The IT Guide to HEROKU
In the Fourth Industrial Revolution, it seems that every day there’s a new wave of digital disruption. With 75 billion connected devices and 6 billion mobile phones, companies in every industry are adapting to a demand for technological change across every stakeholder, from employees to customers. IT leaders are at the center of this digital transformation – they are the agents of change, tasked with growing the business by leveraging the latest and greatest technology.

How quickly can you, as an IT leader, bring new technology into your business? Between legacy systems, outdated infrastructure, and increasing demand for talent, expectations are high and resources are limited. Meeting these high expectations requires finding new and effective ways to deliver value faster – regardless of legacy technologies and complex environments. It requires empowering everyone in your organization to participate in digital transformation by bridging the gap between IT and lines of business to develop a partnership that puts innovation at the top of everyone’s mind.

One way to overcome this gap, deliver value faster, and increase innovation across your business is by building apps. Apps are the driving force behind digitizing work, transforming manual processes like spreadsheet and email-based tasks into automated, intelligent, and connected business processes. Building apps that digitize every part of your business helps you break down silos, work faster, and be more proactive when meeting customer demands.

Inside these pages, you’ll discover why the Salesforce Lightning Platform is the fastest way to build, connect, optimize, and deploy apps. The Lightning Platform empowers everyone in your organization – from admins and business users to professional developers – to build apps. That means you can accelerate your digital transformation so you can streamline processes, boost productivity, disrupt your industry, connect to your customers, and change how your IT department delivers value to your entire business.
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Delight Customers With Engaging Apps Built on Heroku

**HEROKU BY THE NUMBERS**

- **7 Million+** apps developed on Heroku
- **23 Billion** data requests per day

**BUILD MODERN APPS CONNECTED TO YOUR CRM**

When we say the Lightning Platform makes building apps everyone’s business, we’re not leaving out developers. With the Lightning Platform’s pro-code tools, developers can build collaboratively and deliver continuously. Heroku empowers developers to build engaging customer facing apps tied to Salesforce data leveraging the language of their choice while meeting the highest requirements for compliance, security, and scalability.
Heroku gives businesses the flexibility and control to rapidly create, deploy, monitor, and scale innovative apps with industry-leading security and trust. Enterprise app development teams leverage powerful features – such as smart containers, instant scalability, and the leading Heroku developer experience with support for continuous delivery and collaborative development – to deliver the next amazing app for your customers, partners, and employees. Heroku offers a catalog of over 150 pre-integrated add-ons, including external data stores, monitoring, logging, caching, messaging and queuing, alerts and notifications, and other advanced capabilities, as well as a fully managed set of data services hosted by Salesforce and optimized for app developers. Build apps in the programming language of your choice – including Ruby, Node.js, Python, Java, and more – then deploy your app in seconds.
COLLABORATION AND CONTROL

Improving Developer Collaboration and Productivity
Heroku helps enterprise development teams iterate quickly, collaborate effectively, and automate the development process. Bring distributed and heterogeneous development teams into shared app workspaces, so you can build more engaging apps together. Seamlessly integrated permissions sets give users the access privileges they need without slowing productivity. Heroku Flow brings together Heroku Pipelines, Review Apps, Heroku CI, and GitHub integrations into an easy-to-use structured workflow for continuous delivery. You can leverage GitHub Sync for automated deployment of pull requests to staging, creating a disposable review app that allows team members to easily test out code changes before pushing to production.

Accountability with Agility
When you ask customers to entrust you with their personal or business information, you (and they) will want to know who has access to that data and who can deploy code that touches it. Heroku uses privileges that let you separate areas of responsibility so that access is only granted to those who need it. Manage and administer your organization’s development processes, resources, and users from a unified dashboard. And with single sign-on, you can use your identity provider of choice to manage developer access and authorization.

Take the Trail: Develop Apps with Heroku

HEROKU HIGHLIGHTS:

SUPPORT FOR MODERN OPEN-SOURCE LANGUAGES
Run multiple languages, like Node, Ruby, Java, Clojure, Scala, Go, Python, and PHP, all from the same platform.

TRUSTED APP OPERATIONS
Heroku’s global operations and security team is on duty 24/7/365, freeing development teams to focus on creating more compelling user experiences.

SMART CONTAINERS, ELASTIC RUNTIME
Your apps run in dynos — smart containers that are part of an elastic runtime platform that provides orchestration, load balancing, security, logging, and more.

BUILT FOR CONTINUOUS INTEGRATION AND DELIVERY
Deploy from Git, GitHub, or Docker, or using an API. Plug into the most popular CI systems and servers for consistent and automated app delivery.

SIMPLE HORIZONTAL AND VERTICAL SCALABILITY
Heroku runs some of the most demanding and highest-traffic apps in the world. Easily scale apps in a single click with no downtime.

LEADING PLATFORM TOOLS AND SERVICES ECOSYSTEM
Compose apps with add-ons, customize language stacks with buildpacks, and jumpstart projects with buttons, all from the Heroku Elements Marketplace.
**HEROKU ELEMENTS MARKETPLACE**

**Plug-and-Play Developer Components**
The Heroku Elements Marketplace is a curated collection of over 150 add-ons that can be easily integrated into your Heroku app. With add-ons, there’s no need to tame the wilderness of unvalidated components off the internet or reinvent the wheel and write code from scratch for every part of every app. Add-ons are fully managed services, integrated for consumption within Heroku. Example add-ons include services for databases, logging, caching, monitoring, persistence, email services, and more.

Learn more at addons.heroku.com.
SEAMLESS AND SECURE DATA MANAGEMENT FOR SCALE

**Heroku Postgres**
We’ve taken Heroku’s operational expertise of scaling applications and applied it to PostgreSQL, one of the world’s most popular relational database management systems. Heroku Postgres helps you maximize your data instead of spending time on database setup and maintenance. Heroku’s integration of managed data services alongside our application runtime provides a seamless approach to building applications with a solid data layer built in – all while having complete control of how you want to build your applications on the Heroku platform. Whether it’s features like continuous protection or seamlessly applying the latest security patch, you can rest easy as your database is being protected by our behind-the-scenes efforts.
**HEROKU CONNECT**

Heroku is an application development platform that gives developers the flexibility and control to rapidly create, deploy, monitor, and scale apps using preferred languages and tools, while maintaining the enterprise trust and control you need. In the area of integration, many customers use the combination of Heroku Connect and Heroku Postgres to actively manage data integration between Salesforce apps and custom apps written on Heroku, or apps hosted on other platforms. Heroku Connect brings bi-directional synchronization between Salesforce and Heroku Postgres, helping to unify your app data with the contacts, accounts, and other custom objects in the Salesforce database.
Heroku Redis
We’ve enhanced Redis, the world’s most popular key-value data store, with a robust developer experience to make building data-driven apps even easier. Heroku Redis lets you gain greater visibility into performance, better manage your instances with a powerful CLI, and easily federate data with Postgres to gain business insights using familiar SQL tools. Let our experts run your Redis instance so you can focus on what matters – your app.

Apache Kafka on Heroku
Apache Kafka runs on Heroku. Kafka provides the messaging backbone for building a new generation of distributed applications capable of handling billions of events and millions of transactions. Now you can consume Kafka as a service with Heroku’s world-class orchestration and thoughtfully tuned configurations that keep Kafka fast and robust. The easy-to-use CLI and web tooling make Kafka simple to provision, configure, and operate. Seamless integrations let you run producers and consumers as Heroku apps for simple vertical and horizontal scalability.
Heroku Private Spaces
Heroku Private Spaces combines the powerful elasticity of Heroku’s compute and data services with the privacy and control of your own private network. Leveraging virtual networking and software controls, Private Spaces allows you to run your apps in an isolated network and in a designated geographic region of your choosing, which can be entirely private or connected via managed access controls to your on-premises environment or other cloud services.

This powerful mix of a multitenant “control plane” with private runtimes and enterprise-grade secure networks, abstracted to the app layer so you do not need to manage discrete networking configurations at the infrastructure layer, is what makes the Heroku Private Spaces architecture unique. At the same time, Private Spaces preserves the existing Heroku development and deployment experience of the Heroku platform, leveraging the Heroku Button, git push deployments, review apps, pipelines, seamless scaling, self-healing, and the Heroku Elements Marketplace – all of which are included with Private Spaces.
HEROKU SHIELD

Heroku Shield is a set of Heroku platform services that offers additional security features needed for building high-compliance applications. Use Heroku Shield to build HIPAA or PCI-compliant apps for regulated industries, such as healthcare, life sciences, or financial services. Heroku Shield simplifies the complexity associated with regulatory compliance, so you can enjoy the same great developer experience when building, deploying, and managing your high-compliance apps.

Shield Private Spaces

**Shield Private Spaces** enables you to build amazing apps for high-compliance industries like healthcare and life sciences that require a business associate agreement (BAA). Spin up a HIPAA-compliant environment in minutes and start deploying your applications with all the ease of the Heroku developer experience.

Shield Dynos

**Shield Dynos** provide an added layer of security to Heroku Dynos – isolated, virtualized Linux containers that are designed to execute code based on a user-specified command. With Shield Dynos, we include an encrypted ephemeral file system that restricts SSL termination from using TLS 1.0, which is considered a vulnerability.

Shield Postgres

**Shield Postgres** databases guarantee encryption of all your data by blocking all attempt-connection attempts to the database using an unencrypted protocol. As part of continuous protection, Postgres encrypts all data transmitted to backup databases even while at rest. Shield Private Postgres databases are monitored by additional intrusion detection and host scanning mechanisms to ensure complete protection.

Shield Connect

Heroku Shield Connect is the newest addition to Heroku Shield’s set of services. Using Heroku Connect’s bi-directional synchronization between Salesforce and Shield Postgres, you can share sensitive PII data or PHI data in a high-compliance environment.
BUILD INNOVATIVE, ENGAGING APPS

Heroku is powering the app revolution by giving developers the ability to create stunning and engaging apps using the language that is best for the job. And it is all connected to Salesforce.

Toyota Motor Europe
CAR CONFIGURATION APP

Build the perfect Toyota before you even visit the dealership. With the car configuration app, customers can select the perfect model and customize it to their heart’s content. Because Toyota Motor Europe built its app with Heroku on the Lightning Platform, it’s ready for visitors on any device: mobile phones, tablets, or desktops.

“We rely on Heroku for 40+ mission critical apps, and it is helping us transform how we connect and engage with our customers.”

Pierre Masai
CIO
Toyota Motor Europe
Macy’s
RETAIL E-COMMERCE APP
Macy’s runs its mission critical app portfolio on Heroku, including its top retail e-commerce app. Macy’s customers can shop by category, find deals and promotions, and have a genuine Macy’s buying experience from their smartphones or other digital devices. They can also add to wedding and other registries, or find someone else’s registry from which to make a purchase.

★ macy’s
Conclusion
Getting Started with Heroku

Now that you’ve learned about Heroku, why not learn more about how Heroku and Lightning Platform together deliver a powerful customer experience? Get your hands on the Lightning Platform with our free trial that lets you:

**ACCESS**
our drag-and-drop Lightning App Builder

**LEARN**
the basics of customizing Salesforce.

**UNLEASH THE POWER**
of Lightning to bring app ideas to life, faster.

Start building apps today.

GET YOUR FREE TRIAL