



Modern Applications: Evolve your development processes

# Developers drive modern business

Application development has become core to business success. As a result, application developers have emerged as precious assets, not just inside their companies but also across the global economy. According to a report from Stripe, these developers have the potential to collectively raise worldwide GDP by \$3 trillion over the next decade—which is why keeping them productive and professionally fulfilled is more important than ever.

## Attracting and retaining talented developers

Many developers want to work in an environment where they can focus on creating features that deliver value. To foster this kind of environment, many companies are reorganizing, creating small service-oriented development teams responsible for both development and operations. These DevOps teams have the autonomy to build, run, and own their service. These teams release features using new processes, such as Continuous Integration and Continuous Delivery (CI/CD), which accelerate software delivery by automating most of the build, test, and deploy steps.

## Modern software delivery with automated pipelines

Automating pipelines is a process that accelerates the build, test, and deploy phases of software development to achieve faster releases, higher-quality code, and less risky deployments. Automating tasks in the software release process improves developer productivity while significantly reducing error rates. These practices optimize the day-to-day tasks of your developers and free them to focus on innovation that benefits your business.

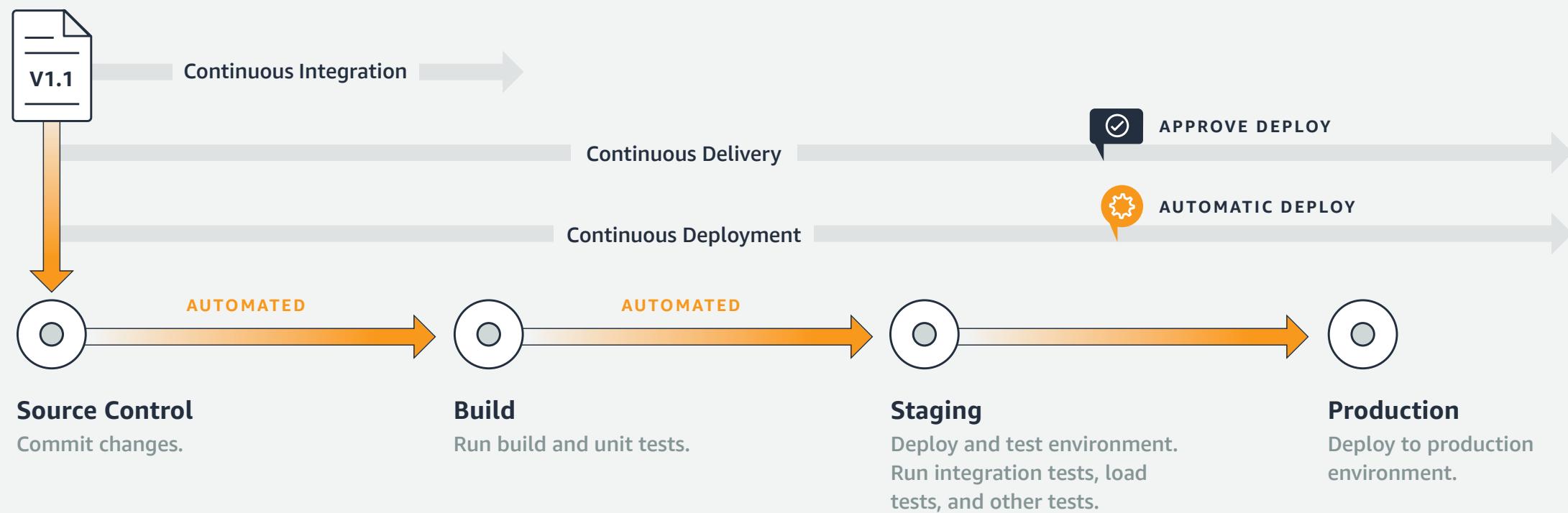




Modern Applications: Evolve your development processes

## Automation, from build to production

Automated pipelines expedite the entire software release process. Every revision that is committed triggers an automated flow that builds, tests, and then deploys the update.





Modern Applications: Evolve your development processes

## Best Practices for automation

- ✓ Keep DevOps teams small (we like to limit to a team that can be fed with two pizzas)
- ✓ Standardize builds on systems
- ✓ Assemble unit tests toward 100% coverage of the code base
- ✓ Make unit tests 70% of the testing in duration, number, and scope
- ✓ Establish role-based security controls
- ✓ Capture, track, and measure standard metrics
- ✓ Commit code to the main trunk, not long-running feature branches, or try and keep feature branches short-lived
- ✓ Use distinct pipelines for each branch and team
- ✓ Treat your infrastructure and delivery configuration as code

## Benefits of using automated pipelines

Improve developer productivity	Find and address bugs quicker	Deliver updates faster	Attract and retain top talent
Automation reduces the time developers spend on routine tasks and eliminates waiting periods between stages of development.	Your team can be agile by addressing smaller problems at a higher frequency. They can be notified of issues earlier before they grow into larger problems.	By delivering smaller changes that are automatically prepared for production, your team will move faster and spend less time in lengthy testing processes.	Reducing the time developers spend on the tasks they like least and freeing them to focus on innovation fosters a culture that keeps talented developers happy.

### Happy developers, happy customers

By implementing automated pipeline processes, developers have the framework to more rapidly turn innovative ideas into a practical reality. This also fosters a developer-friendly culture, freeing time for your development teams to focus on what they love: building great products. Evolving your development processes with automation is one of the best ways you can attract and retain the most talented developers while also building and quickly releasing features that delight your customers.

### Ready to see how it works?

[Visit us](#) to learn more about how Amazon creates and leverages automated pipelines in our development environments.