Red Hat Container Catalog
Consuming Container Images from Red Hat and its Ecosystem

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The Value & New Challenges

It’s quick and easy to pull a Linux container image from a public registry and get started.

In fact, too easy. There can be an explosion of different distributions, architectures, performance and security characteristics in different images.
Red Hat Registry Stats
- 227 repositories
- 2,169 images
- 1+ TB storage

Red Hat Security Statistics 2016
- 97 critical RHSA
- 286 important RHSA
- 100% fixed in <1d *

Red Hat Customer Portal Stats 2016
- 13,100,00 visitors
- 2,400,000 searches
- 108,300,000 views

- Cross-team effort of 10 teams across 4 organizations
- Design driven approach focusing on end customer user experience

RED HAT* CONTAINER CATALOG
- Container Health Index
- Extensive Image Metadata
- Image Documentation
- Image Advisories

* 100% of critical security flaws in RHEL have been fixed in less than one day: https://access.redhat.com/blogs/766093/posts/2957221
Vision
Our vision is to help developers, architects, and IT operations realize the full potential of containers by transforming the way container-based applications are built, delivered, and consumed.

Mission
Our mission is to provide customers and partners with the best experience when delivering and consuming container-based applications. This includes the right information and guidance to make intelligent decisions about which container images to consume.
I want to explore what's inside the Red Hat Container Catalog
I want to search for a product and see all images belonging to it

Joe
Architect

I'm searching for a database container image
I'm searching for Red Hat Enterprise Linux base image

Jane
Developer
use our explore page to browse most relevant products and image categories

popular Red Hat and Ecosystem products

Base, Builder and Application Images

app categories such as database, programming language, logging
I'm looking for a base image, what are my options?

- use the Base Images filter on search page
- or use Base Images tile on explore page

Popular Application Categories
- Container Platform / Management (18)
- Operating System (22)
- Mobile Application Development Platform (MADP) (20)
- Programming Languages & Runtimes (16)
- Logging & Monitoring (15)
- Virtualization Platform (12)

Image Architectures
- Application Image (46)
- Builder Image (13)
- Base Image (10)
You can search for:
- Images / Repos
- Products
- Image ID
- Advisory ID
- Categories
- Keywords
- etc.

Filter facets for multiple characteristics

Type-ahead contains products, repositories and app categories

Search results with key data
Joe
Architect

I want to see the key characteristics of an image. Is there documentation available around an image?

Jane
Developer

What are the environment variables defined inside the image? I would like to learn how this images has been built.
Overview page shows most relevant repository and latest image version data.

Additional tabs for consumption guidance, further technical details, surrounding documentation and tag index.
I want to learn more how to consume and use this image. Do I need a subscription or license to pull it?

I want to pull this image, what do I need to do? I’m using Red Hat Satellite 6, how can I sync the repository?
consumption guidance for different container runtime env's and registries

collection details including copyable command lines
Carl
Security

I want to see which updates are applicable to an image used by us
I want to see an actionable result for applicable security updates

Jane
Developer

I want to get a list of all images associated with an advisory ID
I want to see an aggregated and simple freshness description
Jane
Developer

How can I get more details around an image I’m using?

1. Get the image ID using CLI or registry UI
2. Use the container catalog search to find the image
3. Select the right image version and explore details

[root@dherman ~]# docker images | grep nodejs
registry.redhat.io/rhcs1/nodejs-s-4-rhel7 4.11.14
bf9f328b3d2
9 weeks ago 444 MB
[root@dherman ~]#
Leveraging Red Hat security data (advisories) for RPMs and images

Developed as a cross-team effort leveraging Red Hat’s Security expertise

Single item status (grade A-F) as an aggregated indicator of container health

Red Hat Registry Stats
- 227 repositories
- 2,169 images
- 542,525 RPMs

Red Hat Security Statistics 2016
- 3134 advisories
- 5075 unique CVEs
- 2016: 97 crit RHSA

Images are static content bundles but security issues emerge frequently

Age of the image

Unapplied updates

Red Hat Container Catalog
Health Index

A B C D E F

Leveraging Red Hat security data (advisories) for RPMs and images

Actionable scan results (RPM, Image)
Platform for building and running Node.js 4 applications

by Red Hat, Inc. in Red Hat Enterprise Linux

registry.access.redhat.com/rhacr/nodejs-4-rhel7  •  Updated 4 days ago  •  4.11.16: Health Index A

Overview  Get this image  Tech Details  Documentation  Tags

Container Health Index history

list of all image versions inside this repository

key version attributes

<table>
<thead>
<tr>
<th>Tag Name</th>
<th>Date Pushed</th>
<th>Image Advisory</th>
<th>Health Index</th>
<th>Docker Image ID</th>
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<td>6a532a3b1a8f</td>
</tr>
</tbody>
</table>
Carl Security

What is the associated risk with the content inside the image?

- Container Health Index based on applicable security updates and its age
- Privilege requirements
- Warning if non-current image version
- Vulnerabilities by advisory severity
How can I get rid of those vulnerabilities?

Red Hat advisory severity
CVE ID
content advisory which contains fix
newer image version which contains fix
What’s next?
Upcoming features of future Red Hat Container Catalog releases

- Ecosystem content incl. Red Hat Certified and OpenShift Primed
- Additional acquire paths, image usage documentation
- OpenShift on-premise / Online enhancements
- Subscribe to notifications for products, images and categories for new images, image versions, advisories, freshness grade changes
- Subscriptions / licenses, support policies, FOSS license compliance

Try it out: https://access.redhat.com/containers

You have feedback? An idea or feature request?
Let’s meet at our User Experience Design booth.

Partner Pavilion
Exhibit Hall A
THANK YOU
BACKUP SLIDES
Jenkins Slave Maven

A Jenkins Maven slave image.

**Application Categories**: Container Platform / Management, Keywords

**Repository Specifications**
- Registry: registry.access.redhat.com
- Namespace/Repository: openshift3/jenkins-slave-maven-rhel7
- Release Category: Generally Available
- Repository Size: Not specified
- Image Versions: 5
- Subscription Required: No

### Most recent tag
- Updated: 4 days ago
- Tag: 3.3-15

**Image Advisory**: RHBA-2017:1094

Search for image advisory ID shows affected images

Image advisories shown for each image version
RHEL Atomic Base Image

by Red Hat, Inc. in Product Red Hat Enterprise Linux

registry.access.redhat.com/rhel7-atomic
Updated 9 days ago \( \text{Health Index} \)

Documentation

- [https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux_atomic_host/7/html/getting_started_with_containers/using_red_hat_base_container_images_standard_and_minimal#using_red_hat_atomic_base_images_minimal](https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux_atomic_host/7/html/getting_started_with_containers/using_red_hat_base_container_images_standard_and_minimal#using_red_hat_atomic_base_images_minimal)
- [https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux_atomic_host/7/html/release_notes/red_hat_enterprise_linux_atomic_host/7.3.1#new_features](https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux_atomic_host/7/html/release_notes/red_hat_enterprise_linux_atomic_host/7.3.1#new_features)

Articles

- Modifying the Red Hat Enterprise Linux OpenStack Platform Overcloud Image with virt-customize

Solutions

- Catalog unused base images in Red Hat OpenStack Platform
- How to create a container base image in Red Hat Enterprise Linux 7?
- Is there a Red Hat Enterprise Linux 6 docker image?
- RHEL v6.5 Guest image and CFE-2014-0169

Product Page

- Red Hat Enterprise Linux

Surrounding documentation supposed to provide additional guidance for consumption and usage
Is the image I’m currently using still current?

release category if not generally available

Nginx 1.6 server and a reverse proxy server

by Red Hat, Inc. in Product Red Hat Enterprise Linux

registry.access.redhat.com/rhsrc/nginx-1.6-rhel7 Updated 6 months ago 1.6-9.7

⚠️ Deprecated This repository has been replaced by rhscl/nginx-1.8-rhel7

if a newer repository should be used instead
The Solution - Trusted Enterprise Content

- Trusted Container Images
- Container Health Index
- User Experience First
- Same Red Hat Quality
- Vast Security Experience
LEARN. NETWORK. EXPERIENCE OPEN SOURCE.