VMWARE vREALIZE CODE STREAM
Accelerate Application and IT Code Delivery

AT A GLANCE
VMware vRealize® Code Stream™ supports the desire of teams to release software more frequently and efficiently, while also leveraging their existing investments in build, test, provisioning, deployment and monitoring tools. It is designed to support teams adopting continuous integration/continuous delivery initiatives and gives these teams the ability to fully automate the pipelines associated with the development of application or IT code.

KEY BENEFITS
• Deliver artifacts faster: Enable the teams responsible for application or IT code development to provision development artifacts faster and with more control.
• Deliver more reliable applications: Track artifacts and automate deployment configurations to ensure correct versions are used across all stages of the development lifecycle.
• Improve development visibility: Facilitate cross team collaboration using consolidated dashboards, out-of-the-box and custom reports that highlight the status of in process pipelines.
• Use your existing tool chain: Integrate pipeline automation and governance with your existing tool chain leveraging many out-of-the-box integrations and a powerful SDK.

What is vRealize Code Stream?
vRealize Code Stream helps organizations looking to embrace a continuous integration/continuous delivery approach to the delivery of application or IT code. It is an application release automation solution that enables developers and IT teams to release software more frequently and more efficiently while leveraging their investments in existing build, test, provisioning and monitoring tools. The solution is tightly integrated with VMware vRealize Automation™ and vRealize Orchestrator™ and is designed to address two primary use cases:

• Software Release Automation
• IT Artifact Lifecycle Management

Software Release Automation
vRealize Code Stream automates the release process at each stage of the software delivery pipeline to assure speed and consistency. It integrates with existing software development, testing, artifact management and build systems to orchestrate tasks that need to be performed in the development process.

IT Artifact Lifecycle Management
vRealize Code Stream, combined with the free vRealize Code Stream Management Pack for IT DevOps helps IT teams manage the IT artifacts (or Infrastructure as Code) of their Software-Defined Data Center (SDDC). vRealize Code Stream captures, stores, and integrates with source and version control tools. It also provides the ability to distribute these artifacts between different tenants of vRealize Automation or different instances of VMware vRealize Automation or VMware vRealize Operations™. This simplifies the ongoing management of large, multi instance or multitenant vRealize implementations.
Solution Capabilities
vRealize Code Stream includes the following core functional modules:

• Pipeline Automation: Model any release process for any kind of software
• Release Dashboard: Get real-time visibility into any software release process
• Reporting: Identify problem areas to help improve release quality and efficiency over time

Pipeline Automation
vRealize Code Stream enables development teams to model any kind of release process for any kind of application. From simple single node on premise applications to complex multi-tiered, cloud based or hybrid applications that include both traditional and cloud native, container based applications. It also enables you to model pipelines associated with the development of IT code that is used by IT teams to deliver a SDDC. Pipeline models configure the workflow tasks and governance policies used to build, deploy and test the software at each stage of the development process. The ability to provide gating rules at each step in the process is also supported.

Artifact Management
vRealize Code Stream supports the modeling and resolution of artifacts so that the right artifact versions are automatically retrieved and then fed to the correct deployment scripts or tools when deploying a particular build version of an application. This means that organizations can easily control, store and manage binary artifacts throughout the software release cycle in order to ensure that the right artifact versions are deployed every time.

Tool Chain Integration
vRealize Code Stream includes out-of-the-box support for a variety of different development, test, provisioning and operations tools. In addition, a robust integration framework enables companies to leverage almost any of their existing tools, custom scripts, and process investments. Code Stream’s integration framework consists of native plugins and the ability to leverage vRealize Orchestrator, VMware’s general purpose automation and orchestration engine. The graphic below illustrates the wide range of tools sets supported out-of-the-box.
Process Governance and Control

Automation is what makes the software delivery process go faster, but faster does not guarantee the software will be more stable and reliable. Governance policies are the rails that assure your release train stays on track and that the software delivered will run reliably. Throughout the release delivery process vRealize Code Stream provides visibility into the status of the release to enable authorized users to rapidly take corrective action keeping your release train on schedule. Enhanced visibility also allows for better communication and collaboration across teams and less finger pointing if something should go wrong.

Release Dashboard

As the pace of software releases accelerates it becomes increasingly more important but also more difficult for organizations to track which application, configurations and artifacts are deployed at various stages of the pipeline. vRealize Code Stream provides a summary view of all active pipelines and an end to end view of each pipeline where all users can monitor the status of their pipelines so they can see which tasks are completed, in process or have resulted in an error. Users can then drill down to view the details of each task to aid in problem resolution.

Reporting

Application developers, IT infrastructure and operations teams along with their management need information and status updates on both applications and SDDC elements under development. vRealize Code Stream provides a variety of out-of-the-box and custom reports that enable teams to have full transparency across all projects under development.