



Guidewire InsuranceSuite 9

READY FOR THE CLOUD

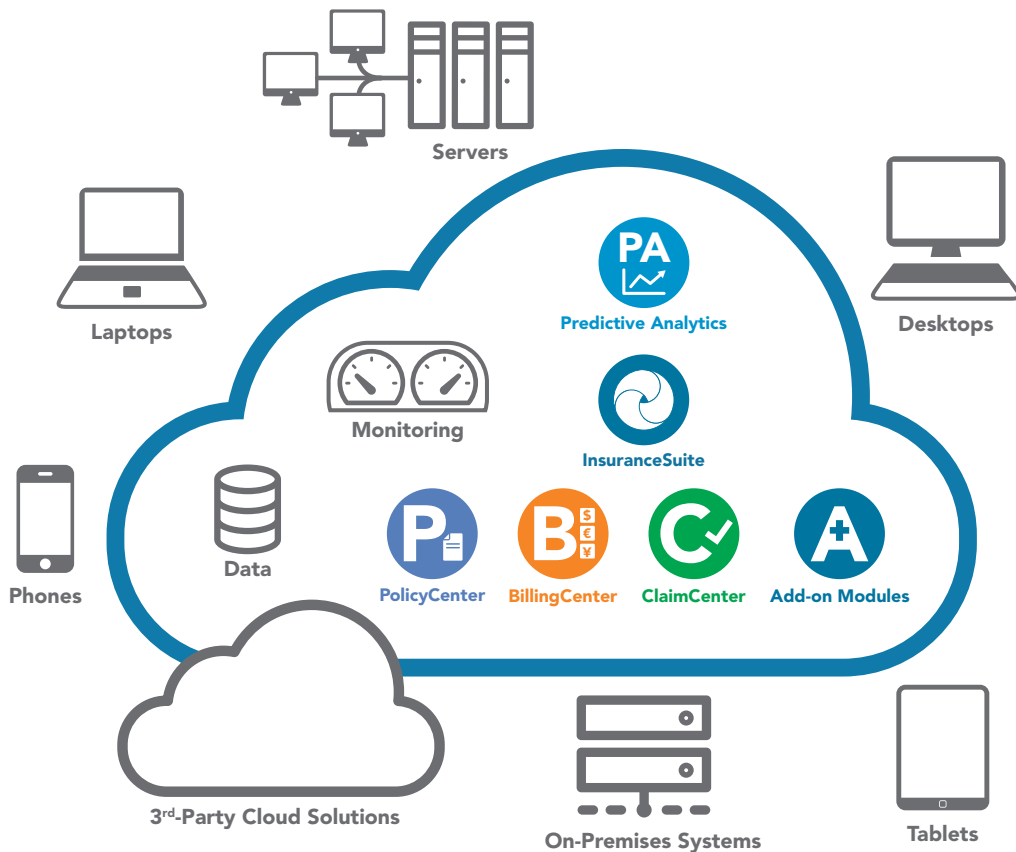


Guidewire InsuranceSuite is a proven solution that helps property and casualty (P/C) insurers worldwide enrich customer and agent/broker relationships while simultaneously growing profitability and enabling agile responses to market threats and opportunities.

With the maturation and growth of cloud computing, insurers are increasingly considering cloud options to drive and enable business transformation programs. Guidewire makes that transition possible by delivering the full functionality of InsuranceSuite 9 with a choice of deployment options.

“Insurance CIOs who want to foster innovation or build out digital ecosystems will have no option other than adopting cloud computing services.”

–Gartner, “Innovation Insight for Cloud Computing Service Providers in the Insurance Industry,”
Juergen Weiss and Gregor Petri, 20 June 2016, <http://www.gartner.com/document/3352418>



InsuranceSuite 9 delivers a complete set of core processing, digital engagement, and data analytics capabilities to support critical business requirements. It can be deployed both on premises and in the cloud. Either way, customers can manage InsuranceSuite 9 directly or implement it as a managed service through a Guidewire Partner.

Benefits of Cloud Deployment

- **Faster implementation**
- **Anytime, anywhere access**
- **Increased elasticity and scalability**
- **Enhanced security and disaster-readiness options**
- **Lower total cost of ownership**
- **Reduced operational overhead**

The P/C insurance industry is facing rapid change, from consumer expectations for faster service and on-demand access, to competitor pressure in new and existing markets, to increased regulatory and security requirements. Meanwhile, IT organizations face constant demands to lower costs while introducing and supporting new products and services. **Implementing core applications in the cloud can help meet business expectations and challenges.**

Public cloud deployments **accelerate implementation** by freeing IT from having to design, procure, build, run, and maintain the required infrastructure for test/dev, production, QA, and training. The cloud enables developers to **quickly boot up environments and shut them down when they are no longer needed**. And unlike internal IT environments—which are often built from repurposed hardware that is not optimized for the specific application—cloud-based deployments can be tailored to meet exact application requirements.

In addition, by deploying in the cloud, applications are **available anytime, from anywhere**. This is an important consideration for multinational corporations and a globally distributed workforce.

The **highly scalable and elastic nature of cloud services** can be a key differentiator in the quest to provide a consistently excellent customer experience. Rapid capacity scaling supports peak demand loads such as policy renewal periods and catastrophe claim events. By embracing cloud computing, organizations are able to respond to changing markets with innovation, speed, improved SLAs, and greater operational efficiencies.

For P/C insurance, **security and disaster readiness** are crucial concerns. Insurers can take advantage of cloud providers' world-class data centers and their expertise at leveraging the most advanced security, failover, and redundancy technologies.

Moving to the cloud can reduce total cost of ownership by 30% to 40% over the course of 10 years (Ernst & Young, "Transformation Through the Cloud", 2015) by eliminating the need to procure hardware and build data centers, by enabling on-demand resource consumption, and by significantly reducing IT involvement.

The freeing up of resources gives development and support teams **more time to innovate around core business functions and interact with customers**. In addition, IT teams can focus on driving innovation and differentiation rather than business-as-usual infrastructure support and maintenance.

Cloud Features in InsuranceSuite 9

The design of InsuranceSuite 9 includes the following features to support cloud deployment.

Improved Scalability

Horizontal scalability enables an application to increase or decrease resources based on load. InsuranceSuite 9 improves horizontal scalability by providing the ability to quickly adjust the number of nodes, servers, or instances within a cluster. Server resources can be automatically increased in response to load without application interruption. Similarly, resource usage can be scaled down as load decreases, thereby freeing resources and reducing operational costs.

“Cloud technology can play a critical role in supporting an insurer’s overall business goals and in supporting its wider ambitions.”

*–June 2015 study from industry analyst
Ovum”*

New Clustering Management

A *cluster* is a group of servers and other resources that act like a single system and enable high availability, load balancing, and parallel processing. Clusters can perform multiple complex instructions by distributing workloads across all connected servers

Previous versions of InsuranceSuite relied on multicast for cluster communications. However, most cloud providers don’t support multicast. In its place, InsuranceSuite 9 uses a pluggable clustering option that handles server messaging through the central database.

Redesigned Server Processing

InsuranceSuite 9 introduces server roles to improve workload distribution across clusters. The mapping of roles to servers is specified either in the server registry or as part of the initial system setup

The redesign of server management around roles introduces a layer of abstraction that:

- Permits administrators to restrict the types of workloads that run on a particular server
- Prevents servers that host UI services from running CPU-intensive background tasks
- Adds server capacity for only specified workloads

The result is on-demand provisioning of jobs, improved fault tolerance, and better request-processing performance.

InsuranceSuite 9 Cloud Deployment Methods

Guidewire has designed InsuranceSuite 9 to support a variety of cloud deployment methods, including private, public, and hybrid. These are distinguished by their ownership, location, and access characteristics.

Public Cloud

InsuranceSuite 9 can be deployed on most infrastructure-as-a-service (IaaS) platforms, including Amazon Web Services (AWS), Microsoft Azure, and IBM SoftLayer. In a public cloud, IT resources are delivered as network-based services that are hosted in provider data centers and designed for multi-tenant use. This eliminates the need for users to build and maintain capital-intensive infrastructure such as servers and data centers, which can significantly reduce their operating costs.

Public Cloud Benefits and Considerations

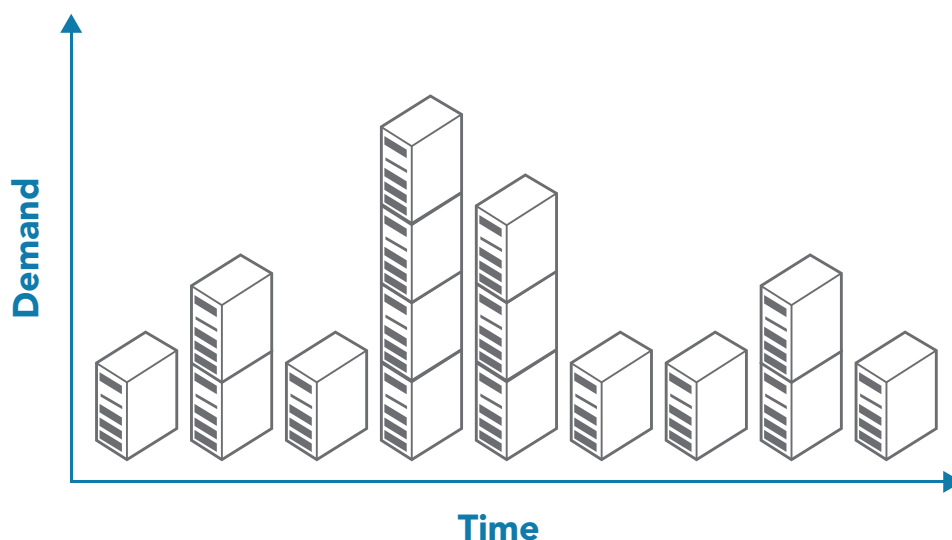
Advantages of a public cloud include pay-as-you-go consumption, rapid resource elasticity, and the ability to shift from CapEx to OpEx financing. In addition, the massive capacity of public cloud providers enables greater application flexibility and scalability. And because managing IT infrastructure is the core competency of cloud providers, they operate higher-quality facilities with better uptime than almost any enterprise-owned data center.

By installing and running InsuranceSuite 9 on a public cloud platform, users have access to highly scalable and flexible infrastructure. The following are some additional benefits.

Deployment Automation. In addition to highly scalable computing resources, IaaS providers offer tools to automate the deployment of complex application stacks. This enables IT organizations to quickly and easily deploy fully configured environments in the cloud.

Rapid Elasticity. According to the National Institute of Standards and Technology (“The NIST Definition of Cloud Computing”, Special Publication 800-145), rapid elasticity is an essential characteristic of cloud computing. The NIST report defines rapid elasticity as follows:

Capabilities can be elastically provisioned and released, in some cases automatically, to scale rapidly outward and inward commensurate with demand. To the consumer, the capabilities available for provisioning often appear to be unlimited and can be appropriated in any quantity at any time.



Improved Fault Tolerance. Most public cloud providers allow customers to distribute applications across multiple physical sites. This capability enables InsuranceSuite to be deployed in a high-availability configuration.

Cloud Agnostic. InsuranceSuite 9 runs on industry-standard infrastructure. This makes it cloud-agnostic, meaning that InsuranceSuite works with all major IaaS platforms. Customers are free to choose the cloud that provides the best combination of cost, performance, and features for each deployment location.

Private Cloud

Private clouds are owned and used exclusively by a single entity. Infrastructure can be located on premises or at a data center colocation provider. For many organizations, a private cloud is a logical extension of their existing physical and virtual infrastructure.

Private Cloud Benefits and Considerations

Private clouds offer many of the same benefits as public clouds. Note, however, the following important differences.

Configuration Flexibility. In contrast to public clouds—which offer services with pre-defined sizes—a private cloud is configured and administered by its owner. This gives private clouds greater configuration flexibility and control than public clouds.

Compliance and Data Sovereignty Considerations. Public cloud technology stacks are typically opaque, and the exact location of systems and data can be uncertain. This can cause compliance and data sovereignty challenges. By contrast, a private cloud remains completely within its owner's control.

Single-Tenant Control. One disadvantage of a multi-tenant environment like a public cloud is the potential for one user's consumption to affect adjacent users. Private clouds have greater control over this "noisy neighbor" problem through the ability to define and enforce usage policies for all workloads.

Capacity Management. Unlike the massive scale and capacity of public clouds, private cloud capacity must be planned and built out in advance of demand. As a result, private clouds do not offer the same elasticity and OpEx flexibility as public clouds.

Hybrid Cloud

The respective benefits and challenges of public and private clouds lead many organizations to adopt a hybrid cloud approach. Hybrid clouds provide a mix of public and private services to satisfy different workloads and capacity requirements. By implementing InsuranceSuite 9 in a hybrid cloud, users can maintain control over performance and security while gaining rapid elasticity and cost efficiencies.

Hybrid Cloud Benefits and Considerations

Hybrid deployments often couple one or more public clouds for rapid scalability and a private cloud for mission-critical workloads. Workload placement for hybrid clouds includes the following strategies.

Private First, with Public Augmentation. Unlike public clouds that offer pay-as-you-go pricing, private clouds are a sunk cost. Even if no one uses a private cloud, it represents operation overhead. For this reason, organizations may want users to make private cloud deployment their preferred option. Users are told to use public clouds only if private resources are insufficient or unsuitable.

Cloud Bursting. Cloud bursting seeks to augment private cloud capacity with public cloud resources at times of high demand. Because this presents significant application architecture as well as infrastructure design challenges, cloud bursting is rarely practiced today.

Own the Base, Rent the Spike. Public clouds are well suited for unpredictable or highly variable workloads. But the cost of constant, on-demand consumption in a public cloud can be substantially higher than for owned infrastructure. An “own the base, rent the spike” approach runs well-defined, stable base workloads in a private cloud and variable workloads in public clouds.

Deploying InsuranceSuite in a hybrid cloud offers cloud advantages while minimizing operational and security risks.

For example, customers can deploy InsuranceSuite 9 in a private cloud while implementing complementary applications such as Guidewire Predictive Analytics and third-party products in a public cloud. This approach maintains control over performance and security while reducing data center, IT infrastructure, and IT personnel requirements.



Private

- Single-tenant implementation
- Owned and operated by IT organization
- Limited overall capacity
- Greater control over data and configuration management policies



Public

- Multi-tenant implementation
- Owned and operated by cloud service provider
- Near limitless capacity
- Pay-as-you-go pricing shifts CapEx to OpEx



Hybrid

- Combination of public and private services
- Optimize workload placement and operational costs

InsuranceSuite 9 Management Options

In addition to the cloud deployment method, Guidewire customers can choose to manage InsuranceSuite 9 directly or to engage a Guidewire partner to deploy InsuranceSuite 9 as a managed service.

Customer Managed. Direct implementation of InsuranceSuite means the customer is responsible for application infrastructure, security, availability, and administration. This management option places the entire implementation of InsuranceSuite under the customer's control.

Managed Services. InsuranceSuite can also be operated as a managed service by a Guidewire partner. In this model, InsuranceSuite is installed, hosted, accessed, and managed by service providers with technical and P/C domain expertise. This can result in lower costs, fuller implementation of application features, and reduced dependence on scarce internal IT experts.

Committed to Customer Success

Guidewire recognizes that every organization has unique operational requirements. We continue to increase deployment and management options—including cloud-based deployment. InsuranceSuite 9 in the cloud delivers all the key benefits of cloud implementation while providing the flexibility to adapt to evolving business needs and future demands of the market.

About Guidewire Software

Guidewire delivers the software that Property/Casualty (P/C) insurers need to adapt and succeed in a time of rapid industry change. We combine three elements – core operations, data and analytics, and digital engagement – into a technology platform that enhances insurers' ability to engage and empower their customers and employees. More than 200 P/C insurers around the world have selected Guidewire. For more information, please visit www.guidewire.com and follow us on twitter: @Guidewire_PandC.

Visit guidewire.com to learn more.