SRE TOOLS

Best SRE Tools For Each Stage Of Devops

It should come as no surprise that the SRE toolchain looks a lot like various iterations of the DevOps toolchain, especially if you see the role of SRE as being, as Matthew puts it, “maybe the purest distillation of DevOps principles into a single role.”

Henry Shapiro notes that the DevOps toolchain can help teams choose the tools they need to Plan, Create, Verify, Package, Release, Configure, and Monitor the software they build.

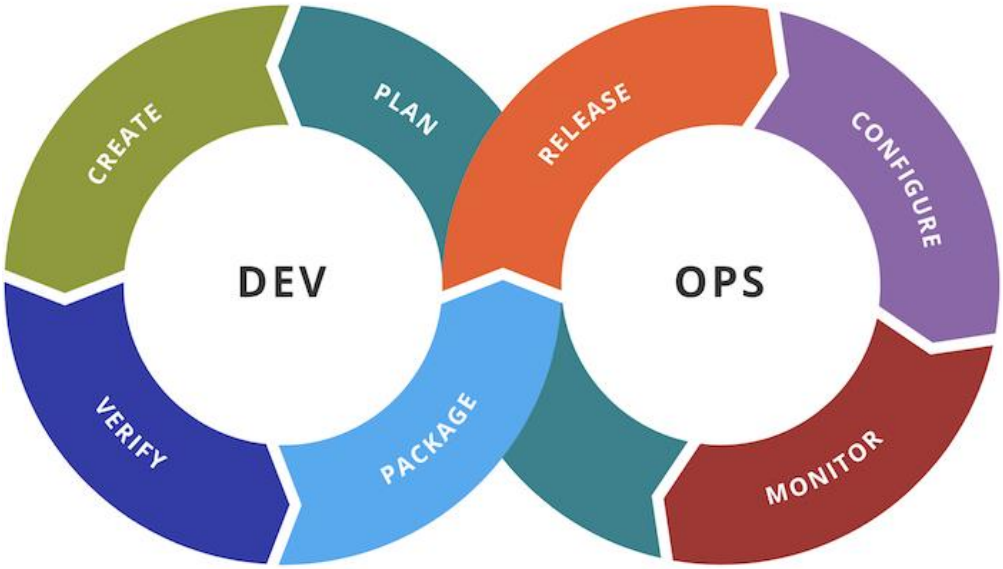

Illustration showing stages in the DevOps toolchain—by Kharnagy

At each of stage of the loop, there are tools a DevOps team uses to do their jobs, and an SRE toolset could look very much the same, depending on how the role is defined in a particular organization. For example, at New Relic SREs play an increasingly important role that combines responsibilities once siloed in traditional dev and ops teams. As a result, the difference between a “DevOps toolchain” and an “SRE toolchain” becomes fuzzy in our organization.

SRE tools for each stage include:

Plan. Project management and tracking tools like JIRA or Pivotal Tracker, or other task management tools.

Create. Integrated development environments (IDEs), text editors, and shared libraries and components—"the building blocks that you use to actually build applications," as Henry says. Even here, SREs have a role to play, such as encouraging development teams to avoid building everything from scratch in favor of reusing reliable code or third-party libraries.

Source-control tools like GitHub and Subversion erase boundaries between dev and ops roles, and enjoy significant popularity among SREs tasked with managing deployment environments and processes.

Verify. Build and continuous integration/continuous delivery (CI/CD) tools like Jenkins or CircleCI, or New Relic's homegrown build tooling—more on those in a moment.

Package. Tools to manage the packaging, release staging, and approval process, such as JFrog.

Release. Tools to manage releases and the lifecycle of an application, like New Relic's homegrown Grand Central.

Configure. Tools like Terraform and Ansible fit the "automate, automate, automate" SRE philosophy, and enable teams to automate and manage configurations across infrastructure and applications. SREs are playing an increasing role in determining what those configuration should look like from a health and reliability perspective, as well as automating away much of the manual work formerly needed to implement those rules and processes.

Both Henry and Jason note that the increasing use of containers may ultimately reduce the need for these tools in many organizations. Because containerized applications include all of their dependencies and configurations in immutable configurations, container platforms like Docker and orchestration tools like Kubernetes are becoming indispensable to SREs.

Monitor. Monitoring can mean a lot of things to a lot of people, but Henry notes that this stage includes tools like New Relic that collect metrics from applications and infrastructure, some form of log or analytic data, and alert on that data via dashboards.