

D2iQ Konvoy: Production Ready Kubernetes for the Enterprise

Overview

As organizations turn more and more to the cloud native universe for innovative open-source technologies, most of them will adopt Kubernetes for their container orchestration and application needs. The use of Kubernetes delivers great promise in the automation of deployment tasks, scaling of application resources and the operation of containers across a wide expanse of cloud and on-premises resources. Most importantly, it can deliver the distributed computing power that has traditionally been out of reach of most mainstream organizations.

Organizations looking to implement Kubernetes are faced with a myriad of choices from the cloud-native landscape. To begin with, difficult decisions must be made in the selection of the base Kubernetes distribution to be used, but even more difficult is choosing the supporting services for production-ready operations. Most enterprise-class organizations require a broader set of services for their production operations such as security, networking, storage, observability, and developer tooling—things many popular distributions do not provide out of the box. The cloud-native landscape moves fast and is littered with technological choices in areas such as these, making it difficult to correctly make decisions that protect the organization's long-term investment in these areas. Making things even more challenging, most organizations simply do not have the resources to make proper decisions and then spend months of intense manual effort to integrate a series of operational services around their Kubernetes distribution. This level of complexity winds up defeating the purpose of the speed and operational efficiencies promised by the cloud native universe. Finally, as the organization drives toward Day 2 operations, most will not do so without the confidence that their support needs can be met when things break, updates are needed or questions need to be answered. Thus, while the initial decision to leverage Kubernetes may seem like a simple one, the follow-up complexities quickly mount and require an effort that few organizations are fully prepared to undertake alone.

D2iQ Konvoy Introduction

The foundation of the D2iQ Kubernetes Platform is a comprehensive, enterprise grade Kubernetes distribution built on pure open source with the add-ons needed for Day 2 production selected, integrated, and tested at scale, for faster time to benefit. Developed to address the exploding demand for Kubernetes, D2iQ Konvoy is a comprehensive Kubernetes distribution enabling companies to leverage Kubernetes with an easy, enterprise-grade experience out of the box. While there are many Kubernetes distributions in the industry, simply installing Kubernetes is not enough. Organizations require a broader set of services for their production operations such as security, networking, storage, observability, and developer tooling. In addition to providing an automated, simplified install of Kubernetes, D2iQ's product and engineering teams did the difficult work for you by providing

Key Benefits

Faster time-to-market with a simplified, automated installer that provisions and installs a complete, flexible, and opinionated open source Kubernetes distribution with best-in-class supporting services

Flexible deployment options to empower deployment both on-premises and in the cloud with reliability—even in air-gapped environments

Enterprise-grade supportability for the complete stack of operational technologies being leveraged

Deep expertise as a CNCF Kubernetes Service and Training Provider to ensure expertise is there to assist you in your journey.

CNCF Certified Kubernetes Partner

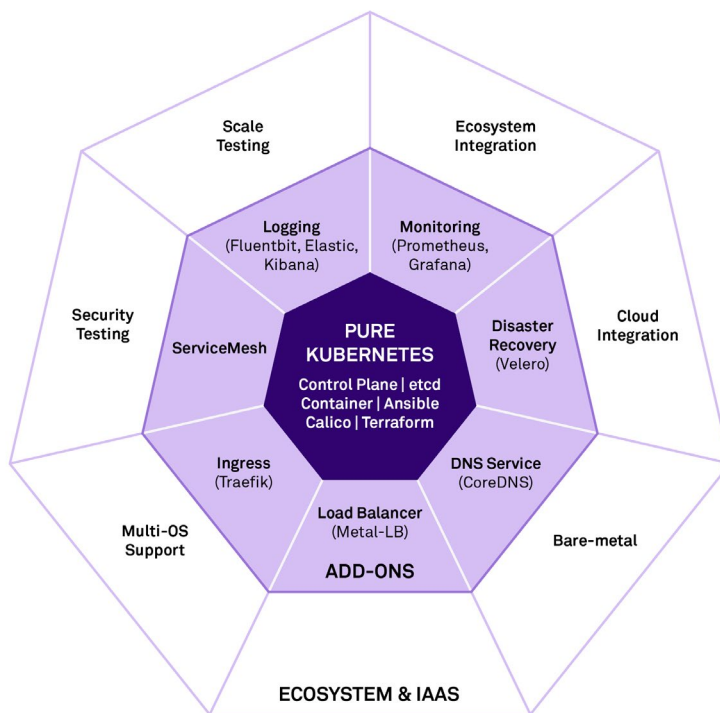


an opinionated set of supporting services from the vast cloud-native landscape and integrating them for an out-of-the-box, production-ready experience. The result is a significant reduction in the effort involved in standing up a production-ready Kubernetes environment and an accelerated time-to-market for your application development needs.

Most importantly, D2iQ provides a full complement of training, professional services and support options to ensure you have end-to-end support for your full stack of application services. This eliminates the pain and substantial cost of managing vendor support relationships with a networking provider, a monitoring provider, a storage provider, and the providers of all of the other supporting services you are using, and ultimately ensures an enterprise-class Kubernetes experience because the organization's critical applications depend on it.

D2iQ Konvoy delivers:

- A focus on driving successful Day 2 operations by delivering an integrated packaged set of operational services for Kubernetes.
- Reduced effort for your team as D2iQ has performed all of the necessary diligence for selecting the ideal services for monitoring, logging, traffic ingress, disaster recovery and other core supporting services for the Kubernetes cluster.
- Reduced time-to-market via Konvoy's built-in installer, which not only configures the core Kubernetes cluster, but all of the corresponding cloud native services mentioned previously that are required for Day 2 operations.



Meeting Organizational Requirements

Line of Business and Project-Owners

As organizations face competitive pressures, their lines-of-businesses are constantly being challenged to deliver innovative new services and initiatives with utmost speed. Many are turning to the cloud native landscape of technologies and services to help them gain an innovation advantage as they look to deliver advanced new capabilities. Unfortunately, with so many options comes tremendous complexity. This complexity hinders the ability to achieve a rapid time-to-market and ultimately makes Day 2 operations very difficult to achieve.

Making things even more challenging, even the most talented of technological professionals find this landscape difficult to navigate, so it is critical to leverage partners who can assist in this journey.

D2iQ delivers industry-leading domain expertise across the cloud native landscape, ensuring that the organization has a trusted advisor to help them make difficult technological decisions, to provide expert integration assistance and in the preparation for a successful Day 2 operational state. To begin with, as the organization marches into the new initiative, one of the most obvious technological decisions will be the choice to use Kubernetes for their application orchestration needs. D2iQ Konvoy makes this process significantly simpler, reducing months of effort for new initiatives through the use of preselected, reliable and safe service choices and providing peace-of-mind for organizations wishing to avoid the complexity of those choices and integration efforts. This is even true for those adopting Kubernetes solutions from the public cloud providers, where there is still a need to select and integrate the many supporting services needed to run Kubernetes in production, at scale.

Further, D2iQ's stable of domain experts will ensure that the organization has a trusted advisor who can help in their training needs for these new services, assist in their deployment and ultimately help support the entire stack of technologies they move to a Day 2 operational state.

Architects

Some of the architect's most important responsibilities are for ensuring project requirements are transformed into an enterprise-grade operational environment that is sustainable, scalable, reliable and supportable by the organization for the long-term. In the cloud native landscape, there is a significant value in the use of Kubernetes for application container orchestration and management. However, the promise of Kubernetes can be bound by the difficulties which go well beyond the selection of which Kubernetes distribution to leverage. In order to operate these container orchestration environments, additional services will need to be selected and integrated before they are ready for an enterprise-class production environment. The simple selection of which services to use for things such as logging, monitoring, visualization, disaster recovery,, networking and load balancing can be very complex and full of future risk. However, after the selection of services, the difficult work of actually making them work together can take many months of effort, significantly impacting the time it will take for the organization to get applications into production.

D2iQ provides immediate value to Architects by delivering a production-ready Kubernetes distribution within D2iQ Konvoy that includes operationally ready services for Day 2 needs such as monitoring, logging, visualization, load-balancing, networking, disaster recovery, developer tooling, and others. D2iQ's domain experts expend significant effort to perform deep research on available cloud native service options, the viability of those options for the future, interoperability testing of the various options and integration validation before allowing a service to be included within D2iQ Konvoy. These services come pre-integrated and ready for a Day 2 operational environment. This packaged set of enterprise-grade services ensures that the organization can shorten its time-to-market for new application needs and specifically helps architects focus their time on the unique and specific application needs for their organization, versus wasting time on necessary but undifferentiating application infrastructure.

Operations

Delivering new applications and services with an eye on rapid time-to-market is absolutely critical for most organizational initiatives. Further, maintaining an environment that provides reliability and performance in a Day 2 operational environment is mandatory even in the face of upgrades or continuous deployment of new code and application components. As the organization leverages Kubernetes, they will require a stream of additional services which are necessary to support a production environment's needs.

These services can include things such as logging, monitoring, networking, disaster recovery, load balancing, developer tooling, and visualization, amongst many others that will be a requirement. Certainly the selection and integration of these services can be quite difficult for even the most experienced organizations; however, the operation of these disparate

Distributed Computing Is In Our DNA

The founders of D2iQ are some of the earliest innovative minds in the world of sophisticated distributed computing environments. Their innovations are a driving factor in the success of the largest application deployments in the world.

This experience and insight into the complexities of managing and operating expansive cloud native services at massive scale are foundational to the development of D2iQ's technologies. By applying this unique experience to the world of Kubernetes, D2iQ ensures that your organization is able to swiftly move towards a successful Day 2 outcome.

services within the Kubernetes environment can also provide significant challenges. Each of these services are built by disparate open-source project teams, each working independently and usually without consideration for a broader ecosystem of services in the production environment.

As these individual services arrive with new major versions, deliver security patches and even provide minor fixes for defects, significant consideration must be given to the process of how to incorporate these new service releases without production impact. Making matters even more difficult, each of these services can require significantly differing processes and operational impacts for implementing new versions.

This complexity can have a significant impact on the ongoing operation of the Kubernetes environment and the associated applications running within. And as a final consideration, most enterprise-class environments will require support, which will be difficult across such a myriad of ancillary services. It is simply not sustainable to have 10-20 different supporting vendors to sustain a production environment for a single or even a few applications.

D2iQ Konvoy helps operational teams prepare and deliver Kubernetes with significantly greater ease of deployment and peace of mind in a Day 2 operational environment. Konvoy delivers a Kubernetes distribution with a stream of expert selected, integrated and tested supporting services that are ready for production at time of installation. This reduces the time to market for new application needs, and for operational teams ensures that the services they are leveraging have been put through a significant battery of interoperational testing.

D2iQ's comprehensive Cloud Native Scale Testing ensures that all of the services work seamlessly together, even under heavy load and a variety of different workloads and operational circumstances. Further, as the supporting services for things such as logging, monitoring, DNS, disaster recovery, networking, visualization, load balancing, and developer tooling are being leveraged in production, Konvoy delivers version interoperability that ensures the consistent and reliable introduction of new service versions.

As new versions of these services are made available by the community, D2iQ will rigorously test and provision these new supporting services so that they can easily be deployed into a production Konvoy environment using its built-in service deployment capabilities. This capability ensures that the organization can deploy new services in a universal way while reducing production risks.

D2iQ also provides a series of training and services offerings which help prepare the organization for the rigors of managing these environments in production. And lastly, as the organization requires support for their Kubernetes environment, D2iQ delivers full-stack support for Kubernetes and the complete stream of supporting operational services within D2iQ Konvoy. This unique level of support provided by D2iQ significantly reduces the operational complexity of getting assistance when challenges arise, minimizes downtime, and lessens the potential for longer term operational impact by having one partner to call for help to deal with problems anywhere in the stack.

Driving Day 2 Success With D2iQ

The Leading Independent Kubernetes Platform

As you look to leverage Kubernetes as a foundational platform to drive cloud native applications and services, navigating the complexities of the technology will be impossible without deep domain expertise and expert support. With this in mind, we designed D2iQ Konvoy to provide you with an enterprise-grade Kubernetes foundation, as well as give you access to expert insights, training, service, and support.

Whether you're in need of a guided, opinionated distribution that reduces time to market from months to days, management or operation of your production deployment, or someone to pick up the phone in the middle of the night, D2iQ can deliver a complete spectrum of technology solutions and services to enable an enterprise Kubernetes experience that is ready to meet Day 2 operational expectations.

Features and Benefits

Features	Benefits
Complete Kubernetes Solution	Cloud Native Computing Foundation conformant pure Kubernetes distribution with a full suite of integrated and supported components delivering an end-to-end solution
CNCF Certified Partner	CNCF certified Kubernetes distribution, Service Provider and Training Partner
Cloud Native Scale Testing	Extensive integration and workload testing at massive scale with a wide range of workloads to ensure real-world preparedness
Policy Based Networking	Protect your applications and data with secure policy driven software defined networking powered by Calico
Access Your Applications	Easily automate and expose application endpoints via Traefik and Metal-LB for ingress and load balancing
Service Discovery	Connect and scale new services through automated service discovery
Monitoring	Gain deep insight into your Kubernetes platform and applications via industry standard logging with Telegraf, Prometheus and Grafana. Swappable with Sysdig
Logging and Metrics	Collect and analyze logs and metrics to ensure optimal performance and troubleshooting with Elastic, Kibana and Fluentbit. Swappable with Datadog
Declarative Automated Installer With Day 2 Add-ons	Modular Ansible and Terraform automation for public cloud and on-premise providers
Ability to Operate in Air-gapped Environments	For customers with rigid security requirements that require a Kubernetes solution that is flexible enough to be installed on unique infrastructure, while doing so without any connection to the outside world.
Backup and Disaster Recovery	Ensure business continuity and disaster recovery with Velero
End to End Support	Enterprise grade support and services for the entire platform including all components



To learn more about about how D2iQ can be your partner in the cloud native journey, go to www.D2iQ.com.