

blackbaud DEVELOPERS' CONFERENCE

June 15-17, 2021

Demystifying Blackbaud SKY®

BLACKBAUD SKY® TRACK

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Blackbaud Core Services



Safe Harbor Statement

This presentation contains forward-looking statements that involve inherent risks, uncertainties and assumptions. It outlines Blackbaud's current plans and general product direction as of the date this presentation was created. Functionality described in this presentation that is not currently available is subject to change at any time, without notice, at Blackbaud's sole discretion. It does not represent a commitment to develop or release specific features within the timeframe discussed, according to the presented design, or at all. Please make any purchase decisions based on features and functionality that are currently available.

Customization of Blackbaud Solutions

As a Blackbaud customer, your Authorized Support Contacts retain the responsibility for providing internal support for Customizations of your Blackbaud solutions by:

- Providing direct support to answer questions regarding Subscription functionality, internal business practices, and troubleshooting processes to Your Non-Authorized Users
- Providing direct support to answer questions regarding Customization specifications, features, intended usage, and Error correction and troubleshooting processes to Your Non-Authorized Users



Janet Wittenberg

Pronouns: She/Her/Her

Product Manager, Commerce Platform



Kerry Campbell
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Pronouns: He/Him/His

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John Vogel

Pronouns: He/Him/His

Product Manager, Identity & Access





✓ Clarify Blackbaud SKY® in 2021

✓ Explain aspects of the platform that help developers extend various Blackbaud solutions

✓ Define key components to achieve success developing apps!

Our Platform Powering Social Good Innovation

In 2015, Blackbaud
SKY was announced
and set a compass
heading for several
aspects of functional
and technical
transformation for
Blackbaud products





OK, I've heard all of this before. What is SKY...really?



Commerce

 Automates, manages and authorizes what our customers can purchase and access

Identity & Access

 Authentication & authorization for users of Blackbaud's ecosystem

SKY Developer

 Open ecosystem powered with SKY API endpoints, marketplace, and add-ins for partners and developers

Shared services

- Shared capabilities
 with common
 navigation,
 notifications,
 payment processing
- Our transformation to SaaS: cloud operations, continuous deployment

66

How do I know if my product is using "SKY"?





It depends...

There are several layers of the platform that are being adopted at different rates in different products.

Ultimately the rate of adoption affects what you can leverage of our developer platform for any Blackbaud product or solution

Today - Learn which extensibility options are available to you

Prerequisites for SKY Developer extensibility:

Blackbaud ID authentication is required for users to interact with a SKY API application

At least some pages built with **SKY UX** in the Blackbaud solution are required to leverage **SKY Add-ins**

Product Platform Adoption

	RE NXT	FE NXT	eTapestry	Grantmaking	Altru	Church Management	BBMS	Education Management	JustGiving	BBCRM
Identity							Ō		0	Ō
Access			0		0		0		0	0
SKY API			0	0	0					0
SKY UX					0		0		0	0
Add-ins			0	0	0		0	O	0	0



Ok, great. I'm a developer. How do I use this information?





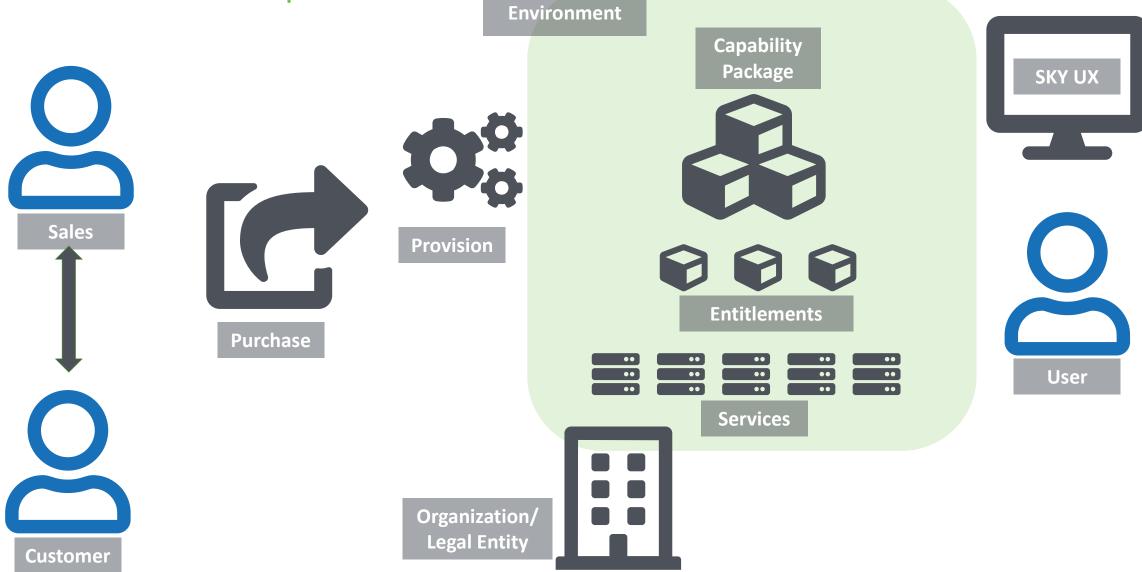
Commerce Platform

Legal Entity / Organization

Environments

Capability packages

Customer Experience



Organization
(aka Legal Entity)



Save the puppies

Environment

Save the puppies Environment 1

Solutions/Capabilities



Raiser's Edge NXT



Organization
(aka Legal Entity)



Save the puppies

Environment

Solutions/Capabilities

Save the puppies Environment 1





Raiser's Edge NXT

Financial Edge NXT



Organization
(aka Legal Entity)



Save the puppies

Environment

Solutions/Capabilities

Save the puppies Environment 1





Raiser's Edge NXT

Financial Edge NXT

Save the puppies Environment 2



Financial Edge NXT

Organization
(aka Legal Entity)



Save the puppies

Environment

Solutions/Capabilities

Save the puppies Production



Raiser's Edge NXT

Save the puppies Test



Raiser's Edge NXT



Identity and Access

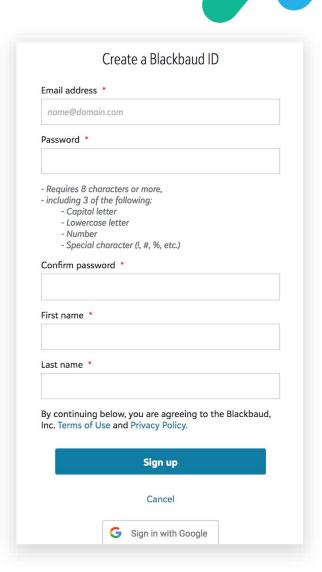
Blackbaud ID

Security

Administrators

What is Blackbaud ID?

- Centralized authentication, identity and session management providing users with a SSO for the Blackbaud solution ecosystem
- Self-serve **user registration** process to create their account
- **SSO** configuration for federated identity with your identity provider (ex: Azure, Okta, Google)
- Enables MFA or further options through an identity provider
- Social Sign In: Google Account





Users can sign in via 3 methods:

- Email/Password
- SSO
- Social

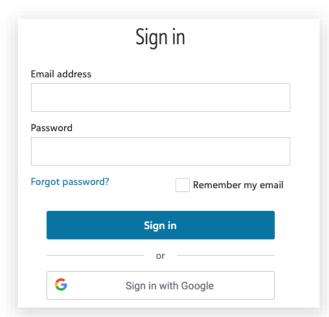
Use Case

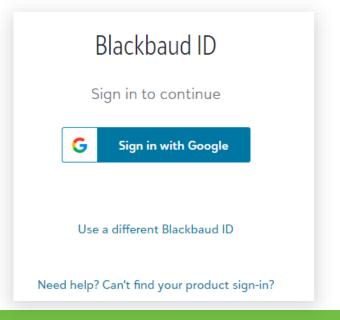
- **Email/Password** users every time
- SSO users first time
- Social users first time

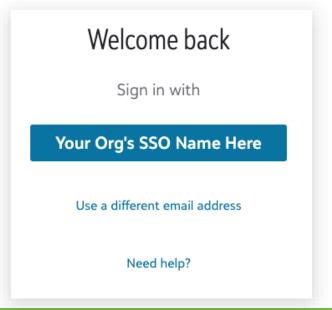
Returning Social users

• Returning **SSO** users

Display





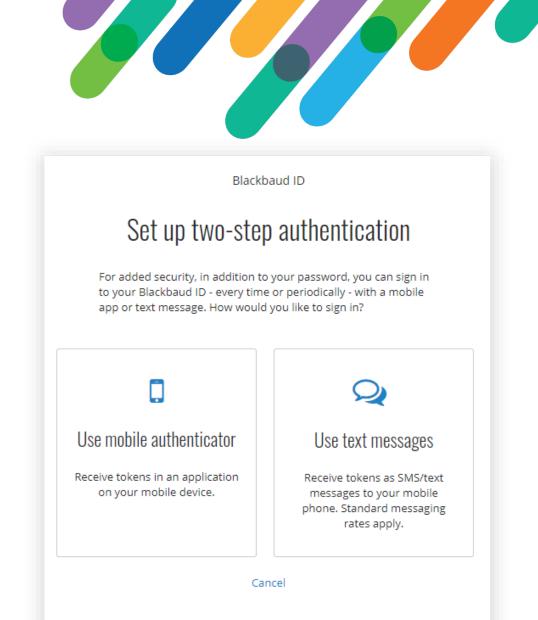


Blackbaud ID and MFA

Having Multi-factor Authentication (MFA) turned on is the greatest single measure to increase the security of an account.

Enabling MFA on a Blackbaud ID account requires verification beyond their email address and password. The verification can be achieved:

- Through a mobile authenticator with biometrics turned on such as fingerprint or facial recognition or time-based, onetime password (TOTP) application such as Google Authenticator, Microsoft Authenticator or Auth0 Guardian
- As SMS/text messages on mobile phone



For a deeper dive please attend <u>SSO, MFA, Blackbaud ID & Your Org's Security Posture</u> on Wed at 2:15pm



SSO through IdP to Blackbaud ID

If your org has an Identity Provider (IdP), then your Org Admin can create a SSO connection to Blackbaud ID using the options seen below so your colleagues have a single account across applications beyond Blackbaud.



Use Azure AD

Create a connection to your Azure Active Directory



Use Google G Suite

Create a connection to your Google G Suite



Use SAML 2.0

Create a connection to your identity provider with Security Assertion Markup Language



Use ADFS

Create a connection to your Active Directory Federation Services



Use Okta

Create a connection to your Okta identity management

For a deeper dive please attend <u>SSO, MFA, Blackbaud ID & Your Org's Security Posture</u> on Wed at 2:15pm

Admin model

Organization
(aka Legal Entity)



Save the puppies

Org Admin

- Full access to Admin Console
 - SSO w IdP
 - Invite users to the org

Environment

Solutions/Capabilities

Save the puppies Environment 1

Environment Admin

- Full access to all Solutions in Environment
 - Can do anything a Solution Admin can do



Raiser's Edge NXT



Financial Edge NXT

Solution Admin

Full access to a Solution

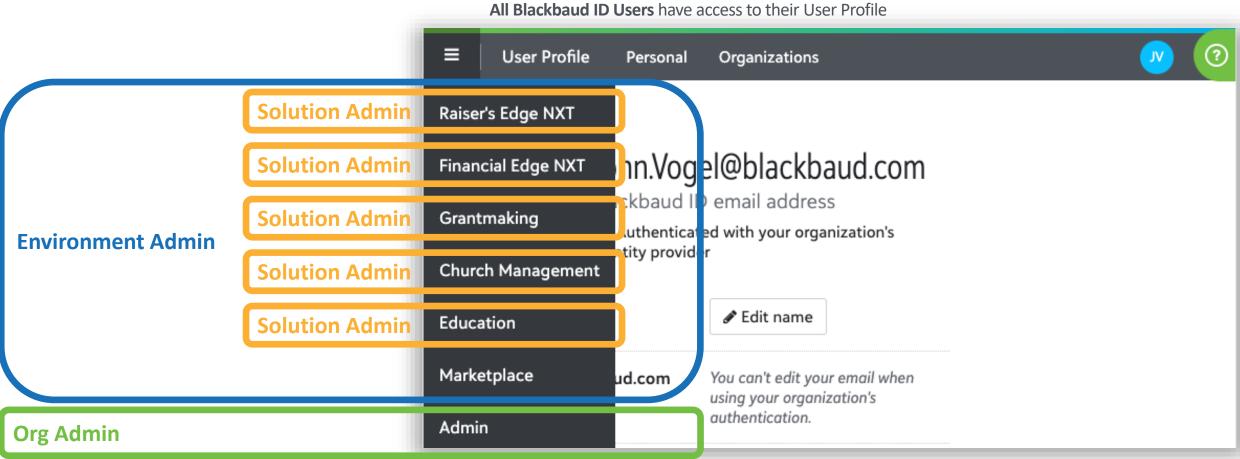
Admin Access

	Org Admin	Environment Admin	Solution Admin
Access to Admin Console			
Manage Authentication			
Add new Users to Org	/		
Add/Edit Org Admins			
Add Environment Admins			
Edit Environment Admins		~	
Access to Solution Security			
Add/Edit Solution Admins			
Add/Edit User Access to Solutions			
Add/Edit User Roles for Solutions			

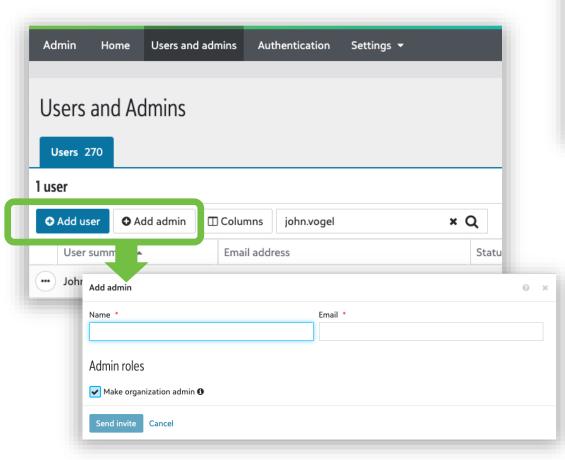
blackbaud^{*}

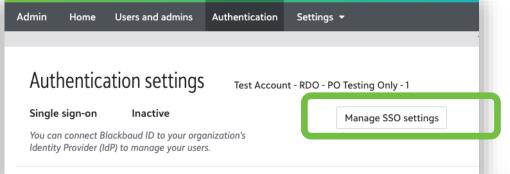


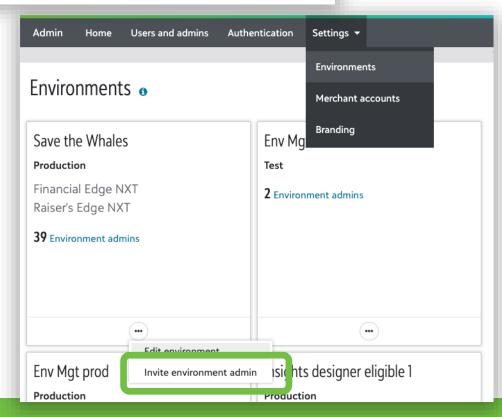




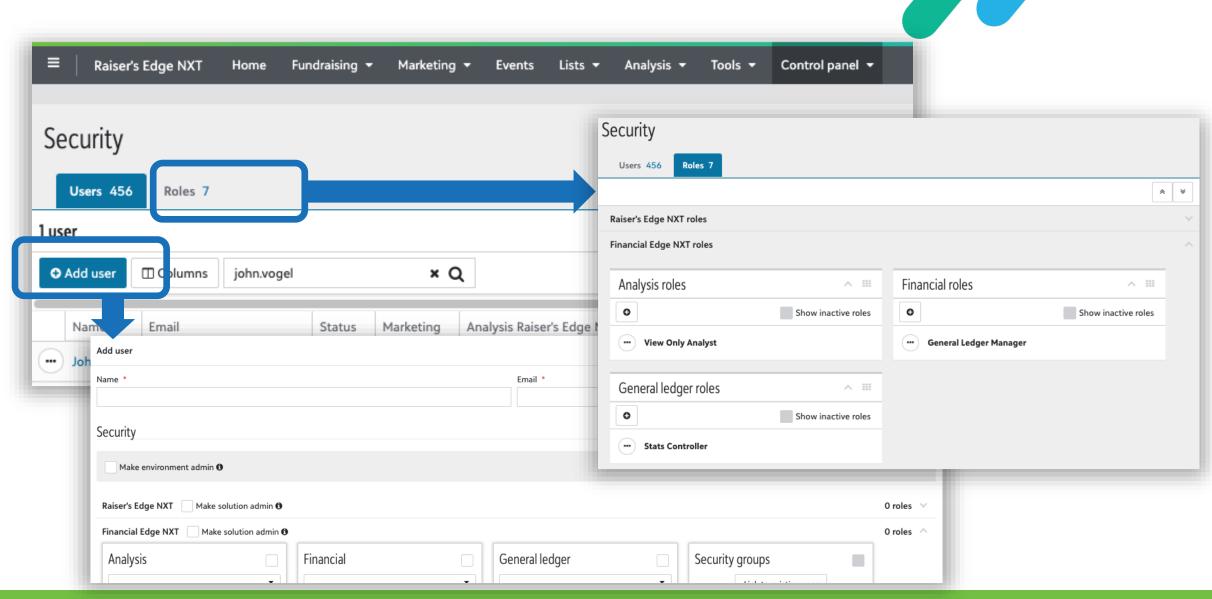
Org Admin



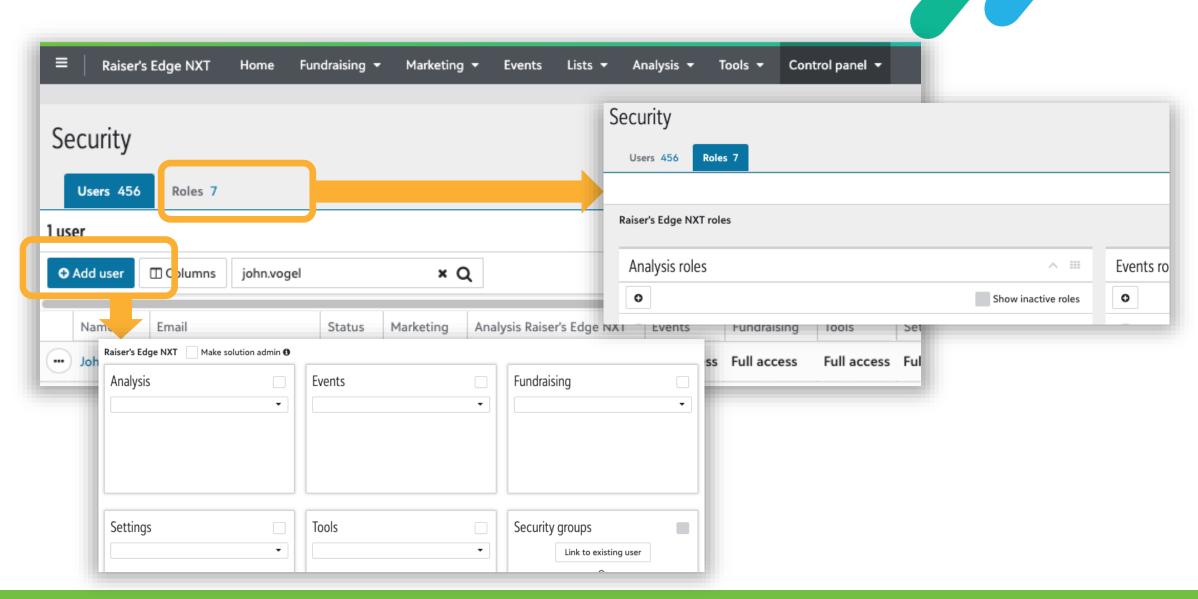




Environment Admin



Solution Admin







SKY Developer SKY API

SKY UX

SKY Add-ins

Marketplace

SKY Developer

The toolset to extend, customize, and contribute to the capabilities available on Blackbaud SKY, including:

SKY API®

Open, industry-standard REST APIs

SKY Add-Ins[™]

Enables contextual experiences in Blackbaud solutions

SKY UX®

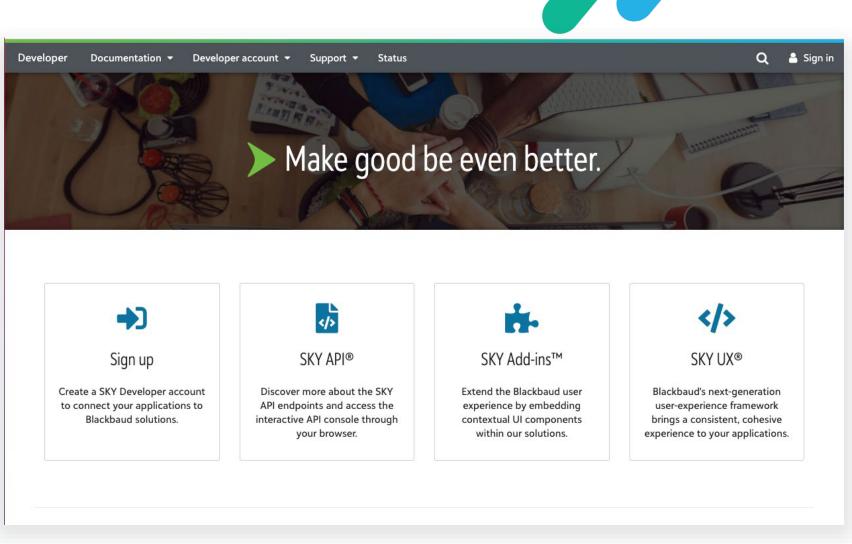
Open source, full component library



SKY Developer Portal

The SKY Developer
Portal is a valuable
resource to help
developers get started
on their journey and
manage their SKY

applications.



https://developer.blackbaud.com

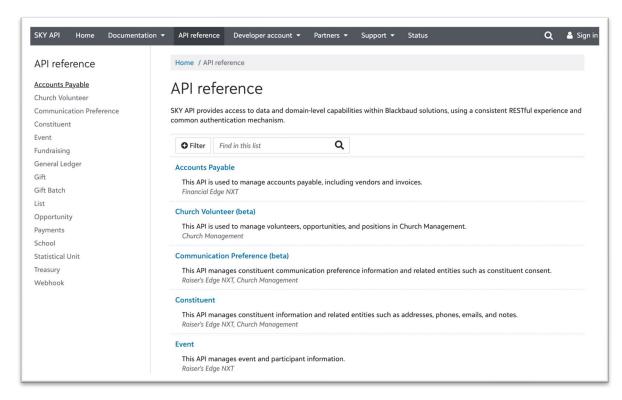


APIs named by capability/domain

SKY APIs are not named by product but capability or domain.

This was an intentional choice to support the vision that one API could be compatible with multiple Blackbaud solutions.





What solutions are represented by SKY API?

Available on SKY API

Other...

Raiser's Edge NXT

Financial Edge NXT

Education Management

Church Management

Blackbaud Merchant Services

Blackbaud CRM

Altru

Luminate Online/TeamRaiser

eTapestry

Blackbaud Grantmaking

JustGiving

Where can I find the documentation for the other APIs?

https://developer.blackbaud.com/skyapi/docs/applications/blackbaud-apis



Non-SKY APIs

The following Blackbaud solutions are not contained within the SKY ecosystem. To go to the solution's API documentation, use the links below.

Blackbaud CRM

Learn how to extend, customize, and integrate with Blackbaud CRM.

Blackbaud Grantmaking

Grantmaking API documentation, including SDK references and a sample project.

Blackbaud Internet Solutions

Customize Internet Solutions through the use of .NET assemblies, REST APIs, and JavaScript SDKs.

Blackbaud Luminate Online

REST endpoints to integrate content in your site, as well as creating custom content and forms.

Blackbaud ON Products

Programmatic access to your Blackbaud ON product data through a REST-based API.

eTapestry

eTapestry developer information, including technical details, sample code, and more.

JustGiving

Create innovative, custombuilt applications using JustGiving's content and data store.

Applications

Applications can be registered in the SKY Developer Portal.

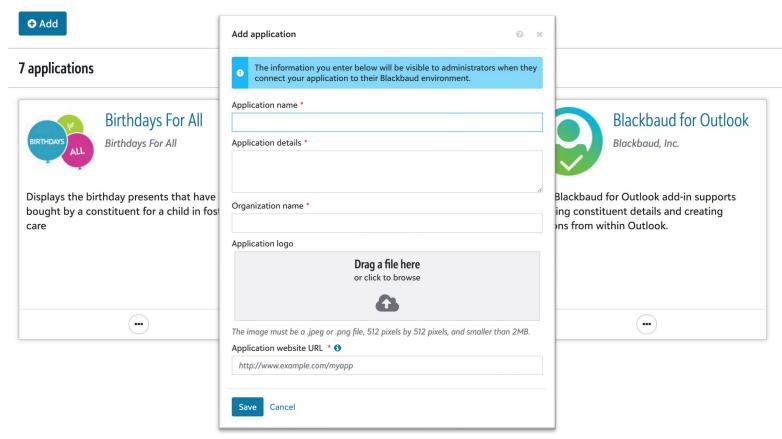
Registering the application will provide the developer with an Application ID and Secret used for the *client_id* and *client_secret* in the OAuth 2.0 flow when using SKY API.

An application must be registered to appear in the Blackbaud Marketplace.



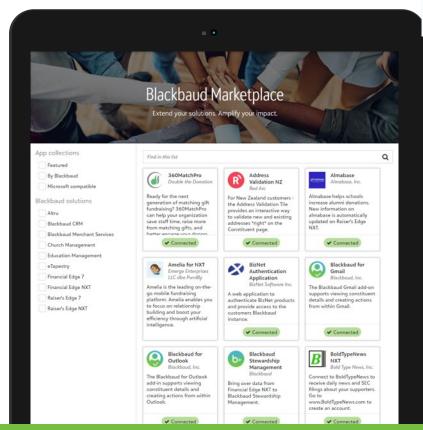
Home / Developer account / My applications

My applications



Blackbaud Marketplace

The *Blackbaud Marketplace* is a curated list of Partner apps that integrate with Blackbaud solutions.





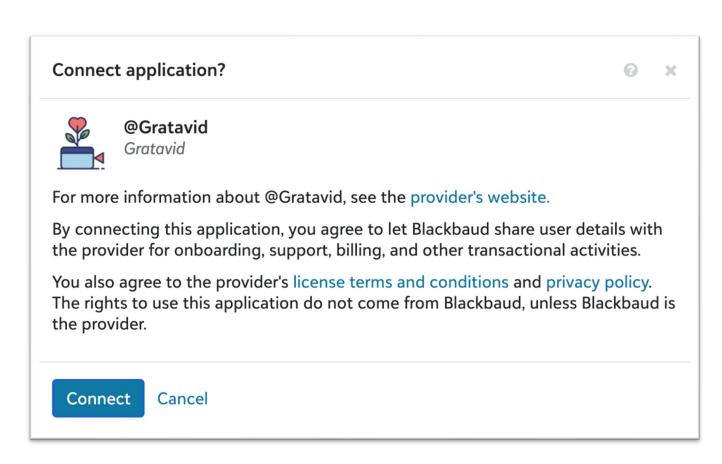


What does "Connect" actually do?

The "Connect" button connects the app to the customer environment which enables the OAuth 2.0 flow and SKY API calls to be authorized.

Apps can be connected via the Marketplace listing or with the Application ID.

Environment admin is required to connect apps.



Personas involved for providing the app access to data



Developer

Creates the app



Environment Admin

Connects the app

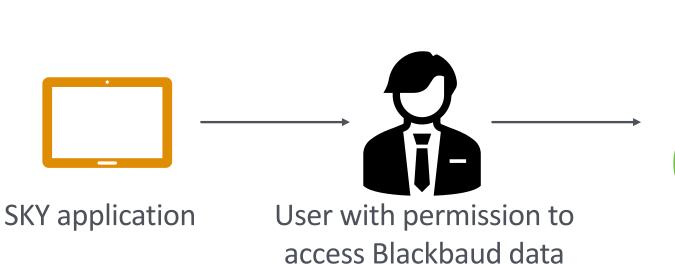


User

Authorizes the app

SKY API Authorization

SKY API uses OAuth 2.0 protocol to authorize API requests without exposing user credentials to the application.





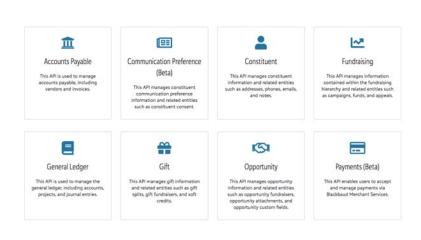
OAuth "environment" level consent

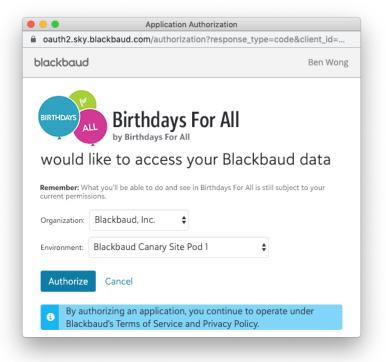
One application...

...calling many APIs...

...single "environment" level consent







API calls authorized in context of the consenting user

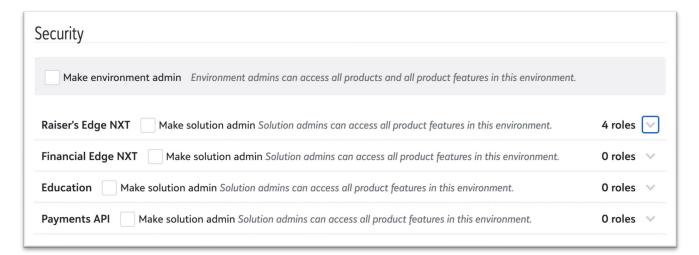






SKY application

User with permission to access Blackbaud data

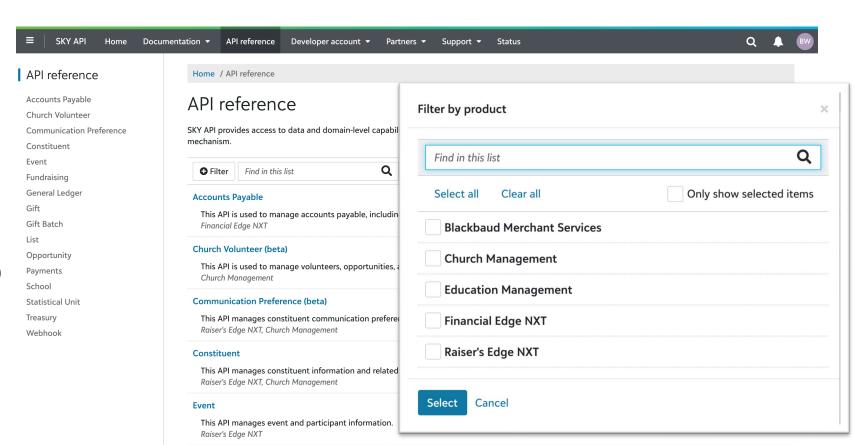




What APIs can be used?

Some APIs require the environment to have a particular solution of capability package.

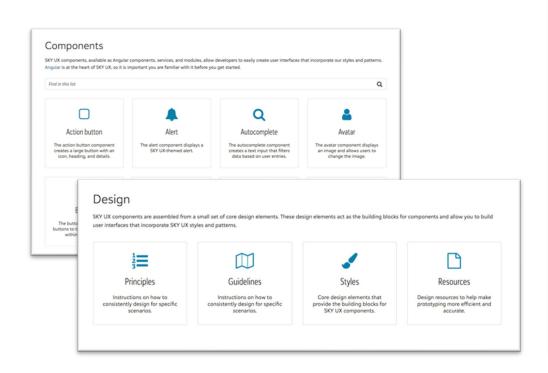
We have future plans to provide more visibility into the details of what solutions/capability packages the environment contains.

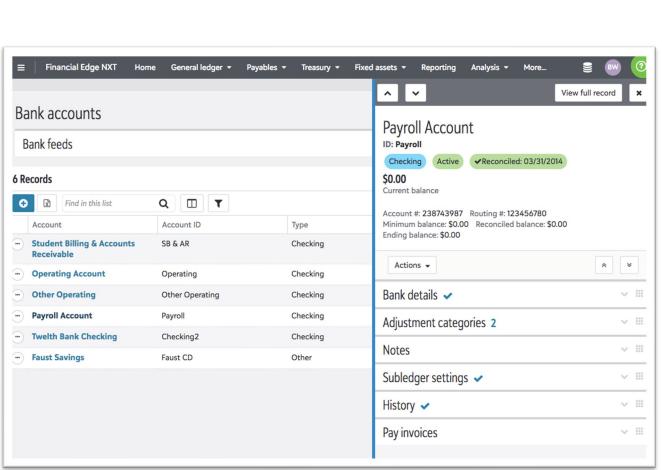




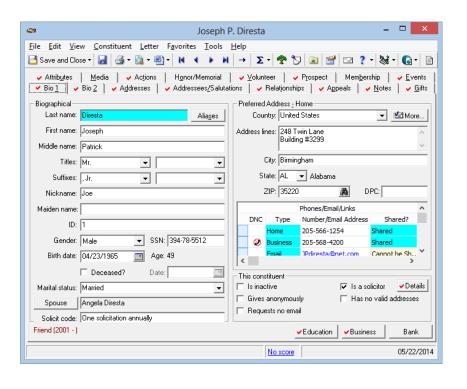
SKY UX

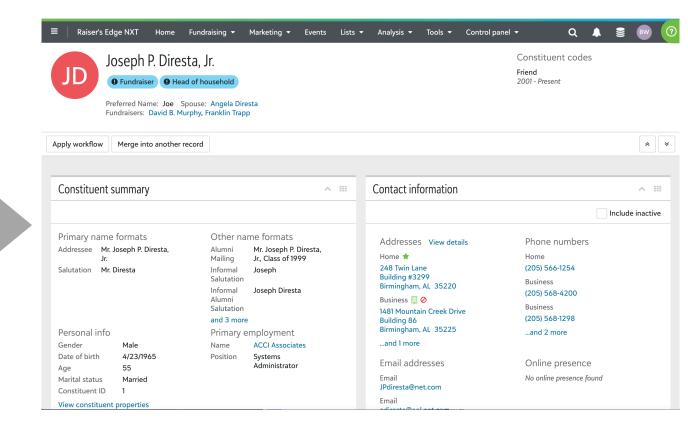
Open source UX toolset to create applications that adhere to the SKY UX principles and patterns.





Legacy to Modern Cloud





SKY UX layers

Design Philosophy

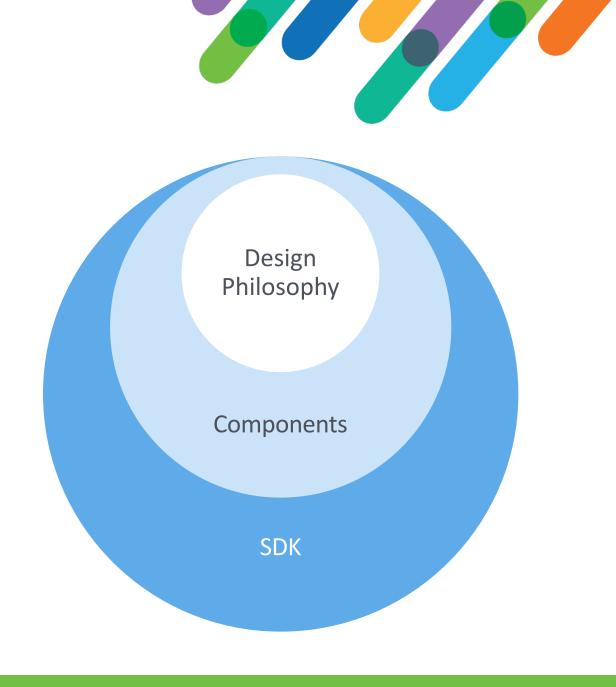
- Focus on workflow
- Empower users
- Maintain clean, cohesive interface

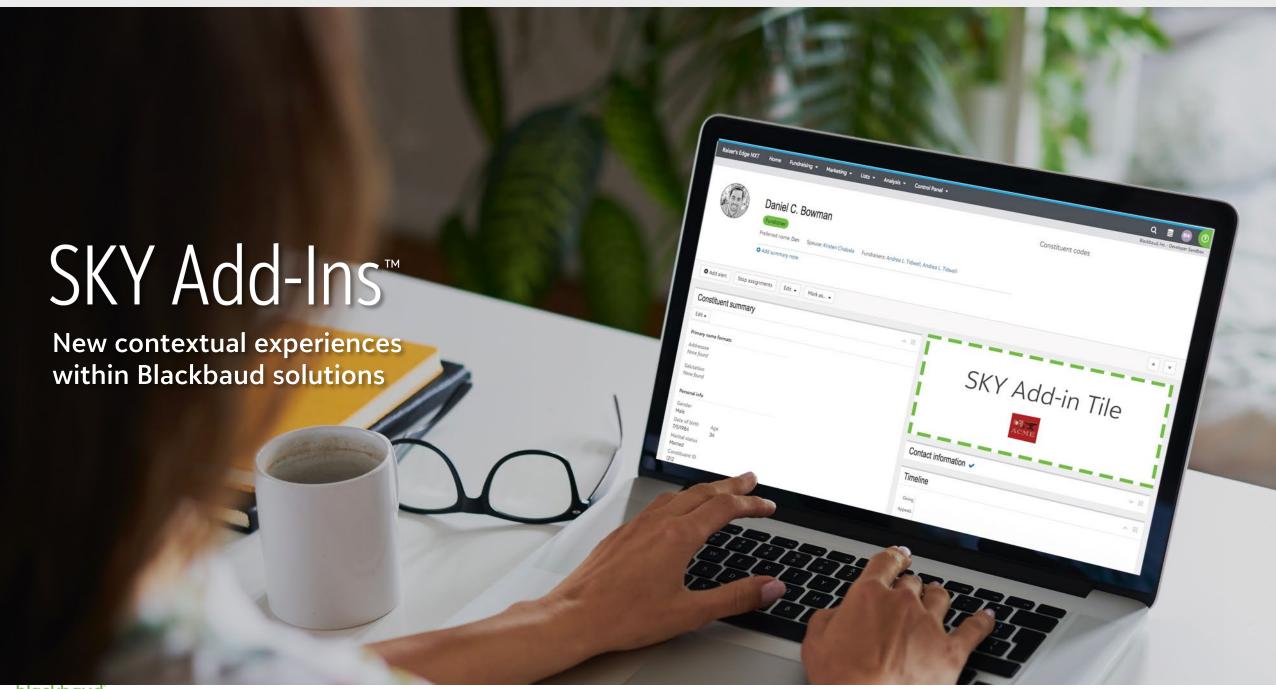
Components

- Based on Angular
- 80+ component library
- Documentation with live code samples

SDK (CLI + Builder)

- Improves developer productivity
- Commands to create, test, and run SPAs

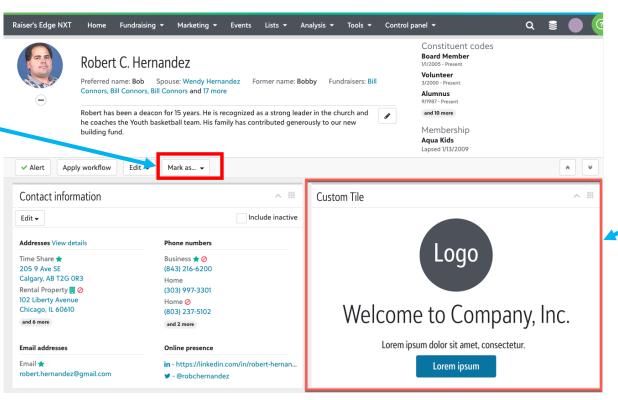




UI extension points

The specific areas in the Blackbaud UI that can be extended are called Extension Points. Extension points render as iframes that load content from an external URL.

Constituent page action



Constituent tile dashboard

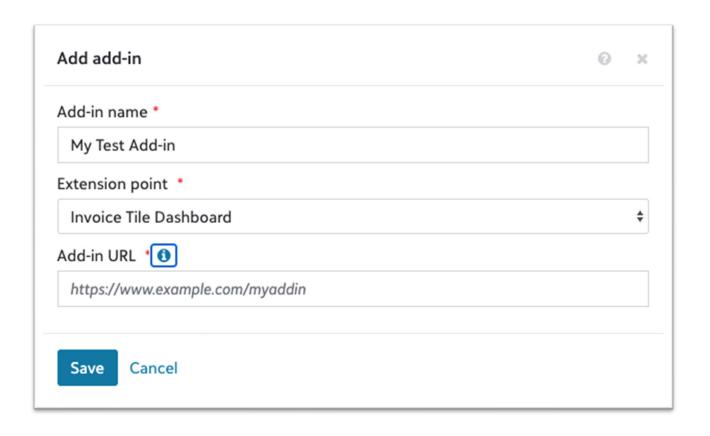


Create a SKY Add-in

You can register SKY Add-in extension points from the SKY Developer Portal > My Applications page.

You must provide a URL for the content to load into the iframe.

The *sky-addin-client* library is then used to provide the functions to interact with the host page.

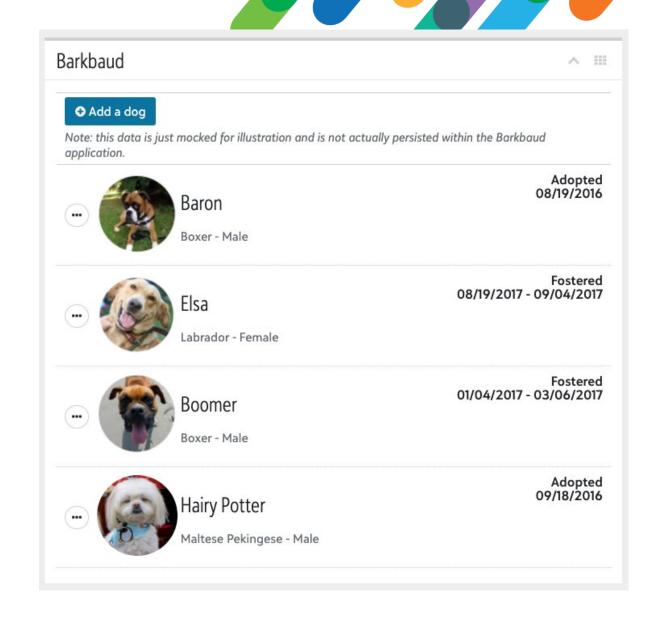


Loading SKY Add-ins

At runtime, the page with the extension point will look for registered SKY Add-ins from SKY Applications connected to the environment.

Context values are provided to the add-in URL

The user's information can be passed via a User Identity Token (UIT)





Wed 12:30pm Open a world of possibilities with SKY Developer

Wed 2:15pm <u>Blackbaud CRM – Getting ready for Blackbaud ID</u>

Wed 2:15pm SSO, MFA, Blackbaud ID & Your Org's Security Posture

Thur 11:15 Extend your reach with the Blackbaud Marketplace



Thank you!