

Continuous Deployment with A10 Lightning Application Delivery Service

Continuous integration/continuous delivery (CI/CD) encompasses all the activities that ensures the real-time deployment of code into production. The practice of continuous deployment delivers significant advantages across the organization. For the CEO, CD means the ability to respond to new business opportunities. For the CTO, it's about better service efficiency. For the line manager, CD provides better schedule visibility. For the DevOps team, it's about sharing tools and processes. For the application developer, it speeds time to production with higher quality.

Powered by a programmable full services proxy, the A10 Lightning Application Delivery Service (ADS) supports CD for two main use cases:

Blue-Green Production Servers

The A10 Lightning Application Delivery Service steers traffic between blue and green groups of servers based on policies under the control of the operations team. Blue-green deployment is a powerful technique for directing traffic between old (blue) and new (green) deployments – all while both environments remain online.

Policies include percentage of traffic, traffic from particular geographies and device types. Various application metrics, such as latency, can be compared across the blue and green servers.

ADS allows organizations to define and manage a traffic split rule for their blue-green deployments. Specify the IP addresses for blue and green versions and control what portion of the live production traffic should be directed to which deployment. Choose a simple percentage split or create a split rule based on anything in HTTP request object, such as a geographic region.

Gain precise phased rollouts without any effort on development side. Set and change the traffic split rule from the A10 Lightning Controller user interface and monitor health and success metrics for both deployments. As confidence in the green release increases, drive more traffic to it. If problems arise, direct all traffic back to the blue release.

Follow the “Blue-Green Deployment Flow” diagram on to improve efficiency and agility.

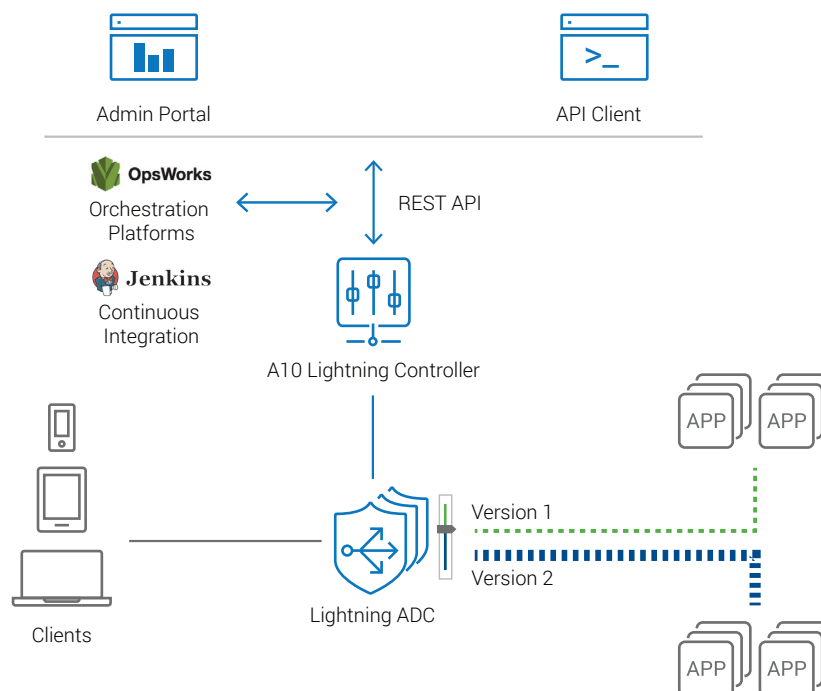


Fig. 1: Easy Continuous Integration / Continuous Delivery

Production Traffic Copied to Test Servers

Requests to production servers can be seamlessly copied to test servers, allowing you to test new application code with real-world traffic and loads.

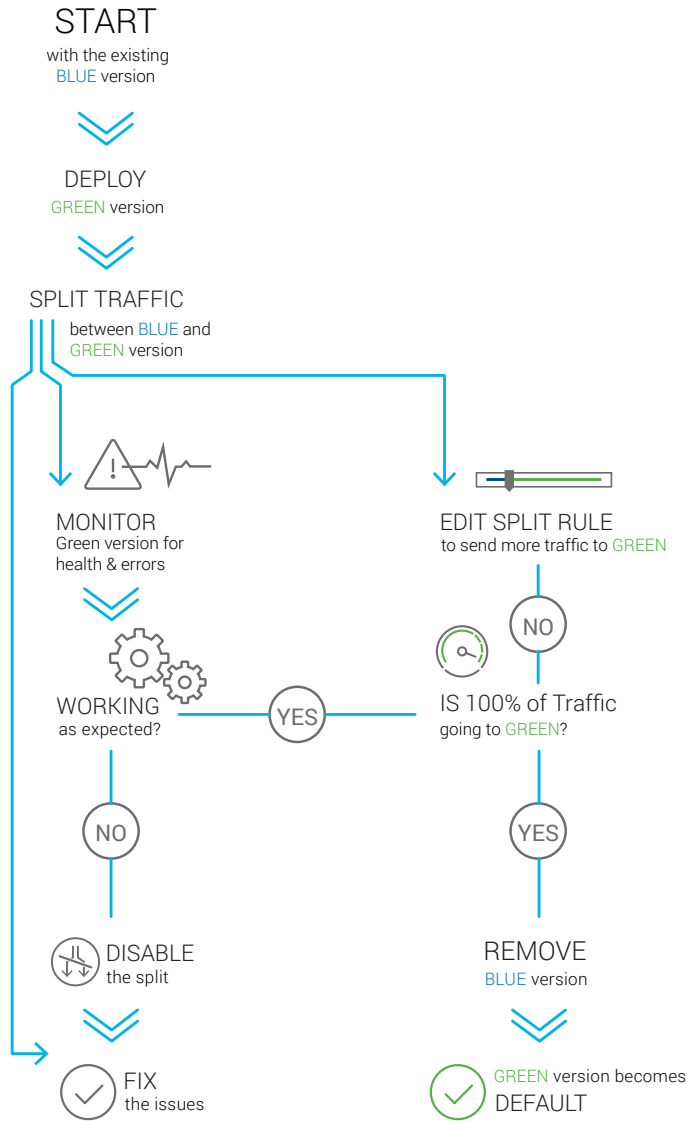


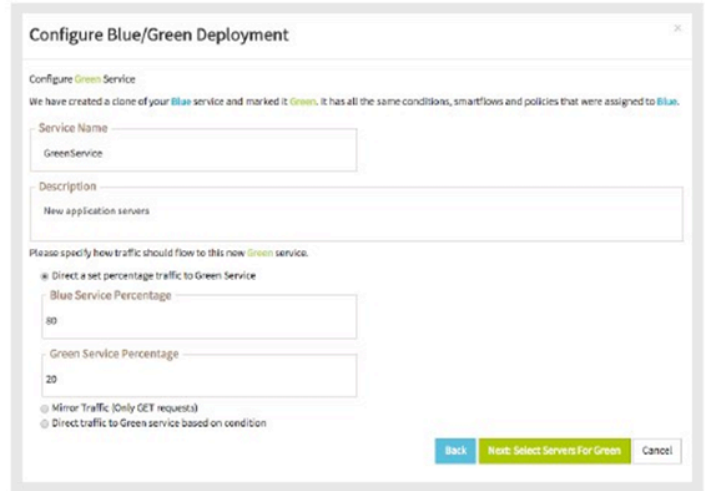
Fig. 2: Blue-Green Deployment Flow

Automated and Improved Runtime Services

A10's cloud-native stateful full proxy, which maintains separation between client-side and server-side connections, makes continuous deployment more efficient, easy and automated.

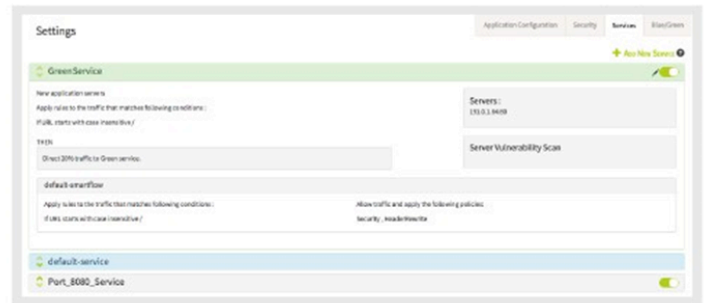
Single Easy-to-Manage Interface

Use A10's Self Service Portal — a single, easy-to-manage interface — to phase in new application code in green groups of servers alongside established blue groups of servers without disrupting user sessions.



Replication of Live Production Traffic

Replicate live production traffic and forward it to test application servers. Get first-hand visibility into how new or upgraded code actually performs against live production traffic, which de-risks new production code.



Detailed Traffic and Health Metrics

Gain real-time health monitoring and access to detailed deployment metrics and logs. Program your own criteria for health. See detailed traffic metrics for both high-level dashboards and detailed drill-down views on the before-and-after CD scenarios.



DevOps-Friendly Open Interfaces

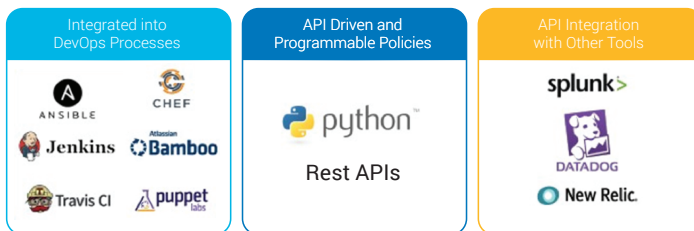
A10's Lightning Application Delivery Service offers open REST APIs that support DevOps practices and toolsets. It integrates tightly with Jenkins Continuous Integration, an open-source continuous integration tool that many organizations use as their CD platform. Integrate with configuration management tools like Chef, Puppet and Ansible that run locally or in the cloud.

The A10 Lightning Application Delivery Service can run on multiple cloud networks and use various data centers without requiring code changes to existing applications, application tuning, or any new software or hardware.

Built for DevOps and Programmable Architectures

Programmable Policies, Ecosystems & Tools

DevOps engineers can take a quick look at the API documentation available at the [A10 Lightning API Explorer](#) (login required).



Summary

The A10 Lightning Application Delivery Service supports blue-green deployments and precise traffic steering between different releases. Adding the solution's continuous deployment capabilities to your cloud environment improves deployment efficiency and agility while reducing risk.

Integrating with ADS requires no code change and is a risk-free method of leveraging CI/CD practices. This is incredibly useful for application migration scenarios, cloud deployments or aggressive development schedules.

Additional benefits include application load balancing, advanced traffic management, content switching, application security, protection against DDoS attacks and more.

About A10 Networks

A10 Networks is a leader in application networking, providing a range of high-performance application networking solutions that help organizations ensure that their data center applications and networks remain highly available, accelerated and secure. Founded in 2004, A10 Networks is based in San Jose, California, and serves customers globally with offices worldwide. For more information, visit: www.a10networks.com

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