



Call Management System (CMS)

R19.0.0.0

Release Notes

Issue 1.5

November 25, 2019

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1. Purpose

The release notes provide summary information about the GA version of the Call Management System (CMS) R19.0.0.0 software.

The release notes include last minute information that is not incorporated into the standard documentation as well as a very high level description of the release content.

For details about the features included in CMS R19.0.0.0 please see the product documentation posted at <http://support.avaya.com>.

The following table provides the material codes for the CMS software:

Product	Version	Required Patch or PSN
Call Management System R19.0.0.0	700514985 – CMS R19 CUE Linux Upg DVD 700514515 – CMS R19 Sftw DVD Linux – cms19ea.d 700514516 – CMS R19 RHEL 7 Kickstart DVD	See PSN005221u for information on an important patch (note 1 below)
	CMS Supervisor Web – Included on CMS Software DVD – cmsweb19ea.d	None
	CMS Supervisor PC Client– R19 NA13 is now available. It is recommended to use the newest PC Client. CMS Supervisor PC Client R19 NA.13 is backward compatible with CMS R18.1 deployments.	None

Note 1: PSN005221u describes a problem where the link to Communication Manager can drop if administration commands are run from CMS for agents that do not have direct agent skills assigned. A patch is available. Details in the PSN.

2. Document Change History

Issue Number	Date	Comment
1.0	10 June 2019	Initial Release of R19.0.0.0
1.1	12 August 2019	Updated to note fixes in PC Supervisor client R19 NA.11 version.
1.2	20 August 2019	Updated to note PSN005221u
1.3	4 September 2019	Updated to note current version of CMS R19 PC Supervisor client available
1.4	17 September 2019	Updated to note current version of CMS R19 PC Supervisor client available.
1.5	25 November 2019	A patch is available to resolve the Tivoli LAN backup problem. See section 4 for details.

3. CMS R19.0.0.0 Functionality

The CMS R19 release provides the following platform and feature support:

3.1. *CMS R19 CMS Platform support*

The CMS R19 release supports the following platforms:

- Continued support for the Avaya Converged Platform 130, this includes new sales and upgrades to existing Avaya Converged Platform deployments
- Continued support for virtualized deployment on VMware, this includes new sales and upgrades to existing VMware deployments.
- Continued support virtualized deployments in Amazon Web Services (AWS), this includes new sales and upgrades to existing AWS deployments.
- Support **upgrades ONLY** on the following servers: Dell R630, Dell R730, HPE DL20 G9, HPE and HPE DL380 G9.
 - No other hardware platforms are supported
 - Customers on older hardware platforms running the Solaris operating system can no longer upgrade on existing hardware. A platform upgrade is required.

3.2. *New CMS Features in R19.0.0.0*

This release contains the following new features. For details about each feature please see the CMS product documents on support.avaya.com.

- Support for licensing using WebLM. No longer will manual authorizations be required.
- Support for LDAP Authorization for user login and password only. Both LDAP authenticated and normal user logins will be supported simultaneously.
- EASG is supported, as a replacement for ASG.
- Intrahour interval table data may now be retained for 370 days, an increase from the previous maximum of 62 days.
- ECH format changes to include several new fields of data.
- Linux 7.6

Features that are no longer available with CMS R19

- New non-EAS ACDs cannot be added on CMS R19. Migration of non-EAS ACDs to CMS R19 from previous releases will be allowed. But no new non-EAS ACDs can be administered on CMS R19.

3.3. *Web Client Improvements*

- The Web Client now allows editing of most Dictionary items. Under the 'Administration' tab, users will see a 'Dictionary' selection on the menu on the left side of the window.

3.4. *PC Client Improvements*

- PC Supervisor SSH login is improved to provide faster and more reliable connection to the CMS server, and eliminate confusing errors.
A side effect of this improvement is the first time the CMS Supervisor R19 PC client connects to a server, users may be prompted to allow access through the Windows firewall. This is a function of the Windows firewall software and the appearance of the firewall acceptance pop-up will depend on customers use of Windows firewall software on the desktop PC running PC Supervisor client.

The following fixes are provided in the R19 PC Supervisor client NA.13

- Improved client resiliency when users make multiple attempts to change passwords reusing old passwords.
- Fixed issue introduced in R19 PC Supervisor client NA.11 where automatic scripts would not execute properly.
- Fixed issue where the legend border option was disabled when data item labels are edited.
- No longer will an extra skill be selected when selecting multiple skills for single agent using the ctrl key to multi-select from the skills list.

4. Known Issues

1. Tivoli Storage Manager (TSM) LAN backups does not work properly when FIPS encryption is enabled on CMS R19. See PSN005424u for more details. A patch is available to resolve the problem.

5. Virtual Deployment Notes

This section contains information related to CMS R19 deployment in virtual environments.

5.1. *Only one OVA provided*

With CMS R19, one OVA file is provided for use in VMware deployments as well as Amazon Web Services (AWS) deployment. Prior to CMS R19, a different OVA file was required when deploying in AWS.

With CMS R19 the same OVA file can be used for deployment in VMware and AWS. This OVA file is also used for deployment on the Avaya Converged Platform.

5.2. *VM Tools*

With CMS R19, open-vm-tools version 10309 replaces VMware installed VM tools. RedHat Linux 7.6 installs open-vm-tools. VMware supports and recommends the use of open-vm-tools. For further information, refer to VMware documentation.

5.3. Caveats when deploying CMS R19 on older VMware versions

CMS R19 supports deployment in VMware ESXi 6.7.

CMS R19 continues to support deployment in VMware ESXi 5.5, 6.0 and 6.5.

However, in supporting all these versions of ESXi, there is a caveat when installing the CMS R19 OVA file in VMware ESXi 5.5 and 6.0.

A warning message will appear during a CMS R19 ova deployment on an ESXi 5.5 and 6.0 server.

The warning can be ignored and deployment continued.

The following warnings appear during OVA deployment:

Unable to parse 'flags.vbxEnabled' for attribute 'key' on element 'Config'.

Unable to parse 'flags.vbxEnabled' for attribute 'key' on element 'Config'.

Unable to parse 'flags.vbxEnabled' for attribute 'key' on element 'Config'.

Do you want to continue?

Repond to the warning by

Clicking the 'Yes' button.

Deployment will be successful and CMS will function normally.

6. Software Download Information

For installation and upgrade implementation options, please consult your Account team or Sales team.

Please be sure to use the latest CMS R19 documents for instructions on installing an upgrading to CMS R19.

For upgrade, customers should consult the *"Planning for Avaya Call Management System Upgrades"* document to determine the proper upgrade procedure to use.

Go to <http://support.avaya.com> to view the full documentation set for CMS R19.0.0.0

Appendix A: Patch Installation Instructions

No patches are required with CMS R19.0.0.0

Appendix B: Linux RPMs included in CMS R19.0.0.0

acl-2.2.51-14.el7.x86_64.rpm	lcms2-2.6-3.el7.x86_64.rpm	passwd-0.79-4.el7.x86_64.rpm
aic94xx-firmware-30-6.el7.noarch.rpm	less-458-9.el7.x86_64.rpm	pciutils-3.5.1-3.el7.x86_64.rpm
alsa-firmware-1.0.28-2.el7.noarch.rpm	libacl-2.2.51-14.el7.x86_64.rpm	pciutils-libs-3.5.1-3.el7.x86_64.rpm
alsa-lib-1.1.6-2.el7.x86_64.rpm	libaio-0.3.109-13.el7.x86_64.rpm	pcre-8.32-17.el7.x86_64.rpm
alsa-tools-firmware-1.1.0-1.el7.x86_64.rpm	libassuan-2.1.0-3.el7.x86_64.rpm	pcsc-lite-libs-1.8.8-8.el7.x86_64.rpm
at-3.1.13-24.el7.x86_64.rpm	libattr-2.4.46-13.el7.x86_64.rpm	perl-5.16.3-294.el7_6.x86_64.rpm
atk-2.28.1-1.el7.x86_64.rpm	libbasicobjects-0.1.1-32.el7.x86_64.rpm	perl-Carp-1.26-244.el7.noarch.rpm
audit-2.8.4-4.el7.x86_64.rpm	libblkid-2.23.2-59.el7_6.1.x86_64.rpm	perl-constant-1.27-2.el7.noarch.rpm
audit-libs-2.8.4-4.el7.x86_64.rpm	libcap-2.22-9.el7.x86_64.rpm	perl-Data-Dumper-2.145-3.el7.x86_64.rpm
authconfig-6.2.8-30.el7.x86_64.rpm	libcap-ng-0.7.5-4.el7.x86_64.rpm	perl-Encode-2.51-7.el7.x86_64.rpm
autogen-libopts-5.18-5.el7.x86_64.rpm	libcollection-0.7.0-32.el7.x86_64.rpm	perl-Exporter-5.68-3.el7.noarch.rpm
avahi-glib-0.6.31-19.el7.x86_64.rpm	libcom_err-1.42.9-13.el7.x86_64.rpm	perl-File-Path-2.09-2.el7.noarch.rpm
avahi-libs-0.6.31-19.el7.x86_64.rpm	libcroco-0.6.12-4.el7.x86_64.rpm	perl-File-Temp-0.23.01-3.el7.noarch.rpm
basesystem-10.0-7.el7.noarch.rpm	libcurl-7.29.0-51.el7.x86_64.rpm	perl-Filter-1.49-3.el7.x86_64.rpm
bash-4.2.46-31.el7.x86_64.rpm	libdaemon-0.14-7.el7.x86_64.rpm	perl-Getopt-Long-2.40-3.el7.noarch.rpm
bc-1.06.95-13.el7.x86_64.rpm	libdb-5.3.21-24.el7.x86_64.rpm	perl-HTTP-Tiny-0.033-3.el7.noarch.rpm
bind-libs-9.9.4-73.el7_6.x86_64.rpm	libdb-utils-5.3.21-24.el7.x86_64.rpm	perl-libs-5.16.3-294.el7_6.x86_64.rpm
bind-libs-lite-9.9.4-73.el7_6.x86_64.rpm	libdhash-0.5.0-32.el7.x86_64.rpm	perl-macros-5.16.3-294.el7_6.x86_64.rpm
bind-license-9.9.4-73.el7_6.noarch.rpm	libdnf-1.12-13.1.el7.x86_64.rpm	perl-parent-0.225-244.el7.noarch.rpm
bind-utils-9.9.4-73.el7_6.x86_64.rpm	libdrm-2.4.91-3.el7.x86_64.rpm	perl-PathTools-3.40-5.el7.x86_64.rpm
binutils-2.27-34.base.el7.x86_64.rpm	libedit-3.0-12.20121213cvs.el7.x86_64.rpm	perl-Pod-Escapes-1.04-294.el7_6.noarch.rpm
biosdevname-0.7.3-1.el7.x86_64.rpm	liberation-fonts-common-1.07.2-16.el7.noarch.rpm	perl-podlators-2.5.1-3.el7.noarch.rpm
btrfs-progs-4.9.1-1.el7.x86_64.rpm	liberation-mono-fonts-1.07.2-16.el7.noarch.rpm	perl-Pod-Perldoc-3.20-4.el7.noarch.rpm
bzip2-1.0.6-13.el7.x86_64.rpm	libestr-0.1.9-2.el7.x86_64.rpm	perl-Pod-Simple-3.28-4.el7.noarch.rpm

bzip2-libs-1.0.6-13.el7.x86_64.rpm	libevent-2.0.21-4.el7.x86_64.rpm	perl-Pod-Usage-1.63-3.el7.noarch.rpm
ca-certificates-2018.2.22-70.0.el7_5.noarch.rpm	libfastjson-0.99.4-3.el7.x86_64.rpm	perl-Scalar-List-Utils-1.27-248.el7.x86_64.rpm
cairo-1.15.12-3.el7.x86_64.rpm	libffi-3.0.13-18.el7.x86_64.rpm	perl-Socket-2.010-4.el7.x86_64.rpm
c-ares-1.10.0-3.el7.x86_64.rpm	libfontenc-1.1.3-3.el7.x86_64.rpm	perl-Storable-2.45-3.el7.x86_64.rpm
chkconfig-1.7.4-1.el7.x86_64.rpm	libgcc-4.8.5-36.el7_6.2.x86_64.rpm	perl-Text-ParseWords-3.29-4.el7.noarch.rpm
chrony-3.2-2.el7.x86_64.rpm	libgcrypt-1.5.3-14.el7.x86_64.rpm	perl-threads-1.87-4.el7.x86_64.rpm
copy-jdk-configs-3.3-10.el7_5.noarch.rpm	libglvnd-1.0.1-0.8.git5baa1e5.el7.x86_64.rpm	perl-threads-shared-1.43-6.el7.x86_64.rpm
coreutils-8.22-23.el7.x86_64.rpm	libglvnd-egl-1.0.1-0.8.git5baa1e5.el7.x86_64.rpm	perl-Time-HiRes-1.9725-3.el7.x86_64.rpm
cpio-2.11-27.el7.x86_64.rpm	libglvnd-glx-1.0.1-0.8.git5baa1e5.el7.x86_64.rpm	perl-Time-Local-1.2300-2.el7.noarch.rpm
cracklib-2.9.0-11.el7.x86_64.rpm	libgomp-4.8.5-36.el7_6.2.x86_64.rpm	pinentry-0.8.1-17.el7.x86_64.rpm
cracklib-dicts-2.9.0-11.el7.x86_64.rpm	libgpg-error-1.12-3.el7.x86_64.rpm	pixman-0.34.0-1.el7.x86_64.rpm
cronie-1.4.11-20.el7_6.x86_64.rpm	libgudev1-219-62.el7_6.6.x86_64.rpm	pkgconfig-0.27.1-4.el7.x86_64.rpm
cronie-anacron-1.4.11-20.el7_6.x86_64.rpm	libICE-1.0.9-9.el7.x86_64.rpm	plymouth-0.8.9-0.31.20140113.el7.x86_64.rpm
crontabs-1.11-6.20121102git.el7.noarch.rpm	libicu-50.1.2-17.el7.x86_64.rpm	plymouth-core-libs-0.8.9-0.31.20140113.el7.x86_64.rpm
cryptsetup-libs-2.0.3-3.el7.x86_64.rpm	libidn-1.28-4.el7.x86_64.rpm	plymouth-scripts-0.8.9-0.31.20140113.el7.x86_64.rpm
cups-1.6.3-35.el7.x86_64.rpm	libini_config-1.3.1-32.el7.x86_64.rpm	policycoreutils-2.5-29.el7_6.1.x86_64.rpm
cups-client-1.6.3-35.el7.x86_64.rpm	libipa_hbac-1.16.2-13.el7_6.8.x86_64.rpm	polkit-0.112-18.el7_6.1.x86_64.rpm
cups-filesystem-1.6.3-35.el7.noarch.rpm	libjpeg-turbo-1.2.90-6.el7.x86_64.rpm	polkit-pkla-compat-0.1-4.el7.x86_64.rpm
cups-filters-1.0.35-22.el7.x86_64.rpm	libldb-1.3.4-1.el7.x86_64.rpm	poppler-0.26.5-20.el7.x86_64.rpm
cups-filters-libs-1.0.35-22.el7.x86_64.rpm	libmnl-1.0.3-7.el7.x86_64.rpm	poppler-data-0.4.6-3.el7.noarch.rpm
cups-libs-1.6.3-35.el7.x86_64.rpm	libmount-2.23.2-59.el7_6.1.x86_64.rpm	poppler-utils-0.26.5-20.el7.x86_64.rpm
curl-7.29.0-51.el7.x86_64.rpm	libmspack-0.5-0.6.alpha.el7.x86_64.rpm	popt-1.13-16.el7.x86_64.rpm
cyrus-sasl-2.1.26-23.el7.x86_64.rpm	libndp-1.2-7.el7.x86_64.rpm	postfix-2.10.1-7.el7.x86_64.rpm
cyrus-sasl-gssapi-2.1.26-23.el7.x86_64.rpm	libnetfilter_conntrack-1.0.6-1.el7_3.x86_64.rpm	procmail-3.22-36.el7_4.1.x86_64.rpm
cyrus-sasl-lib-2.1.26-23.el7.x86_64.rpm	libnfnlink-1.0.1-4.el7.x86_64.rpm	procps-ng-3.3.10-23.el7.x86_64.rpm
dbus-1.10.24-13.el7_6.x86_64.rpm	libnfsidmap-0.25-19.el7.x86_64.rpm	psmisc-22.20-15.el7.x86_64.rpm
dbus-glib-0.100-7.el7.x86_64.rpm	libnl-1.1.4-3.el7.x86_64.rpm	pth-2.0.7-23.el7.x86_64.rpm
dbus-libs-1.10.24-13.el7_6.x86_64.rpm	libnl3-3.2.28-4.el7.x86_64.rpm	pygobject2-2.28.6-11.el7.x86_64.rpm
dbus-python-1.1.1-9.el7.x86_64.rpm	libnl3-cli-3.2.28-4.el7.x86_64.rpm	pygpgme-0.3-9.el7.x86_64.rpm
dejavu-fonts-common-2.33-6.el7.noarch.rpm	libpath_utils-0.2.1-32.el7.x86_64.rpm	pyliblzma-0.5.3-11.el7.x86_64.rpm
dejavu-sans-fonts-2.33-6.el7.noarch.rpm	libpcap-1.5.3-11.el7.x86_64.rpm	pyOpenSSL-0.13.1-4.el7.x86_64.rpm

desktop-file-utils-0.23-1.el7.x86_64.rpm	libpciaccess-0.14-1.el7.x86_64.rpm	pytalloc-2.1.13-1.el7.x86_64.rpm
device-mapper-1.02.149-10.el7_6.7.x86_64.rpm	libpipeline-1.2.3-3.el7.x86_64.rpm	python-2.7.5-77.el7_6.x86_64.rpm
device-mapper-libs-1.02.149-10.el7_6.7.x86_64.rpm	libpng-1.5.13-7.el7_2.x86_64.rpm	python-chardet-2.2.1-1.el7_1.noarch.rpm
dhclient-4.2.5-68.el7_5.1.x86_64.rpm	libpwquality-1.2.3-5.el7.x86_64.rpm	python-configobj-4.7.2-7.el7.noarch.rpm
dhcp-common-4.2.5-68.el7_5.1.x86_64.rpm	libref_array-0.1.5-32.el7.x86_64.rpm	python-dateutil-1.5-7.el7.noarch.rpm
dhcp-libs-4.2.5-68.el7_5.1.x86_64.rpm	libseccomp-2.3.1-3.el7.x86_64.rpm	python-decorator-3.4.0-3.el7.noarch.rpm
diffutils-3.3-4.el7.x86_64.rpm	libseldlinux-2.5-14.1.el7.x86_64.rpm	python-dmidecode-3.12.2-3.el7.x86_64.rpm
dmidecode-3.1-2.el7.x86_64.rpm	libseldlinux-python-2.5-14.1.el7.x86_64.rpm	python-ethtool-0.8-7.el7.x86_64.rpm
dos2unix-6.0.3-7.el7.x86_64.rpm	libseldlinux-utils-2.5-14.1.el7.x86_64.rpm	python-firewall-0.5.3-5.el7.noarch.rpm
dracut-033-554.el7.x86_64.rpm	libsemanage-2.5-14.el7.x86_64.rpm	python-gobject-base-3.22.0-1.el7_4.1.x86_64.rpm
dracut-config-rescue-033-554.el7.x86_64.rpm	libsepol-2.5-10.el7.x86_64.rpm	python-gudev-147.2-7.el7.x86_64.rpm
dracut-fips-033-554.el7.x86_64.rpm	libSM-1.2.2-2.el7.x86_64.rpm	python-hwdata-1.7.3-4.el7.noarch.rpm
dracut-network-033-554.el7.x86_64.rpm	libsmartcols-2.23.2-59.el7_6.1.x86_64.rpm	python-iniparse-0.4-9.el7.noarch.rpm
e2fsprogs-1.42.9-13.el7.x86_64.rpm	libsmclient-4.8.3-4.el7.x86_64.rpm	python-inotify-0.9.4-4.el7.noarch.rpm
e2fsprogs-libs-1.42.9-13.el7.x86_64.rpm	libss-1.42.9-13.el7.x86_64.rpm	python-javapackages-3.4.1-11.el7.noarch.rpm
easg-1.1-0.AV01.el7.x86_64.rpm	libssh2-1.4.3-12.el7_6.2.x86_64.rpm	python-kitchen-1.1.1-5.el7.noarch.rpm
ebtables-2.0.10-16.el7.x86_64.rpm	libsss_autofs-1.16.2-13.el7_6.8.x86_64.rpm	python-libs-2.7.5-77.el7_6.x86_64.rpm
elfutils-default-yama-scope-0.172-2.el7.noarch.rpm	libsss_certmap-1.16.2-13.el7_6.8.x86_64.rpm	python-linux-procfs-0.4-9-4.el7.noarch.rpm
elfutils-libelf-0.172-2.el7.x86_64.rpm	libsss_idmap-1.16.2-13.el7_6.8.x86_64.rpm	python-lxml-3.2.1-4.el7.x86_64.rpm
elfutils-libs-0.172-2.el7.x86_64.rpm	libsss_nss_idmap-1.16.2-13.el7_6.8.x86_64.rpm	python-magic-5.11-35.el7.noarch.rpm
emacsfilesystem-24.3-22.el7.noarch.rpm	libsss_sudo-1.16.2-13.el7_6.8.x86_64.rpm	python-perf-3.10.0-957.12.2.el7.x86_64.rpm
ethtool-4.8-9.el7.x86_64.rpm	libstdc++-4.8.5-36.el7_6.2.x86_64.rpm	python-pycurl-7.19.0-19.el7.x86_64.rpm
expat-2.1.0-10.el7_3.x86_64.rpm	libsysfs-2.1.0-16.el7.x86_64.rpm	python-pyudev-0.15-9.el7.noarch.rpm
expect-5.45-14.el7_1.x86_64.rpm	libtalloc-2.1.13-1.el7.x86_64.rpm	python-schedutils-0.4-6.el7.x86_64.rpm
file-5.11-35.el7.x86_64.rpm	libtasn1-4.10-1.el7.x86_64.rpm	python-six-1.9.0-2.el7.noarch.rpm
file-libs-5.11-35.el7.x86_64.rpm	libtdb-1.3.15-1.el7.x86_64.rpm	python-slip-0.4.0-4.el7.noarch.rpm
filesystem-3.2-25.el7.x86_64.rpm	libteam-1.27-5.el7.x86_64.rpm	python-slip-dbus-0.4.0-4.el7.noarch.rpm
findutils-4.5.11-6.el7.x86_64.rpm	libtevent-0.9.36-1.el7.x86_64.rpm	python-sssdconfig-1.16.2-13.el7_6.8.noarch.rpm
fipscheck-1.4.1-6.el7.x86_64.rpm	libthai-0.1.14-9.el7.x86_64.rpm	python-urlgrabber-3.10-9.el7.noarch.rpm
fipscheck-lib-1.4.1-6.el7.x86_64.rpm	libtiff-4.0.3-27.el7_3.x86_64.rpm	pyxattr-0.5.1-5.el7.x86_64.rpm
firewalld-0.5.3-5.el7.noarch.rpm	libtirpc-0.2.4-0.15.el7.x86_64.rpm	qpdf-libs-5.0.1-3.el7.x86_64.rpm
firewalld-filesystem-0.5.3-5.el7.noarch.rpm	libtool-ltdl-2.4.2-22.el7_3.x86_64.rpm	qrencode-libs-3.4.1-3.el7.x86_64.rpm

fontconfig-2.13.0-4.3.el7.x86_64.rpm	libunistring-0.9.3-9.el7.x86_64.rpm	quota-4.01-17.el7.x86_64.rpm
fontpackages-filesystem-1.44-8.el7.noarch.rpm	libusb-1.0.21-1.el7.x86_64.rpm	quota-nls-4.01-17.el7.noarch.rpm
freetype-2.8-12.el7_6.1.x86_64.rpm	libuser-0.60-9.el7.x86_64.rpm	readline-6.2-10.el7.x86_64.rpm
fribidi-1.0.2-1.el7.x86_64.rpm	libutempter-1.1.6-4.el7.x86_64.rpm	Red_Hat_Enterprise_Linux-Release_Notes-7-en-US-7-2.el7.noarch.rpm
ftp-0.17-67.el7.x86_64.rpm	libuuid-2.23.2-59.el7_6.1.x86_64.rpm	redhat-logos-70.0.3-7.el7.noarch.rpm
fuse-2.9.2-11.el7.x86_64.rpm	libverto-0.2.5-4.el7.x86_64.rpm	redhat-release-server-7.6-4.el7.x86_64.rpm
fuse-libs-2.9.2-11.el7.x86_64.rpm	libverto-libevent-0.2.5-4.el7.x86_64.rpm	redhat-support-lib-python-0.9.7-6.el7.noarch.rpm
fxload-2002_04_11-16.el7.x86_64.rpm	libwayland-client-1.15.0-1.el7.x86_64.rpm	redhat-support-tool-0.9.10-1.el7.noarch.rpm
gawk-4.0.2-4.el7_3.1.x86_64.rpm	libwayland-server-1.15.0-1.el7.x86_64.rpm	rhn-check-2.0.2-21.el7.noarch.rpm
gdb-7.6.1-114.el7.x86_64.rpm	libwbclient-4.8.3-4.el7.x86_64.rpm	rhn-check-2.0.2-24.el7.x86_64.rpm
gdbm-1.10-8.el7.x86_64.rpm	libX11-1.6.5-2.el7.x86_64.rpm	rhn-client-tools-2.0.2-21.el7.noarch.rpm
gdk-pixbuf2-2.36.12-3.el7.x86_64.rpm	libX11-common-1.6.5-2.el7.noarch.rpm	rhn-client-tools-2.0.2-24.el7.x86_64.rpm
GeoIP-1.5.0-13.el7.x86_64.rpm	libXau-1.0.8-2.1.el7.x86_64.rpm	rhnlib-2.5.65-8.el7.noarch.rpm
gettext-0.19.8.1-2.el7.x86_64.rpm	libxcb-1.13-1.el7.x86_64.rpm	rhnsd-5.0.13-10.el7.x86_64.rpm
gettext-libs-0.19.8.1-2.el7.x86_64.rpm	libXcomposite-0.4.4-4.1.el7.x86_64.rpm	rhn-setup-2.0.2-21.el7.noarch.rpm
ghostscript-9.07-31.el7_6.11.x86_64.rpm	libXcursor-1.1.15-1.el7.x86_64.rpm	rhn-setup-2.0.2-24.el7.x86_64.rpm
ghostscript-cups-9.07-31.el7_6.11.x86_64.rpm	libXdamage-1.1.4-4.1.el7.x86_64.rpm	rootfiles-8.1-11.el7.noarch.rpm
ghostscript-fonts-5.50-32.el7.noarch.rpm	libXext-1.3.3-3.el7.x86_64.rpm	rpcbind-0.2.0-47.el7.x86_64.rpm
giflib-4.1.6-9.el7.x86_64.rpm	libXfixes-5.0.3-1.el7.x86_64.rpm	rpm-4.11.3-35.el7.x86_64.rpm
glib2-2.56.1-2.el7.x86_64.rpm	libXfont-1.5.4-1.el7.x86_64.rpm	rpm-build-libs-4.11.3-35.el7.x86_64.rpm
glibc-2.17-260.el7_6.5.x86_64.rpm	libXft-2.3.2-2.el7.x86_64.rpm	rpm-libs-4.11.3-35.el7.x86_64.rpm
glibc-common-2.17-260.el7_6.5.x86_64.rpm	libXi-1.7.9-1.el7.x86_64.rpm	rpm-python-4.11.3-35.el7.x86_64.rpm
gmp-6.0.0-15.el7.x86_64.rpm	libXinerama-1.1.3-2.1.el7.x86_64.rpm	rsh-0.17-79.el7.x86_64.rpm
gnupg2-2.0.22-5.el7_5.x86_64.rpm	libxml2-2.9.1-6.el7_2.3.x86_64.rpm	rsyslog-8.24.0-34.el7.x86_64.rpm
gobject-introspection-1.56.1-1.el7.x86_64.rpm	libxml2-devel-2.9.1-6.el7_2.3.x86_64.rpm	samba-client-libs-4.8.3-4.el7.x86_64.rpm
gpgme-1.3.2-5.el7.x86_64.rpm	libxml2-python-2.9.1-6.el7_2.3.x86_64.rpm	samba-common-4.1.1-38.el7_0.x86_64.rpm
gpm-libs-1.20.7-5.el7.x86_64.rpm	libXrandr-1.5.1-2.el7.x86_64.rpm	samba-common-4.8.3-4.el7.noarch.rpm
graphite2-1.3.10-1.el7_3.x86_64.rpm	libXrender-0.9.10-1.el7.x86_64.rpm	samba-common-libs-4.8.3-4.el7.x86_64.rpm
grep-2.20-3.el7.x86_64.rpm	libxshmfence-1.2-1.el7.x86_64.rpm	samba-libs-4.1.1-38.el7_0.x86_64.rpm
groff-base-1.22.2-8.el7.x86_64.rpm	libxslt-1.1.28-5.el7.x86_64.rpm	sed-4.2.2-5.el7.x86_64.rpm
grub2-2.02-0.76.el7.1.x86_64.rpm	libXt-1.1.5-3.el7.x86_64.rpm	selinux-policy-3.13.1-229.el7_6.12.noarch.rpm

grub2-common-2.02-0.76.el7.1.noarch.rpm	libXtst-1.2.3-1.el7.x86_64.rpm	selinux-policy-targeted-3.13.1-229.el7_6.12.noarch.rpm
grub2-pc-2.02-0.76.el7.1.x86_64.rpm	libXxf86vm-1.1.4-1.el7.x86_64.rpm	sendmail-8.14.7-5.el7.x86_64.rpm
grub2-pc-modules-2.02-0.76.el7.1.noarch.rpm	linux-firmware-20180911-69.git85c5d90.el7.noarch.rpm	setup-2.8.71-10.el7.noarch.rpm
grub2-tools-2.02-0.76.el7.1.x86_64.rpm	lksctp-tools-1.0.17-2.el7.x86_64.rpm	sg3_utils-1.37-17.el7.x86_64.rpm
grub2-tools-extra-2.02-0.76.el7.1.x86_64.rpm	lm_sensors-libs-3.4.0-6.20160601gitf9185e5.el7.x86_64.rpm	sg3_utils-libs-1.37-17.el7.x86_64.rpm
grub2-tools-minimal-2.02-0.76.el7.1.x86_64.rpm	logrotate-3.8.6-17.el7.x86_64.rpm	shadow-utils-4.1.5.1-25.el7_6.1.x86_64.rpm
grubby-8.28-25.el7.x86_64.rpm	lshw-B.02.18-12.el7.x86_64.rpm	shared-mime-info-1.8-4.el7.x86_64.rpm
gssproxy-0.7.0-21.el7.x86_64.rpm	lsof-4.87-6.el7.x86_64.rpm	slang-2.2.4-11.el7.x86_64.rpm
gtk2-2.24.31-1.el7.x86_64.rpm	lsscsi-0.27-6.el7.x86_64.rpm	snappy-1.1.0-3.el7.x86_64.rpm
gtk-update-icon-cache-3.22.30-3.el7.x86_64.rpm	lua-5.1.4-15.el7.x86_64.rpm	sqlite-3.7.17-8.el7.x86_64.rpm
gzip-1.5-10.el7.x86_64.rpm	lz4-1.7.5-2.el7.x86_64.rpm	sssd-1.16.2-13.el7_6.8.x86_64.rpm
hardlink-1.0-19.el7.x86_64.rpm	lzo-2.06-8.el7.x86_64.rpm	sssd-ad-1.16.2-13.el7_6.8.x86_64.rpm
harfbuzz-1.7.5-2.el7.x86_64.rpm	m2crypto-0.21.1-17.el7.x86_64.rpm	sssd-client-1.16.2-13.el7_6.8.x86_64.rpm
hesiod-3.2.1-3.el7.x86_64.rpm	mailx-12.5-19.el7.x86_64.rpm	sssd-common-1.16.2-13.el7_6.8.x86_64.rpm
hicolor-icon-theme-0.12-7.el7.noarch.rpm	make-3.82-23.el7.x86_64.rpm	sssd-common-pac-1.16.2-13.el7_6.8.x86_64.rpm
hmaccalc-0.9.13-4.el7.x86_64.rpm	man-db-2.6.3-11.el7.x86_64.rpm	sssd-ipa-1.16.2-13.el7_6.8.x86_64.rpm
hostname-3.13-3.el7.x86_64.rpm	mariadb-libs-5.5.60-1.el7_5.x86_64.rpm	sssd-krb5-1.16.2-13.el7_6.8.x86_64.rpm
http-parser-2.7.1-5.el7_4.x86_64.rpm	mesa-libEGL-18.0.5-4.el7_6.x86_64.rpm	sssd-krb5-common-1.16.2-13.el7_6.8.x86_64.rpm
hwdata-0.252-7.5.el7.noarch.rpm	mesa-libgbm-18.0.5-4.el7_6.x86_64.rpm	sssd-ldap-1.16.2-13.el7_6.8.x86_64.rpm
hwdata-0.252-9.1.el7.x86_64.rpm	mesa-libGL-18.0.5-4.el7_6.x86_64.rpm	sssd-proxy-1.16.2-13.el7_6.8.x86_64.rpm
info-5.1-5.el7.x86_64.rpm	mesa-libglapi-18.0.5-4.el7_6.x86_64.rpm	stix-fonts-1.1.0-5.el7.noarch.rpm
initscripts-9.49.46-1.el7.x86_64.rpm	microcode_ctl-2.1-47.2.el7_6.x86_64.rpm	strace-4.12-9.el7.x86_64.rpm
iproute-4.11.0-14.el7_6.2.x86_64.rpm	mozjs17-17.0.0-20.el7.x86_64.rpm	subscription-manager-rhsm-1.21.10-3.el7_6.x86_64.rpm
iprutils-2.4.16.1-1.el7.x86_64.rpm	mt-st-1.1-14.el7.x86_64.rpm	subscription-manager-rhsm-certificates-1.21.10-3.el7_6.x86_64.rpm
ipset-6.38-3.el7_6.x86_64.rpm	ncurses-5.9-14.20130511.el7_4.x86_64.rpm	sudo-1.8.23-3.el7.x86_64.rpm
ipset-libs-6.38-3.el7_6.x86_64.rpm	ncurses-base-5.9-14.20130511.el7_4.noarch.rpm	sysstat-10.1.5-17.el7.x86_64.rpm
iptables-1.4.21-28.el7.x86_64.rpm	ncurses-libs-5.9-14.20130511.el7_4.x86_64.rpm	systemd-219-62.el7_6.6.x86_64.rpm
iptables-services-1.4.21-28.el7.x86_64.rpm	net-snmp-5.7.2-37.el7.x86_64.rpm	systemd-libs-219-62.el7_6.6.x86_64.rpm
iputils-20160308-10.el7.x86_64.rpm	net-snmp-agent-libs-5.7.2-37.el7.x86_64.rpm	systemd-sysv-219-62.el7_6.6.x86_64.rpm
irqbalance-1.0.7-11.el7.x86_64.rpm	net-snmp-libs-5.7.2-37.el7.x86_64.rpm	sysvinit-tools-2.88-14.ds.f.el7.x86_64.rpm
ivtv-firmware-20080701-26.el7.noarch.rpm	net-snmp-utils-5.7.2-37.el7.x86_64.rpm	tar-1.26-35.el7.x86_64.rpm

iwl1000-firmware-39.31.5.1-69.el7.noarch.rpm	net-tools-2.0-0.24.20131004git.el7.x86_64.rpm	tcl-8.5.13-8.el7.x86_64.rpm
iwl100-firmware-39.31.5.1-69.el7.noarch.rpm	NetworkManager-1.12.0-10.el7_6.x86_64.rpm	tcpdump-4.9.2-3.el7.x86_64.rpm
iwl105-firmware-18.168.6.1-69.el7.noarch.rpm	NetworkManager-config-server-1.12.0-10.el7_6.noarch.rpm	tcp_wrappers-7.6-77.el7.x86_64.rpm
iwl135-firmware-18.168.6.1-69.el7.noarch.rpm	NetworkManager-config-server-1.4.0-20.el7_3.x86_64.rpm	tcp_wrappers-libs-7.6-77.el7.x86_64.rpm
iwl2000-firmware-18.168.6.1-69.el7.noarch.rpm	NetworkManager-libnm-1.12.0-10.el7_6.x86_64.rpm	teamd-1.27-5.el7.x86_64.rpm
iwl2030-firmware-18.168.6.1-69.el7.noarch.rpm	NetworkManager-team-1.12.0-10.el7_6.x86_64.rpm	telnet-0.17-64.el7.x86_64.rpm
iwl3160-firmware-22.0.7.0-69.el7.noarch.rpm	NetworkManager-tui-1.12.0-10.el7_6.x86_64.rpm	telnet-server-0.17-64.el7.x86_64.rpm
iwl3945-firmware-15.32.2.9-69.el7.noarch.rpm	newt-0.52.15-4.el7.x86_64.rpm	ttmkfdir-3.0.9-42.el7.x86_64.rpm
iwl4965-firmware-228.61.2.24-69.el7.noarch.rpm	newt-python-0.52.15-4.el7.x86_64.rpm	tuned-2.10.0-6.el7_6.3.noarch.rpm
iwl5000-firmware-8.83.5.1_1-69.el7.noarch.rpm	nfs-utils-1.3.0-0.61.el7.x86_64.rpm	tzdata-2019a-1.el7.noarch.rpm
iwl5150-firmware-8.24.2.2-69.el7.noarch.rpm	nscd-2.17-260.el7_6.5.x86_64.rpm	tzdata-java-2019a-1.el7.noarch.rpm
iwl6000-firmware-9.221.4.1-69.el7.noarch.rpm	nspr-4.19.0-1.el7_5.x86_64.rpm	urw-fonts-2.4-16.el7.noarch.rpm
iwl6000g2a-firmware-17.168.5.3-69.el7.noarch.rpm	nss-3.36.0-7.1.el7_6.x86_64.rpm	usermode-1.111-5.el7.x86_64.rpm
iwl6000g2b-firmware-17.168.5.2-69.el7.noarch.rpm	nss-pam-ldapd-0.8.13-16.el7_6.1.x86_64.rpm	ustr-1.0.4-16.el7.x86_64.rpm
iwl6050-firmware-41.28.5.1-69.el7.noarch.rpm	nss-pem-1.0.3-5.el7_6.1.x86_64.rpm	util-linux-2.23.2-59.el7_6.1.x86_64.rpm
iwl7260-firmware-22.0.7.0-69.el7.noarch.rpm	nss-softokn-3.36.0-5.el7_5.x86_64.rpm	vim-common-7.4.160-5.el7.x86_64.rpm
iwl7265-firmware-22.0.7.0-69.el7.noarch.rpm	nss-softokn-freebl-3.36.0-5.el7_5.x86_64.rpm	vim-enhanced-7.4.160-5.el7.x86_64.rpm
jansson-2.10-1.el7.x86_64.rpm	nss-sysinit-3.36.0-7.1.el7_6.x86_64.rpm	vim-filesystem-7.4.160-5.el7.x86_64.rpm
jasper-libs-1.900.1-33.el7.x86_64.rpm	nss-tools-3.36.0-7.1.el7_6.x86_64.rpm	vim-minimal-7.4.160-5.el7.x86_64.rpm
java-1.8.0-openjdk-1.8.0.212.b04-0.el7_6.x86_64.rpm	nss-util-3.36.0-1.1.el7_6.x86_64.rpm	virt-what-1.18-4.el7.x86_64.rpm
java-1.8.0-openjdk-headless-1.8.0.212.b04-0.el7_6.x86_64.rpm	ntp-4.2.6p5-28.el7.x86_64.rpm	which-2.20-7.el7.x86_64.rpm
javapackages-tools-3.4.1-11.el7.noarch.rpm	ntpdate-4.2.6p5-28.el7.x86_64.rpm	wpa_supplicant-2.6-12.el7.x86_64.rpm
jbigkit-libs-2.0-11.el7.x86_64.rpm	numactl-libs-2.0.9-7.el7.x86_64.rpm	xdg-utils-1.1.0-0.17.20120809git.el7.noarch.rpm
json-c-0.11-4.el7_0.x86_64.rpm	openjpeg-libs-1.5.1-18.el7.x86_64.rpm	xfsprogs-4.5.0-19.el7_6.x86_64.rpm
kbd-1.15.5-15.el7.x86_64.rpm	openldap-2.4.44-21.el7_6.x86_64.rpm	xinetd-2.3.15-13.el7.x86_64.rpm
kbd-legacy-1.15.5-15.el7.noarch.rpm	openldap-clients-2.4.44-21.el7_6.x86_64.rpm	xmlsec1-1.2.20-7.el7_4.x86_64.rpm
kbd-misc-1.15.5-15.el7.noarch.rpm	openssh-7.4p1-16.el7.x86_64.rpm	xmlsec1-openssl-1.2.20-7.el7_4.x86_64.rpm
kernel-3.10.0-957.12.2.el7.x86_64.rpm	openssh-clients-7.4p1-16.el7.x86_64.rpm	xorg-x11-fonts-Type1-7.5-9.el7.noarch.rpm
kernel-tools-3.10.0-957.12.2.el7.x86_64.rpm	openssh-server-7.4p1-16.el7.x86_64.rpm	xorg-x11-font-utils-7.5-21.el7.x86_64.rpm

kernel-tools-libs-3.10.0-957.12.2.el7.x86_64.rpm	openssl-1.0.2k-16.el7_6.1.x86_64.rpm	xz-5.2.2-1.el7.x86_64.rpm
kexec-tools-2.0.15-21.el7_6.3.x86_64.rpm	openssl-libs-1.0.2k-16.el7_6.1.x86_64.rpm	xz-devel-5.2.2-1.el7.x86_64.rpm
keyutils-1.5.8-3.el7.x86_64.rpm	open-vm-tools-10.2.5-3.el7.x86_64.rpm	xz-libs-5.2.2-1.el7.x86_64.rpm
keyutils-libs-1.5.8-3.el7.x86_64.rpm	os-prober-1.58-9.el7.x86_64.rpm	yum-3.4.3-161.el7.noarch.rpm
kmod-20-23.el7.x86_64.rpm	p11-kit-0.23.5-3.el7.x86_64.rpm	yum-metadata-parser-1.1.4-10.el7.x86_64.rpm
kmod-libs-20-23.el7.x86_64.rpm	p11-kit-trust-0.23.5-3.el7.x86_64.rpm	yum-rhn-plugin-2.0.1-10.el7.noarch.rpm
kpartx-0.4.9-123.el7.x86_64.rpm	pam-1.1.8-22.el7.x86_64.rpm	yum-utils-1.1.31-50.el7.noarch.rpm
krb5-libs-1.15.1-37.el7_6.x86_64.rpm	pango-1.42.4-2.el7_6.x86_64.rpm	zlib-1.2.7-18.el7.x86_64.rpm
ksh-20120801-139.el7.x86_64.rpm	parted-3.1-29.el7.x86_64.rpm	zlib-devel-1.2.7-18.el7.x86_64.rpm