

PRIVATE DOCKER REGISTRIES WITH NEXUS REPOSITORY MANAGERS

With over 100,000 installations, Nexus Repository Management solutions have long been used to manage software components, assemblies and finished goods from development to delivery. One particularly compelling use case is to store and share Docker images privately and with users and groups in your network. Fine-grained, role-based access controls ensure access to images are private and secure.

As the use of Docker images grows dramatically, users want to ensure they are sourcing images of the highest quality and integrity, while improving the efficiency of their software supply chains. Use Nexus Repository Management Solutions to store everything required to deploy or re-create development, test or production environments. A Nexus repository manager is easy to install, manage, and integrate with your deployment pipeline.

PROBLEMS ADDRESSED

While Docker Hub provides a public registry to store images, it does not meet requirements for proprietary image distribution and storage, trust and provenance, or scalability. To organize, store and share your own library of proprietary and third-party images, you must use a private registry or repository manager. Development, test and operations teams have long turned to on-premises repository management solutions as a secure, private, and trusted location to host and manage a wide variety of components they use and share.

Development and IT teams want to ensure environment parity and standardization using a common set of components, including Docker images, open source and third party binaries, documentation, test scripts, and virtual

machines. Maintaining multiple repositories, user groups, and integration points for these components can be challenging. Nexus repository management solutions offer push/pull of Docker images and all other components needed by build and deployment pipelines. Tens of thousands of organizations use Nexus repository managers to consolidate repositories and access rights to simplify operations and administration.

In addition to providing private registry support by hosting Docker images in Nexus repositories, it also allows you to configure a central access point to all external registries. This can be achieved by configuring proxy repositories that point to external registries such as Docker Hub or the Google Container Registry.

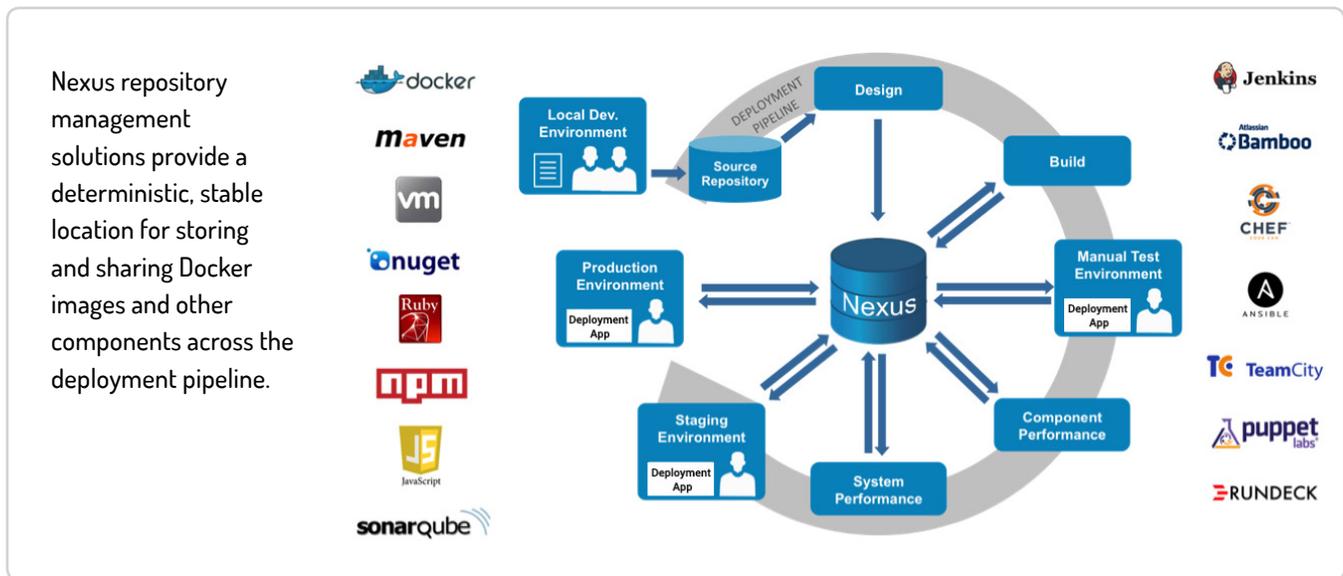
Store and distribute Docker images and other components on-premises

What does it do?

- IT professionals and deployment tool chains can create images and commit them to Nexus repository managers. Users and tools can push/pull Docker images to/from the repository.
- Store third party images downloaded from public Docker registries as well as your own proprietary images.
- When requested images are not available locally, Nexus repository managers can proxy remote Docker registries to search for and download the right images.

Benefits

- Nexus repository managers provide a deterministic, stable location for storing and sharing Docker images and other components.
- Using local copies of commonly used images is more efficient and speeds deployment. Teams can easily reproduce consistent environments using the same Docker images from Nexus repositories in development, test, and production.
- Reduces operational and maintenance overhead by using a common repository manager across development, test, and operations.
- Allow operations team to accelerate rollouts and rollbacks by using specific, controlled versions of Docker images.



Integration to build and deployment pipelines

What does it do?

- Locally hosting Docker images supports automated distribution across development, test, and production.
- Easily integrates with leading tools (e.g., Jenkins, Puppet, CA Release Automation, Chef, Rundeck and Ansible) to pull/push Docker images.

Benefits

Nexus repository management solutions easily adapt to your organization and processes by easily integrating with your development and operations tool chains. As the go-to resource for any component, Nexus repository managers reduce team isolation, ensure consistent development, and improve repeatable deployments.

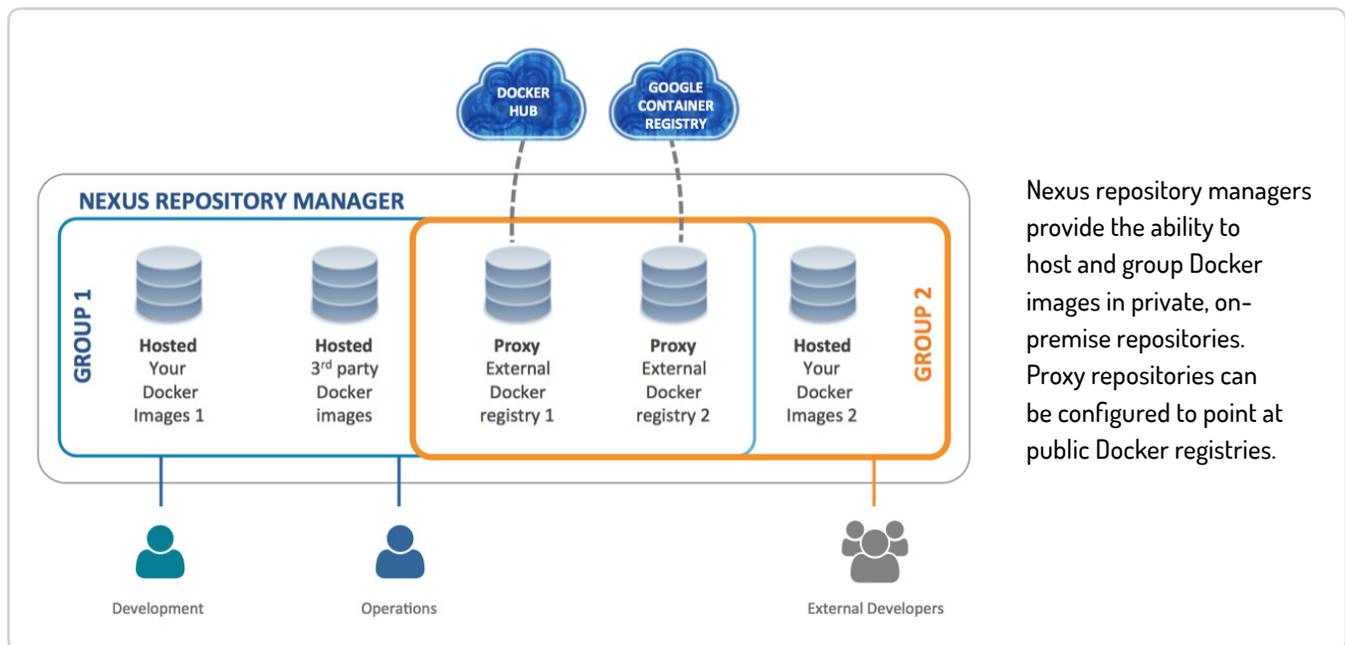
Apply fine-grained access controls

What does it do?

- Nexus repository managers can be configured to support static or dynamic user and group definitions. Repository Groups can be defined to support both internal and external users or groups.
- Nexus repository managers can authenticate users against LDAP and Active Directory servers. In addition to handling authentication, the repository manager can be configured to map Nexus roles to LDAP or AD user groups while also supporting Nexus-specific user-role mapping.
- Securing all connections to external systems with SSL as well as exposing repository managers via SSL are both supported capabilities.

Benefits

- Nexus repository managers allow you to keep proprietary and third-party images private and secure. Nexus supports strategies to maintain an immutable, trusted source of images and components required by development and IT teams.
- Protect different repositories, ensuring that only authorized personnel and tools are granted access to store and retrieve images.
- Keep Nexus repositories secure using SSL to support access for internal and external teams of developers.



Precise search

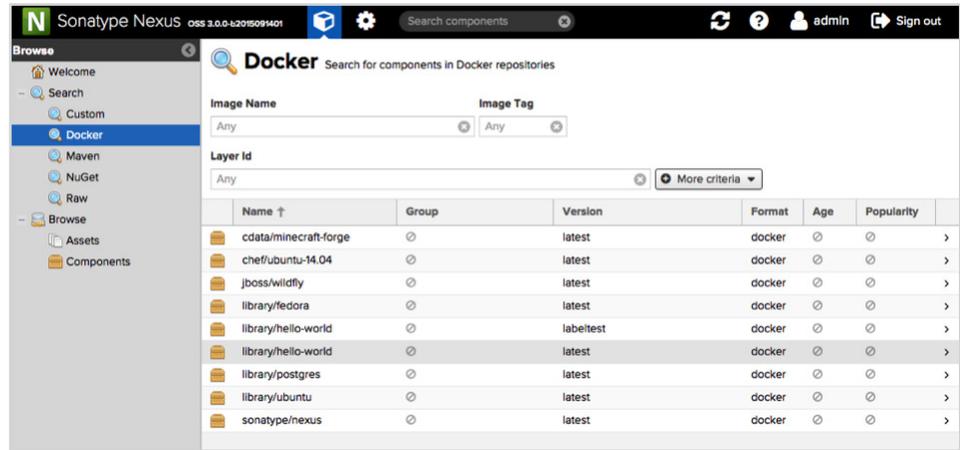
What does it do?

- Authorized colleagues and tools can search the repository for the image, pull it based on a metadata tag, and run it where desired.
- Search Docker images by name, description, user-name, stars and more.
- Private repositories are not accessible by anyone other than authorized personnel.

Benefits

- Easily find the latest images.
- Reduce image sprawl by keeping the catalogue of approved, immutable components with the repository manager.

Nexus repository managers can store a variety of public and proprietary Docker images. Users can search hosted, proxied, or grouped repositories for any Docker image.



NEXT STEPS

Try this feature by downloading Nexus Repository Management OSS: bit.ly/NexusDockerM7.

You can learn more about using Nexus as a private registry for your Docker images and other components a by visiting TheNexus community: bit.ly/NexusDocker_more.

Sonatype helps organizations build better software, even faster. Like a traditional supply chain, software applications are built by assembling open source and third party components streaming in from a wide variety of public and internal sources. While re-use is far faster than custom code, the flow of components into and through an organization remains complex and inefficient. Sonatype's Nexus solutions apply proven supply chain principles to increase speed, efficiency and quality by optimizing the component supply chain. Sonatype has been on the forefront of creating tools to improve developer efficiency and quality since the inception of the Central Repository and Apache Maven in 2001, and the company continues to serve as the steward of the Central Repository serving 17.2 Billion component download requests in 2014 alone. Sonatype is privately held with investments from New Enterprise Associates (NEA), Accel Partners, Bay Partners, Hummer Winblad Venture Partners and Morgenthaler Ventures. Visit: www.sonatype.com
