
Cloud Competitive Analysis from a design perspective

Damien Solomon and Virginia Honig

Intro

How are three of our top competitors treating the Discover, Sign-up, Spin-up experience?

How do they integrate multiple service offerings?

The Competition



Overview



AWS is like going to the lumber yard to buy the raw wood, then to the hardware store to get the nails and concrete. It gives users the construction material to build whatever they want.

- IaaS but exploring PaaS offerings
- Robust offerings that appeal most to Enterprise users
- Requires user expertise or hired support to use



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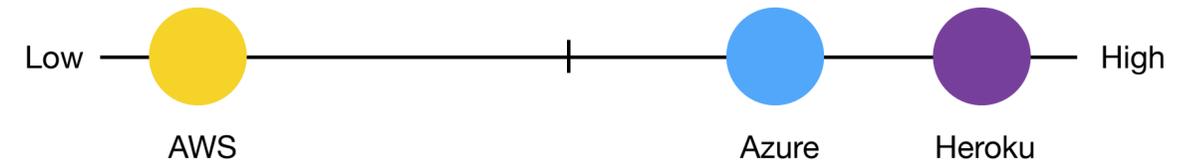
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- Easy to use out of the box, and offers support options for more complex Enterprise needs



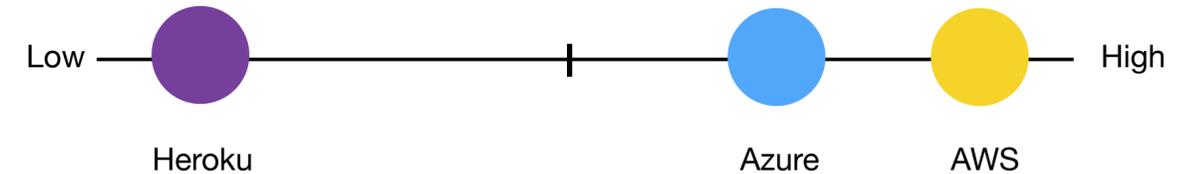
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- Most popular in developer community because it is easy to use, quick to learn, and lets them do the work they love.

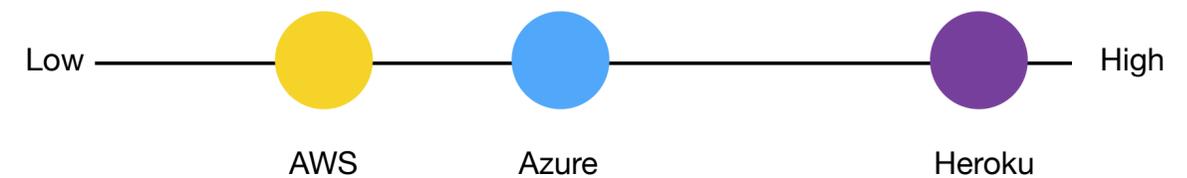
“Out of the box” ease of use



Amount of offerings



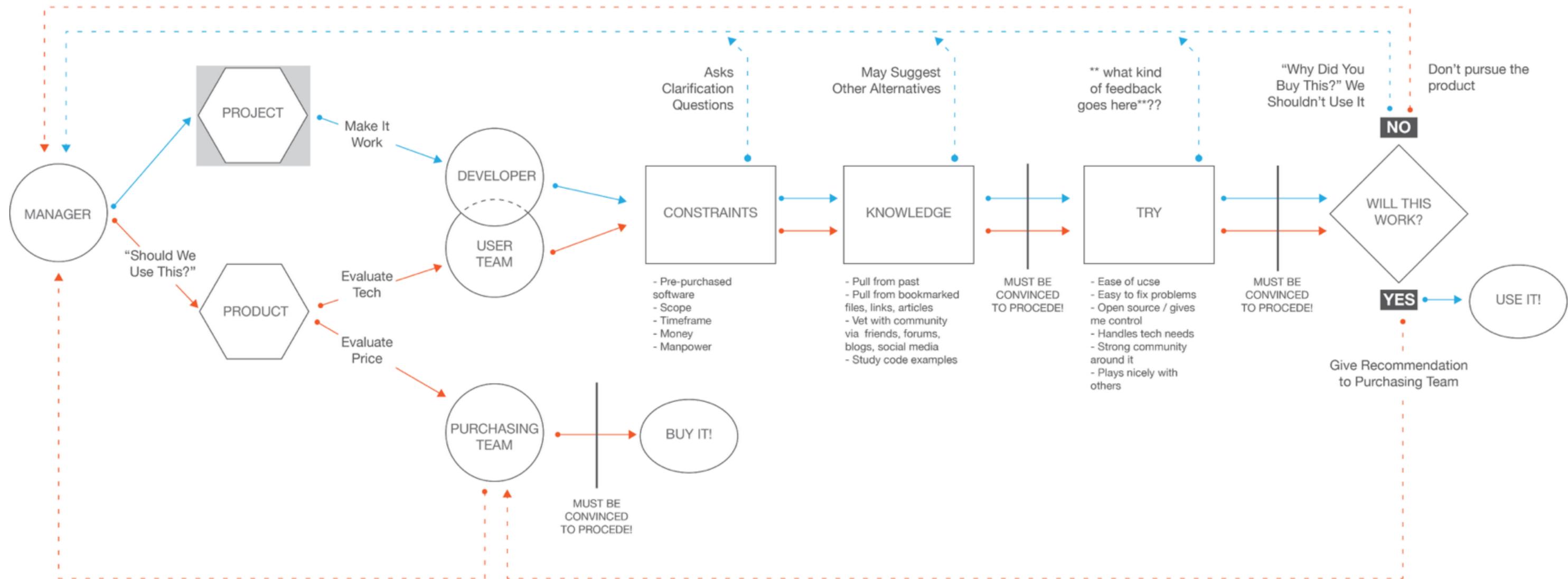
Managed service level



The Developer's Journey

The Discovery Process

Enterprise Developer Workflow for New Projects or Evaluation of Products



KEY			
	PERSON		DECISION
	AREA OF FOCUS		RESULT
	TASK		PROJECT STEP
			PRODUCT STEP
			PROJECT FEEDBACK
			PRODUCT FEEDBACK

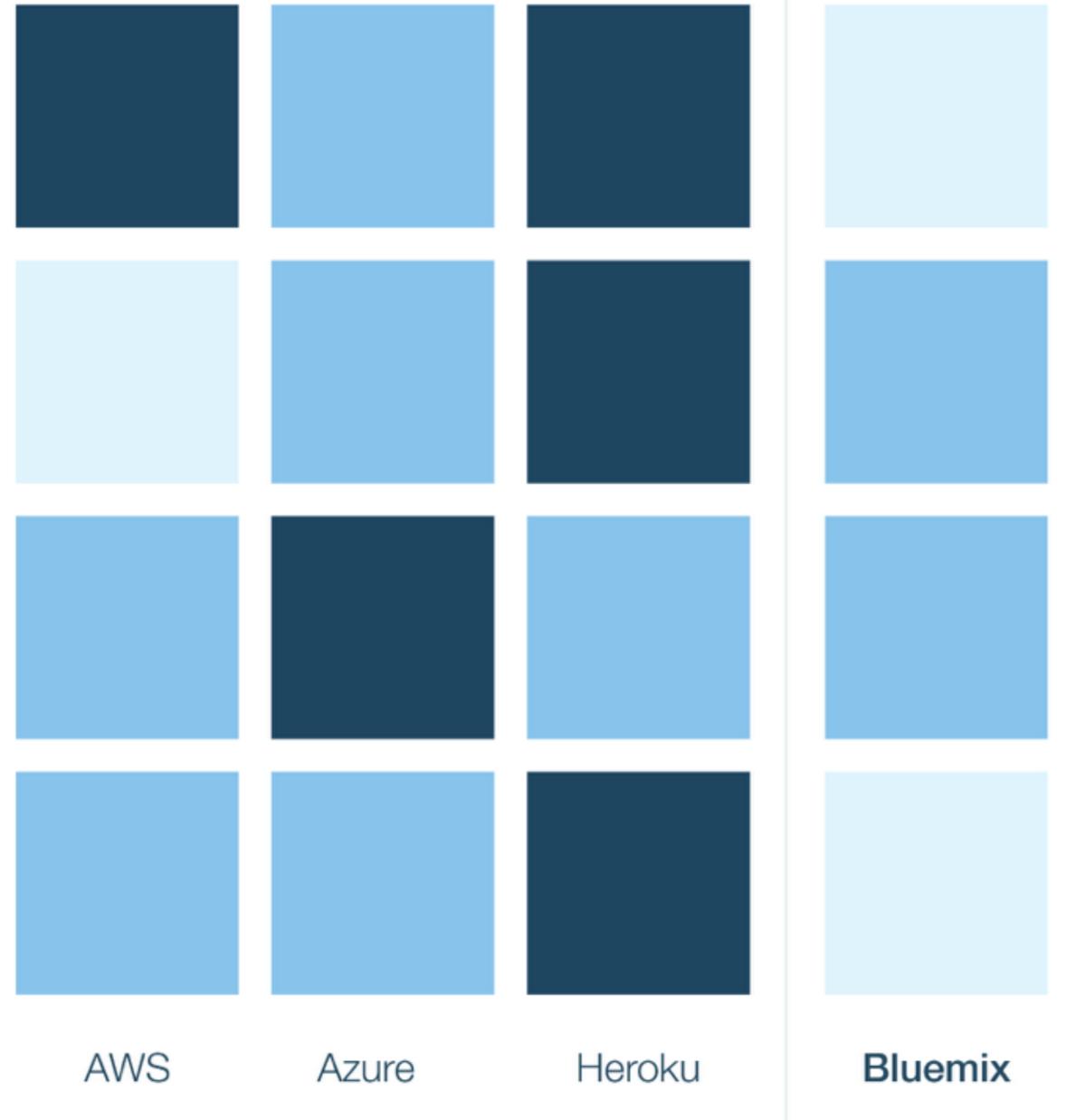
Overview - Key products and attributes for Developers

Community Approval
Offerings are well vetted amongst community of users, and there is frequent and up-to-date activity around using product.

Time to Productive Use
Users can quickly sign up, find what they need, and start using the services.

Integration of Services
Service offerings are easy to link together in the form of bundles or grouped suggestions relevant to users.

Support and Documentation
Help and documentation is easy to find and go through step by step. Support is provided at all levels from free to premium levels.



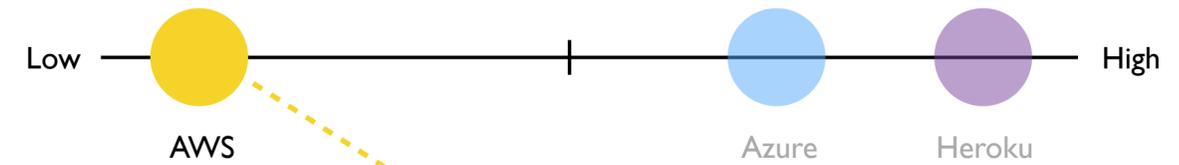
Summary



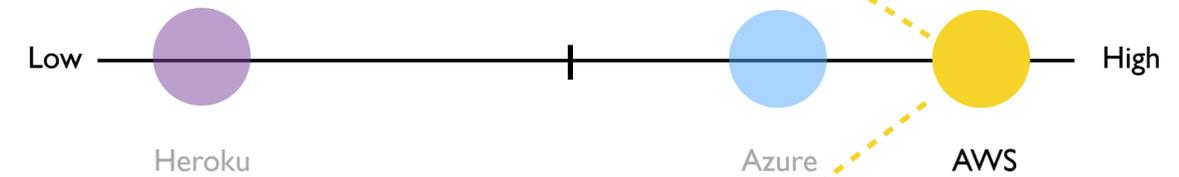
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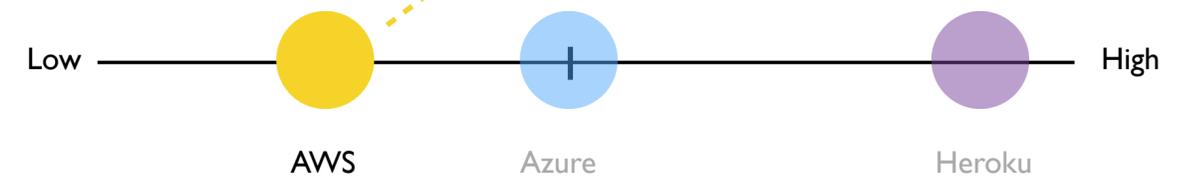
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Discover

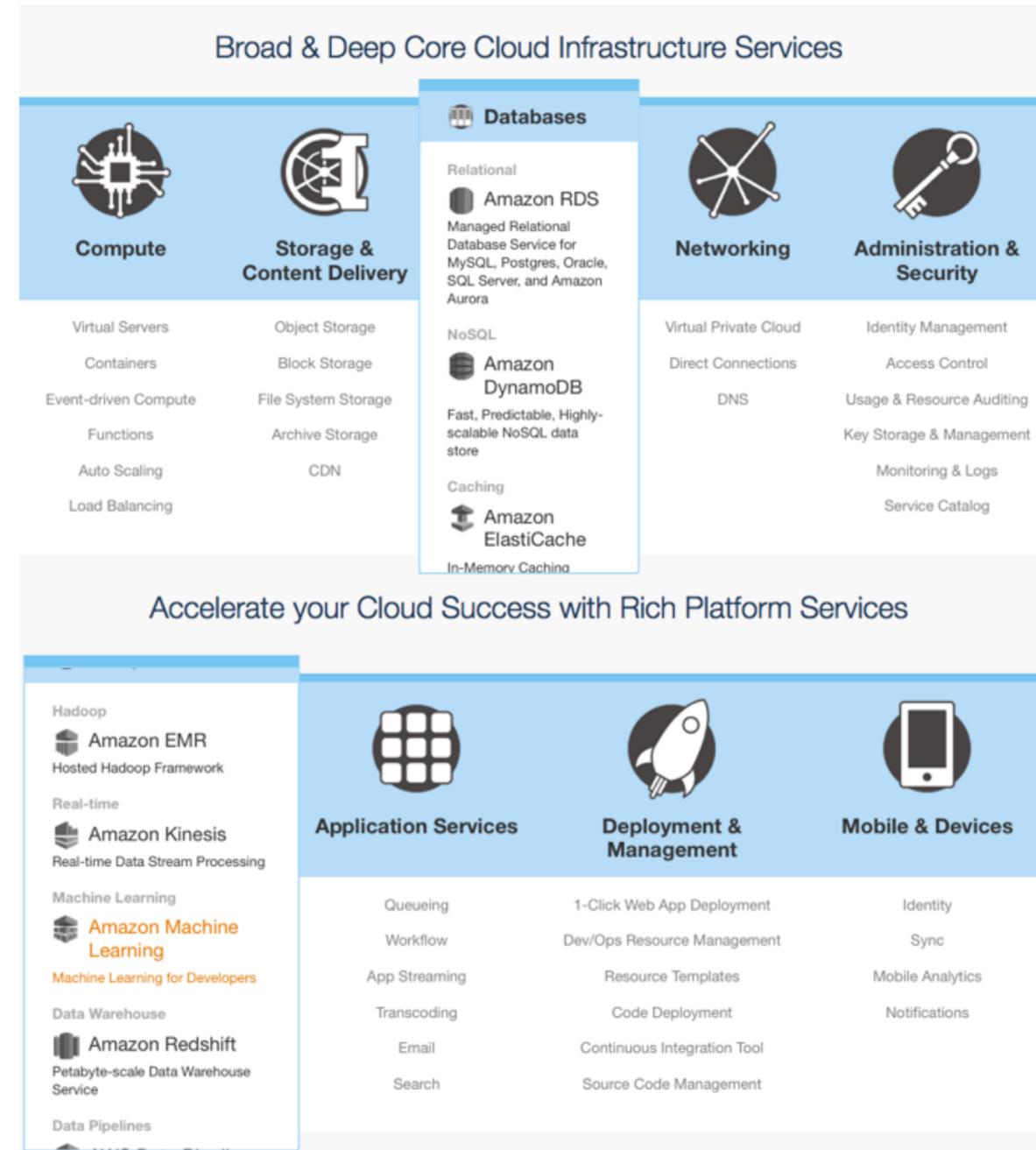


DATABASES

Divided into Amazon branded groups for relational, non relational and caching.

ANALYTICS

Separated into a different section of AWS, following Amazon branded versions of platforms like Hadoop



Sign-up



Easy to follow steps but all users information required at the beginning:

1. Contact Information

2. Payment Information

Includes: overview of free pricing tier

3. Identity Verification

Completed by phone. ~ 2 Minutes

4. Support Plan

Free tier is automatically selected

The image displays three screenshots of the Amazon Web Services sign-up process, illustrating the steps from payment information to support plan selection.

Payment Information: This screen shows a table of pricing tiers and a form for entering credit card details.

AWS Free Usage Tier	Compute Amazon EC2	Storage Amazon S3	Database Amazon RDS
Free for 1 year	750hrs/month*	5GB	750hrs/month*

Form fields include: Credit Card Number, Expiration Date, Cardholder's Name, and options to use existing or new address.

Identity Verification: This screen prompts the user to provide a telephone number for verification.

1. Provide a telephone number
Please enter your information below and click the "Call Me Now" button.

Country Code: United States (+1) | Phone Number: 5037073716 | Ext: []

2. Call in progress
3. Identity verification complete

Support Plan: This screen allows the user to select a support plan.

Please Select One

- Basic (Free)**
Contact Customer Service for account and billing questions, receive help for resources that don't pass system health checks, and access the AWS Community Forums.
- Developer (\$40/month)**
Get started on AWS - ask technical questions and get a response to your web case within 12 hours during total business hours.
- Business (Starting at \$160/month - Pricing Example) - Recommended**
24/7/365 real-time assistance by phone and chat, a 1-hour response to web cases, and help with 3rd party software. Access AWS Trusted Advisor to increase performance, fault tolerance, security, and potentially save money. @
- Enterprise**
15 minute response to web cases, an assigned technical account manager (TAM) who is an expert in your use case, and white-glove case handling that notifies your TAM and the service engineering team of a critical issue.
If you select this option, you will not be charged immediately. We will contact you to discuss your needs and finalize the setup.

AWS Support Features Table:

	Basic	Developer	Business	Enterprise
Customer Service - 24/7x365	•	•	•	•
Support Forums	•	•	•	•
Documentation, White Papers, Best Practice Guides	•	•	•	•
AWS Trusted Advisor @	4 checks	4 checks	37 checks	37 checks
Access to Technical Support	Support for Health Checks	Email (total business hours)	Phone, Chat, Email, Live Screen Sharing (24/7)	Phone, Chat, Email, Live Screen Sharing (24/7)
Primary Case Handling	Technical Customer Service Associate	Cloud Support Associate	Cloud Support Engineer	Sr. Cloud Support Engineer
Users who can create Technical Support	1 (account credentials only)	Unlimited (IAM supported)	Unlimited (IAM supported)	Unlimited (IAM supported)
Response Time		<12 hours	<1 hour	<15 minutes
Architecture Support		Building Blocks	Use Case Guidance	Application Architecture
Best Practice Guidance		•	•	•
AWS Support API @			•	•

Support



Choosing support is a required part of the sign-up process

Basic	Free
Developer	\$49/Month
Business	\$100+
Enterprise	\$15,000

- Developer & Business are charged on credit card
- Enterprise requires higher touch sales process
- Basic if free

Support Plan

All customers receive free support. Choosing a paid support plan will allow you to receive one-on-one technical assistance from experienced engineers and access many other support features. Please see below.

Please Select One

- Basic (Free)**
Contact Customer Service for account and billing questions, receive help for resources that don't pass system health checks, and access the AWS Community Forums.
- Developer (\$49/month)**
Get started on AWS - ask technical questions and get a response to your web case within 12 hours during local business hours.
- Business (Starting at \$100/month - Pricing Example) - Recommended**
24/7/365 real-time assistance by phone and chat, a 1 hour response to web cases, and help with 3rd party software. Access AWS Trusted Advisor to increase performance, fault tolerance, security, and potentially save money. @
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Continue

AWS Support Features	Basic	Developer	Business	Enterprise
Customer Service - 24x7x365	+	+	+	+
Support Forums	+	+	+	+
Documentation, White Papers, Best Practice Guides	+	+	+	+
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Best Practice Guidance		+	+	+
AWS Support API @			+	+
Third-party Software Support @			+	+
Infrastructure Event Management @			Contact Us for Pricing	+
AWS Concierge @				+
Direct Access to Technical Account Manager (TAM)				+
White-glove Case Routing @				+
Management Business Reviews @				+

AWS Support Pricing	Basic	Developer	Business	Enterprise
Pricing	Included	\$49/month	Greater of \$100 - or - 10% of monthly AWS usage for the first \$0-\$10K 7% of monthly AWS usage from \$10K-\$80K 5% of monthly AWS usage from \$80K-\$250K 3% of monthly AWS usage from \$250K+ @	Greater of \$15,000 - or - 10% of monthly AWS usage for the first \$0-\$150K 7% of monthly AWS usage from \$150K-\$500K 5% of monthly AWS usage from \$500K-\$1M 3% of monthly AWS usage from \$1M+ @

Please Select One

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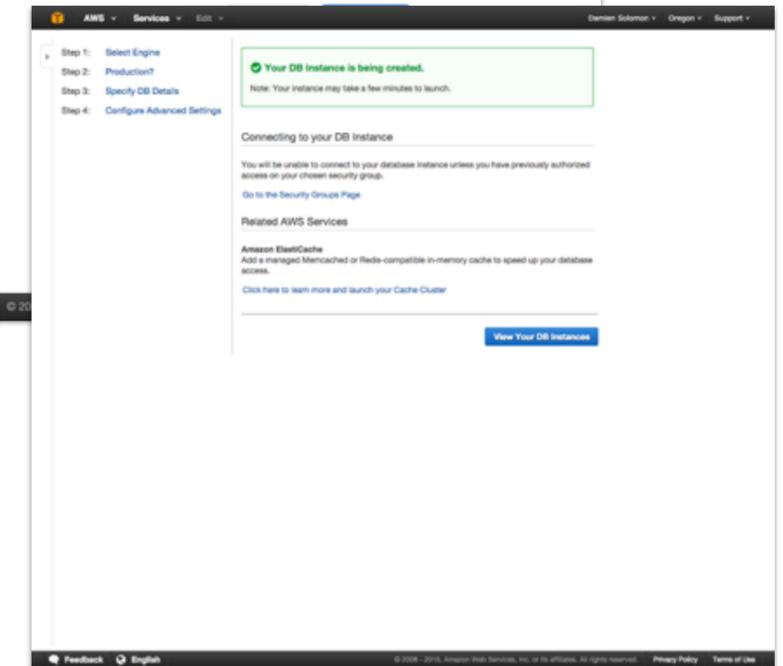
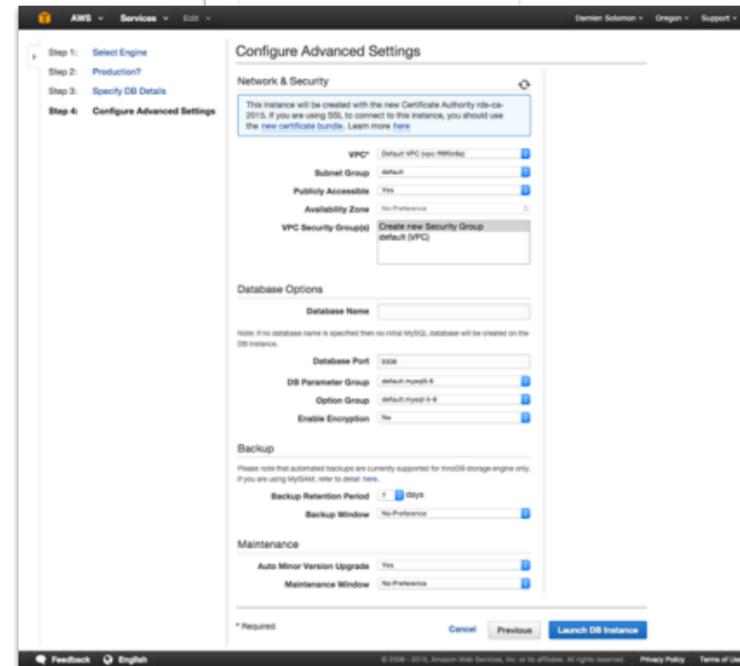
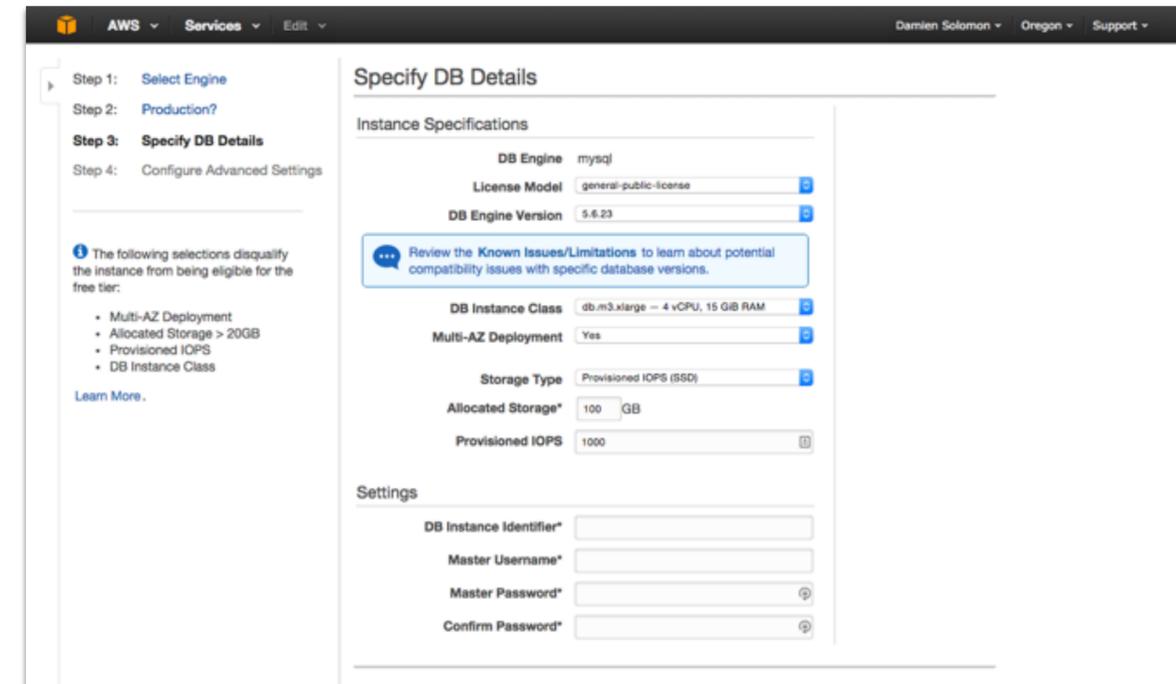
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Spinning up a Database



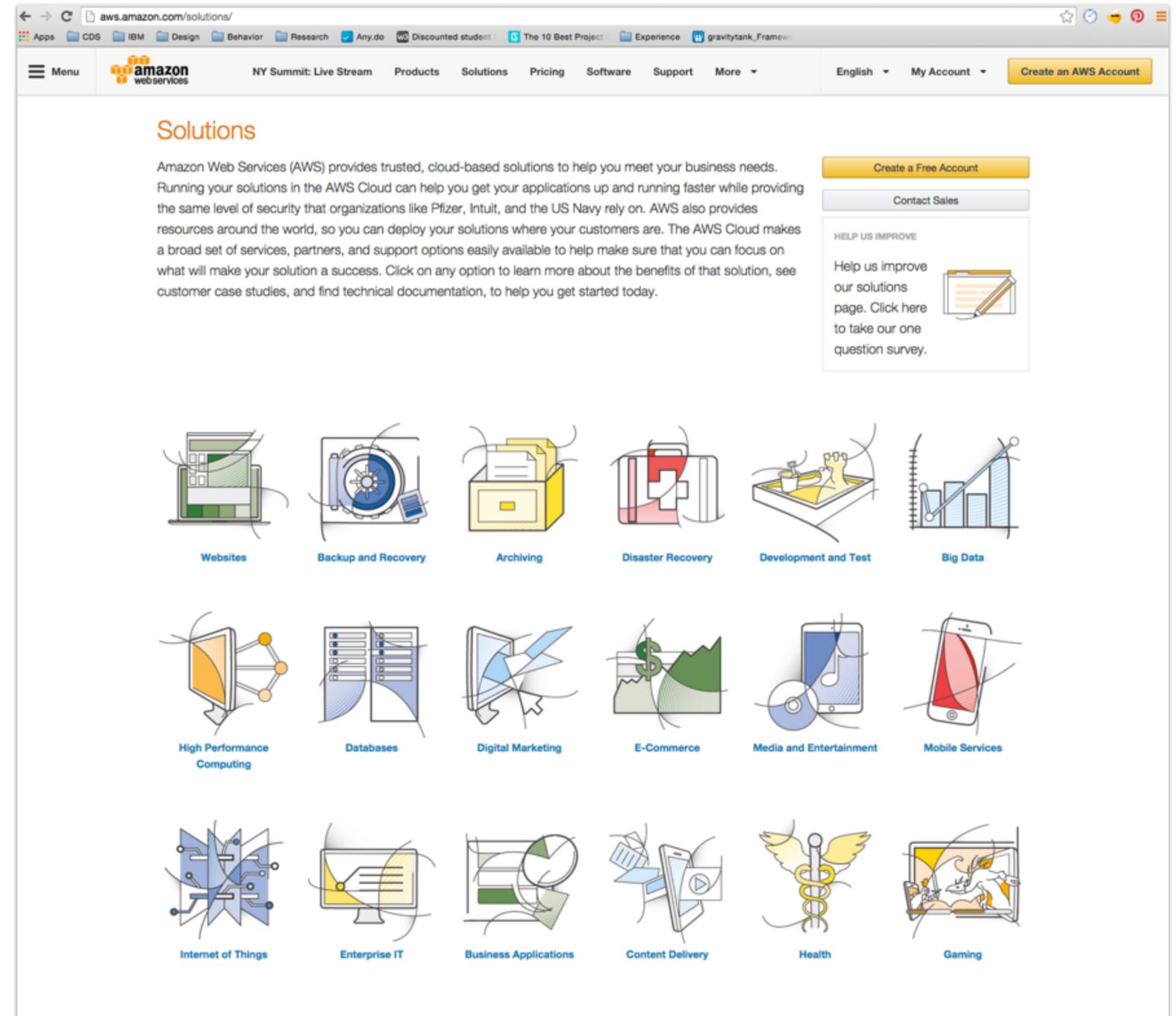
- Amazon's strategy is to give users precise control over the setup of their database.
- It reinforces the notion that Amazon designs for experts well versed in databases as well as the AWS system in general.
- This is in contrast to a developer who cares more about code than the database that powers it.



Integration of Services



- Services divided by business need-based solutions.
- Illustrations make it easy to find.



Summary

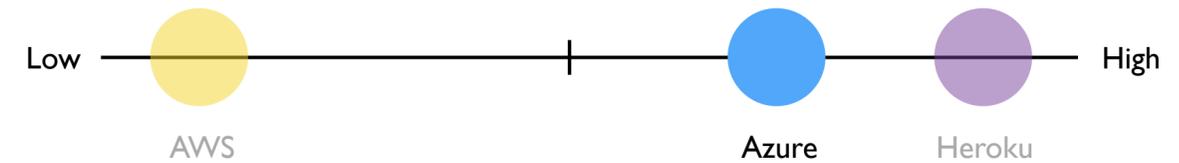


Microsoft Azure

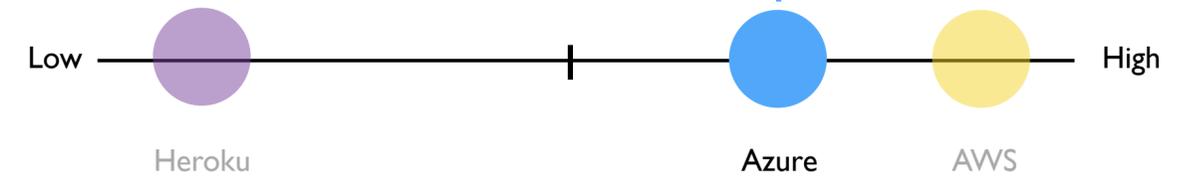
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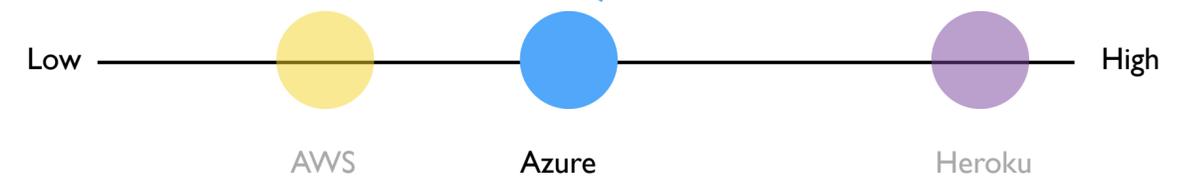
“Out of the box” ease of use



Amount of offerings



Managed service level



Discover



Microsoft Azure

- Databases and Analytics are in two separate sections, behind the menu. There is no “data section” or landing page for the entire group, just the individual products
- The Only call out for a DBaaS on the homepage is for SQL Databases. Copy reads “Managed Relational SQL Database-as-a-Service”

The screenshot shows the Microsoft Azure homepage. At the top, there's a navigation bar with links for 'Why Azure', 'Products', 'Documentation', 'Pricing', 'Downloads', 'Marketplace', 'Blog', 'Community', and 'Support'. A 'FREE TRIAL' button is also visible. The main headline reads 'The cloud for modern business' with sub-points: 'Move faster', 'Save money', and 'Integrate on-premises apps and data'. A 'Why Azure?' button is below. A blue callout box on the right states '57% of Fortune 500 companies already use Azure. Hear their stories >'. Below this is a 'Sign up and deploy your first cloud solution in under 5 minutes' section with a 'Try for free >' button. The main content area is divided into three columns: 'Get Started' (with a 'Get started >' link), 'Free Webinars' (with a 'Sign up and attend >' link), and 'Azure Friday' (with a 'Watch this week's show >' link). The bottom section is titled 'Popular Solutions' and features six cards: 'Web Apps' (Deploy and scale modern websites and web apps in seconds), 'Virtual Machines' (Launch Windows Server and Linux in minutes), 'SQL Database' (Managed Relational SQL Database-as-a-Service), 'Machine Learning' (Powerful cloud-based predictive analytics), 'Mobile Backends' (Build and host the backend for any mobile app), and 'RemoteApp' (Deploy Windows client apps in the cloud, run on any device).

Discover -DBaaS Landing Page



Microsoft Azure

- Highlights scalability, performance, SLA, etc... **as well as “Self managed for near zero maintenance”**
- Shows customers who use service right below

Build SaaS applications that support massive scale
Developers building software-as-a-service (SaaS) applications can leverage SQL Database to provide flexibility to support both explosive growth and profitable business models. For workloads with unpredictable database resource consumption, the elastic database model provides you with the ability to pool resources to be leveraged among a group of databases. Instead of overprovisioning to meet peak demand, you can use an elastic database pool to let hundreds or thousands of databases leverage resources within a budget that you control. You can drive cost efficiencies with a purchase model that allows you to maintain control over price and performance across a group of databases.
[Learn more about creating elastic database pools.](#)

Easily manage massive numbers of databases
Simple management tasks become complicated when you scale to thousands of databases, and that's the challenge of explosive growth. SaaS developers spend countless hours writing complex logic to handle these schema changes and other administrative operations as the business grows. With elastic databases, life becomes easier. You take a script, submit it as a job, and Azure SQL Database does the rest to perform the script across many databases. Elastic database tools simplify building and managing applications that scale across lots of databases, so building applications against a single database or thousands of databases is just as easy using familiar T-SQL and ADO.NET programming models. You can also run centralized query operations like reporting and data extractions spanning many databases, returning a single unified result set.
[Learn more about using elastic database tools.](#)

Gain 25% more Premium performance
Backed by the power and presence of Azure, high-throughput applications can take advantage of the latest version which delivers 25% more Premium database power. Additionally, internal tests over 600 million rows of data show up to 100x query performance improvements when applying the In-memory columnstore technology. The SQL Database service tiers enable applications to easily scale-up or down predictable performance on each database.

Microsoft Azure

SALES 1-800-867-1389 MY ACCOUNT PORTAL

Why Azure Products Documentation Pricing Downloads Marketplace Blog Community Support

SQL Database
A relational database-as-a-service that makes tier-1 capabilities easily accessible

- ✓ Scalable to thousands of databases
- ✓ Predictable performance you can dial up or down
- ✓ Availability-backed by replicas & uptime SLA
- ✓ Data protection via auditing, restore & geo-replication
- ✓ Programmatic DBA-like functionality for efficient DevOps
- ✓ Self-managed for near-zero maintenance

[Get started](#)

[Pricing details](#) [Documentation](#)

Upgrade to the latest service version for greater SQL compatibility and more Premium performance

Customers leveraging cloud efficiencies for business-class applications

TREK Flavorms Callaway GOLF 3M SAMSUNG easyJet

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99.99% SLA

Maintenance through a

PHP .NET Java JavaScript

Sign-up



Microsoft Azure

NOTE

User must create a Microsoft account and then an Azure account

1. Create Microsoft Account

2. Verify Microsoft Account

Uses: Code sent by email

3. Create Azure Account

Requires: Verification by phone, adding credit card to account

The image shows two overlapping screenshots of the Microsoft Azure sign-up process. The background screenshot is the 'Microsoft Azure' sign-up page, and the foreground screenshot is the 'Create an account' page.

Microsoft Azure Sign-up Page (Background):

- Header: Microsoft Azure, damiensoio@live.com
- 1 About you: FIRST NAME (Damien), LAST NAME (Solomon), COUNTRY/REGION (United States), CONTACT EMAIL.
- 2 Verification by phone: COMPLETE
- 3 Verification by card: PAYMENT METHOD (New Credit Card), CARD NUMBER, CARD TYPE (Discover Network), EXPIRATION DATE, CVV, NAME ON CARD, ADDRESS LINE 1, PHONE NUMBER, ADDRESS LINE 2, CITY, STATE, ZIP CODE.
- 4 Agreement: I agree to the subscription agreement, offer details, and privacy statement. Microsoft may use my email and phone to provide special Microsoft Azure offers.
- Sign up button.
- Footer: © 2015 Microsoft, Privacy & Cookies, Trademarks, Legal, Support, Give Us Feedback, Microsoft.

Create an account Page (Foreground):

- Header: Microsoft, Create an account.
- Text: You can use any email address as the user name for your new Microsoft account, including addresses from Outlook.com, Yahoo! or Gmail. If you already sign in to a Windows PC, tablet, or phone, Xbox Live, Outlook.com, or OneDrive, use that account to sign in.
- Form fields: First name, Last name, User name (someone@example.com), Password (8-character minimum, case sensitive), Reenter password, Country/region (United States), Birthdate (Month, Day, Year), Gender (Select...).
- Section: Help us protect your info. Your phone number helps us keep your account secure.
- Form fields: Country code (United States (+1)), Phone number.
- Text: We want to make sure that a real person is creating an account.
- Image: CAPTCHA (4-3-1-5).
- Buttons: New, Audio.
- Form field: Enter the characters you see.
- Text: Send me promotional offers from Microsoft. You can unsubscribe at any time.
- Text: Click Create account to agree to the Microsoft Services Agreement and privacy and cookies statement.
- Button: Create account.
- Footer: © 2015 Microsoft, Terms of Use, Privacy & Cookies.

Spinning up a database



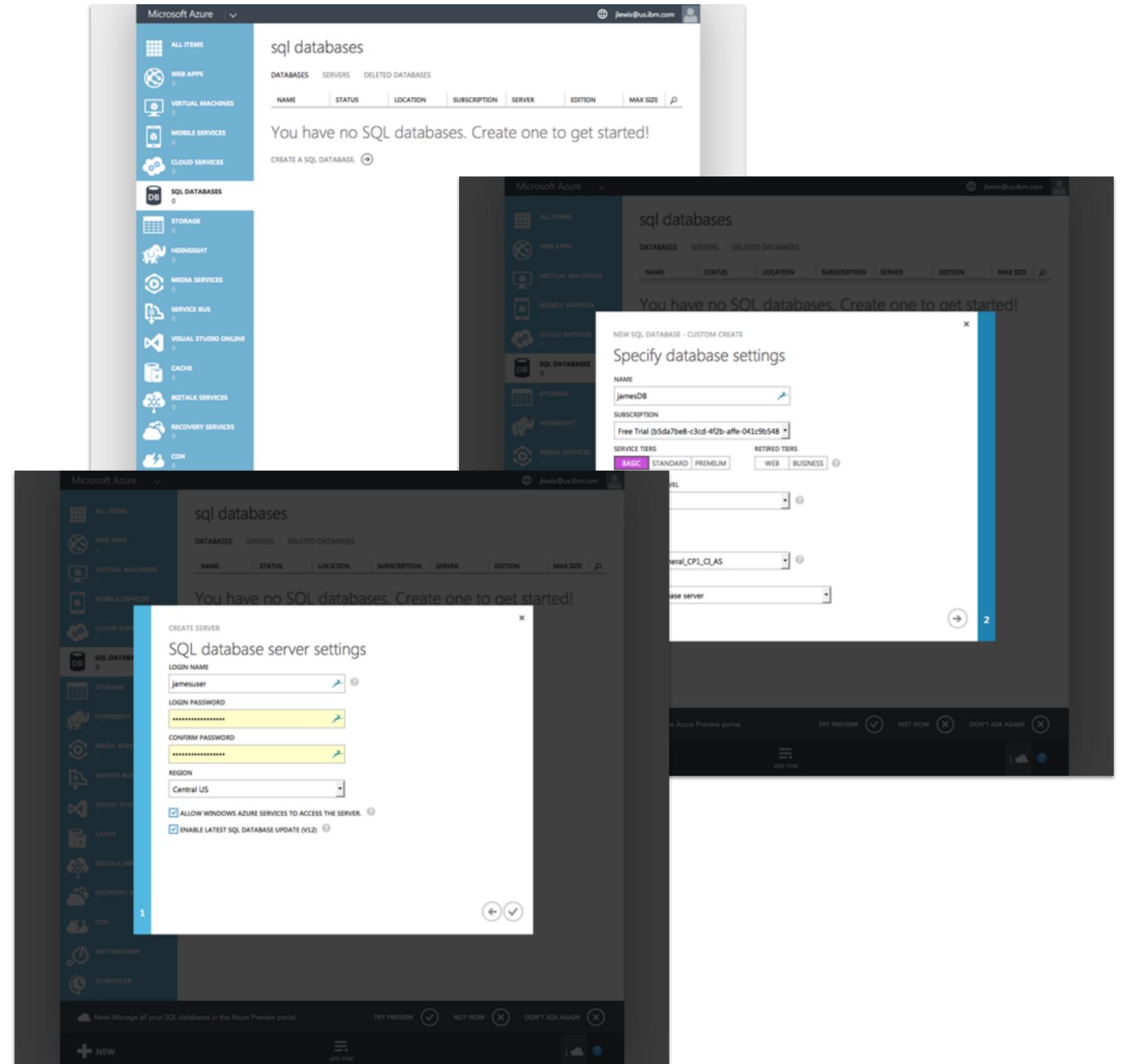
Microsoft Azure

- While spinning up an azure SQL Database is fairly straight forward and simple.
- more concerned with creating settings that relate to billing and performance.
- If users care about a database that will scale easily, it leaves one to assume that their database won't scale unless they change service tier and performance level.
- Secondly, what happens if they haven't selected the correct subscription level?

1. SQL Databases on Sidebar and Click "Create a SQL Database"

2. Specify subscription, service tiers, performance and SQL Server

3. If no SQL Server set up, set user a username, password and region for server.

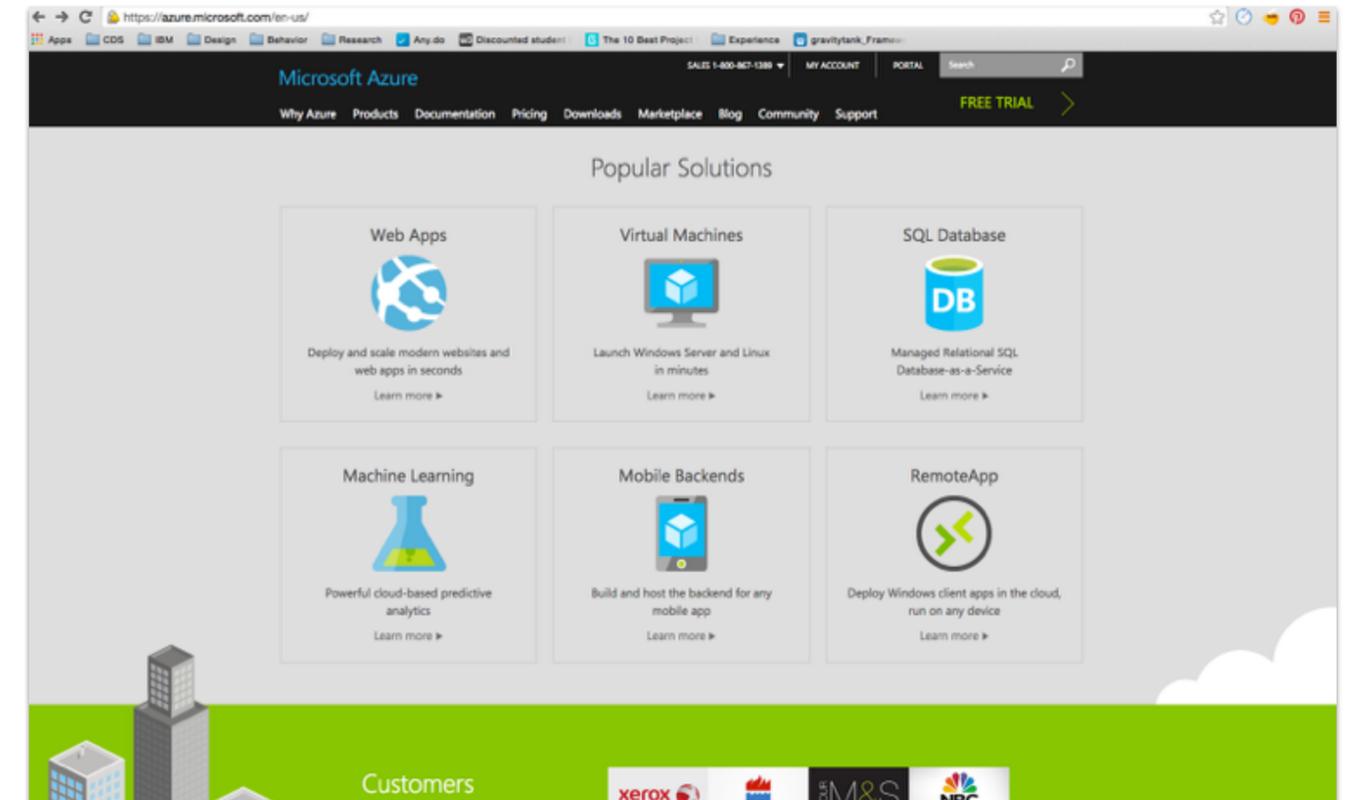


Integration of services



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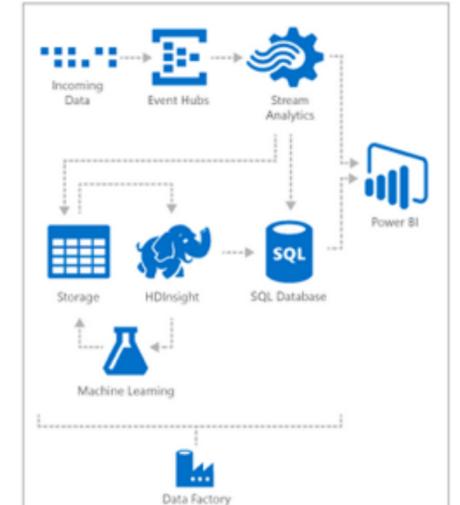
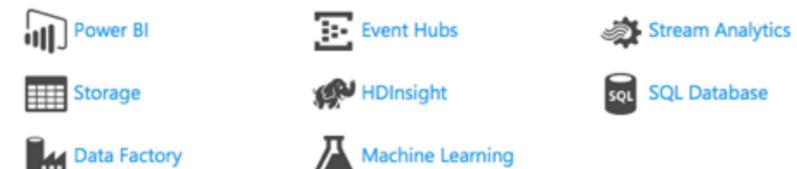
- Visual systems map shows how multiple elements work together for all scales of
- Each offering shows type of service in quick read description
- Popular solutions shows successful combinations of offerings



Transform your business with a complete data analytics solution

Use data factory to orchestrate a data workflow across storage, Machine Learning, HDInsight, and stream analytics using data from virtually any source. Monitor your data pipelines, and use Power BI to answer your toughest business questions.

Learn more:



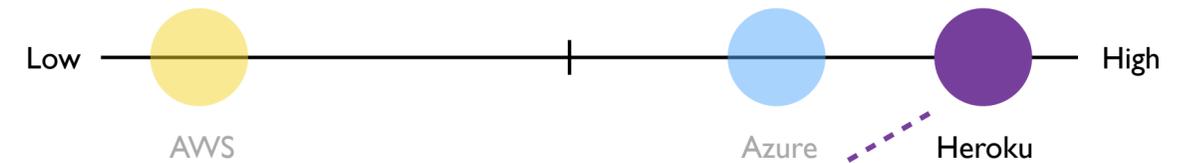
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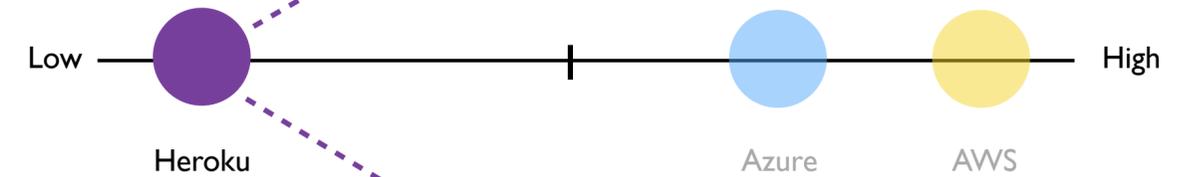
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- Simple offerings that meet the needs of start-ups dev but are now expanding into the Enterprise market.
- Most popular in developer community because it is easy to use, quick to learn, and lets them do the work they love.

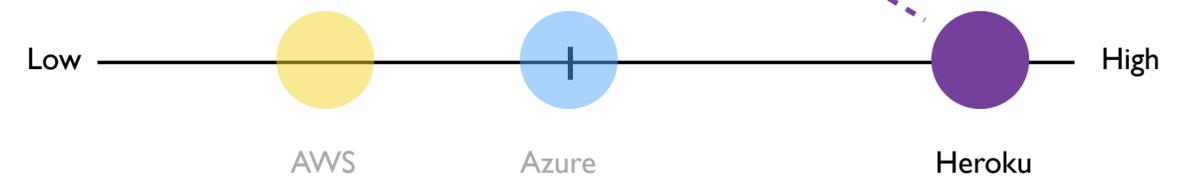
“Out of the box” ease of use



Amount of offerings



Managed service level

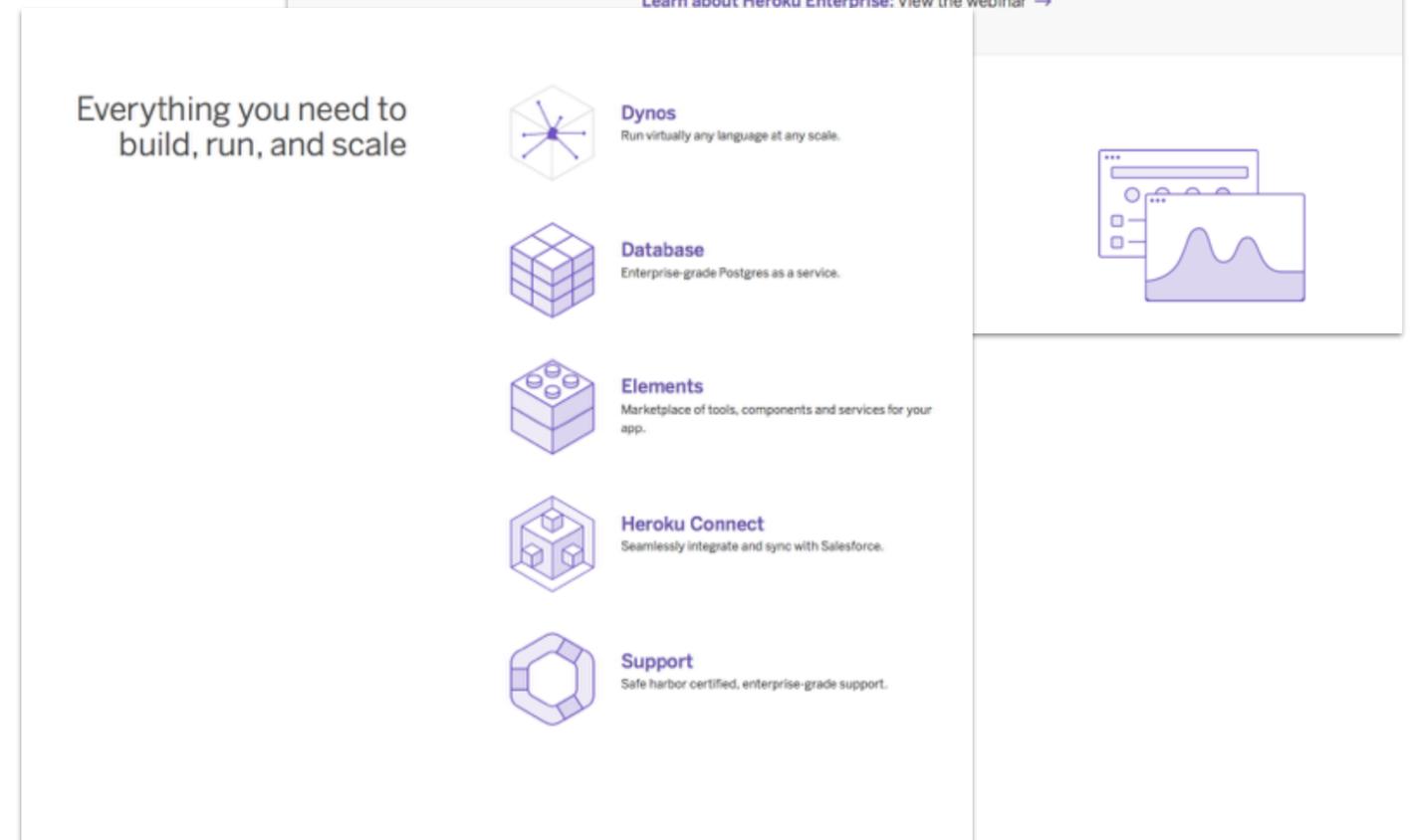
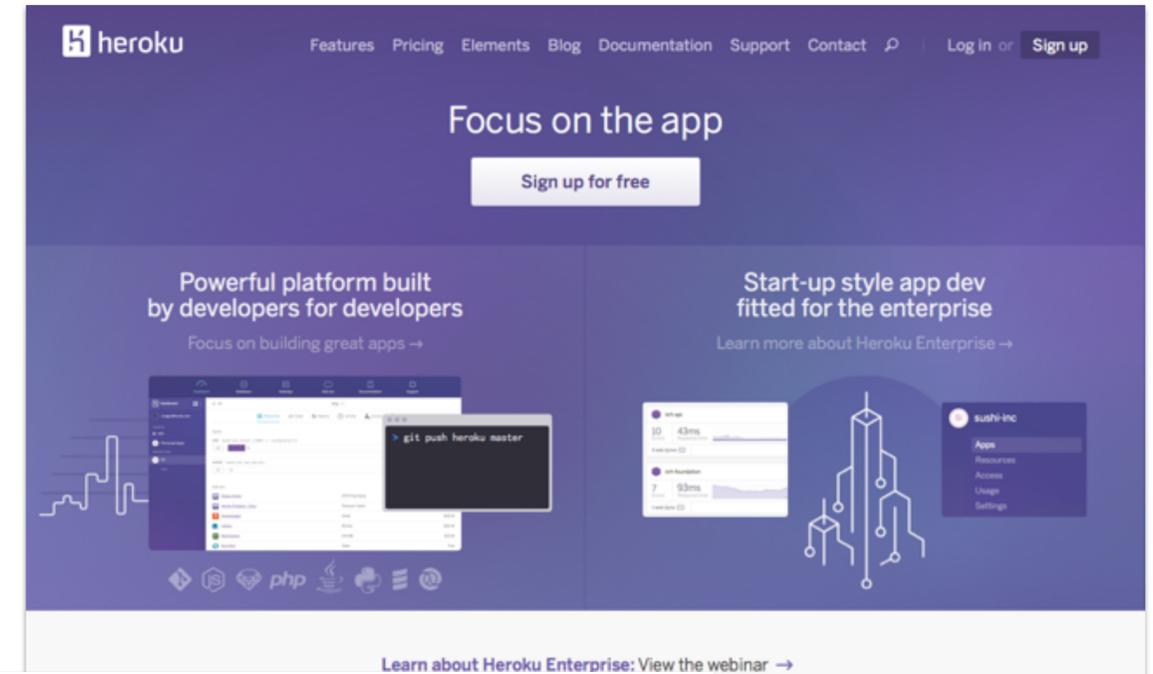


Discover



Heroku has traditionally focused on solo developers and small teams. However, it is evident it is focused on serving enterprise customers, and will likely be aided in the fact that developers love Heroku.

Heroku doesn't have a separate landing page for its main DBaaS, postgres. Instead it focused on the integration of PaaS services to “build, run and scale” apps.



Sign-up



Heroku is similar to Bluemix - it doesn't require a credit during signup, and only prompts a user for one when they want to use a paid service.

1. Create Heroku Account

No Credit Card Required

2. Set Password

After confirmation of email address

Two overlapping screenshots of the Heroku sign-up process. The foreground screenshot shows the 'Sign up for free and experience Heroku today' page. It features the Heroku logo at the top, followed by the heading 'Sign up for free and experience Heroku today'. Below this are three sections: 'Free account' (Create apps, connect databases and add-on services, and collaborate on your apps, for free.), 'Your app platform' (A platform for apps, with app management & instant scaling, for development and production.), and 'Deploy now' (Go from code to running app in minutes. Deploy, scale, and deliver your app to the world.). To the right of these sections are four input fields: 'First name', 'Last name', 'Email', and 'Company name', each with a green checkmark icon. Below the input fields is a 'Create Free Account' button. At the bottom, there is a link to 'Terms of Service and Privacy Policy' and a 'Log In' button for existing users. The background screenshot shows the 'Set your password' page, which includes the Heroku logo, the heading 'Set your password', and the instruction 'Create your password and log in to your Heroku account.' It features two password input fields, a 'Log in' button, and a link to 'Privacy Policy'.

Pricing and Support



There is no call out for premium support on the sign up page.

It is only on the pricing page, placed at the bottom of the page. It is something users need to look for, as opposed to AWS which includes it as a step in their signup process.

- Estimated cost updates at top, always visible on screen
- Managed features & pricing tiers for Postgres DBaaS. Mentions “fully managed” but only in subheadline
- Support tiers are at the very bottom

The screenshot shows the Heroku Postgres pricing and support page. At the top, there are navigation links for Dynos, Databases, Add-ons, and Support. The estimated monthly cost is \$1700, and there is a 'Sign up for free' button. The main heading is 'Keep your data safe and be more productive with Heroku Postgres', followed by a subheading 'Heroku Postgres is a fully managed, reliable database-as-a-service and powerful suite of tools.' Below this are four pricing tiers: Hobby, Standard, Premium, and Enterprise. The Premium tier is selected and highlighted with a blue border and a checkmark. Below the pricing tiers is a section for 'Customize your Postgres setup' with a list of Premium plans and their prices. At the bottom, there are three support tiers: Standard Support, Premium Support, and Customer Solutions Architect. The Premium Support tier is selected and highlighted with a blue border and a checkmark. At the very bottom, there are three footnotes: 1. Support business hours are 6AM to 6PM PDT. 2. Greater of \$1,000 or 20% of total monthly usage. Minimum 3 month commitment. 3. Premium Support price plus \$1,000/month.

Spinning up a database



1. Select Database in main navigation on account dashboard

2. First Time Use: CTA to create a database and indication of how long it will take to spin up a database: 1-5 minutes

3. Select database by pricing level. Easy to miss free and low cost plan

4. Database with auto assigned name and overview of settings appears in postgres dashboard

Note: Clicking on the Database tile in the navigation takes you out of the main dashboard into a “Heroku Postgres” space, with no easy way to get back. Bad UX practice!

The image shows a sequence of screenshots from the Heroku interface. The top screenshot is the main dashboard with a navigation menu on the left containing 'Dashboard', 'Databases', 'Dataclips', 'Add-ons', 'Docs', and 'Support'. The main content area has a 'Getting Started with Heroku' section with links for various languages: Ruby, PHP, Node.js, Python, Java, Clojure, and Scala. Below this is a 'herokupostgres' dashboard with a search bar and a 'Create Database' button. The middle screenshot shows a 'Databases will appear here' message with a 'Create Database' button and text indicating that databases require 1 to 5 minutes to provision. The bottom screenshot is a pricing table for Heroku Postgres Standard plans.

Standard ⁰	Standard ²	Standard ⁴	Standard ⁸
1 GB RAM*	3.5 GB RAM*	15 GB RAM*	60 GB RAM*
64 GB storage	256 GB storage	512 GB storage	1 TB storage
120 connections	400 connections	500 connections	500 connections
\$ 50 / mo	\$ 200 / mo	\$ 750 / mo	\$ 2,000 / mo

Other plans: [Dev Plan \(Free\)](#) and [Basic Plan \(\\$9/mo\)](#)

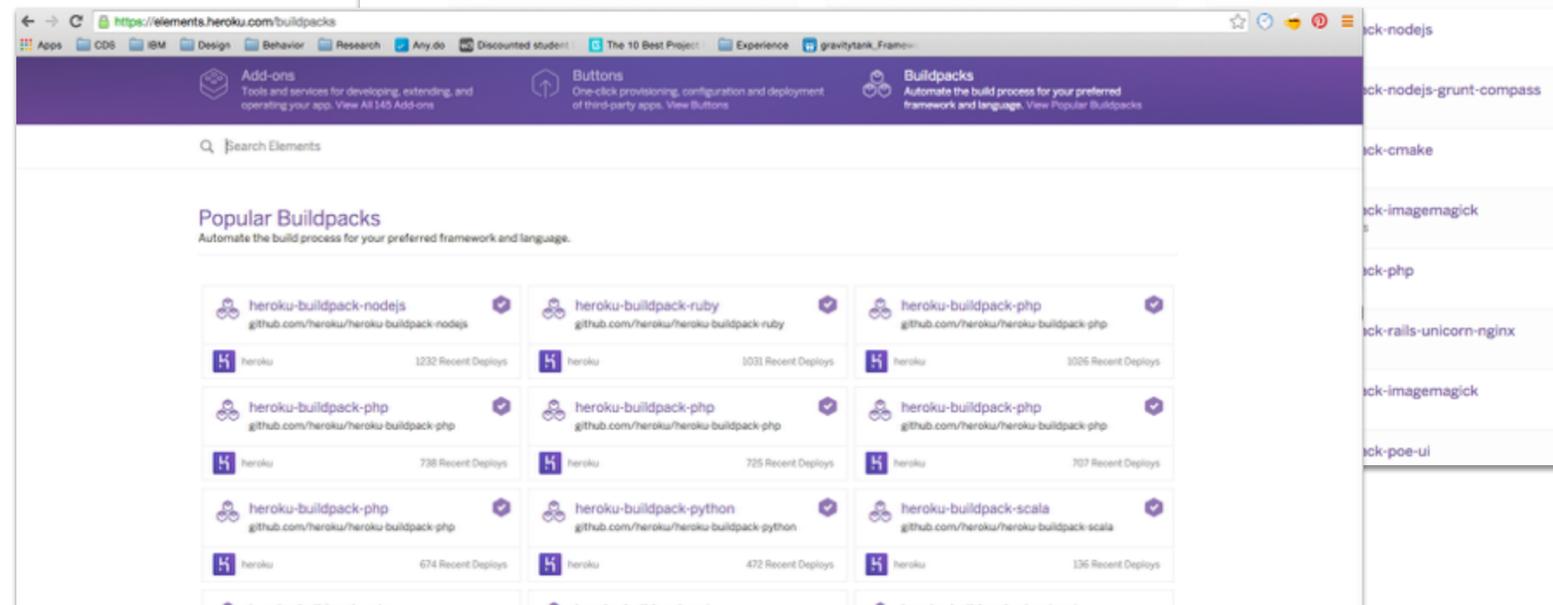
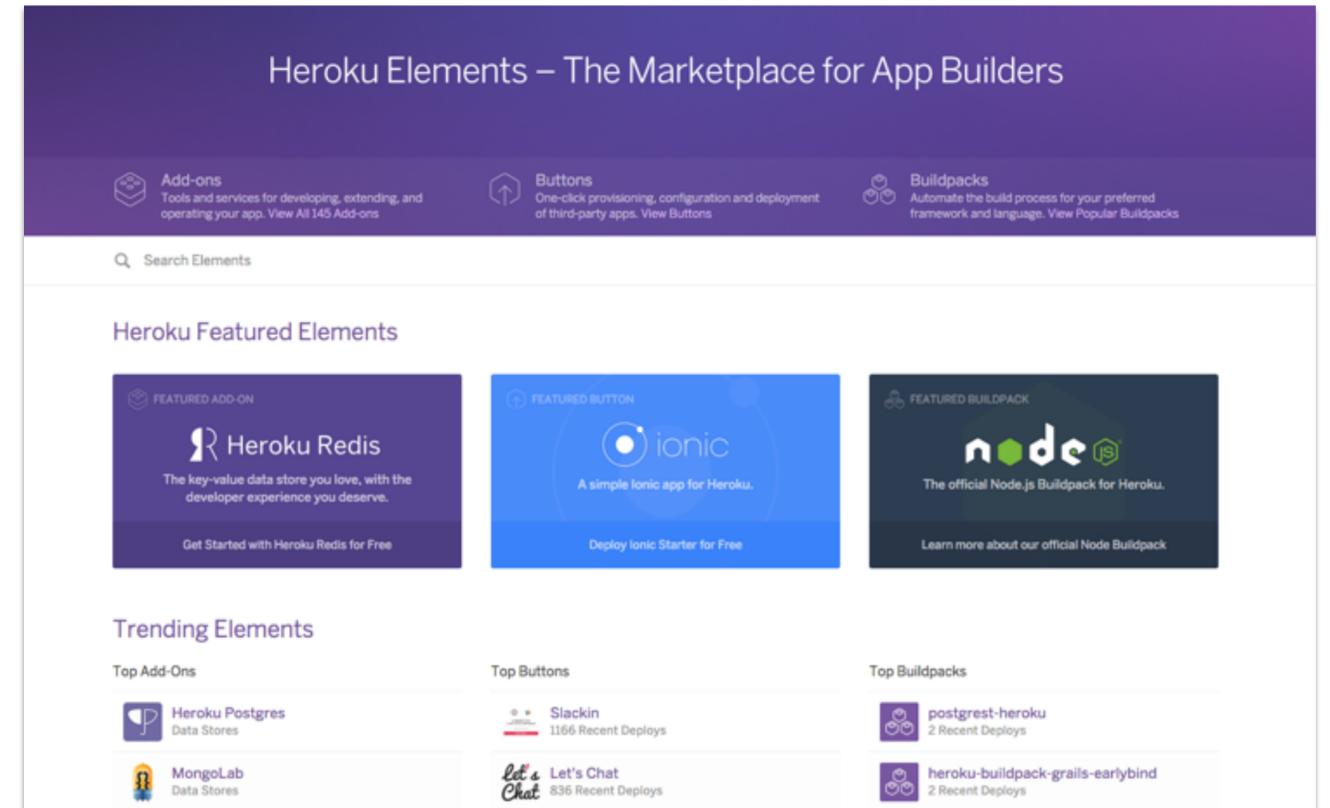
* To know more about memory usage, read this [Dev Center Article](#). To view all our available databases, please visit [Heroku pricing](#).

The bottom right screenshot shows a specific database instance named 'heroku-postgres-1d7ab4a6::jade' with a size of 6.4 MB, running on the 'Hobby Dev' plan, and using PostgreSQL 9.4.1.

Integration of Services

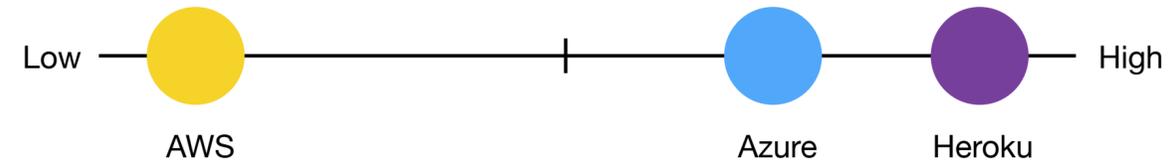


- Offerings categorized by add-ons; top buttons; and top build packs. But no integration mentioned.
- Number of deployments show how popular each offering is based on community use

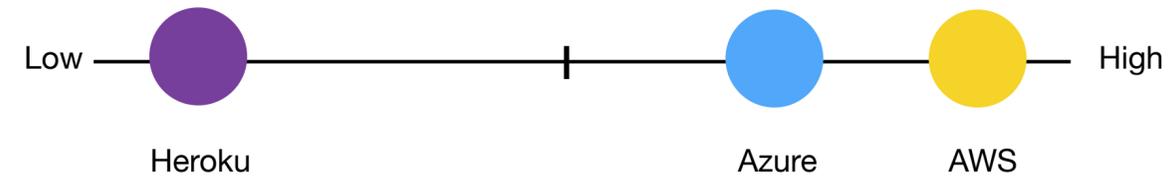


Recap

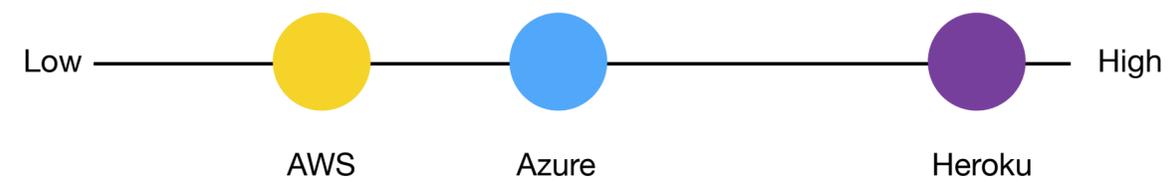
“Out of the box” ease of use



Amount of offerings



Managed service level



Outro

How might we offer the robustness of AWS, the do-it-for-me options of Azure, and the simple, friendly vibe of Heroku?