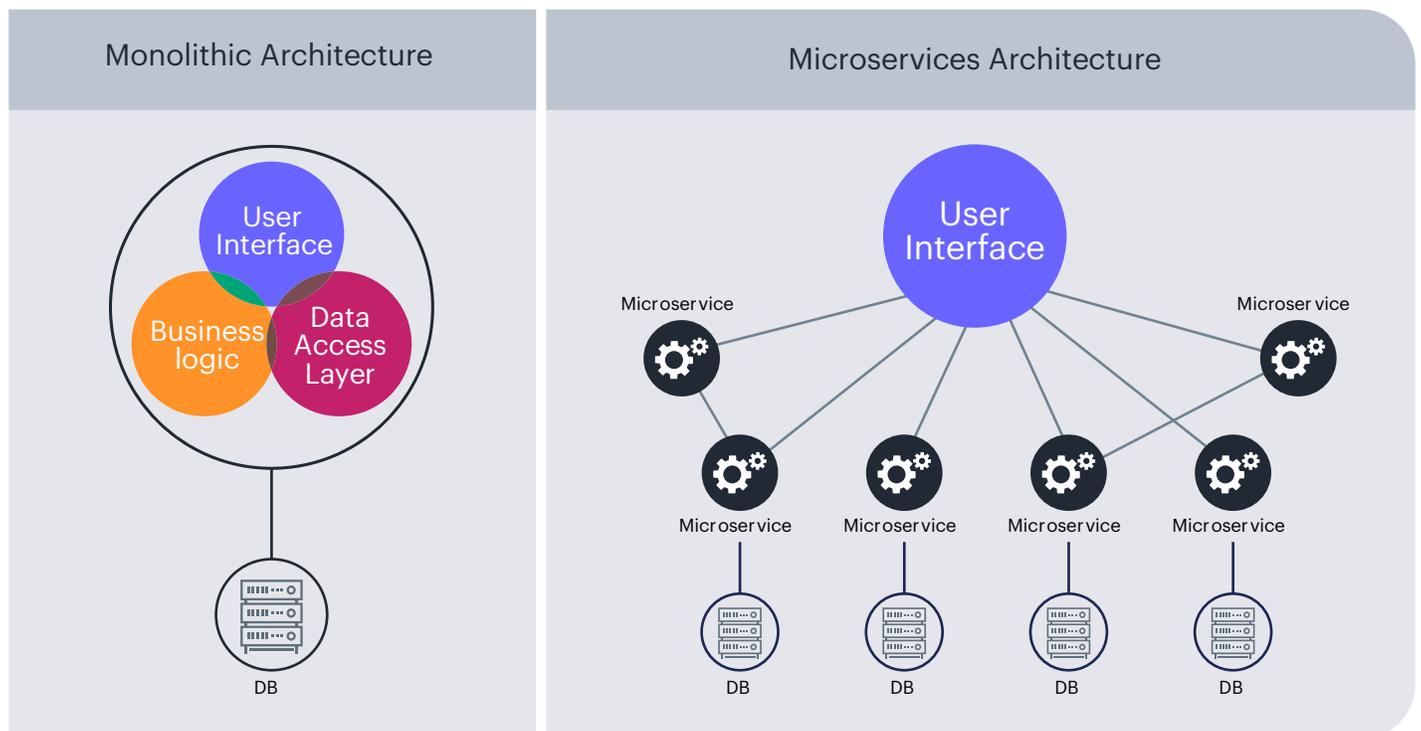
Why Monolithic Architecture Is the Wrong Choice for Contact Centers

One of the major disadvantages of a contact center application built on a monolithic architecture is that if your vendor's development team makes a single change to a module, it's extremely costly and disruptive to your business operations.

This is a serious business hardship for global contact centers that operate around the clock because downtime not only negatively impacts customer satisfaction and service level agreements (SLAs), but for those that service life-or-death situations, it's completely unacceptable.

As a monolithic application grows, the negative effects increase, resulting in poor scalability, greater complexity and diminished reliability. It's also difficult to overcome these issues without completely re-architecting the entire system—an expensive and time-consuming endeavor that many vendors aren't willing to take on.

Other major drawbacks of monolithic applications for contact centers include:

- **Unreliability** because if one feature doesn't work, the entire system is affected.

- **Lack of scalability** due to different modules with conflicting resource requirements. This can result in higher costs passed on to customers, such as professional services fees to add new users to the system.

- **Inflexibility** because portions of the application can't be built with different technologies.

- **Not well suited for complex applications**, such as contact center solutions, due to tightly coupled dependencies.

Since monolithic architecture is not typically built with an APIfirst approach, often not all functionality can be performed via APIs and must be accomplished in the application itself. This can slow down potential integration because the APIs have to be built first.

Benefits of Microservices for Contact Centers

It was the kind of challenges associated with complex application environments such as contact centers which originally led to the creation of microservices. Since a microservices architecture is split into relatively small components that can be modified or extended without impacting other parts of the application, each microservice can be individually upgraded without impacting the rest of the system. These building blocks are well-integrated, yet each runs its own process, so they can be independently tested, deployed and maintained. This enables stable, reliable and scalable cloud contact center applications.

Other benefits of a microservices architecture in the contact center include:

- **Zero-downtime upgrades.** Updates are owned and managed by the vendor, and they're immediately pushed out to you with no system downtime. New features can be launched independently without updating the entire application or taking it offline.

- **Scalability.** Cloud contact center solutions built using microservices can dynamically scale to accommodate any increase in the number of agents or fluctuations in interaction volume. This ability to easily scale up or down means you only pay for the infrastructure that you need. If you're affected by seasonality, this is particularly significant for your contact center.

- **Access to innovative updates.** Microservices make it possible for your vendor to continuously develop and deploy new features so you'll always have access to the latest innovations.

- **Problematic issues are easily contained.** Any issues with code updates, such as upgrades or bug fixes, are small and contained within a single microservice. This means if the update doesn't work as intended, it can simply be rolled back without impacting your entire application.

- **Encourages omnichannel technology adoption.** You're not restricted to using only the channels or technologies you originally chose when you implemented your solution. Rather, you can expand your application to include the technologies that make the most sense for your contact center as it evolves.

Important Questions to Ask Vendors about Microservices

It's important to realize not all microservices are the same. A vendor may tell you its solution utilizes microservices, but in reality, only a very small portion of the system might be built with them. As Serenova's Proudfoot explains, "The true story may be the vendor has a monolithic application with bolted-on versions of microservices, which won't produce the same results as a true microservices architecture. That's why questioning them carefully is important."

Ask a vendor these questions to determine if its application was built using a true microservices architecture:

- ✓ Do you leverage a microservices architecture? If yes, what portion is based on microservices? Was your system built from the ground up using microservices?

- ✓ Is your architecture active-active? (If the answer is yes, the vendor has a monolithic architecture, not microservices.)

- ✓ How do you handle high availability?

- ✓ How are upgrades handled? How often do you release new upgrades/features/bug fixes? Will my contact center system be down while you perform upgrades?

- ✓ How do you minimize downtime?

Serenova's Unique Approach to Microservices

When Serenova developed CxEngage, its cloud contact center solution, it purposefully adopted a development approach that provides the agility and resiliency that contact centers need. Using a microservices architecture means outstanding reliability, scalability and innovation.

CxEngage was built from the ground up on microservices. They weren't bolted on later as an afterthought. The platform continues to be developed fully on microservices architecture, with a nonstop integration pipeline and automated testing. All this enables innovative updates to CxEngage, which you can take advantage of immediately.

"We've containerized our microservices so our engineering team can develop, deploy and scale changes independently and quickly. Every layer of CxEngage is completely redundant, massively scalable and replicated across multiple data centers to ensure your contact center has rock-solid reliability at all times," Proudfoot explains.

The next time you're questioning a contact center solution vendor about its system, ask if it uses a microservices architecture and how the company ensures system reliability, scalability and dependability. The answers will give you valuable insights into how committed the vendor is to solve the everyday challenges contact centers face.

About Lifesize

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