

# Guidewire DevConnect

## > Technology Overview

### Purpose and Scope

This document provides an overview of Guidewire DevConnect technology and infrastructure for customers, partners, and other key stakeholders.

Integration add-ons that support certain claims-related scenarios may be developed by Guidewire PartnerConnect Solution partners for publication in the Guidewire Marketplace. This is one of the integration approaches supported by Guidewire. You can receive regular updates about DevConnect add-ons and releases by [registering for the Guidewire Marketplace newsletter here](#).

### DevConnect Terminology

Term	Definition
add-on	Integration software component that is written using a DevConnect software development kit (SDK).
consumers	Users of DevConnect add-ons (primarily Guidewire customers).
domain	A category of integration from a business perspective.
DevConnect SDK	A set of Java contracts in a particular domain that facilitate integration. An SDK separates the two sides of the integration: one side is generally implemented by Guidewire (the SDK content), and the other side is implemented by the owner of the external integration.
Guidewire application	May refer to Guidewire ClaimCenter, Guidewire PolicyCenter, or Guidewire BillingCenter.
public add-on	An add-on that is developed to integrate a third-party system with a Guidewire application. Public add-ons are published in the Guidewire Marketplace for customers to download.
producers	Creators of DevConnect add-ons.
Solution partner	Solution partners are third parties that partner with Guidewire to provide software, technology, and data solutions as well as insurance support services.



## DevConnect Platform

Guidewire DevConnect is a developer platform that enables Guidewire PartnerConnect Solution partners to create innovative public add-ons that integrate with Guidewire applications. DevConnect add-ons offer key capabilities in three areas:

- **Straightforward installation:** Add-ons can be deployed without coding, which can significantly reduce your cost to implement a partner solution.
- **Full-fidelity upgrades:** Add-ons are upgrade-safe; the underlying Guidewire application can be upgraded without the need to re-implement add-ons.
- **Enhanced support:** Full support by our Solution partners enables your teams to focus on higher-value activities rather than troubleshooting and supporting integrations.

DevConnect provides Solution partners with application programming interfaces (APIs), SDKs, and associated tools that enable developers to rapidly design and build feature-rich add-ons for Guidewire applications and publish them in the Guidewire Marketplace.

In addition to powerful tools to help partners create add-ons, DevConnect provides the integration framework for rapidly deploying these add-ons. With DevConnect and the Guidewire Marketplace, insurers can:

- Discover and download new solutions from the Guidewire Marketplace to address business problems
- Integrate with partner add-ons without coding, leading to time and cost savings
- Perform upgrades of the underlying Guidewire application without having to reimplement integrations, reducing total cost of ownership.

## DevConnect SDKs

Each DevConnect SDK focuses on a specific category of integration called a *domain*. For example, the Claim Servicing SDK enables integrations that allow an insurer to instruct an outside vendor to perform a service, track work progress, and receive documents and invoices. Examples include repair services, inspection services, and support services such as records retrieval. The Claims SDK consists of multiple domains packaged together for installation.

## Standard Technologies

DevConnect leverages standard technologies that are broadly adopted to minimize the learning curve for developers. Guidewire prioritizes based on the following guidelines:

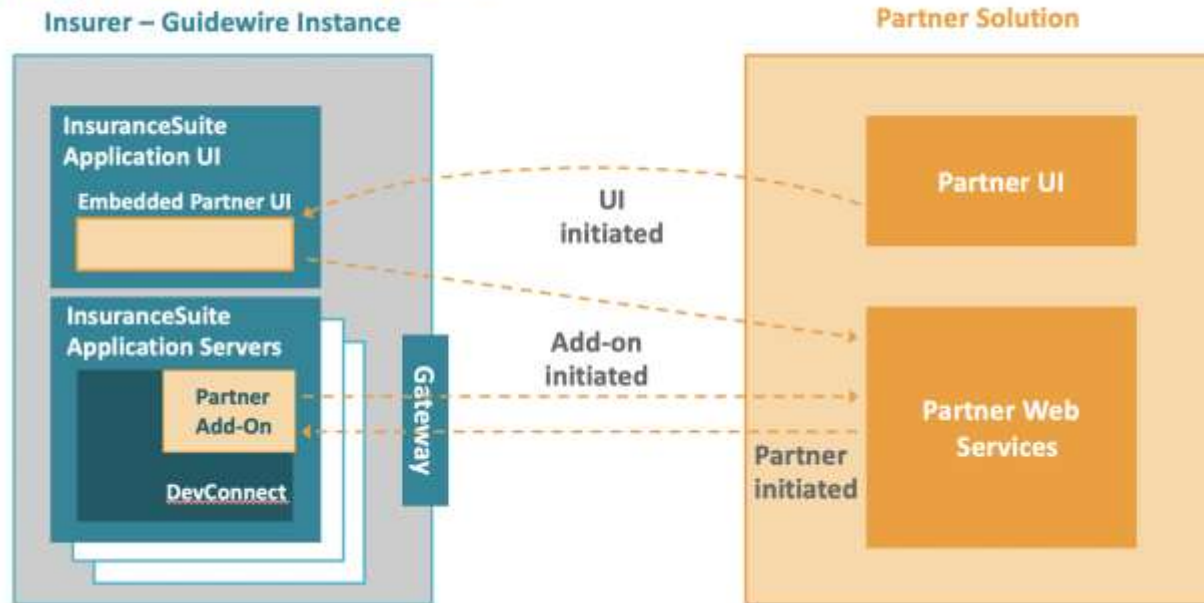
- Minimize the use of proprietary technologies, and instead leverage industry-standard technologies by using Java and JavaScript as the primary programming languages.
- Use open-source libraries.
- Choose modern and open standards that are widely adopted, such as Representational State Transfer (REST), Security Assertion Markup Language (SAML), and JavaScript Object Notation (JSON) Web Token (JWT).

## DevConnect Architecture

Typically, a DevConnect add-on contains three main components (as shown in the figure below).

- The partner's solution provides network services (REST APIs).
- A Java component that is deployed inside the appropriate Guidewire application server. The partner implements this component in Java code by using the Java APIs provided by the DevConnect SDK.
- The partner provides a user interface (UI) component on a publicly accessible HTTP server and embeds the component in an inline frame (IFrame) in the UI for the appropriate Guidewire application. This UI component communicates both with the partner's network services and with Guidewire applications by using the DevConnect SDK JavaScript library. This component might be optional for some add-ons.

## Integration Interactions



### Installing and Configuring a DevConnect Add-On

Prior to accessing an SDK or add-on, insurers must execute a *DevConnect Customer Agreement*. Insurers can download the latest version of the DevConnect SDK required to support the add-on of interest from the Guidewire Community after being authorized by Guidewire. The DevConnect SDK installation package consists of the following components:

- Binary JAR files
- A YAML configuration file
- Guidewire InsuranceSuite configuration content that must be installed into the insurer's system

The insurer admin must install the DevConnect SDK version that corresponds to the appropriate InsuranceSuite application version. The installation steps are as follows:

1. Copy the SDK package.
2. Apply the SDK patch to the InsuranceSuite application base file.
3. Build the configuration in Studio.
4. Configure the DevConnect runtime.
5. Test the SDK.

The insurer can download the partner's add-on install package from the Guidewire Marketplace. The add-on must be installed in the InsuranceSuite application `<work>/modules/configuration/config` folder. The add-on contains properties that are specific to both the Guidewire partner that developed the add-on and to each insurer's installation.

### Technical Requirements for Network Services

A DevConnect add-on communicates with the partner services in both directions.

- **Add-on as a consumer:** Initiates calls to partner services.
- **Add-on as a producer:** Receives callbacks, also known as webhooks, from the partner services.

## Add-On as a Consumer

An add-on might initiate REST API calls to partner services. DevConnect provides the OkHttp library for this purpose. Other technical aspects of outbound REST APIs include:

- JSON payloads.
- Authentication for outbound calls from the add-on. The authentication is the responsibility of the partner.
- Transport layer security (TLS). Note that the certificates cannot be self-signed.

It is up to the partner to implement a specific authentication protocol in the add-on code. DevConnect provides a mechanism for the partner to provide an insurer with account credentials or API key/shared secret for authentication. These credentials can then be provisioned in the application server. The DevConnect SDK can access the provisioned credentials and provide them to the partner's add-on code at runtime.

## Add-On as a Producer

The add-on developer might implement REST endpoints that are activated in the insurer's application server and are callable by the partner's services. Add-ons use the JAX-RS standard to expose REST APIs for calls to the add-on. Additional requirements for inbound REST APIs include:

- JSON payloads.
- Authentication for inbound calls, which must be implemented by using a JWT.
- Transport layer security (TLS). Note that the certificates cannot be self-signed.

The JWT must be passed in the HTTP request header. The DevConnect SDK verifies the token by first retrieving the partner's public key. That public key must be provided by a JSON Web Key Set (JWKS) object. The partner makes the JWKS object available from a publicly accessible HTTP server.

## Technical Requirements for the UI

DevConnect enables partners to embed their UI directly into the appropriate InsuranceSuite application UI. The implementation uses a DevConnect extension point and an IFrame.

### Implementation of Embedded Pages

DevConnect provides a JavaScript library that can be loaded onto the partner's page to facilitate communication with InsuranceSuite. A vendor context JSON object can be requested by the partner's page when loaded using the IFrame. This context object provides basic information about the claim that the user is currently viewing. The partner can then call back to InsuranceSuite, using the provided JavaScript library, to fetch additional data for prefilling a form. Partners may have an existing portal that they intend to reuse for their add-on. For example, partners frequently have a form that adjusters can use to place orders. If a partner decides to repurpose pieces of an existing portal in this way, they decide how to implement the integration. Some partners fork their UI code; others use switching logic to dynamically modify the pages and associated UI logic when embedding the UI in a DevConnect IFrame. For example, an order form when embedded in a DevConnect IFrame might need to do the following:

- Strip out extraneous navigation logic
- Perform prefill logic and other logic that works only in an embedded DevConnect context (for example, creating a ServiceRequest object to track workflow in ClaimCenter).

### Browser Security

The partner must host the page that is embedded in the IFrame. The page that is fetched from the IFrame must be hosted by the partner on a publicly accessible endpoint (over HTTPS). While the actual SSO implementation protocol will be based on insurers' requirements, partners are required to demonstrate that the add-on can support SAML 2.0 SSO as part of the validation and publishing process for the Guidewire Marketplace.

Using SAML has the following benefits:

- For the partner, it simplifies the maintenance of the insurer's users in their system; effectively, the partners outsource this activity to the insurer's authentication service.

- For the insurer, it gives the user seamless access to the partner's services by using existing credentials (SSO), while at the same time minimizing the administration overhead for maintaining user credentials in the partner's system.

## Browser Support

DevConnect currently supports the latest versions of the following browsers:

- Google Chrome
- Mozilla Firefox
- Microsoft Edge

## For Additional Information

For more details about DevConnect, please contact your Guidewire customer account manager or send email to [CRM\\_AMER@guidewire.com](mailto:CRM_AMER@guidewire.com) (within North America) or [CAM\\_EMEA@guidewire.com](mailto:CAM_EMEA@guidewire.com) (outside North America).