



Introduction to Anaconda Team Edition

Saundra Monroe, Principal Product Manager, Anaconda, Inc.



Team Edition Overview

- An enterprise-ready clearinghouse for build artifacts (packages and libraries) along with their metadata, that enables automation and stores in a way to assure governance and security are built in by default.
- Anaconda Teams Edition makes it easy to distribute consumable artifacts to end users, package managers and CI servers so that they can retrieve and store the artifacts and their dependencies during the development lifecycle.



INNOVATION

Get the latest technology from the open-source brain trust



MANAGEMENT

Control the who, what, when, where, and how of open source



SECURITY

Catch vulnerabilities before they catch up with you



Who Benefits?



Development and Data Science teams:

- Easy governed access to critical OSS libraries and other artifacts.
- Stability and performance within their development lifecycle and build process.
- Integrations to my existing workflow
 - IDEs
 - Collaboration tools
 - Deployment methods



IT/System Admins/CISOs:

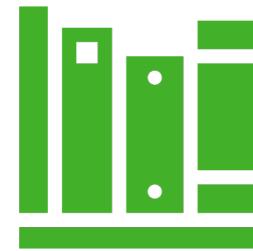
- Govern access to critical OSS libraries and other artifacts.
 - Set and enforce open source use and security policies
 - Map components to known vulnerabilities
- Governance and traceability
- Scalable as workload increases
- Identify license and component-quality risks



Why do organizations need Team Edition?



Provide only approved software components for teams to use.

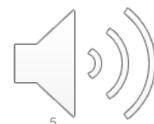


Give them the tools to create their own lists of safe libraries and other bits to use.

Team Edition – CVE Background

- Open source software vulnerabilities create security risks for organizations and new vulnerabilities are discovered all the time.
- Common Vulnerabilities and Exposures (CVEs) is list of publicly known vulnerabilities. Each vulnerability includes an ID number, severity score, and description.
- Severity scores are assigned based on the numerical Common Vulnerability Scoring System (CVSS) on a zero to ten scale.

CVSS score	Qualitative Rating
0.0	None
0.1 - 3.9	Low
4.0 - 6.9	Medium
7.0 - 8.9	High
9.0 - 10	Critical





The screenshot shows the Anaconda Dashboard interface. At the top left, there's a navigation bar with 'packages' (marked 1) and 'Search for packages'. Below it, a sidebar has 'Packages' (marked 2) and 'Channels' options. The main area displays 'My Channels' with one channel named 'anaconda-admin' containing 84 packages (marked 3). To the right, there's a section for 'Latest CVEs' (marked 4) listing several entries like CVE-2013-1753, CVE-2020-7212, etc., each with a severity rating (e.g., 7.5, 6.5) and publish date. Further down, there's a 'This Week's Top 10 Downloads' section. The bottom half of the dashboard is titled 'Latest Packages' (marked 5) and lists several packages under the 'anaconda-admin / clean' channel, including werkzeug, sphinx, django, widgetsnbextension, urllib3, and pycrypto, each with its version, conda status, file count, and last update.

Team Edition Dashboard



CVEs

Screen Shot 2020-05-24 at 5:44:45 PM

CVE-2019-16778
tensorflow-base [17+ Affected Packages]
9.8

In TensorFlow before 1.15, a heap buffer overflow in `UnsortedSegmentSum` can be produced when the `Index` template argument is `int32`. In this case `data_size` and `num_segments` fields are truncated from `int64` to `int32` and can produce negative numbers, resulting in a heap buffer overflow.

CVE-2019-1551
openssl [55+ Affected Packages]
5.3

There is an overflow bug in the `x64_64` Montgomery squaring procedure used in exponentiation with 512-bit moduli. No EC algorithms are affected. Analysis suggests that attacks against 2-prime RSA1024, 3-prime RSA1536, and DSA1024 as a result of this defect would be very difficult.

CVE-2019-5010
python [749+ Affected Packages]
7.5

An exploitable denial-of-service vulnerability exists in the X509 certificate parser of Python.org Python 2.7.11 / 3.6.6. A specially crafted X509 certificate can cause a NULL pointer dereference, resulting in a denial of service. An attacker can initiate or accept TLS...

CVE-2019-18348
python [1+ Affected Packages]
6.1

An issue was discovered in `urllib2` in Python 2.x through 2.7.17 and `urllib` in Python 3.x through 3.8.0. CRLF injection is possible if the attacker controls a `url` parameter, as demonstrated by the first argument to `urllib.request.urlopen` with `\r\n` (specifically in the host component).

CVE-2019-17514
library/glob.html
in the Python 2 and 3 documentation before 2016 has potentially misleading information about whether sorting occurs, as demonstrated by irreproducible cancer-research results. NOTE: the effects of this documentation cross application domains...
7.5

Screen Shot 2020-05-24 at 5:43:54 PM

CVE-2019-1551
openssl [55+ Affected Packages]
5.3

There is an overflow bug in the `x64_64` Montgomery squaring procedure used in exponentiation with 512-bit moduli. No EC algorithms are affected. Analysis suggests that attacks against 2-prime RSA1024, 3-prime RSA1536, and DSA1024 as a result of this defect would be very difficult.

Type to filter by channel

Channel	Name	File Name	Platform
anaconda-admin	openssl	openssl-1.0.2n-hb7f436b_0.conda	Linux 64
anaconda-admin	openssl	openssl-1.0.2m-h8cf7e7_0.tar.bz2	Linux 64
anaconda-admin	openssl	openssl-1.0.2r-h76447c_0.conda	Linux 64
anaconda-admin	openssl	openssl-1.0.2l-h077ae2c_5.tar.bz2	Linux 64
anaconda-admin	openssl	openssl-1.0.2t-h76447c_1.tar.bz2	Linux 64
anaconda-admin	openssl	openssl-1.0.2m-h8cf7e7_0.conda	Linux 64
anaconda-admin	openssl	openssl-1.0.2s-h76447c_0.conda	Linux 64
anaconda-admin	openssl	openssl-1.0.2q-h76447c_0.conda	Linux 64
anaconda-admin	openssl	openssl-1.1.1a-h76447c_0.conda	Linux 64
anaconda-admin	openssl	openssl-1.1.1d-h76447c_2.conda	Linux 64
anaconda-admin	openssl	openssl-1.0.2s-h7b6447c_0.tar.bz2	Linux 64
anaconda-admin	openssl	openssl-1.1.1b-h7b6447c_1.tar.bz2	Linux 64

Below are CVSS details. For more information please refer to the Common Vulnerability Scoring System version 3.0 spec.

Exploitability medium

- Attack Vector: network
- Attack Complexity: low
- Privileges Required: none
- User Interaction: none
- Scope: unchanged

Impact low

- Confidentiality: low
- Integrity: none
- Availability: none





Screen Shot 2020-05-24 at 5:28:47 PM ~

Back to anaconda-admin

Edit mirror

Active (download all the files from the source channel immediately)
 Passive (download JSON immediately and files on demand later)

Name **1**
main

External Source Channel
<https://api.anaconda.cloud/repo/anaconda-main>

Destination Channel
anaconda-admin **2**

Type
conda

Subdirectory
Choose a subdirectory

Only mirror files with CVE score less than or equal to Enter CVE score

Package Filters **3**
All package name filters use the MatchSpec protocol

Only include the following package names pycrypto openssl python numpy numpy-base pyopenssl nginx tensorflow tensorflow-gpu tensorflow-base tensorflow-base-gpu

Exclude

By Package Name **3**
 Add package

By License Type **3**
 Choose license(s) Choose license(s)

Date Range **4**
From Choose a Start Date To Choose an End Date

View Channel Filters

Frequency **4**
Weekly on Sunday at 00 : 00

Run Now

Cancel

Creating a mirror for your default channel





Screen Shot 2020-05-24 at 4:16:44 PM

packages Search for packages

My Channels

1 anaconda-admin
14 selects 2 checkmarks
This channel has no description

2 Packages Projects Environments Notebooks CVEs Mirrors Subchannels Groups History

Type to filter

numpy
v1.16.2 (600 KB) (Latest: 1.16.2)
Array processing for numbers, strings, records, and objects.

numpy-base
v1.16.0 (600 KB) (Latest: 1.16.0)
This package has no description.

openssl
v1.1.1d (600 KB) (Latest: 1.1.1d)
OpenSSL is an open-source implementation of the SSL and TLS protocols

pycryptopp
v2.6.1 (600 KB) (Latest: 2.6.1)
Cryptographic modules for Python.

pyopenssl
v17.4.0 (600 KB) (Latest: 17.4.0)
Python wrapper module around the OpenSSL library

python
v3.7.2 (600 KB) (Latest: 3.7.2)
General purpose programming language

tensorflow
v1.7.0 (600 KB) (Latest: 1.7.0)
Tensorflow is a machine learning library.

tensorflow-base
v1.7.0 (600 KB) (Latest: 1.7.0)
Tensorflow is a machine learning library; base package contains only tensorflow.

tensorflow-gpu
v1.7.0 (600 KB) (Latest: 1.7.0)
Tensorflow is a machine learning library; base package contains only tensorflow.

Mirror 3
conda repo mirror --create <mirror_name> -s <ext>

Name: conda repo mirror --create <mirror_name> -s <ext>
Owner(s): anaconda-admin
Access: Public
Downloads: 0
Created: May 22, 2020

Items per page: 50 1 - 9 of 9

Default channel view





Package view with no CVE filters

Screen Shot 2020-06-24 at 4:58:54 PM

anaconda-admin / openssl

Last Published 2 days ago
1.1.1c 100% 266 free Latest: 1.1.1d

OpenSSL is an open-source implementation of the SSL and TLS protocols

File Dependencies Dependents 2

Type to filter 3

Install conda install -c anaconda-admin openssl

Version	Build	Platform	Build Type	Active	Size	Downloads	
1.1.1e	openssl-1.1.1e-h774522_0.tar.bz2	win-64	tarbz2	0	active	5.75 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h07e037_0.tar.bz2	win-64	tarbz2	0	active	4.75 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h1dk5oc_1.tar.bz2	win-64	tarbz2	0	active	3.44 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h1dk5oc_2.tar.bz2	win-64	tarbz2	1	active	3.41 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h1dk5oc_3.tar.bz2	win-64	tarbz2	1	active	3.43 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h1dk5oc_4.tar.bz2	win-64	tarbz2	0	active	5.06 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h1dk5oc_5.tar.bz2	win-64	tarbz2	1	active	5.08 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h1dk5oc_6.tar.bz2	win-64	tarbz2	1	active	4.19 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h1dk5oc_7.tar.bz2	win-64	tarbz2	0	active	5.69 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h1dk5oc_8.tar.bz2	win-64	tarbz2	1	active	5.71 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h1dk5oc_9.tar.bz2	win-64	tarbz2	1	active	5.72 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h1dk5oc_10.tar.bz2	win-64	tarbz2	1	active	5.73 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h07e037_3.tar.bz2	win-64	tarbz2	1	active	4.81 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h07e037_4.tar.bz2	win-64	tarbz2	1	active	4.81 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h07e037_5.tar.bz2	win-64	tarbz2	1	active	4.76 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h1dk5oc_11.tar.bz2	win-64	tarbz2	5	active	3.42 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h774522_1.tar.bz2	win-64	tarbz2	5	active	5.06 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h07e037_1.tar.bz2	win-32	tarbz2	5	active	4.21 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h774522_1.tar.bz2	win-32	tarbz2	5	active	5.72 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h07e037_1.tar.bz2	win-64	tarbz2	5	active	4.84 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h1dk5oc_11.tar.bz2	win-64	tarbz2	6	active	3.45 MB	5/22/20 3:38PM
1.1.1e	openssl-1.1.1e-h1dk5oc_12.tar.bz2	win-64	tarbz2	6	active	3.45 MB	5/22/20 3:38PM
1.1.1b	openssl-1.1.1b-h774522_1.tar.bz2	win-32	tarbz2	6	active	5.09 MB	5/22/20 3:38PM
1.1.1b	openssl-1.1.1b-h774522_1.tar.bz2	win-64	tarbz2	6	active	5.03 MB	5/22/20 3:38PM
1.1.1b	openssl-1.1.1b-h07e037_1.tar.bz2	win-32	tarbz2	6	active	4.15 MB	5/22/20 3:38PM
1.1.1b	openssl-1.1.1b-h07e037_1.tar.bz2	win-64	tarbz2	6	active	4.16 MB	5/22/20 3:38PM

Screen Shot 2020-06-24 at 6:06:57 PM

anaconda-admin / openssl

Last Published 2 days ago
1.1.1c 100% 266 free Latest: 1.1.1d

OpenSSL is an open-source implementation of the SSL and TLS protocols

File Dependencies Dependents

Rack

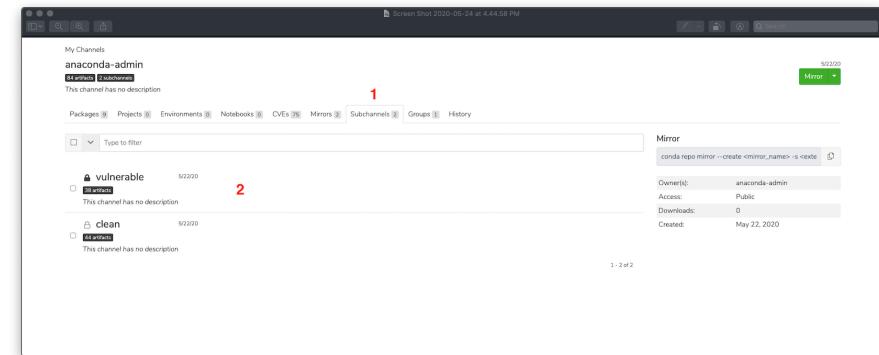
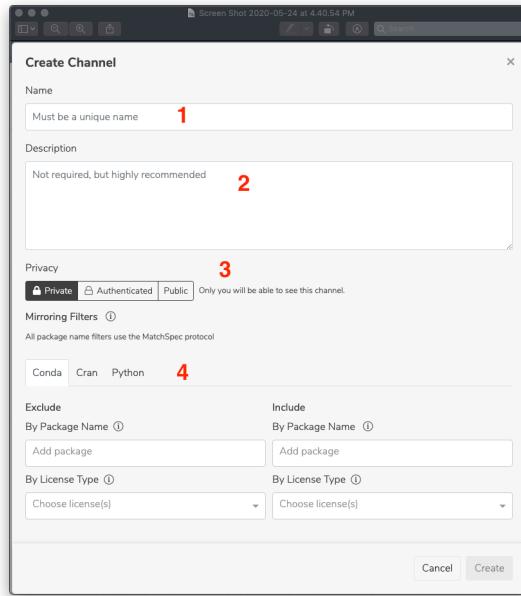
openssl-1.1.1c-h0c8e037_1.tar.bz2

Associated CVEs:

5.3	CVE-2019-1549	Published Sep 10, 2019
5.3	CVE-2019-1551	Published Dec 09, 2019
3.7	CVE-2019-1563	Published Sep 10, 2019
4.7	CVE-2019-1547	Published Sep 10, 2019
3.3	CVE-2019-1552	Published Jul 30, 2019



Create your private or authenticated subchannels



Vulnerable subchannel with CVE filter

Screen Shot 2020-05-24 at 4:45:57 PM

Edit mirror

Back to vulnerable

Active download all files from the source channel immediately

Passive download (CDN immediately and files on demand later)

Name: Medium-risk **1**

External Source Channel: <https://api.anaconda.cloud/api/v1/anaconda/main>

Destination Channel: vulnerable

Type: conda

Only minor files with CVE score less than or equal to: 6.9 **2**

Package Filters

All package names must use the MatchSpec protocol

Only include the following package names

Exclude

By Package Name: **3**

By License Type:

Date Range: From To

View Channel Filters

Frequency: Weekly

Screen Shot 2020-05-24 at 4:59:57 PM

anaconda-admin /vulnerable /openssl **1**

OpenSSL is an open-source implementation of the SSL and TLS protocols

Files

Type to filter **2**

Version	File	Size	Active	Last Modified
1.1.1f	openssl-1.1.1f+11d435cc_0.tar.bz2	5.06 MB	active	5/22/20 10:52:09 PM
1.1.1f	openssl-1.1.1f+11d435cc_0.tar.gz	5.75 MB	active	5/22/20 10:52:09 PM
1.1.1f	openssl-1.1.1f+11d435cc_0.conda	2.2 MB	active	5/22/20 10:52:09 PM
1.1.1e	openssl-1.1.1e+11d435cc_0.tar.bz2	3.45 MB	active	5/22/20 10:52:09 PM
1.1.1e	openssl-1.1.1e+11d435cc_0.tar.gz	4.4 MB	active	5/22/20 10:52:09 PM
1.1.1e	openssl-1.1.1e+11d435cc_0.conda	5.08 MB	active	5/22/20 10:52:09 PM
1.1.1e	openssl-1.1.1e+11d435cc_0.conda	4.15 MB	active	5/22/20 10:52:09 PM
1.1.1e	openssl-1.1.1e+11d435cc_0.conda	5.75 MB	active	5/22/20 10:52:09 PM
1.1.1e	openssl-1.1.1e+11d435cc_0.conda	4.75 MB	active	5/22/20 10:52:09 PM
1.1.1e	openssl-1.1.1e+11d435cc_0.conda	3.79 MB	active	5/22/20 10:52:09 PM
1.1.1e	openssl-1.1.1e+11d435cc_0.conda	2.2 MB	active	5/22/20 10:52:09 PM
1.1.1e	openssl-1.1.1e+11d435cc_0.conda	4.41 MB	active	5/22/20 10:52:09 PM
1.1.1e	openssl-1.1.1e+11d435cc_0.conda	3.56 MB	active	5/22/20 10:52:09 PM
1.1.1e	openssl-1.1.1e+11d435cc_0.conda	3.44 MB	active	5/22/20 10:52:09 PM
1.1.1e	openssl-1.1.1e+11d435cc_0.conda	3.41 MB	active	5/22/20 10:52:09 PM
1.1.1d	openssl-1.1.1d+11d435cc_2.tar.bz2	3.43 MB	active	5/22/20 10:52:09 PM
1.1.1d	openssl-1.1.1d+11d435cc_2.tar.gz	3.41 MB	active	5/22/20 10:52:09 PM
1.1.1d	openssl-1.1.1d+11d435cc_2.conda	3.44 MB	active	5/22/20 10:52:09 PM
1.1.1d	openssl-1.1.1d+11d435cc_2.tar.bz2	5.06 MB	active	5/22/20 10:52:09 PM
1.1.1d	openssl-1.1.1d+11d435cc_2.tar.gz	5.08 MB	active	5/22/20 10:52:09 PM
1.1.1d	openssl-1.1.1d+11d435cc_2.conda	4.19 MB	active	5/22/20 10:52:09 PM
1.1.1d	openssl-1.1.1d+11d435cc_2.conda	5.69 MB	active	5/22/20 10:52:09 PM
1.1.1d	openssl-1.1.1d+11d435cc_2.conda	5.71 MB	active	5/22/20 10:52:09 PM
1.1.1d	openssl-1.1.1d+11d435cc_2.conda	5.72 MB	active	5/22/20 10:52:09 PM
1.1.1d	openssl-1.1.1d+11d435cc_2.conda	5.73 MB	active	5/22/20 10:52:09 PM
1.1.1d	openssl-1.1.1d+11d435cc_2.conda	4.81 MB	active	5/22/20 10:52:09 PM

Sort: Version

Install:

Homepage: <http://www.openssl.org>

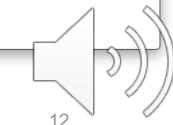
Docs: <https://www.openssl.org/docs/man1.1.1/>

Repository: <https://github.com/openssl/openssl>

Last Published: May 22, 2020

License: OpenSSL

Platforms: [Windows](#) [macOS](#) [Linux](#)



Clean subchannel with CVE filter

Screen Shot 2020-05-24 at 5.24.29 PM

Edit mirror

Back to clean

External Source Channel: <https://api.anaconda.cloud/api/v1/anaconda/main>

Destination Channel: **clean** 2

Type: **conda**

Only mirror files with CVE score less than or equal to: 3.9 3

Package Filters

All package names must use the MatchExact protocol

Only include the following package names: [Add package](#)

Exclude

By Package Name: [Add package](#)

By License Type: [Choose license\(s\)](#)

Date Range: From [Choose a Start Date](#) To [Choose an End Date](#)

[View Channel Filters](#)

Frequency: Weekly on Sunday at 00:00

Run Now

Cancel **Submit**

Screen Shot 2020-05-24 at 5.04.26 PM

anaconda-admin / clean / openssl 1

Last published a second ago
URL: [http://localhost:1111](#)

This package has no description.

Files 2 **Dependencies** **Dependants**

Type to filter:

Name	Version	Platform	Score	CVEs	State	Size	Uploaded
openssl-1.1.1f-h7ba6447c_0.tarbz2	1.1.1f	0xwax44	0	0	passive	3.81 MB	5/24/20 05:04PM
openssl-1.1.1f-h7ba6447c_0_conda	1.1.1f	0xwax44	0	0	passive	2.52 MB	5/24/20 05:04PM
openssl-1.1.1e-h7ba6447c_0tarbz2	1.1.1e	0xwax44	0	0	passive	3.79 MB	5/24/20 05:04PM
openssl-1.1.1e-h7ba6447c_0_conda	1.1.1e	0xwax44	0	0	passive	2.53 MB	5/24/20 05:04PM
openssl-1.1.1d-h7ba6447c_4tarbz2	1.1.1d	0xwax44	0	0	passive	3.75 MB	5/24/20 05:04PM
openssl-1.1.1d-h7ba6447c_4_conda	1.1.1d	0xwax44	0	0	passive	2.52 MB	5/24/20 05:04PM
openssl-1.0.2u-h7ba6447c_0tarbz2	1.0.2u	0xwax44	0	0	passive	3.15 MB	5/24/20 05:04PM
openssl-1.0.2u-h7ba6447c_0_conda	1.0.2u	0xwax44	0	0	passive	2.16 MB	5/24/20 05:04PM

Install [conda install -c anaconda-admin/openssl](#)

Version: [May 24, 2020](#)

Last Published: May 24, 2020

License: OpenSSL

Platforms: [0 views](#)

1 of 8

Anaconda Team Edition



HARNESS INNOVATION
FROM THE OPEN-
SOURCE COMMUNITY



MANAGE OPEN-
SOURCE PROJECTS



SECURE YOUR OPEN-
SOURCE PIPELINE



| *Thank you.*