How Salesforce Runs on Heroku:

Global Scalability to Serve Customers and Employees

salesforce | HEROKU from Salesforce

Forward note

Betty Junod, CMO

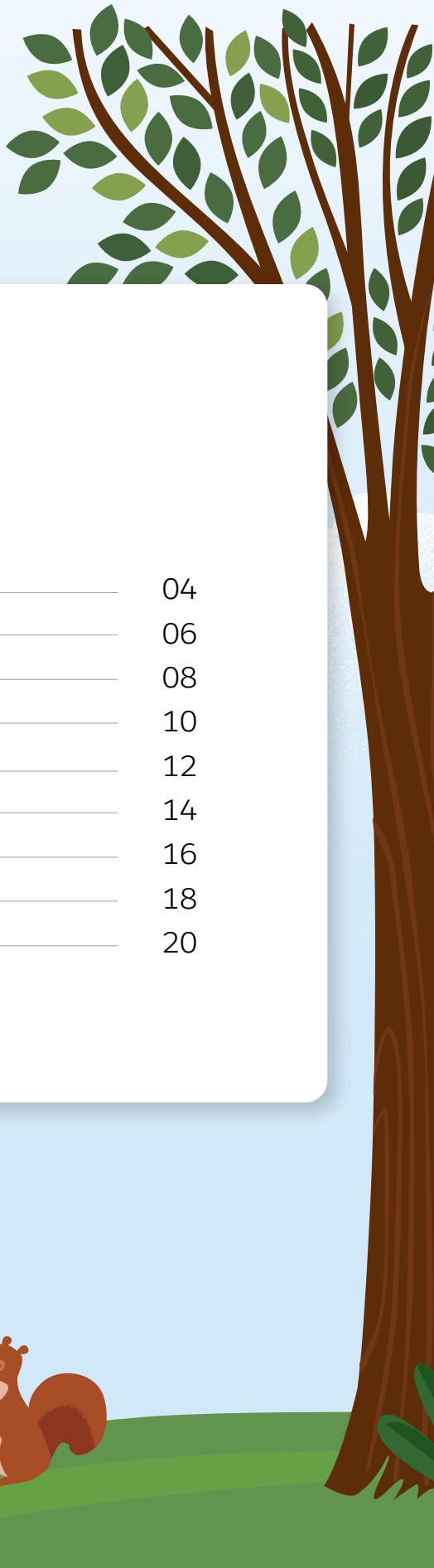
Heroku by Salesforce

I am delighted to share with you this exploration into **how we are delivering business success at Salesforce using Heroku.**
At Salesforce, we pride ourselves on being Customer Zero for all of our products and deploying solutions for our own sales, service, marketing, and technology teams - demonstrating what's possible in business transformation.

This ebook demonstrates how we use **Heroku at scale across Salesforce, resulting in over 11,000 custom applications–many of which are integrated with our C360 portfolio–to serve over 80,000 employees and 150,000 customers around the world.** From annual go-to-market planning to custom Agentforce actions, lead scoring, Trailhead, and more, the Heroku AI PaaS is an **essential element that brings the flexibility of any code and elastic compute to every solution.**

I invite you to learn more about how these solutions supported by Heroku deliver simplicity and speed so that our teams can focus on innovation and business success.

Betty Junod



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Salesforce Customer Zero

Salesforce runs its business on Heroku

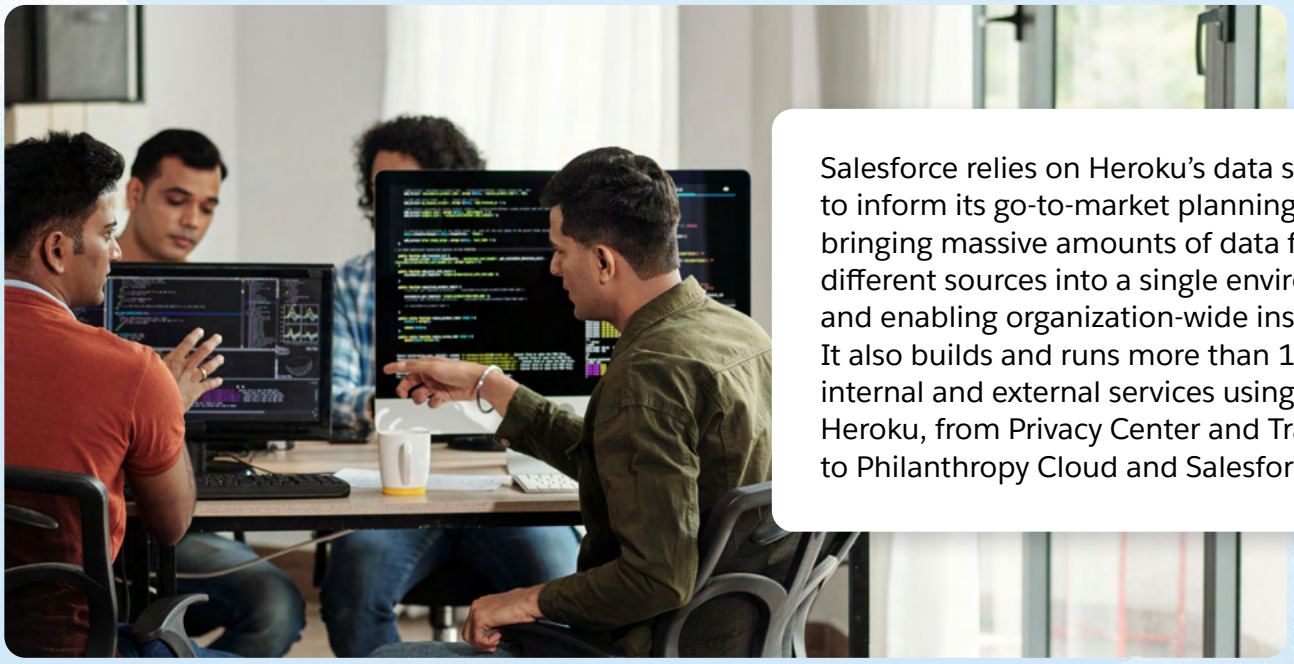
> Heroku's data services have been essential to making our annual go-to-market planning efficient. Heroku Postgres and Heroku Dataclips enable us to easily extract rich insights from our data and share it across the team."
>
> –Ira Kaufman, Manager for Tools, Innovation, and Data Quality, Salesforce

Use case

Powering go-to-market planning.

Products used

- Heroku Postgres
- Heroku Dynos
- Heroku Connect
- Streaming Data Connectors
- Apache Kafka on Heroku
- Heroku Private Spaces and Shield
- Heroku Key-Value Store



Salesforce relies on Heroku's data services to inform its go-to-market planning, bringing massive amounts of data from different sources into a single environment and enabling organization-wide insights. It also builds and runs more than 11,000 internal and external services using Heroku, from Privacy Center and Trailhead to Philanthropy Cloud and Salesforce+.

Key results

Scaled to support almost 400% growth in sales organization over 4 years.

Data preparation reduced from weeks to minutes.

Funneled all data into a single database environment.

Significant time savings, equivalent to six weeks + of employee time.

Challenge

Mobilizing a global sales organization requires lots of data. Not only does the world outside change from one fiscal year to the next (regional economies grow or shrink, new companies appear, technology trends enter and leave the mainstream), but a company's understanding of and response to the market also evolves.

Why Salesforce chose Heroku

Heroku helped the team run millions of rows of data, enormous spreadsheets, and unending manual validations, as well as reduced opportunities for human error.

How Salesforce uses Heroku

- Salesforce ran 11K internal and customer-facing services and applications on Heroku
- Built customer experiences such as Privacy Center, Trailhead, and Industry Cloud; products such as CPQ and Philanthropy Cloud; the Salesforce Events app (Salesforce+); and more
- Runs services such as Salesforce MFA, Revenue Cloud, and Public DNS
- Runs backend services on Heroku, and is the largest user of Heroku Connect
- DET extensively uses Heroku for its base camp, license tracking, and surfacing customer product recommendations through in-app guidance, along with a Customer Success Scorecard

How Salesforce provides agentic global support for customers, powered by Heroku

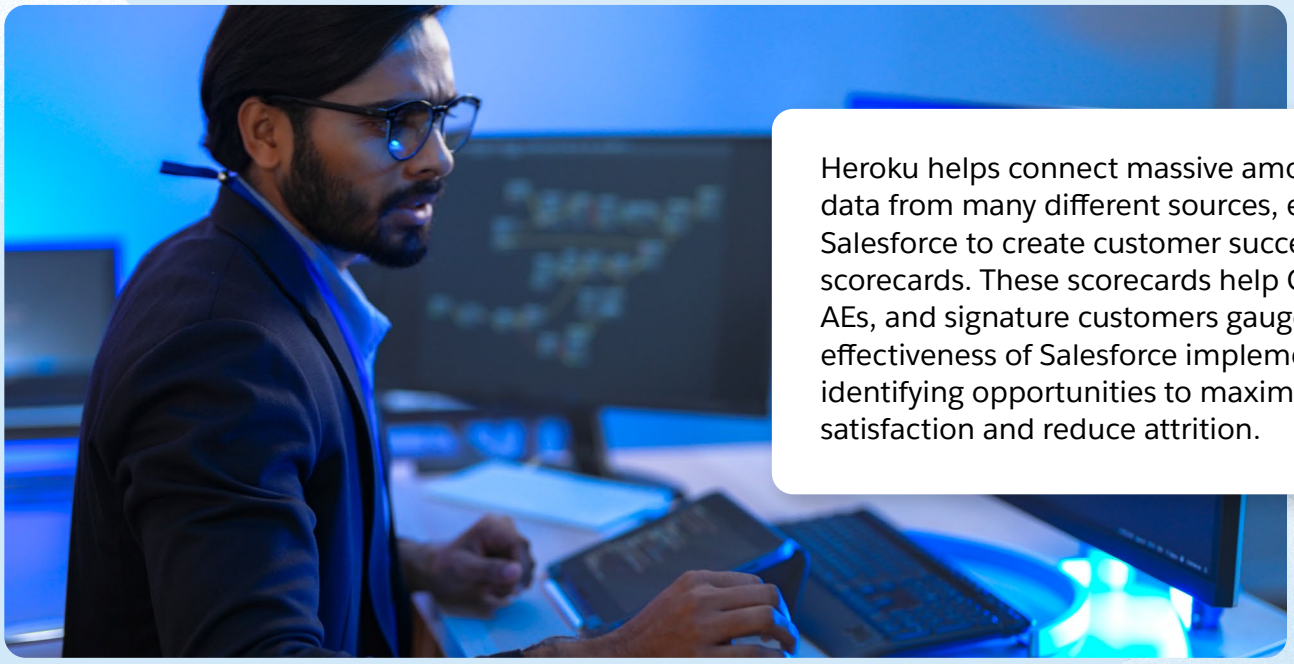
> We had different platforms available, but Heroku really had all the tools ready for us to come together and be able to provide a solution that met all the needs for our various consumers."
>
> –Daniel Muldoon, Senior Engineer, Salesforce Digital Enterprise Technology

Use case

Connecting data and scaling.

Products used

- Heroku Postgres
- Heroku Dynos
- Salesforce Platform
- Heroku Connect
- Golang API
- Heroku Buildpacks



Heroku helps connect massive amounts of data from many different sources, enabling Salesforce to create customer success scorecards. These scorecards help CSMs, AEs, and signature customers gauge the effectiveness of Salesforce implementations, identifying opportunities to maximize user satisfaction and reduce attrition.

Key results

Heroku connected multiple data sources for leading-edge customer support.

Supported multiple languages and allowed more modern tech stacks.

Improved engineering efficiency.

Easy scalability to handle high data volume and future growth.

Challenge

The Digital Enterprise Technology External Experience team creates Salesforce's Customer Success Scores. They needed a solution that could connect immense amounts of data from multiple different sources, while providing all the components needed to deliver a customer-grade product. Without a solution that could scale, direct queries could be slow and would not meet the team's requirements for responsive, high-performance experiences.

Why Digital Enterprise Technology chose Heroku

With the External Experiences team being within the Salesforce ecosystem already, Heroku was an easy addition that helped the team connect multiple data sources. This enabled them to create self-contained components usable on almost any JavaScript-supporting property, unlocking their ability to create reusable assets and leverage more modern tech stacks.

How Digital Enterprise Technology External Experience Team uses Heroku

- Golang API implementation optimized performance and concurrency, providing the fastest response time
- Heroku Connect brought together various data sources, both external and from internal Salesforce orgs
- Data queries were built using Golang and enabled by Heroku Buildpacks
- Heroku Postgres add-on securely stored the information, enabling the team to control and optimize large volumes of data
- Heroku Dynos provides logging, metric tracking, and analytics
- Heroku handled all of the updates for the tech stack

Salesforce AppExchange achieves global scalability with Heroku

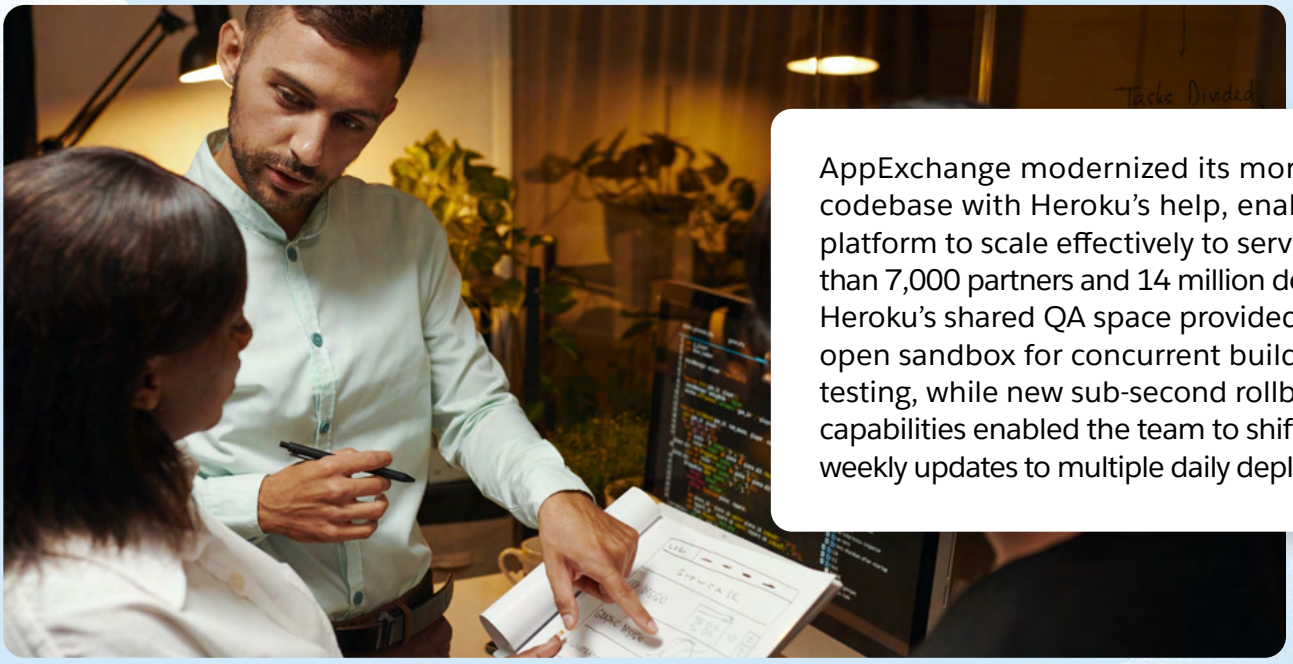
> The platform's beauty lies in its simplicity: You only manage your app's requirements, and a single, one-time configuration takes care of everything else. This app-first approach, even compared to major cloud providers, is what truly sets it apart."
>
> –Ranganath Prasannakumar, Salesforce Software Engineering Architect

Use case

Achieving global scalability with Heroku.

Products used

- Heroku Postgres
- Heroku Dynos
- Heroku Private Spaces
- Autoscaling
- Agentforce
- Lightning Web Components
- Apache Kafka on Heroku
- Heroku Key-Value Store



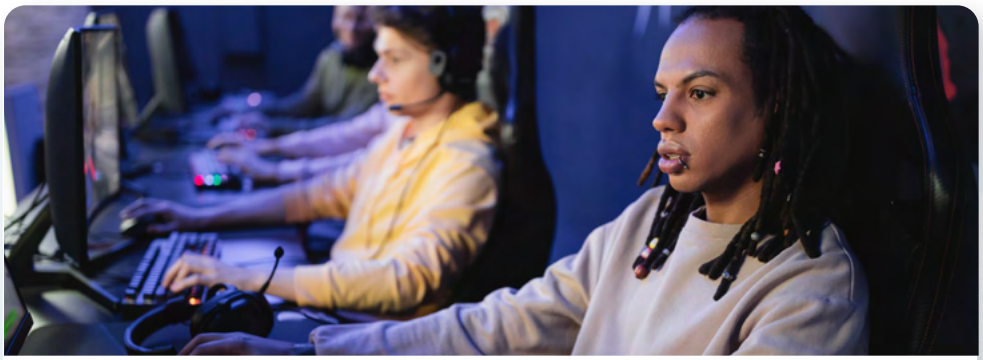
AppExchange modernized its monolithic codebase with Heroku's help, enabling the platform to scale effectively to service more than 7,000 partners and 14 million downloads. Heroku's shared QA space provided a more open sandbox for concurrent building and testing, while new sub-second rollback capabilities enabled the team to shift from bi-weekly updates to multiple daily deployments.

Key results

Microservices offering grew their capabilities to service over 7,000 partners with over 14 million downloads.

Provided a new sub-second rollback capability.

Shared QA space allowed multiple developers to work and test concurrently.



Challenge

Salesforce's AppExchange was stuck in a monolithic codebase. Without modernizing, they wouldn't be able to handle significant growth in traffic. They needed a non-static solution to manage the increased load.

Why Salesforce AppExchange chose Heroku

Heroku, being part of the Salesforce ecosystem, made the integration simple and offered all the capabilities the AppExchange team needed. It helped transform AppExchange from a niche platform to a more open development space, further expanding with web technologies like Postgres, Node.js, and Lightning Web Components.

How the Salesforce AppExchange Team uses Heroku

- Heroku Dynos for development
- Integrating reverse proxy provider via Heroku Private Spaces
- Heroku microservices powered datacloud connections when testing Agentforce
- Lightning Web Components powers the UI of various web interfaces of the AppExchange bot on public domains, and embedded experiences within the Salesforce CRM
- Heroku Postgres helped when spinning up new databases
- Apache Kafka on Heroku propagates events based on listing partner additions and modifications. It also acts as a trigger for updating several other services with relevant data
- Heroku Key-Value Store provides in-memory caching to improve search performance on all our interfaces
- Implemented Heroku's autoscaling feature to help handle increased loads

Salesforce reached 99.8% data accuracy for M&A with Heroku

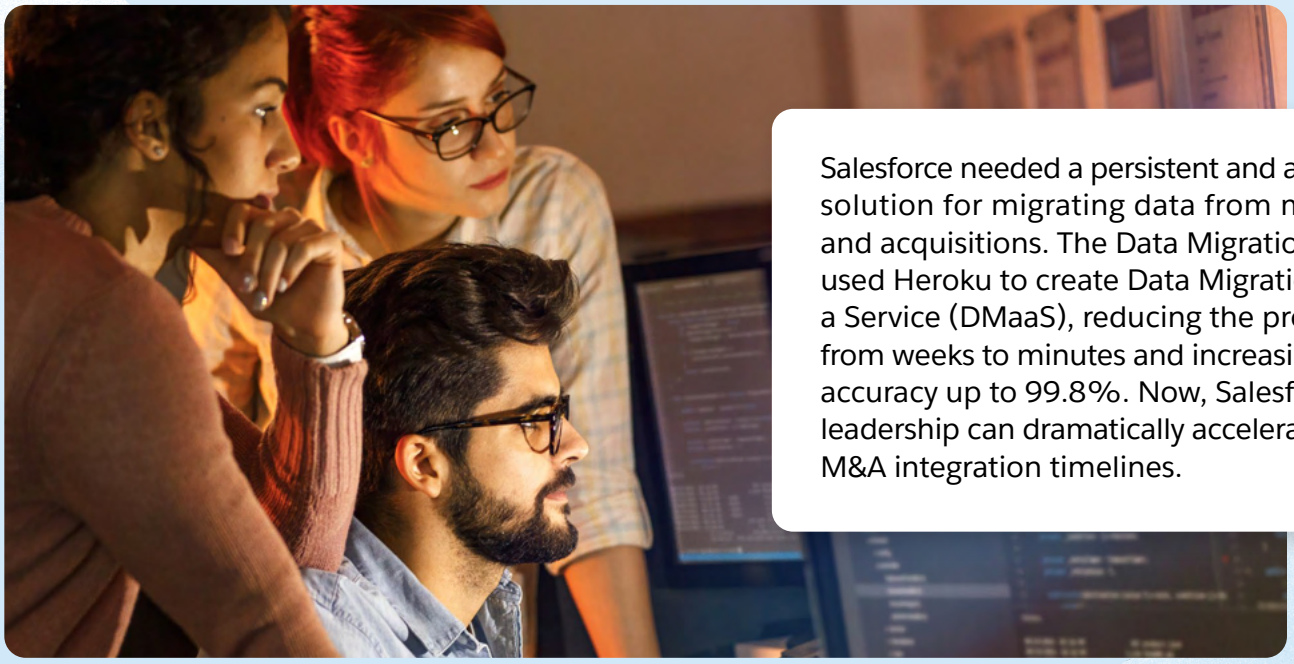
> The value proposition of deriving value from our M&As has shifted dramatically with Heroku. Time-to-market or time-to-revenue is now measured not in quarters or years, but in weeks or months."
>
> –Pooja Tripathi, Salesforce Director Product Line

Use case

Scaling data loads quickly & efficiently.

Products used

- Heroku Postgres
- Autoscaling
- Heroku Managed Inference and Agents
- Tableau
- Slack Bots
- Tail Logs



Salesforce needed a persistent and accurate solution for migrating data from mergers and acquisitions. The Data Migration team used Heroku to create Data Migration as a Service (DMaaS), reducing the process from weeks to minutes and increasing data accuracy up to 99.8%. Now, Salesforce leadership can dramatically accelerate their M&A integration timelines.

Key results

Created persistent, re-usable data migration solution.

Achieved data accuracy of 99.8%.

Shortened data migration process from weeks to minutes.

Enabled the acquisition of more complicated businesses.

Challenge

The Salesforce Data Migration Team needed to go from bespoke solutions for each new merger to a simple, persistent, and unified solution. They dedicated themselves to DMaaS, or Data Migration as a Service, which is a Salesforce-on-Salesforce platform for enabling one-time data movement.

Why Data Migration Team chose Heroku

Platform compatibility - The team was able to easily incorporate Heroku and MuleSoft tools into their existing processes and ecosystem.

Optimizations - Heroku offered simple data synchronization via Heroku Connect and more accurate data delivery through the MuleSoft API.

How the Data Migration Team uses Heroku

- Heroku Connect enabled bi-directional data synchronization between Heroku Postgres and Salesforce
- Heroku provided built-in security and compliance features like Heroku Private Spaces, Shield Private Space, SSL, and Rollbacks
- Deployed a Python-based backend to Heroku using GitHub integration and automatic deploys for streamlined releases
- Used Heroku Key-Value Store to power real-time alert logic
- Coordinated live incident reporting via Slack bots that triggered updates to Heroku-hosted APIs for instant public alerts
- Scaled new services like a geospatial tile server using Terraform, with autoscaling web dynos and container support for portability
- Leveraged pre-production environments, static IPs, and logging add-ons to stage safely and monitor performance without DevOps overhead

Salesforce OrgFarm achieved ease-of-use at scale using Heroku

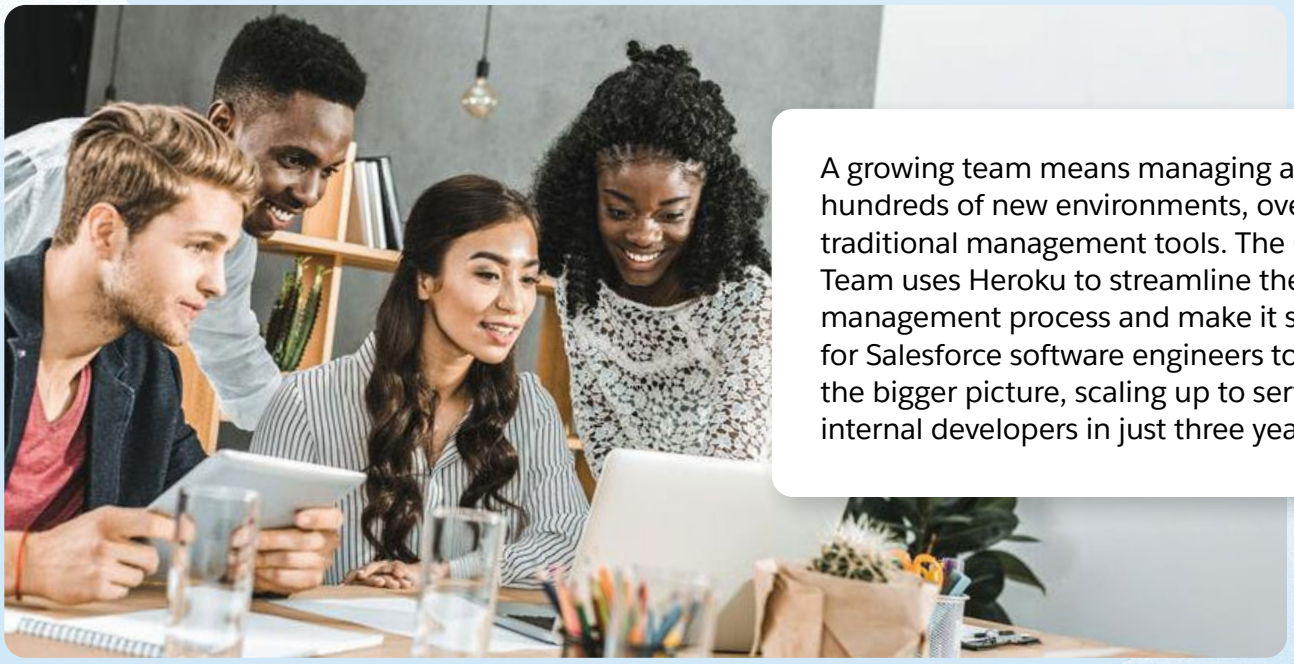
> The easiest and best way to scale up and run quite a bunch of worker nodes and web nodes is through Heroku. We found Heroku to be very, very easy to use, develop, deploy, and deliver value to our customers."
>
> –Shiva Nimmagadda Venkata, Salesforce VP, Software Engineering

Use case

Scaling data loads quickly & efficiently.

Products used

- Heroku Postgres
- Autoscaling
- Heroku Managed Inference and Agents
- Tableau
- Slack Bots
- Tail Logs



A growing team means managing and sharing hundreds of new environments, overwhelming traditional management tools. The OrgFarm Team uses Heroku to streamline the org management process and make it simpler for Salesforce software engineers to focus on the bigger picture, scaling up to serve 15,000 internal developers in just three years.

Key results

OrgFarm achieved its core goal of delivering ease-of-use for Salesforce devs.

Autoscaling grew the team's size and the number of customers they could handle.

Scaled from 10 to 15,000 developers in 3 years.

Trustees required 100% reliable data, which Heroku delivered.

Challenge

The Salesforce OrgFarm team needed a method for streamlining and simplifying their processes, so their software engineers could focus on the bigger picture instead of getting bogged down in managing infrastructure and iterative testing.

Why OrgFarm chose Heroku

Being within Salesforce meant that integrating Heroku's platform was simple, specifically when using Data Cloud for integrating analytics with data gathering. The OrgFarm team was able to scale data loads, improve the debugging process, and keep data more secure, all by utilizing Heroku.

How OrgFarm uses Heroku

- The team's internal Heroku Postgres database runs on Heroku
- Tableau provides data analysis and additional reporting, pushing data to Data 360 via an add-on
- Tail logs are used in the debugging process, making it easy to log bugs and roll out deployments
- Heroku Managed Inference and Agents are accessed using Heroku AI
- The team's Slack bots run and compute on Heroku
- Their Agentforce agent exchange and internal agent exchange run on Heroku
- Autoscaling helped manage and share tens of thousands of environments by automatically scaling the number of Heroku Dynos based on application performance

Salesforce runs Slack Apps at scale using Heroku

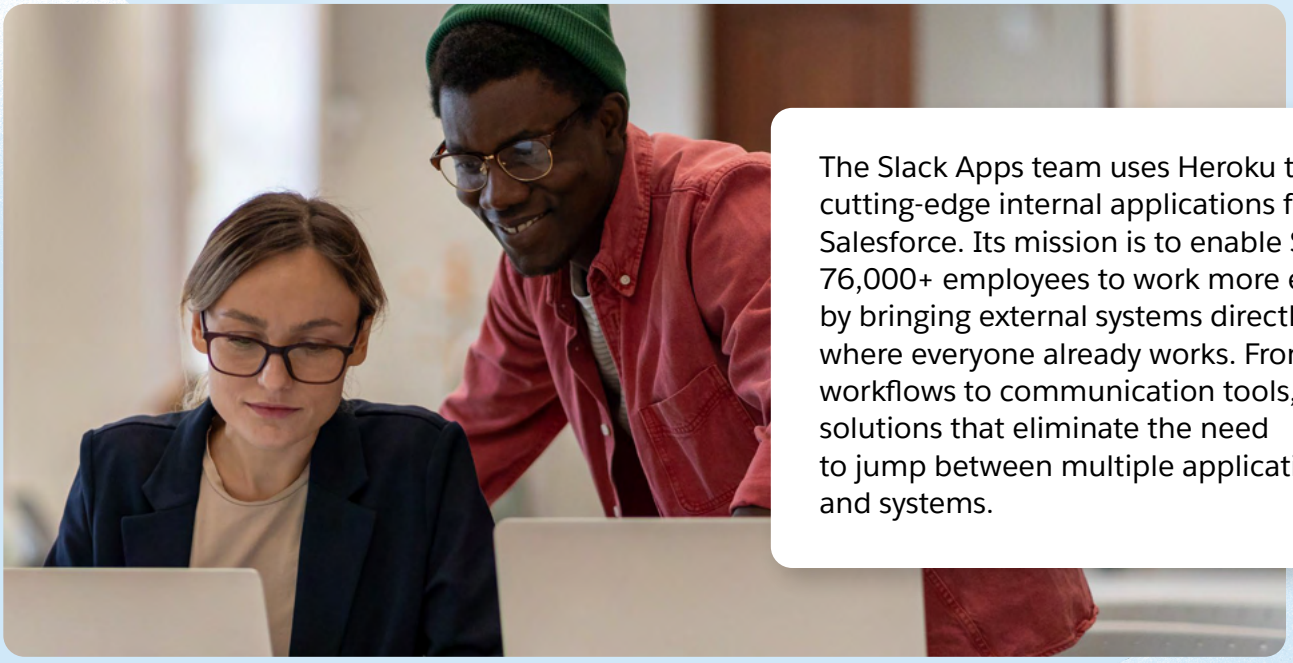
> Heroku definitely made us get to market faster. We could have built and hosted these apps on a laptop if we needed to, but we would have needed a whole team to manage the infrastructure and all the data services.
>
> –Phi Tran, Principal Software Engineer, Salesforce

Use case

Developing & hosting Slack apps.

Products used

- Heroku Postgres
- Heroku Dynos
- Heroku Private Spaces and Shield
- Heroku Connect
- Apache Kafka on Heroku
- Heroku AppLink
- Tableau
- Slack
- Einstein



The Slack Apps team uses Heroku to build cutting-edge internal applications for Salesforce. Its mission is to enable Salesforce's 76,000+ employees to work more efficiently by bringing external systems directly into Slack, where everyone already works. From approval workflows to communication tools, it creates solutions that eliminate the need to jump between multiple applications and systems.

Key results

Replacing REST API significantly reduced project difficulty and time cost.

$2,000,000 saved in returned licenses.

3,310 years saved in approval wait times.

68K issues resolved without requiring human intervention.

Challenge

The Slack Apps team builds cutting-edge tools to help Salesforce employees work effectively and efficiently. The team needed a solution that would enable robust data services support, event-driven architecture, and scale their tools out to 80K+ Salesforce employees, all without relying on an extensive infrastructure management team.

Why Slack Apps chose Heroku

Speed & simplicity - Heroku enabled the team to build quickly and without a large infrastructure team.

Data services support - Heroku Postgres, Heroku Key-Value Store, and Apache Kafka on Heroku made life easy for the team.

Scalability - Their small team gained a platform that could scale to all 80K+ Salesforce employees.

How the Salesforce Slack Apps Team uses Heroku

- Heroku for building Java applications
- Heroku Key-Value Store and Heroku Postgres for data management for data management
- Apache Kafka on Heroku for event-driven architecture
- Heroku Private Spaces for managing the inbound/outbound allow list and IP allow list
- Heroku Connect for replacing REST API
- Heroku AppLink for exposing Heroku apps as API services in Salesforce

Trailhead accelerates content publishing and enhances scalability with Heroku

TRAILHEAD

> Heroku's capabilities have transformed how we manage content delivery at Trailhead. The ability to quickly respond to urgent requests, whether for conferences or critical product launches, highlights a significant shift from the days when our content team awaited our tech readiness. Now, we're equipped to handle any volume of updates with speed and flexibility, ensuring we meet leadership and market demands promptly."
>
> –Daniel Hoechst, Director, Trailhead Content Engineering, Salesforce

Use case

Scalable growth & faster publishing.

Products used

- Heroku Dynos
- Heroku Connect
- Apache Kafka on Heroku
- Heroku Key-Value Store
- Heroku Postgres
- Review Apps
- GitHub Actions

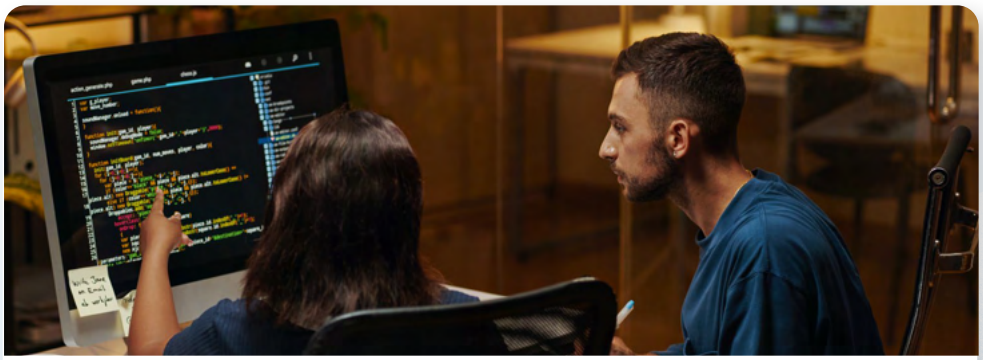
Trailhead uses Heroku to streamline and scale its publishing workflows by automating content updates and reducing the complexity of infrastructure management. Heroku allowed the team to significantly increase output and reduce publishing time, without proportionally increasing team size.

Key results

10x increase in badge output, team size optimized by ~67%.

Reduced publishing time from over an hour to a few minutes.

Managed large user spikes during educational initiatives.



Challenge

The Trailhead team was not able to efficiently scale the release publishing process, creating a significant technical limitation.

Why Trailhead chose Heroku

Trailhead turned to Heroku for its seamless Salesforce integration and developer-friendly environment. It initially focused on improving the publishing workflow, significantly reducing manual overhead by automating updates and content releases, enabling more frequent and reliable content releases.

How Trailhead uses Heroku

- Automated content updates with Heroku Postgres, Heroku Key-Value Store, and GitHub API integrations
- Transitioned from monthly to daily content releases, improving user engagement
- Reduced manual processes, allowing developers to focus on innovation
- Efficiently managed increased user engagement without proportional team size growth
- Reduced complexity of infrastructure management, enabling precise resource allocation

Salesforce BaseCamp improves employee support with Heroku

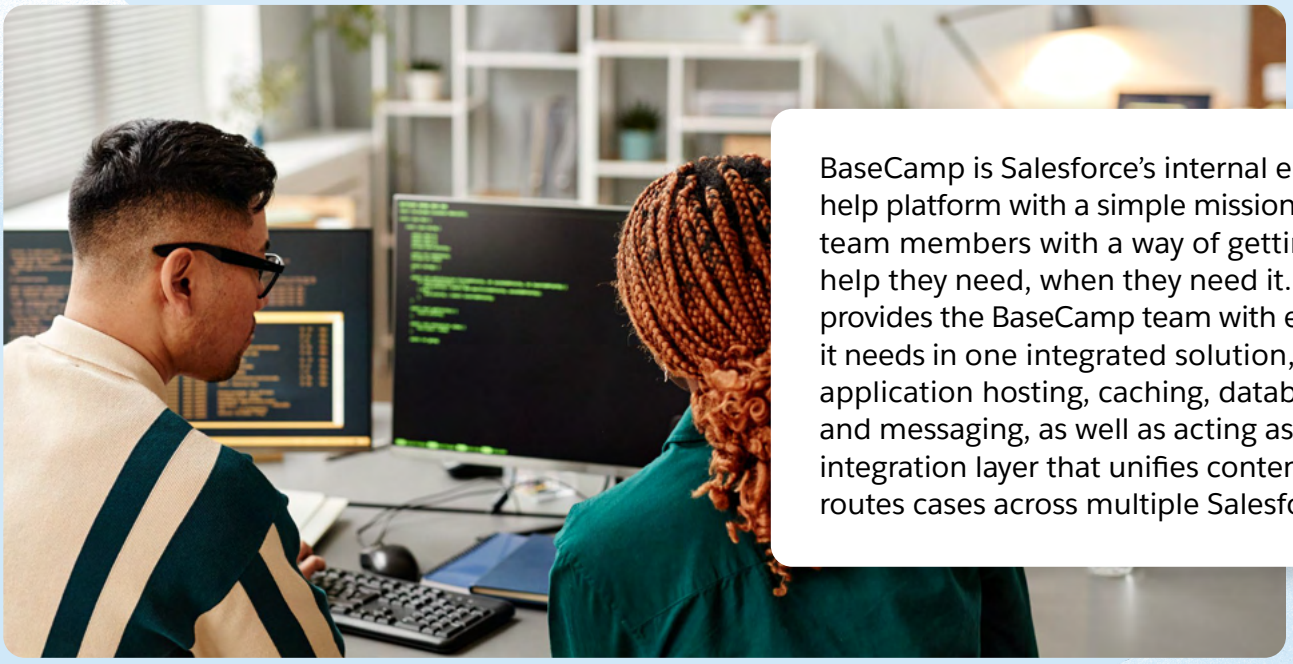
> I don't think about Heroku very often, and when I do think about Heroku, it just works. It's just you're like, 'oh, I need to do this thing in Heroku' and it's like, 'oh yeah, it's easy to do that.' It just makes it simple."
>
> –Josh Boyden, Principal Engineer, Salesforce

Use case

Unifying knowledge for support.

Products used

- Heroku Dynos
- Heroku Connect
- Apache Kafka on Heroku
- Heroku Key-Value Store
- Heroku Postgres
- Salesforce Platform
- Slack



BaseCamp is Salesforce's internal employee help platform with a simple mission: provide team members with a way of getting the help they need, when they need it. Heroku provides the BaseCamp team with everything it needs in one integrated solution, including application hosting, caching, databases, and messaging, as well as acting as the integration layer that unifies content and routes cases across multiple Salesforce orgs.

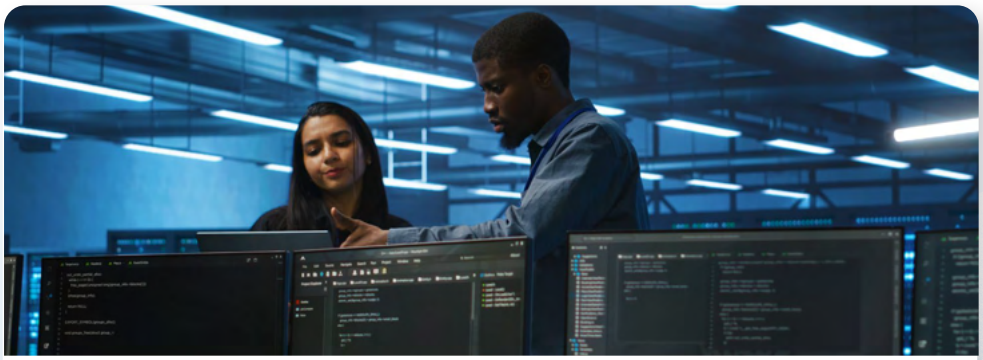
Key results

Employees can now use natural language instead of multiple dropdown menus.

Single platform consolidates knowledge from 6-7 internal sources.

Dedicated web UI and Slack integration to suit different workflows.

Near-zero time spent managing infrastructure.



Challenge

Previously, Salesforce employees had to navigate a series of confusing dropdown menus to find support as the knowledge was spread across different sources and orgs. Choosing the wrong combination of answers meant requests were often lost or employees would have to start over.

Why BaseCamp chose Heroku

Heroku allowed the BaseCamp team to unify data from multiple Salesforce orgs. Now, employees can access knowledge self-serve, using natural language questions rather than confusing menus. If they still need further support, the application ensures tickets are routed in the right direction.

How the Salesforce BaseCamp team uses Heroku

- Heroku Dynos form the basis for a number of applications which each handle different tasks
- Data is synchronized and unified across multiple internal Salesforce orgs with Heroku Connect
- Apache Kafka on Heroku enables communication between BaseCamp's multiple services
- Heroku Key-Value Store provides in-memory caching to improve performance across each app
- Case updates in the Slack app are managed by Heroku Postgres, ensuring updates and state changes are posted to the right threads

How Salesforce+ leveraged Heroku to launch rapidly and scale globally

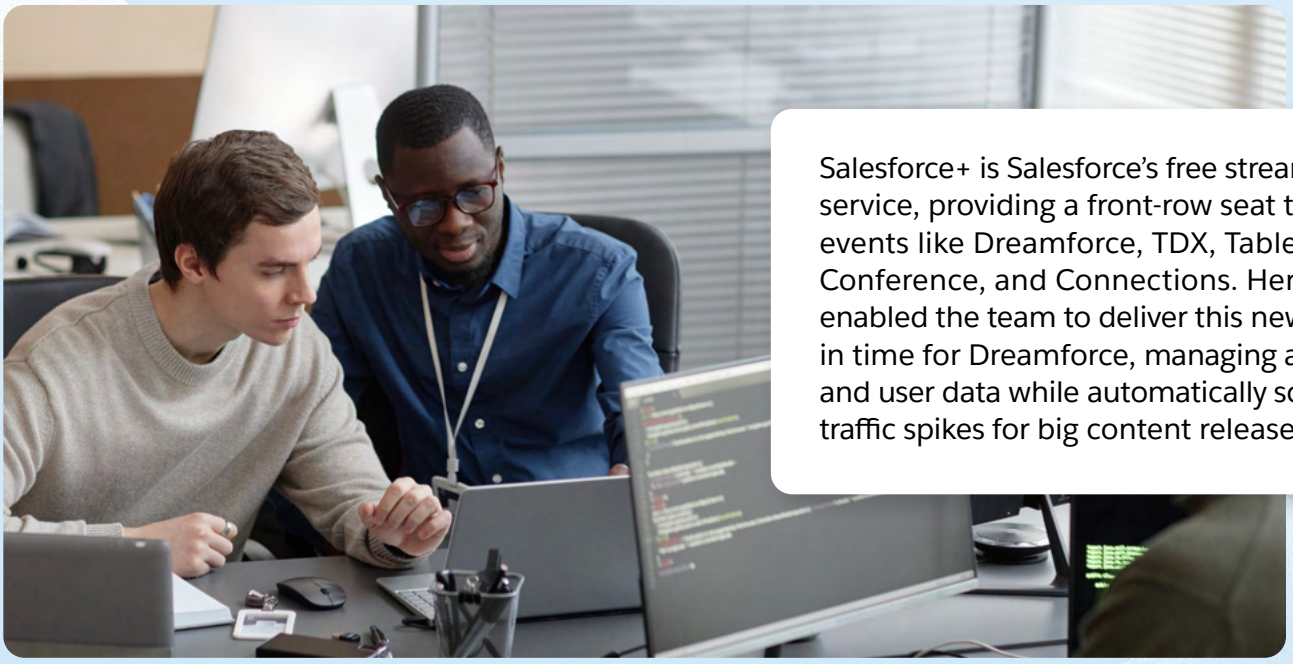
> Heroku let us move fast and stay focused on building. We launched Salesforce+ on time without getting slowed down by infrastructure."
>
> –Avrami Hendlish, Director, Software Engineering, Salesforce

Use case

Launching a streaming platform.

Products used

- Heroku Dynos
- Heroku Key-Value Store
- Heroku Postgres
- Autoscaling



Salesforce+ is Salesforce's free streaming service, providing a front-row seat to global events like Dreamforce, TDX, Tableau Conference, and Connections. Heroku enabled the team to deliver this new platform in time for Dreamforce, managing all content and user data while automatically scaling as traffic spikes for big content releases.

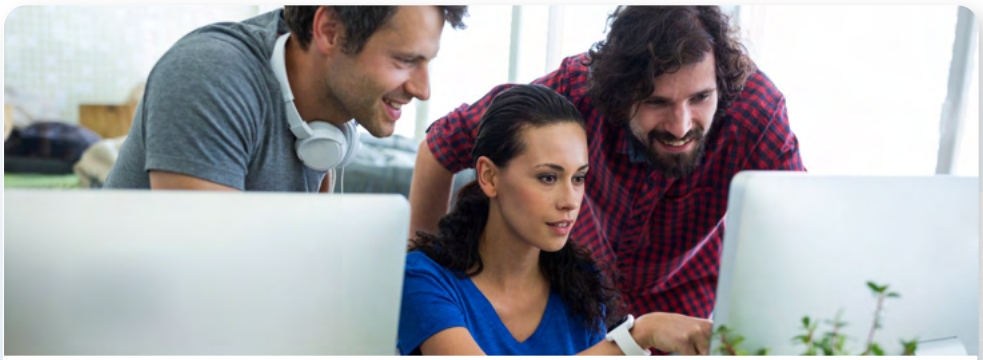
Key results

Delivered a new platform within a tight deadline.

Delivered 100+ hours of live & on-demand programming.

Contributed hundreds of millions of dollars to the marketing pipeline.

Enabled a 2.75x increase in Dreamforce audience reach.



Challenge

The team needed to launch a new streaming platform, named Salesforce+, in time for Dreamforce. The platform needed to deliver digital-first experiences for the community, supporting a broader strategy to reach professionals looking to engage with the brand in a more scalable, media-rich format.

Why Salesforce+ chose Heroku

Heroku was already proven internally across Salesforce, making it a safe, familiar choice that aligned with enterprise standards and accelerated onboarding. Heroku's developer-friendly platform gave the team a strong starting point, helping it move quickly without sacrificing quality.

How Salesforce+ uses Heroku

- Heroku Postgres manages all Salesforce+ content and user data, powering personalized viewing experiences for a global audience
- Exposes platform data to the frontend with a GraphQL API layer hosted on Heroku
- Mirrors data to a separate Heroku Postgres instance for analytics and reporting, keeping production workloads isolated from read-heavy dashboards
- Heroku Key-Value Store manages caching
- Heroku Dynos and autoscaling helps the team respond to variable traffic demands without manual intervention
- Heroku OpEx helps the team stay on top of latency, errors, and other key performance signals

Start your journey