

The Manager's Guide to Messaging for Development Teams

**How to increase team
productivity and efficiency
through advanced collaboration**



GREAT TEAMWORK depends on effective collaboration. When DevOps teams have easy access to an advanced messaging-based collaboration environment, they are not only more productive and efficient—they thrive. Today’s modern messaging platforms help development teams ship software and manage operations with greater speed and confidence. These platforms bring people, discussions, bots, tools, and files together in a central, shared workspace to collaborate in real time throughout the DevOps lifecycle.

Collaboration tools and methods are critical to enabling your organization to run at peak productivity. Choosing the right team messaging solution is a strategic decision that can greatly increase your development team’s ability to deploy code faster and increase velocity.

If you’re looking to uplevel DevOps collaboration, this guide will help you determine the best way forward. We’ll cover common organizational challenges and highlight the ways a modern messaging platform drives collaborative, integrated DevOps workflows for a high-performance organization.



Challenges to Effective DevOps Collaboration



Developer productivity is impacted by many factors, including an organization's tools, practices, policies, and individual preferences. As you evaluate your current collaboration landscape, consider how the following may be holding your organization back from optimizing DevOps team efficiency.

Collaboration Silos Inhibit Productivity

Teams tend to organically develop their own ways of working together using favorite communications tools and methods to power workflows and day-to-day teamwork. It gets complicated when a team needs to collaborate with others across the organization and externally. When everyone is using different tools, it creates communication silos that become hurdles to effective cross-team and cross-functional collaboration. The added friction makes it harder, and slower, for your organization to get things done.

Limited, Frustrating Legacy Messaging Tools

Many products on the market offer enterprise messaging capabilities. Legacy platforms, like Jabber, Lync, Yammer, or Microsoft Teams, are focused on communications and social networking, providing lightweight feature sets for enabling group chat, audio and video conferencing, or file sharing. However, for development teams, simple chat is not enough. They need a modern solution that supports the complexity and dependencies of DevOps teamwork.

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Teams need to communicate, but they also need to collaborate, with efficiency and speed, connecting to all of the disparate tools and systems that help them get the job done. While tools like MS Teams provide basic chat capabilities, a truly modern solution also provides features like robust search, granular user permissions, and text and code formatting. In addition, modern tools not only provide chat features, but also enable integrations and automated workflows connected to code repositories, CI/CD systems, and other mission-critical systems developers use every day.

Too Many Manual Tasks and Workflows

Development teams depend on automation to help them deliver higher-quality software faster. For many workflows, such as CI/CD or incident response, messaging and automation go hand in hand—humans, bots, and systems need to exchange critical information to keep everything moving smoothly. Yet most messaging solutions do not integrate with DevOps tools and systems, such as Jenkins, GitLab or Jira. People are forced to manually log into numerous dashboards to accomplish simple or repetitive tasks, or rely on others to share information. This context-switching not only slows an engineer's pace, but it also breaks their focus and flow, making it more difficult to focus on writing clean code or resolving high-priority bugs.



Lack of Control Over Data Security & Compliance

Data security is critical to any organization, and for those with strict compliance requirements, it is paramount. IT teams must maintain a strong security stance over all company systems and data processes, including messaging. However, since technology evolves at an



increasing pace, development teams also need the autonomy to work with the tools that best fit their needs. So organizations are faced with the challenge of providing developers with the freedom to use the best tool for a specific use case, while still maintaining control and ownership over data. If developers aren't given the tools they need, IT may face a proliferation of unauthorized use of tools that are outside of their control, leaving the company at risk of a data breach.



Top Reasons to Adopt a Modern Messaging Platform

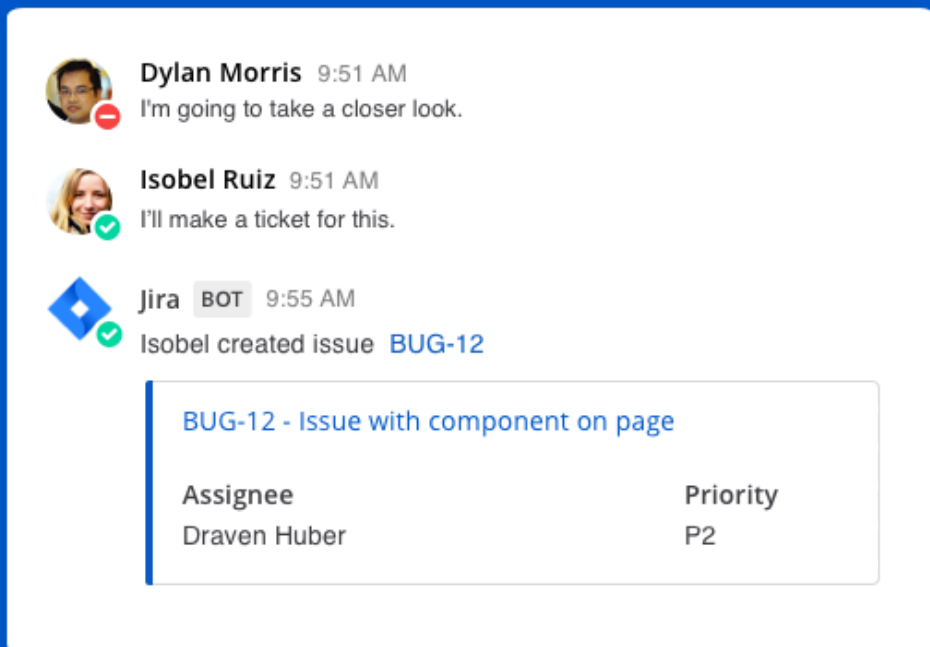


The right messaging platform will unlock your team's potential for advanced collaboration with powerful capabilities that drive increased efficiency, productivity, and velocity. The following considerations can help you define messaging requirements for your organization.

Designed for Developer Collaboration

Take advantage of a messaging solution that's designed from the ground up specifically for DevOps teams. These platforms are built by innovative software companies that put the collaboration needs of developers, system administrators and infrastructure operators first. They focus on delivering specific capabilities, such as integrating third-party tools that address the productivity hurdles DevOps teams face every day. With advanced collaboration as

*Modern messaging
connects to existing
DevOps workflows.*



A screenshot of a Mattermost chat interface. The chat window is white with a blue header bar. It shows three messages:

- Dylan Morris** 9:51 AM: I'm going to take a closer look. (Status: offline)
- Isobel Ruiz** 9:51 AM: I'll make a ticket for this. (Status: online)
- Jira BOT** 9:55 AM: Isobel created issue **BUG-12**

Below the messages is a card for the issue **BUG-12 - Issue with component on page**. The card has a blue border and contains the following information:

Assignee	Priority
Draven Huber	P2

a core principle, these platforms also enable teams to explore new ways of working together and discover new opportunities to be more productive and efficient. Essentially, your messaging platform becomes the UI that drives your team's daily DevOps workflows.

Centralized Messaging for Everyone

Eliminate disjointed communications between developers, systems administrators, and infrastructure teams across the company and beyond. By consolidating your DevOps messaging tools onto a single platform, everyone has access to what they need to stay productive: people, information, discussions, system alerts, bots, and more.

Messaging platforms allow you to build a repository of information whose value grows over time.

A Central Repository of Knowledge

Put conversation histories at everyone's fingertips. On a sophisticated messaging platform, discussions are persistent, threaded, and easily searchable, allowing users to review the end-to-end context of an event or decision. Teams have visibility into shared activities, and stakeholders can track the progress of a particular project or incident. Modern messaging platforms also provide granular access controls, so that only the right people have permission access specific conversations or to use specific channels.

A Single Source of Truth

When crucial conversations only happen over email or in person, it becomes nearly impossible to track down the full story of a project. By creating a central hub of persistent, searchable conversations, messaging platforms allow you to build a repository of information whose value grows over time. Team members or others who are new to a project can easily follow the project's history by accessing past conversations and decisions that were made in the project or team channel.



Integrations with DevOps Tools and Workflows

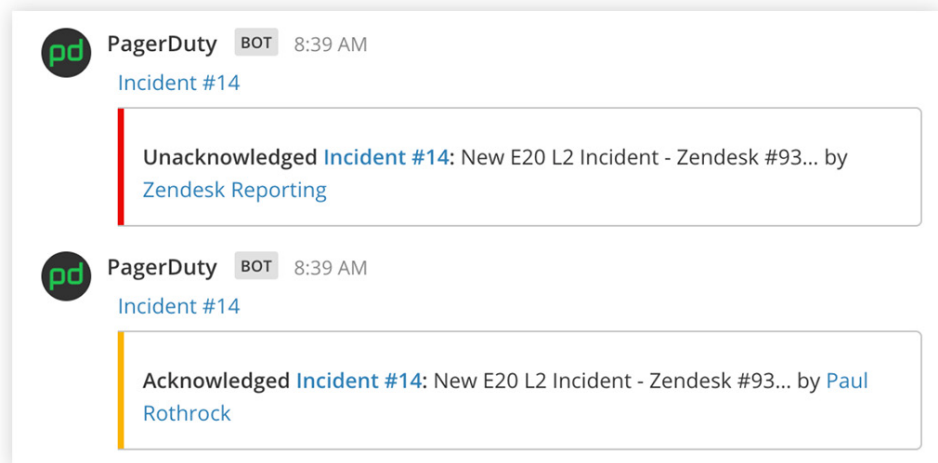
Increase workflow automation by integrating data from your internal systems into specific messaging channels or rooms. Robust messaging platforms allow you to run bots that act on data in your systems directly from your collaboration workspace. They make third-party integrations simple and fast, allowing developers to use a plug-in or web hooks to connect with the wide range of tools that they use regularly. They also provide an API or integration framework that enables connections with internal systems that are invisible to the internet. Most organizations also benefit from access to a large collection of prebuilt integrations, along with documentation that provides instructions and best practices.

Real-Time Alerts for Faster Response

Notify the right people the moment an incident or issue occurs. Automated alerts from your DevOps systems flow into a dedicated messaging channel, so teams can jump straight into collaborating on a response and stakeholders can easily follow their progress. Popular bots, like Hubot, can add logic to alerting use cases.

While some infrastructure and monitoring systems can deliver hundreds or thousands of alerts into a single channel, having well documented support for bots allow teams to leverage the power of artificial intelligence and machine learning to surface the most important machine-generated data to the right team, or even automate a response based on certain criteria.

*Surface alerts to the
same place where
team members
collaborate.*



Controlled Privacy, Security, and Compliance

Reduce the risk of a data breach by eliminating rogue use of non-compliant messaging tools. Some modern platforms, such as Slack, only run in the public cloud. A truly enterprise-ready messaging platform will give you a choice of where you can host your deployment, whether it be on-premise, private cloud, or public cloud. With the self-hosted approach, running your messaging platform behind your company firewall enables you to comply with

*The most secure
platforms give you
complete control over
your deployment
and data.*

Compliance Export

Enable Compliance Export: ☒ true ☐ false

When true, Mattermost will export all messages that were posted in the last 24 hours. The export task is scheduled to run once per day. See [the documentation](#) to learn more

Compliance Export Time:

Set the start time of the daily scheduled compliance export job. Choose a time when fewer people are using your system. Must be a 24-hour time stamp in the form of HH:MM

Export Format:

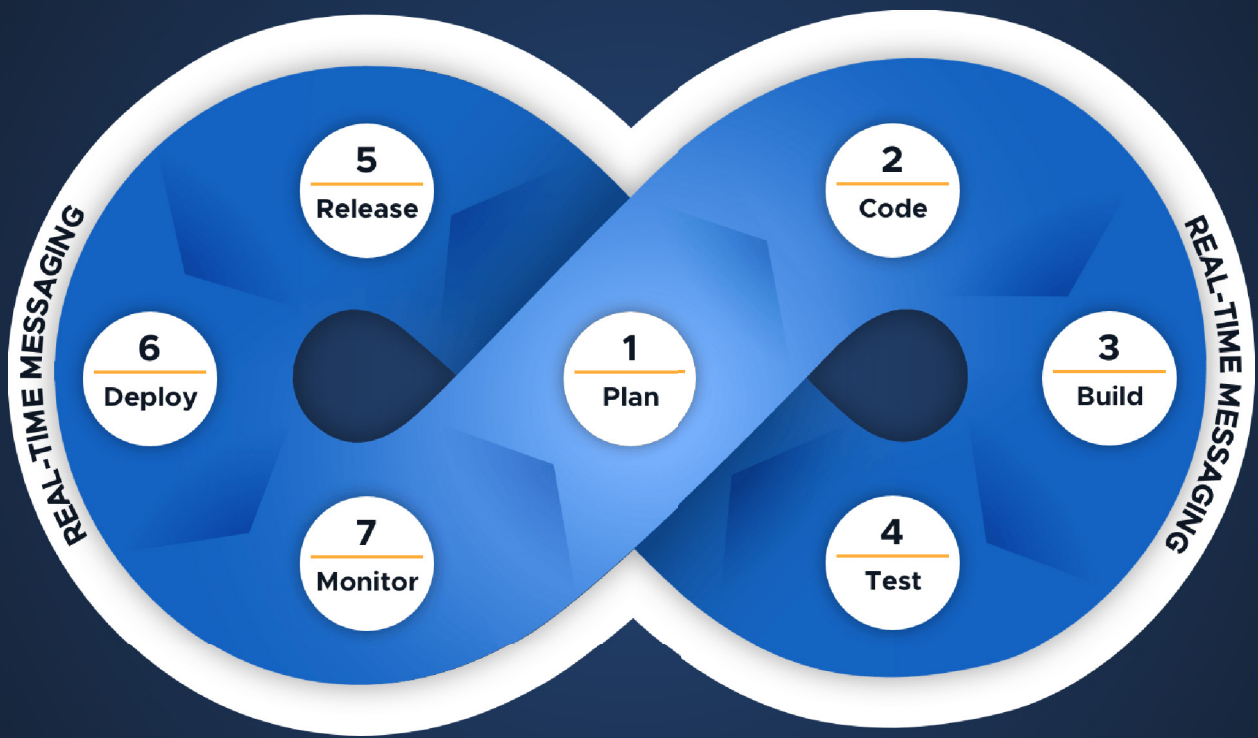
[Run Compliance Export Job Now](#)

Status	Finish Time	Run Time	Details
Success	09/20/2018 - 2:36 AM	12 secs	2413 messages exported
Success	08/20/2018 - 1:30 AM	4 secs	1746 messages exported
Pending	—	--	

GDPR and other data security regulations, while giving IT control and ownership over confidential messaging data.

Advanced User Experience

Enable users and teams to collaborate with a fluid, highly customizable user experience that supports their unique workflows and communication style. Leading messaging platforms offer an intuitive UI and superior performance. They also provide rich features that people love to use, and have come to expect, such as support for video and emojis, keyboard shortcuts, and advanced search. Cross-platform compatibility allows users to communicate via Mac, Windows, or Linux clients, iOS or Android devices, or a web browser.



Real-Time Messaging Across the DevOps Lifecycle

A modern messaging platform acts as your command center for software development, delivery, and operations. It's the place where your teams meet to discuss ideas and issues, make decisions, access information, and manage workflows tied to your DevOps tools and systems.



Plan

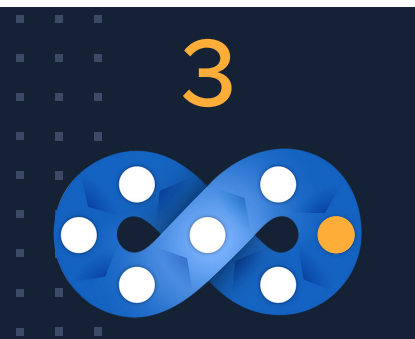
Your messaging platform is the system of record for team conversations related to planning new products and features. From technologies to timeframes, teams collaborate on ideas, discuss approaches, and make decisions. Users can easily share project documents, like roadmaps, diagrams, or presentations. Persistent messaging histories and threaded conversations make the process open and transparent, so your team, partners, and stakeholders stay informed and aligned. Integration with planning tools like Jira help teams access and share information in Jira within a dedicated project workspace. If a voice conversation is needed, integration with video conference platforms like Zoom or WebEx, makes it easy to hop on and off a call, and jump straight back into the workflow on the team channel.



Code

As developers write code, they naturally turn to each other for collaboration and support. Whether individuals are sitting in the same office or working remotely, the entire team can work together in a shared virtual workspace. Everyone can easily ask

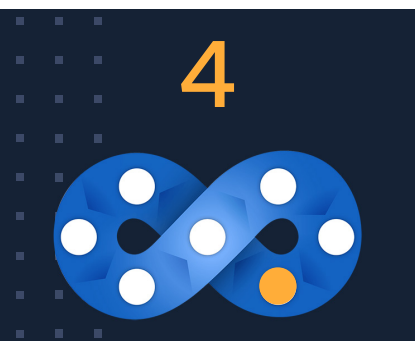
questions and solve problems in real time, discuss technical approaches, and review each other's code. A robust messaging platform will offer language syntax support, enabling developers to paste a code snippet directly into a conversation and see it displayed with the correct formatting. Integration with development tools, such as GitLab, allow developers to create and submit code into a shared repository from within the team's messaging channel.



Build

When it's time to create a new software build, integrating your messaging platform with your build system can make the build process easy and transparent. Custom slash commands allow your team to trigger a build, view or download builds, and get signature information straight from the messaging platform's UI. Plugins allow your team to access other automation tools, like Jenkins, to more easily interact with jobs and builds and view notifications from within the team's workspace.





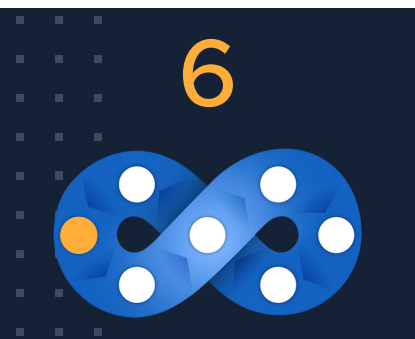
Test

The test process requires close collaboration as teams test new releases, identify issues, and fix bugs. Your DevOps teams can create a powerful testing hub by using webhooks to integrate their favorite CI and bug tracking tools with your messaging platform. From the platform, they can then automatically trigger tests and post notifications, bug reports, or alerts from your testing and issue tracking tools to the right channels, keeping everyone updated in real time throughout the testing process.



Release

When a build is released, you want to ensure that the relevant teams are informed that the release was successful. Developers can then accelerate their delivery of new features and fixes, and ops engineers can be prepared to support the software update. Your messaging platform is the real-time broadcaster of this information. Integration with third-party release packaging tools, such as Jenkins, into your release workflow can automatically notify the right people and promote transparency across teams.




Deploy

Following the code to its final destination on production, the DevOps team needs visibility into which servers received the code and any relevant stats, so they can troubleshoot any issues that may arise during deployment. Whether you deploy using Puppet, Kubernetes, AWS services, or another solution, your messaging platform can send out automated notifications into your deployment workstream, enabling everyone to easily track the success of the release into the wild.

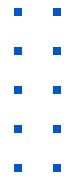


Monitor

DevOps monitoring tools keep track of application health and performance on production. Your messaging platform can post real time and historic data from monitoring systems like Nagios, making it visible across your organization. This makes it easier for engineers and business stakeholders to gain insights and make decisions. It also provides a powerful hub for incident response. During an outage, a dedicated channel can alert the right individuals and bring teams together to resolve issues faster.



What to Look for in a Messaging Platform



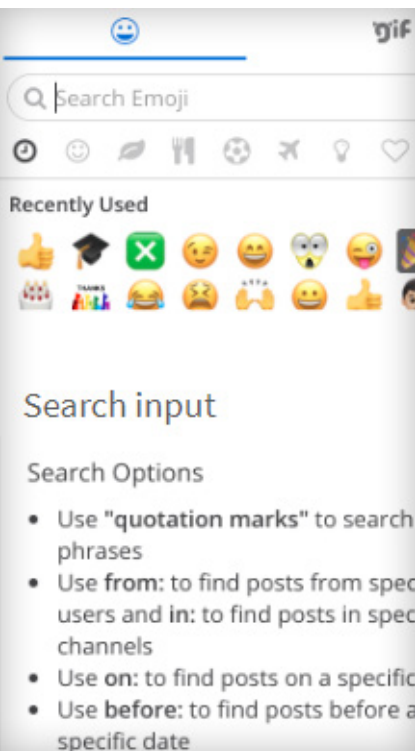
Consider how your DevOps organization collaborates today. Do teams struggle with particular challenges or hurdles? What aspects of a modern messaging platform can help them be more productive and efficient? The following considerations can help you identify the features and capabilities of a messaging platform that can empower your DevOps teams to work smarter together.

1 Functionality

You'll want a messaging platform that can serve as your centralized hub for enabling workstream collaboration and storing project activity data. Look for robust features that can support your unique team, such as:

- Configurability to match your organization and project structures
- Searchable message histories, threaded conversations

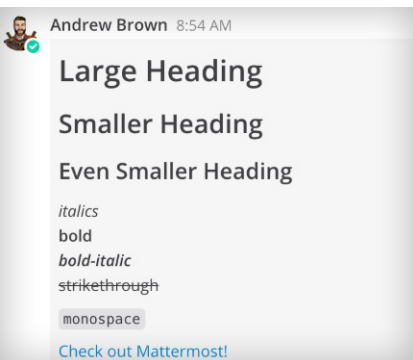
- Rich media support: share multiple file formats, communicate via voice, video, and screen sharing
- Language syntax support for collaborating on code snippets
- Multilingual UI for global teams
- Tools and resources to migrate data from legacy messaging platforms
- Fast, lightweight client apps that do not consume large amounts of memory



2 User Experience

To boost team productivity, your messaging platform must be one that your engineers want to use. Be sure to gather usability feedback from your power users. Many developers particularly value the following features and characteristics:

- Easy, intuitive, enjoyable to use
- Public and private channels
- Compact view allowing users to fit as much information on a screen as possible



- Rich text formatting like Markdown and code snippet formatting
- Cross-platform availability, including Mac, Windows, Linux, iOS, Android, and desktop browser
- Specific features or capabilities requested by your team

3 Customization & Integrations

To truly tap the power of a modern messaging platform, you'll want to consider how it can integrate with your DevOps environment of tools, services, and systems. Evaluate which tools your team uses and which integrations are highest priority. The following will give you the most flexibility:

- Ability to easily integrate with internal legacy systems
- Easy-to-set up integration processes with good documentation
- Ecosystem of third-party bots and plugins
- Ability to build your own bots or custom integrations
- Extensibility with open source APIs and an SDK
- Scalability to meet the needs of a growing enterprise

4 Data Security & Compliance

If your company is like most enterprises, you'll need a messaging platform that gives you control over how your messaging data is handled, secured, and stored. Your IT organization may require the following:

- Compliance with industry regulations or standards
- Complete control over data behind the company firewall
- Multiple hosting choices: on-premise, private or public cloud
- Access to source code and control over a single-tenant system
- Ability to conduct eDiscovery and compliance audits and generate reports
- Mobile access governance through Enterprise Mobility Management solutions
- Secure single sign-on using your authentication framework



Uber



Deloitte.



About Mattermost

Mattermost is the open source messaging and collaboration platform designed for enterprise DevOps teams and high-trust organizations. The platform enables your teams to be more productive and ship software with confidence through advanced collaboration and integrated workflows in a central, shared workspace.

- **Users** enjoy an elegant, customized experience on Mattermost that supports their communication style and team culture.
- **Teams** can build powerful workflows that integrate popular DevOps tools, such as Jira, Jenkins, and GitLab. Mattermost's ecosystem offers hundreds of open source plugins and bots for free, and our robust library of platform APIs enable teams to further extend the platform.
- **IT administrators** gain peace of mind as Mattermost gives them complete control over data security and compliance in a self-hosted, public cloud, or hybrid implementation.

Mattermost gives development teams the autonomy and control they need to be more productive, while meeting the requirements of IT and security teams. Organizations use Mattermost to automate workflows, streamline coordination, and increase organizational agility. Mattermost maximizes team efficiency by making information easier to find, and the platform increases the value of existing software and data by integrating with other tools and systems.

[Learn more about Mattermost at mattermost.com](https://mattermost.com)