How Slack expedites the software development lifecycle

Why over half of developers choose Slack as their platform for building better code faster

slack

Table of contents

Introduction

What if your software developers and engineering teams were able to consistently deploy multiple times each day? What if they needed less than one day's lead time for changes and took less than one hour to restore major incidents?

Developer velocity (the ability to ship features and bug fixes quickly) is the key to hitting this kind of delivery performance. **According to management consulting firm McKinsey & Company**, companies with the best developer velocity **outperform the rest of the market by four to five times**.

But to improve developer velocity, you need the right tools. **McKinsey's research** shows that "best-in-class tools are the primary driver of developer velocity." Likewise, **DevOps Research and Assessment** (DORA) found that the highest-performing engineers were "1.5 times more likely to have easy-to-use tools."

Engineers are now working with more widely distributed teams as remote work becomes normalized across many industries. This means engineers are working with more tools and software than ever before. Constant context switching between tools takes up precious time that could be used to ship code.

Slack is the channel-based messaging platform that unifies and transforms your engineering tech stack. It's a central place for developers to collaborate on feature development, deploy code and manage incidents.

Over half of developers use Slack as their platform of choice for building better code faster. Here's why.

Build and deploy code faster

Your engineers have to work with a variety of tools, teammates, and stakeholders to create and ship code. Whether a team is scoping feature requirements or reviewing pull requests, there are many potential friction points—duplicated code review, buried notifications, disjointed communication and so on.

"The highest-performing engineers are 1.5 times more likely to have easy-to-use tools."

Source: "**Accelerate State of DevOps**," DevOps Research and Assessment, 2019

To build code quickly and efficiently, these friction points must be smoothed at both the human and systems level.

Slack improves the velocity of your development by offering a hub where the right people can collaborate and work with the information and tools they need, at exactly the moment they need them.
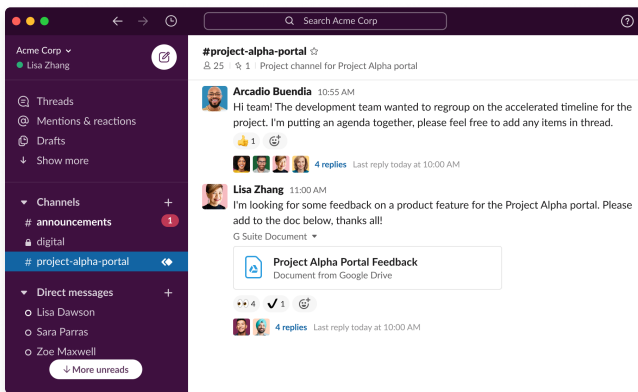
"Slack sits at the junction of our human systems and our machine systems, connecting the two in meaningful ways that enable speed, quality and visibility for our test, deploy, planning and operations processes," said Shawn Carney, the senior director of engineering at Etsy, during Slack Frontiers 2020.

IDC Research found that the average engineering team using Slack also saw a 24% increase in features delivered on time. Here's how.

Improve team visibility and collaboration with channels

Channels in Slack provide an organized space for everything related to a project, topic

or team. In Slack channels, engineers can manage and monitor the development cycle within a single tool. Teams can quickly make plans, trigger pull requests and provide real-time feedback that improves the quality of their code.

Here are just a few ideas for channels to help you get started:

- **#devel-new-app** gathers everyone working on setting requirements and specs for a mobile app
- **#dev-team-standups** has daily threads for team members to respond with their updates on today's tasks, plans for tomorrow and any requests for help
- **#product-questions** gives customer support or nontechnical team members a place to ask about advanced features or discuss bugs or product issues before filing a request in a tool like GitHub or Jira
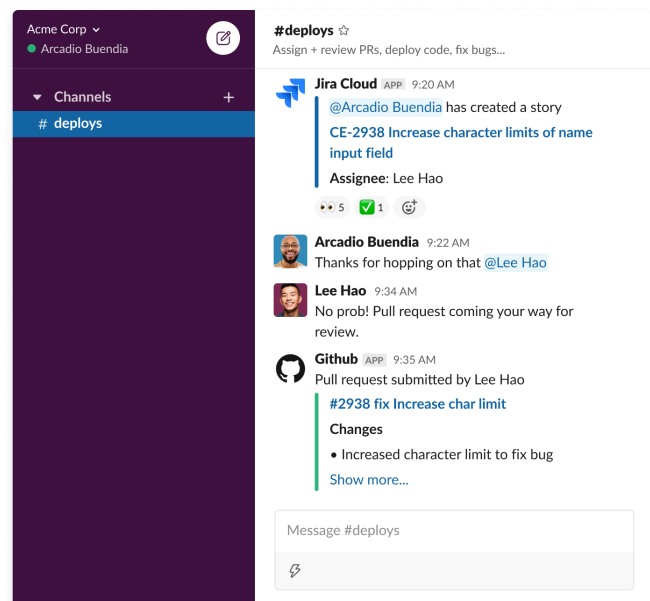
Channels make it easy to include the right people on the right topics at the right time:

- **Stakeholders**—whether they're developers, project managers or VPs— have instant visibility into what their team is doing and how a project is progressing
- **Engineers** can spend more time focused on their work and less time updating stakeholders or chasing down coworkers for code reviews
- **Cross-functional teams** can rally around a project in a dedicated channel to hammer out feature requirements and functionality
- **Team leads** can hold fast, efficient stand-ups and discussions

Slack channels also create a point of record, where you can easily search through all documents, decisions and conversations in a channel. No more losing product specs in email attachments. Channel members can **pin a message with the specs document to a channel**, for example, and locate it quickly within the channel sidebar.

In channels, teams work together faster— which leads to building and deploying code more efficiently.

Engineering teams using Slack see an average of **23% faster time to market**, as well as a 27% reduction in the time it takes to test and iterate their code.

Drive efficiency with Slack integrations

Context switching is another major challenge for engineers. Teams must work between several tools when they don't have a single

> "Slack sits at the junction of our human systems and our machine systems, connecting the two in meaningful ways that enable speed, quality and visibility for our test, deploy, planning and operations processes."

Shawn Carney
Senior director of engineering, Etsy

hub to manage the development cycle. The constant back-and-forth between tools creates a lot of friction and inefficiency in the development process.

Little wonder then that **DORA found** that the highest-performing teams "automate and integrate tools more frequently into their toolchains on almost all dimensions." And according to **IDC Research**, "Companies enjoy a mean productivity increase of 37% when three or more applications are integrated."

> "Companies enjoy a mean productivity increase of 37% when three or more applications are integrated."

Source: "**Unlocking collaboration: Making software work better together**," IDC Market Spotlight, 2020

Instead of having engineers work between tools, integrate your tech stack in one platform: Slack. With **Slack apps** readily available out of the box, engineers can get alerts and run commands in key applications like **AWS**, **PagerDuty**, **Azure Repos**, **Jira**, **GitHub** and over 2,400 other apps.

Using these integrations, you can review pull requests, merge code and manage the QA process, all without leaving Slack.
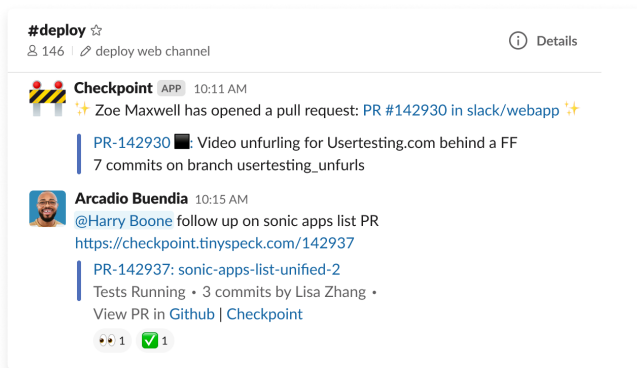

IBM uses Slack integrations to pipe system alerts from numerous applications into team channels. Say a developer submits a user story for review in the source code. The system triggers a notification in the team's Slack channel, letting everyone know that there's new code up for review. The reviewer can then go into the system to review the code directly from that Slack message.

The team's **#help-desk** channel collects pull request notifications, which automatically facilitate peer code reviews and alert the team when requests have been approved. This saves team members from having to switch applications to get the latest updates.

IBM's team also relies on its **Jenkins/Travis CI** integration to notify the team when the status of a build changes.

With Slack, teams can keep up the pace, knowing that they'll be notified about individual code reviews as needed and will be given the right information to help them quickly complete tasks.
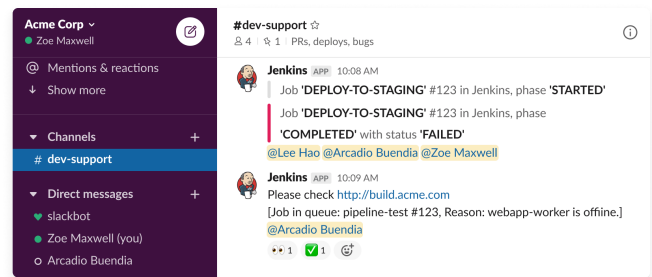
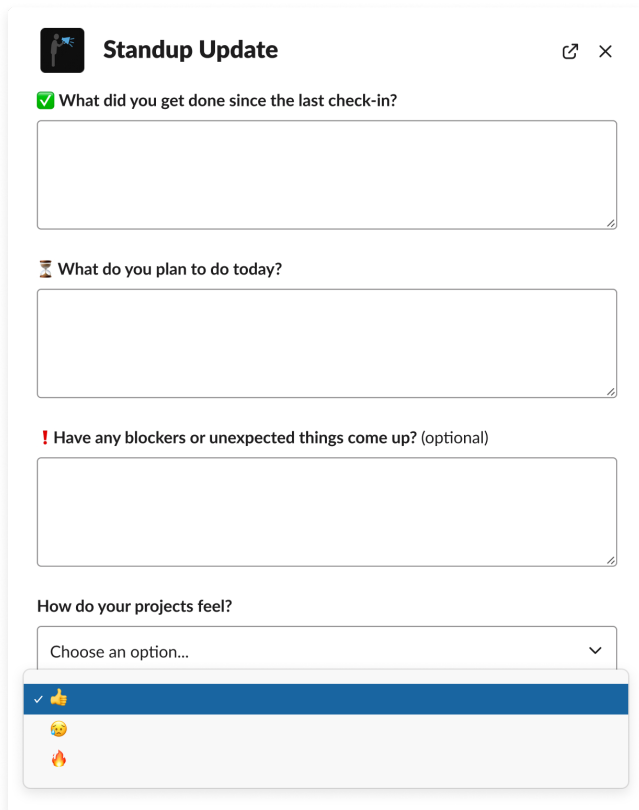# Automate work with Workflow Builder

Another way to manage context switching is to simply automate away the need for certain tasks. **Workflow Builder** is a no-code automation tool available right in Slack that makes it easier for your teams to focus on delivering value. Use Workflow Builder to easily automate routine and repetitive tasks, such as:

- **Managing status updates**. Instead of breaking momentum for a stand-up, run stand-ups asynchronously by prompting team members to post updates in Slack. Workflow Builder makes it easy to set up daily or weekly reminders by either asking everyone to post their replies as a thread
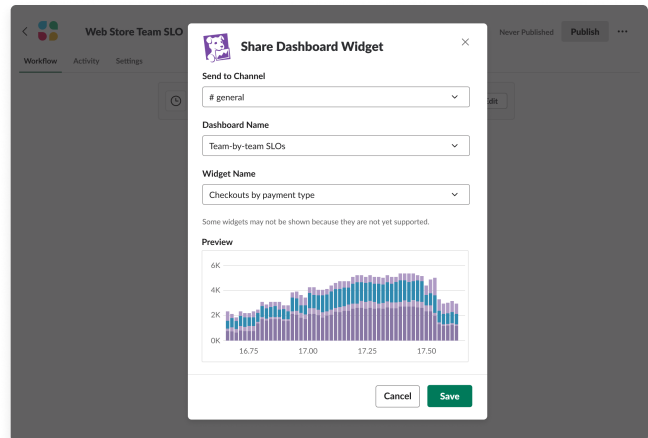
to that message, or creating a quick form to focus your team's answers on a few key questions and ratings.

- **Announcing code deployment**. Launch a Workflow Builder action that automatically posts an "all clear" message when a deployment reaches 100% of servers with no ill effects after a review period.

- **Monitoring application rollout**. Use Workflow Builder with a tool like Datadog to regularly pull data from a dashboard or monitoring system into your team's Slack channel.
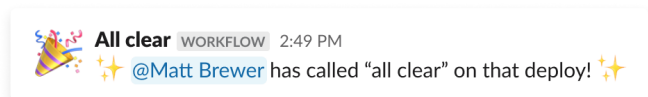
Before **Hearst Media** started using Slack, its DevOps team found itself asking the same tedious follow-up questions every time an employee requested access to a software tool such as **Jira** or **GitHub**. Questions like: What's your email address? What's your username? What level of access do you need?

Now requests are made and approved entirely in Slack, launched from a quick request form made in Workflow Builder. Completed answers are delivered to a DevOps team member via direct message, where he or she can approve it with a click. From there, a custom Slack app picks up the approval and completes the task.

Workflow Builder helps your team refocus on the work that matters, without sacrificing visibility or responsiveness.

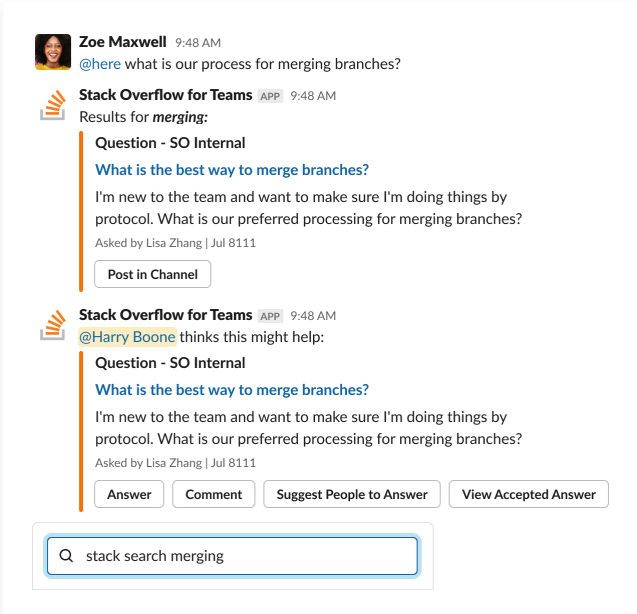# Connect your business processes with Slack API

Slack offers a range of APIs that let you build more enhanced, custom and powerful experiences in Slack via custom apps. Apps give your devs access to the full scope of the platform, so you can layer Slack on top of your unique tech stack and enhance usability.

Online shopping website Etsy uses dozens of custom apps built with Slack API to help with everything from the deploy train to the updating of support tickets. Etsy runs upward of 40,000 software tests on all code pushed to production, with an average of 22 code pushes a day. Automation is what makes this high volume of tests possible. Here are just a couple of the custom bots that **Etsy shared at Slack Frontiers**:

- **Pushbot** is Etsy's homegrown legacy bot that handles the coordination of pushes. When a developer deploys, they go to the **#push** channel and use a command to tell the push bot that they want to join the queue. This bot ensures that all the appropriate tests have been run and allows them to enforce some basic ground rules for pushes.
- **Devbot** is a messenger bot that relays messages from Jenkins and Deployinator (a Sinatra app Etsy built that uses a Ruby web framework) to orchestrate the deploys of the various stacks at Etsy. This custom bot pulls down the status of builds, pushes DMs to engineers directly (as well as to a designated Slack channel) and lets push

train members provide status updates.
- A **PagerDuty app** provides visibility for internal rotations and tracks the status of alerts.
- A **Stack Overflow for Teams** integration can create a draft of a post on Etsy's Stack Overflow or link people to Stack Overflow search results whenever someone asks a question in a channel. The integration lets engineers ask questions and share knowledge about internal systems within a channel, reducing repetition and toil.

- **Announcebot** broadcasts changes to an infrastructure announcement channel to provide visibility into what's new.

These apps and custom workflows save Etsy engineers valuable time that would otherwise be spent context switching between tools.

Improve service reliability

Service incidents and downtime are chaotic and costly. Exact costs vary based on an organization's size and industry, but according to research by the **Ponemon Institute**, unplanned outages cost an average of around $9,000 per minute. Naturally, there's a lot of pressure from on high to resolve incidents as quickly as possible.

But traditional communication processes—like triage meetings, phone bridges and email chains—often slow down response times.

Real-time communication—whether a meeting or a phone bridge—requires you to constantly disrupt your troubleshooting to provide context as new people join the call. Email chains and chat tools make it quicker to share context, but they lead to isolated communication. Out-of-the-loop team members might unintentionally duplicate work, and key postmortem learnings get lost in inboxes and private chats.

You need a tool that can give you the speed and visibility of a meeting, with the rich context and archivability of email.

Slack provides the ideal command center for managing incidents. Engineers can discover incidents in record time, solve issues faster and capture data for comprehensive post-incident review reports. Slack also allows you to keep stakeholders—sales agents, customer service team members, executives—informed about resolution statuses directly in Slack.

"The ability to jump into Slack to work an incident with a team and get a timeline view of all the communication that's preceded is extremely helpful, especially if you're responding to a middle-of-the-night incident," said Paul Zimny, the chief technology officer at movie ticketing company **Fandango**.

Since implementing Slack, technical teams estimate that they've **reduced mean time to resolving bug issues by 19%** by leveraging Slack channels and integrations to streamline response workflows.

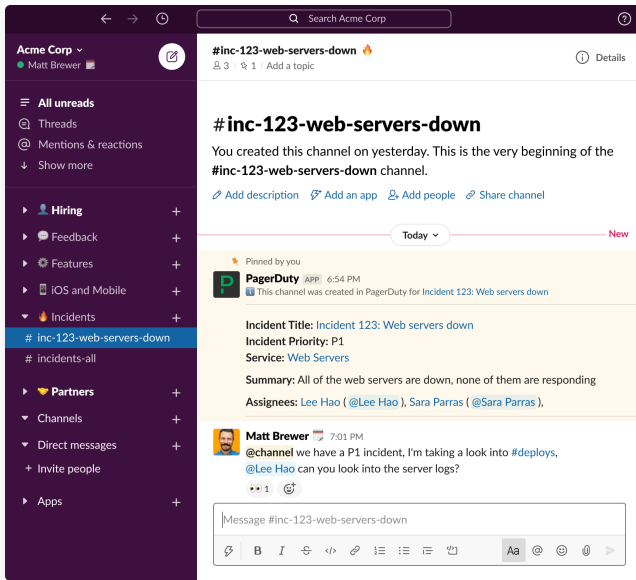| ROI	BENEFITS PV	NPV	PAYBACK
338%	**$6.91M**	**$5.33M**	**< 6 months**
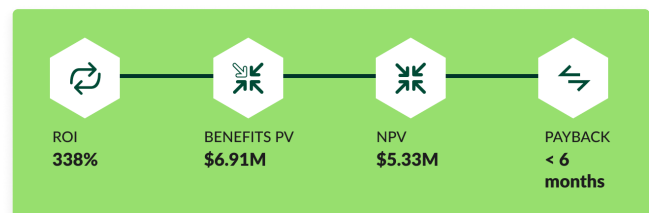
Create a dedicated Slack channel to manage incidents

Once your team is aware of a problem, generate a dedicated Slack channel to collect the full incident history in a single place. An incident channel helps engineers and other team members get up to speed with an incident quickly.

With custom workflows, Slack will do this for you by triggering the creation of an incident channel based on an alert and then adding the right people to the channel. You can even set up your bot to automatically post your new channel to **#engineering**, so others can find it.

At **Tyro**, a fast-growing business bank, Slack integrations kick in automatically as soon as an incident is identified: PagerDuty issues an alert, and Zapier spins up a dedicated Slack channel. The bot pulls key stakeholders into the channel, where they can review the incident information and collaborate to come up with a solution.

As a part of incident management, Tyro's resolution managers issue CAN (conditions, actions, needs) reports to update everyone on the incident status. Previously, the process involved a lot of copying and pasting from different places. But with Workflow Builder,

they created a form for resolution managers to fill out right in Slack.

"The workflow established a very succinct way of delivering consistent messaging throughout an incident, and it's standardized across resolution managers," said Timothy Kersten, a program leader at Tyro.

A dedicated incident channel doesn't just make it faster to resolve issues—it also makes it easier to learn from them. Once you resolve the incident, your Slack channel becomes a rich, searchable archive of files, screenshots, error messages and team discussions.

"We use these incident channels as the root of our analysis for our postmortems, and what's great is there's no guesswork, because we have all that history right there," said Thomas Lawless, an executive IT specialist at **IBM**.

"We use these incident channels as the root of our analysis for our postmortems and what's great is there's no guesswork, because we have all that history right there."

Thomas Lawless
Executive IT specialist, IBM

Leverage integrations and automations to increase responsiveness

From your team's perspective, an incident begins when you first get an alert. But from the customer's perspective, the problem usually begins earlier. Speed is of the essence, so the last thing you want is an important alert getting buried in an inbox.

Integrations with critical monitoring apps like **PagerDuty** instantly send rich incident alerts to channels, so your whole team has visibility into issues. Engineers can swarm issues immediately, right from Slack, reviewing incident details, tagging relevant teammates on the alert and triggering actions directly from Slack.
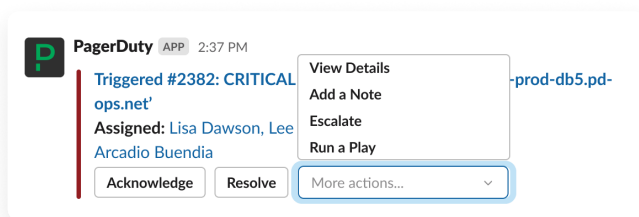
Alert integrations also give non-engineers visibility into service issues. Your support techs could monitor a **#dev-ops-notification** channel to quickly identify customer experience issues that they can address.

Telecommunications company **Vodafone** uses the PagerDuty integration to monitor and escalate customer-facing events. When an incident occurs in a production environment, the right team is notified, down to the right individual, within milliseconds inside Slack.

"That dramatically reduces the mean time to resolution because we're able to contact and alert the right person at exactly the right time," said Matt Beal, former director of technology strategy and architecture at Vodafone.

Before Slack, it would have taken 15 to 20 minutes to find the root cause, but Vodafone reduced the mean time to resolution to under five minutes.

By interacting with alerts directly within Slack, engineers are able to swarm incidents much faster, leading to better overall response times. Custom workflows (or "Slack bots") are a huge part of this.

Game developer **Riot Games** uses a **Sentry** integration in Slack that pipes robust crash analytics and diagnostics directly to their operations and monitoring channels. The app automatically shares an enormous amount of valuable information when a player experiences a game crash, including screenshots and the actions that occurred right before the crash.

These event summaries automatically post to the appropriate Slack channel, where on-call engineers can use buttons to assign events to colleagues, learn more details about the incident or resolve incidents directly.
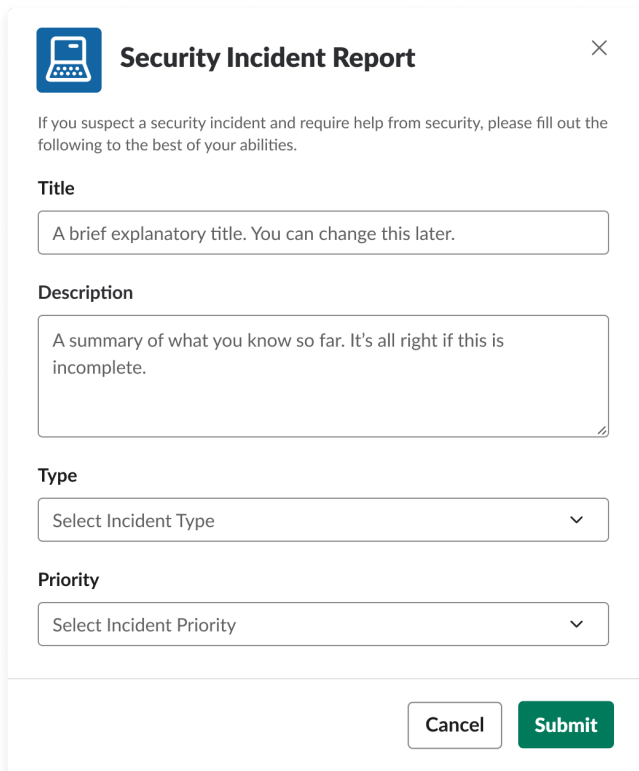
Riot Games also uses **Jira** and **ServiceNow** integrations to capture Slack conversation threads associated with the outages, for future reference.

To resolve issues faster, **Netflix** integrated its custom, open-sourced incident management software, called **Dispatch**, with Slack via API. It built several functionalities into its custom Dispatch/Slack integration:
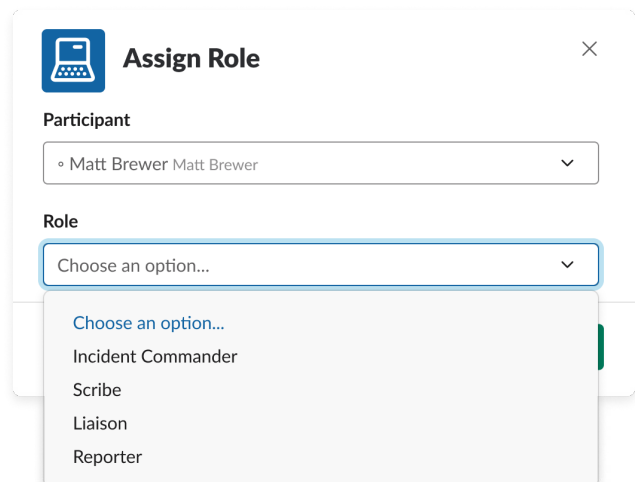
- A **slash command** that opens a low-friction reporting form, requiring only a title and a description. The goal was to help employees report incidents as quickly as possible.

Security Incident Report ✕

If you suspect a security incident and require help from security, please fill out the following to the best of your abilities.

Title

A brief explanatory title. You can change this later.

Description

A summary of what you know so far. It's all right if this is incomplete.

Type

Select Incident Type ⌄

Priority

Select Incident Priority ⌄

Cancel   Submit

- An **automated announcement** for participants as they join an incident channel. Dispatch includes their name, team location and role they play in the incident.

- An **automated welcome message** sent to new participants in an incident channel, with instant information and links to all the resources that Dispatch has created. (This automation frees the incident commander and other participants from having to provide context to them and allows the participants to start contributing right away.)

- A **slash command** that enables the incident commander to assign roles to other participants. Dispatch adds the participants to the channel if they're not already members and then assigns them their role. Once a role change has been completed, Dispatch notifies everyone in the channel.
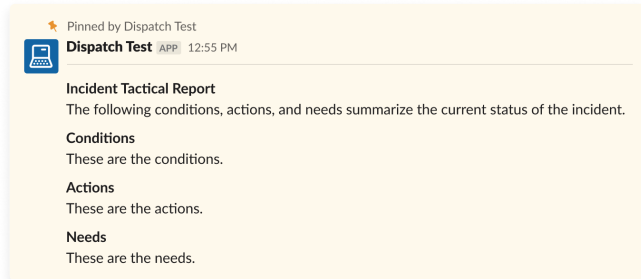
Assign Role ✕

Participant

◦ Matt Brewer Matt Brewer ⌄

Role

Choose an option... ⌄

Choose an option...
Incident Commander
Scribe
Liaison
Reporter

- A **slash command** that gives the incident commander or scribe an easy way to write and share tactical and executive reports with the right audience.

⭐ Pinned by Dispatch Test

Dispatch Test `APP` 12:55 PM

Incident Tactical Report
The following conditions, actions, and needs summarize the current status of the incident.

Conditions
These are the conditions.

Actions
These are the actions.

Needs
These are the needs.

- Slack creates a **hub** where engineers and other stakeholders can swarm an incident quickly and efficiently. There's no need to hunt down alerts, find the right teammates or context switch between dashboards. Instead, your team can focus on what really matters: solving the issue and making the end user happy again.

Engage developers and improve team productivity

Retaining top talent isn't easy—the software industry has the **highest turnover** of any sector. And in a **survey by Stripe**, executives said access to developer talent was one of the top five threats to their businesses, ranking it as more important than access to capital.

To solve this problem, you need to empower workers to do their best work and ensure that they're satisfied with their jobs. Global analytics and advice firm **Gallup reports** that organizations with high engagement see 24% less turnover, even in high-turnover industries like tech.

According to Gallup, the majority (60%) of employees say it's important that they're able to focus on "what they do best in a role." In other words, they want to do work that allows them to succeed instead of waste their time on low-value tasks.

This is especially true for engineers. Contrary to what you might expect, **DORA found** that the highest-performing developers are only half as likely to report feeling burned out as average developers. A sense of achievement is critical to job satisfaction.

To retain your talent, provide engineers with tools that empower them to do their best work. **McKinsey found** that developer satisfaction and retention rates were 47% higher for companies that give their engineers the best available tools for each stage of the software lifecycle.

According to **Stack Overflow's 2020 Developer Survey**, Slack is second only to GitHub when it comes to developer collaboration—53% of professional developers use Slack.

Engineers can personalize Slack to reflect the way they want to work, with unique channels, notification preferences, integrations and custom workflows.

> ## 53%
> of professional developers use Slack
>
> **Source:** "**2020 Developer Survey**," Stack Overflow, 2020

Foster a collaborative culture with channels

Slack channels are an ideal space for engineers to feel a sense of contribution and belonging through collaboration.

Using Slack, the innersource community at the **Royal Bank of Canada** (RBC) has actively fostered a culture that brings the open-source practice of communally developing

software into the context of an organization. Innersource culture is rooted in collaboration, open communication, experimentation and feedback. Slack enables this culture by connecting developers with the larger RBC community in an open space, where everyone can contribute.

Employees can ask questions openly inside Slack channels. People from different teams and backgrounds often jump in to help, making it easy to obtain information.

Better collaboration also means better performance. For instance, at RBC, information on how to get set up and running with a development environment is indexed, shared and made searchable in Slack. That instant access to information has streamlined development processes. What previously took hours—or even days—to research now takes minutes. And when questions come up, there's always another developer out there using the channel who can jump in and help.

Transparency doesn't just build culture. It also saves time, cuts down on redundant work and, ultimately, drives higher job satisfaction and engagement.

> "When we put the power back in the hands of the developers, they drive the culture and create the capabilities."

Paul Whyte
Former head of systems engineering, Vodafone U.K.

Empower engineers to innovate faster with integrations

Integration and automation aren't just productivity-boosters; they also empower your engineers to innovate and create workflows uniquely suited to their teams and projects.

For the engineering teams at **Vodafone** to successfully adopt the fast-moving Agile and DevOps methodologies that shorten deployment timelines, they needed to focus on building camaraderie and empowering developers.

"Slack's been instrumental in developing that fabric," said Paul Whyte, the former head of systems engineering for Vodafone U.K. "When we put the power back in the hands of the developers, they drive the culture and create the capabilities."

At Vodafone, the systems engineering team frequently uses Slack integrations to tighten the turnaround time on new code. "In terms of our ability to deploy really quickly, Slack is a key element," Whyte said. "Our Slack integrations empower developers to deploy from development machines to test environments to production environments in a very short period of time." So far, Vodafone has reduced that cycle from around three months to 30 minutes—and the company aims to lower it even more.

Engineering teams using Slack see a **16% increase in developer productivity**, and 87% of companies say Slack improves developer collaboration.

With Slack, you leverage the best of both human and machine—allowing developers to minimize repetitive work and focus on the work that excites them.

Ship better code faster with Slack

As remote work becomes normalized, collaboration matters more than ever. It's critical that your engineering teams have a common space where they can connect, help one another and get work done.

Slack provides that shared environment. It unites your teams' technology, knowledge and people so that engineers can focus on what really matters: shipping outstanding products and services.

To learn more about transforming your dev lifecycle with Slack, **contact our sales team**.

About Slack

Slack makes work simpler, more pleasant and more productive. It's a channel-based messaging platform for enterprise that brings the right people, information and tools together to get work done.

From FTSE 100 companies to corner shops, millions of people around the world use Slack to connect their teams, unify their systems and drive their business forward.

slack