



Call Management System (CMS)

R18.1.0.4

Release Notes

Issue 1.11

August 5, 2020

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1. Purpose

The release notes provide information about the GA version of the Call Management System (CMS) R18.x software. The release notes include last minute information that is not incorporated into the standard documentation as well as a very high level of the release content.

For details about the features included in each release of CMS 18.x, please see the product documentation posted at <http://support.avaya.com>.

The following table describes the release details:

NOTE: Starting with CMS R18.0.2.0, only Linux versions of CMS are provided.

Starting with CMS R18.1.0.3, software includes no material codes.

Product	Version	Required Patch or PSN
Call Management System R18.1.0.4	CMS Server R18.1.0.4 Software ISO—CMSR18.1.0.4.va.a_SFTW_DVD_LINUX.iso CMS R18 (18.1.0.4) VMware OVA, CMS-R18.1.0.4-va.a-e6.10-00 CMS R18 (18.1.0.4) AWS OVA, CMS-R18.1.0.4-va.a-e6.10-00-aws	Please note the OVA deployment caveat described in section 4.1
	CMS Supervisor Web – Included in CMS Software ISO - cmsweb18va.a	None
	CMS Supervisor PC Client– R18.1 MB.08 NOTE: CMS Supervisor PC Client R19 NB.08 is now available. It is recommended to use the newest PC Client. CMS Supervisor PC Client R19 NB.08 is backward compatible with CMS R18.1 deployments.	None

2. Document Change History

Issue Number	Date	Comment
1.0	6 August 2018	Initial Release of R18.1.0.0
1.1	30 October, 2018	Update information to note that LAN backup is only available with CMS version 18.1.0.0 (or greater) and only with a new install.
1.2	10 December, 2018	Update with information about R18.1.0.1 Service Pack
1.3	29 March, 2019	New version of CMS PC Supervisor available with bug fixes. See section 3.6 for details.
1.4	12 August 2019	Updates for service pack 18.1.0.2
1.5	26 August 2019	Include information in section 1 about critical server patch.
1.6	4 September 2019	Updated to note the current version of the CMS R19 PC Supervisor client available.
1.7	17 September 2019	Update to note latest PC Supervisor R19 client availability.
1.8	30 March 2020	Updates for service pack 18.1.0.3

1.9	3 April 2020	Corrected typo for incorrect PC Supervisor client version in section 4.2.
1.10	20 July 2020	Updated for Service Pack 18.1.0.4
1.11	5 August 2020	RPM list in Appendix B was incomplete. The rpm list is now correct.

3. CMS R18.1 Functionality

The CMS R18.1 release provides the following platform and feature support:

3.1. *CMS R18.1 CMS Platform support*

The CMS R18.1 release supports the following platforms:

- Support for new sales on the Avaya Solutions Platform.
- Continued support for virtualized deployment on VMWare, this includes new sales and upgrades to existing VMWare deployments.
- Support upgrades on existing servers: Dell R220, Dell 620, Dell R630, Dell 720, Dell R730, HP DL20, HP DL380 G8, and HP DL380 G9.
- Support for existing servers to an Avaya Solutions Platform or VMWare deployment.
- Support for upgrades is not supported on all Oracle servers.

3.2. *Communication Manager 8.0 support*

This release allows customers to connect their CMS to Communication Manager 8.0.

Communication Manager 8.0 provides the following notable features for CMS customers:

- Up to 16 digits for agent login IDs, station extensions and VDN extensions. Vector administration is still limited to 13 digits for agent login IDs and VDN extensions.
- Support for up to 30,000 measured trunks per Communication Manager system and 100,000 system-wide (previous maximums: per Communication Manager system - 24,000; system-wide 80,000)
- Support for up to 9,999 trunks per trunk group (previous maximum: 250)

3.3. *Local Area Network (LAN) Backup/Restore Improvements*

- Support LAN backup and restore in Virtualized environment. This provides support for specific IBM Spectrum Protect (formerly Tivoli) and Netbackup client/server client/server products.
 - Note that a fresh (aka new) install of CMS 18.1.0.0 is required to enable the LAN backup functionality in a Virtual environment. This is due to the need to specifically allocate disk space to manager the LAN backup.
 - Customers on releases of CMS R18 prior to R18.1.0.0 cannot simply upgrade to CMS 18.1.0.0 and begin performing LAN backups in a virtual environment.
 - LAN backups on a hardware server are not affected and continue to operate as normal.

4. 18.1.0.4 Information

4.1 Bugs Fixes in 18.1.0.4

The following **CMS Server** fixes have been added to CMS R18.1.0.4

- The call history record (Internal and External Call History) value for queue time is incorrect when a direct agent call is recorded. This fix allows the correct queue time value to be recorded in the call history record.
- In a rare call scenario involving a conference while a call ringing and a RONA, the link to the CM may drop. This is a defensive fix to prevent the link drop.
- Tenant Users were receiving a “No Permissions” error when running reports that take an agent name or logid as an input, such as the Historical Agent Split/Skill Summary Daily report, if the sum total of all agents assigned to the tenant(s) the user had permissions for was greater than 32,000. For example, tenant 1 is assigned 8000 agents, tenant 2 has 16,000 agents, tenant 25 has 10,000 agents, and tenant 50 has 20,000 agents. This is a total of 54,000 agents across all the tenants. If tenant login ‘abc’ had permissions for all tenants (1, 2, 25 and 50), ‘abc’ would erroneously receive a permissions error when attempting to run the Historical Agent Split/Skill Summary Daily report. With this fix, ‘abc’ is able to run the Historical Agent Split/Skill Summary Daily report successfully.

The following **CMS Supervisor PC** fixes have been added to CMS R18.1.0.4:

NOTE: the CMS R18 PC Supervisor client MB.08 was not updated. Avaya recommends customer use the latest client which is the R19 CMS Supervisor PC client. CMS Supervisor PC Client R19 is backward compatible with CMS R18.1.x deployments.

For updated information on the latest R19 CMS PC client see the CMS R19 Release Notes.

5. 18.1.0.3 Information

5.1. VMWare Deployment Caveats for 18.1.0.3

CMS R18.1.0.3 and later releases support deployment in VMware ESXi 6.7.

CMS R18.1.0.3 and later releases continue 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 R18.1.0.x OVA file in VMware ESXi 5.5 and 6.0.

A warning message will appear during 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’.

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

Do you want to continue?

Respond to the warning by

Clicking the ‘Yes’ button.

5.2. Bugs Fixed in 18.1.0.3

The following CMS Server fixes have been added to CMS R18.1.0.3

- Tomcat container upgraded to latest 8.5 version. Tomcat update includes Ghostcat update and miscellaneous bug fixes.
- Fix for Integrated report when the skill state column is incorporated twice in the same table.
- Fix for Integrated report with a CWC input value.
- Fix for link drop when Change Agent Skills Direct agent skill field is blank. This is an incorporation of R18.1.0.2 Patch #1.
- Fix for ECH record size of extended ECD format. This is an incorporation of R18.1.0.2 Patch #2.
- Fix to revert skill and VDN call profiles work based back to tracking the times of the last VDN & skill used before answer or abandon. This is an incorporation of R18.1.0.2 Patch #3.
- Fix for inflated time spent in VDN based on vectors flowing to other vectors.
- Update CMS handling of transfers completed by unstaffed extensions to reduce the number of ignored and abandoned calls.
- Fix for VDN report issue when vdn is greater than 11 digits.

The following CMS Supervisor Web fix have been added to CMS R18.1.0.3:

- Fix for password change issue when password includes \$ anywhere but as last character.

The following CMS Supervisor PC fixes have been added to CMS R18.1.0.3:

NOTE: the CMS R18 PC Supervisor client MB.08 was not updated. Avaya recommends customer use the latest client and CMS Supervisor PC Client R19 NB.02 is backward compatible with CMS R18.1.x deployments. The following fixes are provided in the R19 PC Supervisor client NB.02.

- CMS PC Supervisor Forms now support high resolution (4K) displays.
- If a CMS user account cannot be created in User Data form because the chosen login is reserved, a “Reserved User-ID” message is displayed on the status bar of the form.
- An error has been corrected that prevented the ACD Status screen from being displayed when connected to an R19 CMS server.
- An error has been corrected in the Browse dialog to ensure content is filtered by user permissions.
- An error has been corrected that prevented the VDN Access menu from being displayed on systems with LDAP enabled.

The following fixes were provided in earlier versions of the CMS Supervisor PC Client:

- 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.

6. 18.1.0.2 Information

6.1. VMWare Deployment Caveats for 18.1.0.2

CMS R18.1.0.2 supports deployment in VMware ESXi 6.7.

CMS R18.1.0.2 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 R18.1.0.2 OVA file in VMware ESXi 5.5 and 6.0.

A warning message will appear during 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?

Respond to the warning by

Clicking the 'Yes' button.

6.2. Bugs Fixed in 18.1.0.2

The following CMS Server fixes have been added to CMS R18.1.0.2

- Fixed an issue where the monthly archiver can core dump if CMS has tenancy enabled, and monthly data summation causes an overflow.
- Defensive fix to prevent the link to CM from dropping if an un-logged in agent handles an ACD call. While the link will not drop, the call is ignored by CMS.
- Will not ignore calls where an agent is service observing another agent who has conferenced in more than one non-logged in agent or unmeasured trunk.
- Corrected a minor error in trunk group reports for trunk groups with more than 256 members.
- Allow a skill on the agents skill list in position 61 to be assigned as the direct agent skill via Change Agent Skill.
- WebClient port is no longer locked up after a network scan.

The following CMS Supervisor Web fixes have been added to CMS R18.1.0.2:

- Allow query names to be longer than 20 characters for custom designer reports.
- Some custom calculations failed to execute in the web client, this has been resolved.

The following CMS Supervisor PC fixes have been added to CMS R18.1.0.2:

NOTE: the CMS R18 PC Supervisor client MB.08 was not updated.

The following fixes are provided in the R19 PC Supervisor client NA.13. Avaya recommends customer use the latest client and CMS Supervisor PC Client R19 NA.13 is backward compatible with CMS R18.1.x deployments.

- 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.

7. 18.1.0.1 information

7.1. Enhancements in 18.1.0.1

- CMS server security has been enhanced with stronger file access restrictions by modifying permissions on various files. See Appendix C for a list of file permission changes.
- Agent Count reports are now available that provide the customer the ability to see the number of agents logged in, by interval, for the maximum number of intervals retained. Customers can save copies of the report (for example, exporting the report or off-loading the data), for a longer-term view of agent usage can be obtained. The Agent Count report is available in the ASCII interface under
Reports->Historical->Agent->Agent Count

7.2. Bugs Fixed in 18.1.0.1

The following **CMS Server** fixes have been added to CMS R18.1.0.1

- Defensive fix is included to prevent CM link bounce when a Direct Agent Call (DAC) is forwarded over an unmeasured trunk. Note that all trunks used for call center operations must be measured.
- Permission checking failed when a pseudo ACD was numbered greater than 11.

The following **CMS Supervisor Web** fixes have been added to CMS R18.1.0.1:

- Report run in CMS Web failed when a numeric list was present in an 'in' clause in the custom report definition.

The following **CMS Supervisor PC** fixes have been added to CMS R18.1.0.1:

- Bug fixes March 2019 in MB.08
 - When adding skills to an agent, PC Supervisor automatically selected the first skill alphabetically. If the user began by using the ctrl key to select skills, the first skill is selected. This has been corrected such that no skills are selected by default. The user my select all skills to add to an agent.

- After copy and edit of a real time graphical report, if the report was saved before execution (instead of just executing the changed report), the border around the chart disappeared.
- When running the Integrated Agent Information report, the Staffed Time and Aux Time measures do not tally.
- When adding a skill to an agent, if the user clicks ok more than one time, the skill will be added to the selection the number of times 'ok' was clicked.
- PC Supervisor not properly recognizing password reuse and can hang when the server is configured to restrict password reuse.
- Report headings were exported as "****" when the 'time as seconds' option was not selected for the report
- Supervisors were able to delete an agent skill when the Supervisor did not have permission for that skill, when skill changes were completed by template. All permission checking is now enforced properly for agent skill changes via template.

8. Bugs fixed in 18.1.0.0

The following **CMS Server** fixes have been added to CMS R18.1.0.0

- Floating point calculation issues in specific report queries.
- Storage.def file created incorrectly with converter.
- Upgrade Tomcat container to latest version.
- rt_gem process memory leaks.
- Data collection issue: problems with transfers and conferences.
- aom_admin fails to add snmp users.

The following **CMS Supervisor Web** fixes have been added to CMS R18.1.0:

- Localization problem with historical:split/skill:Preferred Skill Level Summary (D/M/W) reports.
- Resolve web client vulnerabilities found during web client scan.
- Set focus on flash based reports when flash initializes.
- Implement updates for CEC standard for security related headers.
- Web client Designer Report display issues for normal users when flags=272.
- Web client cause tables to extend to the bottom of the screen regardless of whether this will obscure other objects (tables or otherwise).

The following **CMS Supervisor PC** fixes have been added to CMS R18.1.0:

- Data inaccurate when a query is duplicated in a single designer report.
- Error prevents Export All Data Report function.
- Numeric User ID inconsistency in PC Supervisor vs terminal client.

- Report ownership issue: normal supervisor user can edit and save the designer report of an administrator directly.
- Client / server connection not closed down completely in all scenarios; consumes licenses.
- Results not displayed for interactive scripting of change (multi) agent skills.
- Trace log settings multiplied (number of logs, log file sizes).
- Selecting multiple agents for report input via browse button generates incorrect query.
- Scripting not working for Tenant administration operations.
- Name-formatted fields displayed as numbers for columns added to (Agent & VDN) Designer reports.
- Headings exported incorrectly when "Seconds" option not selected in Report Export Data function.

9. Software Download Instructions

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

NOTE:

Please be sure to use the latest *“Deploying CMS R18 in an Avaya Customer Experience Virtualized Environment”* and *“Software Installation, Maintenance and Troubleshooting”* documents for proper installation and upgrade instructions.

For upgrade, customers should consult the *“CMS Overview and Specifications”* document to determine the proper upgrade procedure to use.

Go to <http://support.avaya.com> to view the full documentation set for CMS R18.1.x.

Appendix A: Patch Installation Instructions

No patches are required with CMS R18.1.0.4

Appendix B: Linux RPMs included in CMS R18.1.0.4

abrt-2.0.8-44.el6.x86_64	gpm-libs-1.20.6-12.el6.x86_64	libusb-0.1.12-23.el6.x86_64	python-2.6.6-68.el6_10.x86_64
abrt-addon-ccpp-2.0.8-44.el6.x86_64	grep-2.20-6.el6.x86_64	libusb1-1.0.9-0.7.rc1.el6.x86_64	python-argparse-1.2.1-2.1.el6.noarch
abrt-addon-kerneloops-2.0.8-44.el6.x86_64	groff-1.18.1.4-21.el6.x86_64	libuser-0.56.13-8.el6_7.x86_64	python-dateutil-1.4.1-7.el6.noarch
abrt-addon-python-2.0.8-44.el6.x86_64	grub-0.97-99.el6.x86_64	libutempter-1.1.5-4.1.el6.x86_64	python-dmidecode-3.10.15-2.el6.x86_64
abrt-cli-2.0.8-44.el6.x86_64	grubby-7.0.15-7.el6.x86_64	Lib_Utills-1.00-09.noarch	python-ethtool-0.6-6.el6.x86_64
abrt-libs-2.0.8-44.el6.x86_64	gskcrypt64-8.0-50.10.x86_64	libuuid-2.17.2-12.28.el6_9.2.x86_64	python-gudev-147.1-4.el6_0.1.x86_64
abrt-python-2.0.8-44.el6.x86_64	gsskss64-8.0-50.10.x86_64	libX11-1.6.4-3.el6.x86_64	python-iniparse-0.3.1-2.1.el6.noarch
abrt-tui-2.0.8-44.el6.x86_64	gtk2-2.24.23-9.el6.x86_64	libX11-common-1.6.4-3.el6.noarch	python-iwlib-0.1-1.2.el6.x86_64
acl-2.2.49-7.el6_9.1.x86_64	gzip-1.3.12-24.el6.x86_64	libXau-1.0.6-4.el6.x86_64	python-libs-2.6.6-68.el6_10.x86_64
acpid-1.0.10-3.el6.x86_64	hal-0.5.14-14.el6.x86_64	libxcb-1.12-4.el6.x86_64	python-lxml-2.2.3-1.1.el6.x86_64
aic94xx-firmware-30-2.el6.noarch	hal-info-20090716-5.el6.noarch	libXcomposite-0.4.3-4.el6.x86_64	python-magic-5.04-30.el6.x86_64
alsa-lib-1.1.0-4.el6.x86_64	hal-libs-0.5.14-14.el6.x86_64	libXcursor-1.1.14-2.1.el6.x86_64	python-pycurl-7.19.0-9.el6.x86_64
alsa-utils-1.1.0-10.el6.x86_64	hdparm-9.43-4.el6.x86_64	libXdamage-1.1.3-4.el6.x86_64	python-rhsm-1.18.7-1.el6_9.x86_64
at-3.1.10-49.el6.x86_64	hesiod-3.1.0-19.el6.x86_64	libXext-1.3.3-1.el6.x86_64	python-rhsm-certificates-1.18.7-1.el6_9.x86_64
atk-1.30.0-1.el6.x86_64	hicolor-icon-theme-0.11-1.1.el6.noarch	libXfixes-5.0.3-1.el6.x86_64	python-six-1.9.0-2.el6.noarch
atmel-firmware-1.3-7.el6.noarch	hmacalc-0.9.12-2.el6.x86_64	libXfont-1.5.1-2.el6.x86_64	python-urlgrabber-3.9.1-11.el6.noarch
attr-2.4.44-7.el6.x86_64	hpssacli-2.0-23.0.x86_64	libXft-2.3.2-1.el6.x86_64	ql2100-firmware-1.19.38-3.1.el6.noarch
audit-2.4.5-6.el6.x86_64	hunspell-1.2.8-16.el6.x86_64	libXi-1.7.8-1.el6.x86_64	ql2200-firmware-2.02.08-3.1.el6.noarch
audit-libs-2.4.5-6.el6.x86_64	hunspell-en-0.20090216-7.1.el6.noarch	libXinerama-1.1.3-2.1.el6.x86_64	ql23xx-firmware-3.03.27-3.1.el6.noarch
augeas-libs-1.0.0-10.el6.x86_64	hwdata-0.233-20.1.el6.noarch	libxml2-2.7.6-21.el6_8.1.x86_64	ql2400-firmware-7.03.00-1.el6_5.noarch
authconfig-6.1.12-23.el6.x86_64	info-4.13a-8.el6.x86_64	libxml2-python-2.7.6-21.el6_8.1.x86_64	ql2500-firmware-7.03.00-1.el6_5.noarch
avahi-libs-0.6.25-17.el6.x86_64	initscripts-9.03.61-1.el6.x86_64	libXrandr-1.5.1-1.el6.x86_64	quota-3.17-23.el6.x86_64
b43-fwcutter-012-2.2.el6.x86_64	iproute-2.6.32-57.el6.x86_64	libXrender-0.9.10-1.el6.x86_64	rdate-1.4-16.el6.x86_64
b43-openfwfwf-5.2-10.el6.noarch	iptables-1.4.7-19.el6.x86_64	libxslt-1.1.26-2.el6_3.1.x86_64	readahead-1.5.6-2.el6.x86_64
basesystem-10.0-4.el6.noarch	iptables-ipv6-1.4.7-19.el6.x86_64	libXtst-1.2.3-1.el6.x86_64	readline-6.0-4.el6.x86_64
bash-4.1.2-48.el6.x86_64	iputils-20071127-24.el6.x86_64	lksctp-tools-1.0.10-7.el6.x86_64	Red_Hat_Enterprise_Linux-Release_Notes-6-en-US-8-2.el6.noarch
bc-1.06.95-1.el6.x86_64	ipw2100-firmware-1.3-11.el6.noarch	lm_sensors-libs-3.1.1-17.el6.x86_64	redhat-indexhtml-6-6.el6.noarch
bfa-firmware-3.2.23-0-2.el6.noarch	ipw2200-firmware-3.1-4.el6.noarch	logrotate-3.7.8-28.el6.x86_64	redhat-logos-60.0.14-1.el6.noarch
bind-libs-9.8.2-0.68.rc1.el6_10.7.x86_64	irqbalance-1.0.7-9.el6.x86_64	lsof-4.82-5.el6.x86_64	redhat-release-server-6Server-6.10.0.13.el6_10.5.x86_64
bind-utils-9.8.2-0.68.rc1.el6_10.7.x86_64	ivtv-firmware-20080701-20.2.noarch	lua-5.1.4-4.1.el6.x86_64	redhat-support-lib-python-0.9.7-6.el6.noarch

binutils-2.20.51.0.2-5.48.el6_10.1.x86_64	iw-4.1-1.el6.x86_64	lvm2-2.02.143-12.el6_9.1.x86_64	redhat-support-tool-0.9.8-6.el6.noarch
biosdevname-0.7.2-1.el6.x86_64	iw1000-firmware-39.31.5.1-1.el6.noarch	lvm2-libs-2.02.143-12.el6_9.1.x86_64	rftkill-0.3-4.el6.x86_64
blktrace-1.0.1-7.el6.x86_64	iw100-firmware-39.31.5.1-1.el6.noarch	lzo-2.03-3.1.el6_5.1.x86_64	rhn-check-1.0.0.1-45.el6.noarch
bridge-utils-1.2-10.el6.x86_64	iw13945-firmware-15.32.2.9-4.el6.noarch	m2crypto-0.20.2-9.el6.x86_64	rhn-client-tools-1.0.0.1-45.el6.noarch
btparser-0.17-2.el6.x86_64	iw14965-firmware-228.61.2.24-2.1.el6.noarch	m4-1.4.13-5.el6.x86_64	rhndlib-2.5.22-15.el6.noarch
busybox-1.15.1-21.el6_6.x86_64	iw15000-firmware-8.83.5.1_1-1.el6_1.1.noarch	mailx-12.4-10.el6_10.x86_64	rhnsd-4.9.3-6.el6.x86_64
bzip2-1.0.5-7.el6_0.x86_64	iw15150-firmware-8.24.2.2-1.el6.noarch	make-3.81-23.el6.x86_64	rhn-setup-1.0.0.1-45.el6.noarch
bzip2-libs-1.0.5-7.el6_0.x86_64	iw16000-firmware-9.221.4.1-1.el6.noarch	MAKEDEV-3.24-6.el6.x86_64	rng-tools-5-2.el6_7.x86_64
ca-certificates-2019.2.32-65.1.el6_10.noarch	iw16000g2a-firmware-17.168.5.3-1.el6.noarch	man-1.6f-39.el6.x86_64	rootfiles-8.1-6.1.el6.noarch
cairo-1.8.8-6.el6_6.x86_64	iw16050-firmware-41.28.5.1-2.el6.noarch	man-pages-3.22-20.el6.noarch	rpm-4.8.0-59.el6.x86_64
checkpolicy-2.0.22-1.el6.x86_64	jasper-libs-1.900.1-22.el6.x86_64	man-pages-overrides-6.10.0-1.el6.noarch	rpm-libs-4.8.0-59.el6.x86_64
chkconfig-1.3.49.5-1.el6.x86_64	java-1.8.0-openjdk-1.8.0.252.b09-2.el6_10.x86_64	mdadm-3.3.4-8.el6.x86_64	rpm-python-4.8.0-59.el6.x86_64
cms-R18.1.0.4-va.a.x86_64	java-1.8.0-openjdk-headless-1.8.0.252.b09-2.el6_10.x86_64	MegaCli-8.04.07-1.noarch	rsh-0.17-64.el6_9.1.x86_64
cmsweb-R18.1.0.4-va.a.x86_64	jpackage-utils-1.7.5-3.16.el6.noarch	microcode_ctl-1.17-33.29.el6_10.x86_64	rsync-3.0.6-12.el6.x86_64
ConsoleKit-0.4.1-6.el6.x86_64	json-c-0.11-13.el6.x86_64	mingetty-1.08-5.el6.x86_64	rsyslog-5.8.10-12.el6.x86_64
ConsoleKit-libs-0.4.1-6.el6.x86_64	kbd-1.15-11.el6.x86_64	mlocate-0.22.2-6.el6.x86_64	rt61pci-firmware-1.2-7.el6.noarch
coreutils-8.4-47.el6.x86_64	kbd-misc-1.15-11.el6.noarch	module-init-tools-3.9-26.el6.x86_64	rt73usb-firmware-1.8-7.el6.noarch
coreutils-libs-8.4-47.el6.x86_64	kernel-2.6.32-754.30.2.el6.x86_64	mtr-0.75-5.el6.x86_64	satyr-0.16-2.el6.x86_64
cpio-2.10-13.el6.x86_64	kernel-firmware-2.6.32-754.30.2.el6.noarch	mt-st-1.1-5.el6.x86_64	scl-utils-20120927-29.el6_9.x86_64
cpuspeed-1.5-22.el6.x86_64	kexec-tools-2.0.0-310.el6.x86_64	mysql-libs-5.1.73-8.el6_8.x86_64	sed-4.2.1-10.el6.x86_64
cracklib-2.8.16-4.el6.x86_64	keyutils-1.4-5.el6.x86_64	nano-2.0.9-7.el6.x86_64	selinux-policy-3.7.19-312.el6.noarch
cracklib-dicts-2.8.16-4.el6.x86_64	keyutils-libs-1.4-5.el6.i686	ncurses-5.7-4.20090207.el6.x86_64	selinux-policy-targeted-3.7.19-312.el6.noarch
crda-3.13_2015.10.22-3.el6.x86_64	keyutils-libs-1.4-5.el6.x86_64	ncurses-base-5.7-4.20090207.el6.x86_64	sendmail-8.14.4-9.el6_8.1.x86_64
cronie-1.4.4-16.el6_8.2.x86_64	keyutils-libs-devel-1.4-5.el6.x86_64	ncurses-libs-5.7-4.20090207.el6.i686	setserial-2.17-25.el6.x86_64
cronie-anacron-1.4.4-16.el6_8.2.x86_64	kpartx-0.4.9-106.el6_10.1.x86_64	ncurses-libs-5.7-4.20090207.el6.x86_64	setup-2.8.14-23.el6.noarch
crontabs-1.10-33.el6.noarch	krb5-devel-1.10.3-65.el6.x86_64	net-snmp-5.5-60.el6_10.1.x86_64	setuptool-1.19.9-4.el6.x86_64
cryptsetup-luks-1.2.0-11.el6.x86_64	krb5-libs-1.10.3-65.el6.i686	net-snmp-libs-5.5-60.el6_10.1.x86_64	sg3_utils-libs-1.28-13.el6.x86_64
cryptsetup-luks-libs-1.2.0-11.el6.x86_64	krb5-libs-1.10.3-65.el6.x86_64	net-tools-1.60-114.el6.x86_64	sgpio-1.2.0.10-5.el6.x86_64
cups-1.4.2-81.el6_10.x86_64	ksh-20120801-38.el6_10.x86_64	newt-0.52.11-4.el6.x86_64	shadow-utils-4.1.5.1-5.el6.x86_64
cups-libs-1.4.2-81.el6_10.x86_64	lcms-libs-1.19-1.el6.x86_64	newt-python-0.52.11-4.el6.x86_64	shared-mime-info-0.70-6.el6.x86_64
curl-7.19.7-54.el6_10.x86_64	ledmon-0.79-1.el6.x86_64	nfs-utils-1.2.3-78.el6_10.2.x86_64	slang-2.2.1-1.el6.x86_64

cyrus-sasl-2.1.23-15.el6_6.2.x86_64	less-436-13.el6.x86_64	nfs-utils-lib-1.1.5-13.el6.x86_64	smartmontools-5.43-3.el6.x86_64
cyrus-sasl-lib-2.1.23-15.el6_6.2.x86_64	libacl-2.2.49-7.el6_9.1.x86_64	nspr-4.21.0-1.el6_10.x86_64	snappy-1.1.0-1.el6.x86_64
cyrus-sasl-plain-2.1.23-15.el6_6.2.x86_64	libaio-0.3.107-10.el6.x86_64	nss-3.44.0-7.el6_10.x86_64	sos-3.2-63.el6_10.4.noarch
dash-0.5.5.1-4.el6.x86_64	libattr-2.4.44-7.el6.x86_64	nss-softokn-3.44.0-6.el6_10.x86_64	sqlite-3.6.20-1.el6_7.2.x86_64
db4-4.7.25-22.el6.x86_64	libblkid-2.17.2-12.28.el6_9.2.x86_64	nss-softokn-freebl-3.44.0-6.el6_10.i686	strace-4.8-11.el6.x86_64
db4-utils-4.7.25-22.el6.x86_64	libcap-2.16-5.5.el6.x86_64	nss-softokn-freebl-3.44.0-6.el6_10.x86_64	sudo-1.8.6p3-29.el6_10.3.x86_64
dbus-1.2.24-11.el6_10.x86_64	libcap-ng-0.6.4-3.el6_0.1.x86_64	nss-softokn-freebl-devel-3.44.0-6.el6_10.i686	sysstat-9.0.4-33.el6_9.1.x86_64
dbus-glib-0.86-6.el6_4.x86_64	libcom_err-1.41.12-24.el6.i686	nss-sysinit-3.44.0-7.el6_10.x86_64	system-config-firewall-base-1.2.27-7.2.el6_6.noarch
dbus-libs-1.2.24-11.el6_10.x86_64	libcom_err-1.41.12-24.el6.x86_64	nss-tools-3.44.0-7.el6_10.x86_64	system-config-firewall-tui-1.2.27-7.2.el6_6.noarch
dbus-python-0.83.0-6.1.el6.x86_64	libcom_err-devel-1.41.12-24.el6.x86_64	nss-util-3.44.0-1.el6_10.x86_64	system-config-network-tui-1.6.0.el6.3-4.el6.noarch
desktop-file-utils-0.15-9.el6.x86_64	libcurl-7.19.7-54.el6_10.x86_64	ntp-4.2.6p5-15.el6_10.x86_64	systemtap-runtime-2.9-9.el6.x86_64
device-mapper-1.02.117-12.el6_9.1.x86_64	libdrm-2.4.65-2.el6.x86_64	ntpdate-4.2.6p5-15.el6_10.x86_64	sysvinit-tools-2.87-6.ds.f.el6.x86_64
device-mapper-event-1.02.117-12.el6_9.1.x86_64	libedit-2.11-4.20080712cvs.1.el6.x86_64	ntsysv-1.3.49.5-1.el6.x86_64	tar-1.23-15.el6_8.x86_64
device-mapper-event-libs-1.02.117-12.el6_9.1.x86_64	libertas-usb8388-firmware-5.110.22.p23-3.1.el6.noarch	numactl-2.0.9-2.el6.x86_64	tcl-8.5.7-6.el6.x86_64
device-mapper-libs-1.02.117-12.el6_9.1.x86_64	libevent-1.4.13-4.el6.x86_64	openjpeg-libs-1.3-16.el6_8.x86_64	tcpdump-4.0.0-11.20090921gitdf3cb4.2.el6.x86_64
device-mapper-persistent-data-0.6.2-0.2.rc7.el6.x86_64	libffi-3.0.5-3.2.el6.x86_64	openldap-2.4.40-16.el6.x86_64	tcp_wrappers-7.6-58.el6.x86_64
dhclient-4.1.1-63.P1.el6_10.x86_64	libfontenc-1.1.2-3.el6.x86_64	openssh-5.3p1-124.el6_10.x86_64	tcp_wrappers-libs-7.6-58.el6.x86_64
dhcp-common-4.1.1-63.P1.el6_10.x86_64	libgcc-4.4.7-23.el6.i686	openssh-clients-5.3p1-124.el6_10.x86_64	tcsh-6.17-38.el6.x86_64
diffutils-2.8.1-28.el6.x86_64	libgcc-4.4.7-23.el6.x86_64	openssh-server-5.3p1-124.el6_10.x86_64	telnet-0.17-49.el6_10.x86_64
dmidecode-2.12-7.el6.x86_64	libgcrypt-1.4.5-12.el6_8.x86_64	openssl-1.0.1e-58.el6_10.i686	telnet-server-0.17-49.el6_10.x86_64
dmraid-1.0.0.rc16-11.el6.x86_64	libgpg-error-1.7-4.el6.x86_64	openssl-1.0.1e-58.el6_10.x86_64	time-1.7-38.el6.x86_64
dmraid-events-1.0.0.rc16-11.el6.x86_64	libgssglue-0.1-11.el6.x86_64	openssl-devel-1.0.1e-58.el6_10.i686	tmpwatch-2.9.16-6.el6.x86_64
dosfstools-3.0.9-4.el6.x86_64	libgudev1-147-2.74.el6_10.x86_64	p11-kit-0.18.5-2.el6_5.2.x86_64	traceroute-2.0.14-2.el6.x86_64
dracut-004-411.el6.noarch	libICE-1.0.6-1.el6.x86_64	p11-kit-trust-0.18.5-2.el6_5.2.x86_64	ttmkfdir-3.0.9-32.1.el6.x86_64
dracut-fips-004-411.el6.noarch	libidn-1.18-2.el6.x86_64	pam-1.1.1-24.el6.x86_64	tzdata-2020a-1.el6.noarch
dracut-kernel-004-411.el6.noarch	libjpeg-turbo-1.2.1-3.el6_5.x86_64	pam_passwdqc-1.0.5-8.el6.x86_64	tzdata-java-2020a-1.el6.noarch
e2fsprogs-1.41.12-24.el6.x86_64	libkadm5-1.10.3-65.el6.x86_64	pango-1.28.1-11.el6.x86_64	udev-147-2.74.el6_10.x86_64
e2fsprogs-libs-1.41.12-24.el6.x86_64	libnih-1.0.1-8.el6.x86_64	parted-2.1-29.el6.x86_64	unzip-6.0-5.el6.x86_64
ed-1.1-3.3.el6.x86_64	libnl-1.1.4-2.el6.x86_64	passwd-0.77-7.el6.x86_64	upstart-0.6.5-17.el6.x86_64
efibootmgr-0.5.4-15.el6.x86_64	libpcap-1.4.0-4.20130826git2dbcaa1.el6.x86_64	pciutils-3.1.10-4.el6.x86_64	usbutils-003-6.el6.x86_64

eggdbus-0.6-3.el6.x86_64	libpciaccess-0.13.4-1.el6.x86_64	pciutils-libs-3.1.10-4.el6.x86_64	usermode-1.102-3.el6.x86_64
eject-2.1.5-17.el6.x86_64	libpng-1.2.49-2.el6_7.x86_64	pcmciautils-015-4.2.el6.x86_64	ustr-1.0.4-9.1.el6.x86_64
elfutils-0.164-2.el6.x86_64	libproxy-0.3.0-10.el6.x86_64	pcre-7.8-7.el6.x86_64	util-linux-ng-2.17.2-12.28.el6_9.2.x86_64
elfutils-libelf-0.164-2.el6.i686	libproxy-bin-0.3.0-10.el6.x86_64	pcsc-lite-libs-1.5.2-16.el6.x86_64	vconfig-1.9-8.1.el6.x86_64
elfutils-libelf-0.164-2.el6.x86_64	libproxy-python-0.3.0-10.el6.x86_64	perl-5.10.1-144.el6.x86_64	vim-common-7.4.629-5.el6_10.2.x86_64
elfutils-libelf-devel-0.164-2.el6.i686	libreport-2.0.9-34.el6.x86_64	perl-libs-5.10.1-144.el6.x86_64	vim-enhanced-7.4.629-5.el6_10.2.x86_64
elfutils-libs-0.164-2.el6.x86_64	libreport-cli-2.0.9-34.el6.x86_64	perl-Module-Pluggable-3.90-144.el6.x86_64	vim-filessystem-7.4.629-5.el6_10.2.x86_64
ethtool-3.5-6.el6.x86_64	libreport-compat-2.0.9-34.el6.x86_64	perl-Pod-Escapes-1.04-144.el6.x86_64	vim-minimal-7.4.629-5.el6_10.2.x86_64
expat-2.0.1-13.el6_8.x86_64	libreport-filessystem-2.0.9-34.el6.x86_64	perl-Pod-Simple-3.13-144.el6.x86_64	virt-what-1.11-1.3.el6.x86_64
expect-5.44.1.15-5.el6_4.x86_64	libreport-plugin-kerneloops-2.0.9-34.el6.x86_64	perl-version-0.77-144.el6.x86_64	wget-1.12-10.el6.x86_64
file-5.04-30.el6.x86_64	libreport-plugin-logger-2.0.9-34.el6.x86_64	pinentry-0.7.6-8.el6.x86_64	which-2.19-6.el6.x86_64
file-libs-5.04-30.el6.x86_64	libreport-plugin-mailx-2.0.9-34.el6.x86_64	pinfo-0.6.9-12.el6.x86_64	wireless-tools-29-6.el6.x86_64
filesystem-2.4.30-3.el6.x86_64	libreport-plugin-reportuploader-2.0.9-34.el6.x86_64	pixman-0.32.8-1.el6.x86_64	words-3.0-17.el6.noarch
findutils-4.4.2-9.el6.x86_64	libreport-plugin-rhtsupport-2.0.9-34.el6.x86_64	pkgconfig-0.23-9.1.el6.x86_64	xdg-utils-1.0.2-17.20091016cvs.el6.noarch
fipscheck-1.2.0-7.el6.x86_64	libreport-plugin-ureport-2.0.9-34.el6.x86_64	plymouth-0.8.3-29.el6.x86_64	xinetd-2.3.14-40.el6.x86_64
fipscheck-lib-1.2.0-7.el6.x86_64	libreport-python-2.0.9-34.el6.x86_64	plymouth-core-libs-0.8.3-29.el6.x86_64	xmlrpc-c-1.16.24-1210.1840.el6.x86_64
fontconfig-2.8.0-5.el6.x86_64	libselenium-2.0.94-7.el6.i686	plymouth-scripts-0.8.3-29.el6.x86_64	xmlrpc-c-client-1.16.24-1210.1840.el6.x86_64
freetype-2.3.11-19.el6_10.x86_64	libselenium-2.0.94-7.el6.x86_64	pm-utils-1.2.5-11.el6.x86_64	xorg-x11-drv-ati-firmware-7.6.1-4.el6.noarch
ftp-0.17-54.el6.x86_64	libselenium-devel-2.0.94-7.el6.x86_64	polycoreutils-2.0.83-30.1.el6_8.x86_64	xorg-x11-fonts-Type1-7.2-11.el6.noarch
gamin-0.1.10-9.el6.x86_64	libselenium-utils-2.0.94-7.el6.x86_64	polkit-0.96-11.el6_10.1.x86_64	xorg-x11-font-utils-7.2-11.el6.x86_64
gawk-3.1.7-10.el6_7.3.x86_64	libsemanage-2.0.43-5.1.el6.x86_64	poppler-0.12.4-12.el6_10.1.x86_64	xz-4.999.9-0.5.beta.20091007git.el6.x86_64
gdb-7.2-92.el6.x86_64	libsepol-2.0.41-4.el6.x86_64	poppler-data-0.4.0-1.el6.noarch	xz-libs-4.999.9-0.5.beta.20091007git.el6.x86_64
gdbm-1.8.0-39.el6.x86_64	libsepol-devel-2.0.41-4.el6.x86_64	poppler-utils-0.12.4-12.el6_10.1.x86_64	xz-lzma-compatible-4.999.9-0.5.beta.20091007git.el6.x86_64
gdk-pixbuf2-2.24.1-6.el6_7.x86_64	libSM-1.2.1-2.el6.x86_64	popt-1.13-7.el6.x86_64	yum-3.2.29-81.el6.noarch
giflib-4.1.6-3.1.el6.x86_64	libss-1.41.12-24.el6.x86_64	portreserve-0.0.4-11.el6.x86_64	yum-metadata-parser-1.1.2-16.el6.x86_64
glib2-2.28.8-10.el6.x86_64	libssh2-1.4.2-3.el6_10.1.x86_64	postfix-2.6.6-8.el6.x86_64	yum-plugin-security-1.1.30-42.el6_10.noarch
glibc-2.12-1.212.el6_10.3.i686	libstdc++-4.4.7-23.el6.i686	prelink-0.4.6-3.1.el6_4.x86_64	yum-rhn-plugin-0.9.1-60.2.el6_8.noarch
glibc-2.12-1.212.el6_10.3.x86_64	libstdc++-4.4.7-23.el6.x86_64	procmail-3.22-25.1.el6_5.1.x86_64	yum-utils-1.1.30-42.el6_10.noarch
glibc-common-2.12-1.212.el6_10.3.x86_64	libstdc++-devel-4.4.7-23.el6.i686	procps-3.2.8-45.el6_9.3.x86_64	zd1211-firmware-1.4-4.el6.noarch
gmp-4.3.1-13.el6.x86_64	libtar-1.2.11-17.el6_4.1.x86_64	psacct-6.3.2-70.el6.x86_64	zip-3.0-1.el6_7.1.x86_64
gnupg2-2.0.14-9.el6_10.x86_64	libtasn1-2.3.6.el6_5.x86_64	psmisc-22.6-24.el6.x86_64	zlib-1.2.3-29.el6.i686

gnutls-2.12.23-22.el6.x86_64	libthai-0.1.12-3.el6.x86_64	pth-2.0.7-9.3.el6.x86_64	zlib-1.2.3-29.el6.x86_64
gpgme-1.1.8-3.el6.x86_64	libtiff-3.9.4-21.el6_8.x86_64	pygobject2-2.20.0-5.el6.x86_64	zlib-devel-1.2.3-29.el6.x86_64
gpg-pubkey-2fa658e0-45700c69	libtirpc-0.2.1-15.el6.x86_64	pygpgme-0.1-18.20090824b2r68.el6.x86_64	
gpg-pubkey-fd431d51-4ae0493b	libudev-147-2.74.el6_10.x86_64	pyOpenSSL-0.13.1-2.el6.x86_64	

Appendix C: File Permission Changes in CMS R18.1.0.1

The following table lists all files whose permissions were changes in CMS R18.1.0.1. The table lists the file permission before CMS R18.1.0.1 and the new permission after install or upgrade to CMS R18.1.0.1.

File Name	Previous Permission	R18.1.0.1 Permission
/etc/ssh/sshd_config	rw-r--r--	rw-----
/etc/hosts.allow	r-xr-xr-x	rw-r--r--
/etc/hosts.deny		
/etc/pam.d/cups	rw-r--r--	r-----
/usr/lib/cms/pbxtcrflags	rw-rw-rw-	rw-rw-r--
/cms/aom/data/db/alarm.lst	rw-rw-rw-	rw-r--r--
/cms/maint/r3mig/sys_adm	rw-rw-rw-	rw-r--r--
/cms/maint/remig/sys_data		
/cms/maint/r3mig/id_map		
/cms?mainta/r3mig/acdx/acd_adm		
/cms/perfbin/perf/frfsh.cur	rw-rw-rw-	rw-r--r--
/cms/perfbin/perf/rfrsh.old		
/cms/db/log/idbm.*	rw-rw-rw-	rw-r--r--
/var/tmp/lnklog^Hlock	rw-rw-rw-	rw-r--r--
/var/tmp/pbxdb?lock		
/var/tmp/RT_?lock		
/cms/tmp	rw-rw-rw-	rw-rw-rw-
/cms/perfbin/perf	rw-rw-rw-	rw-rw-rw-
/cms/db/log	rw-rw-rw-	rw-rw-rw-
/opt/Informix_isql32/JRE	rw-rw-rw-	rw-rw-rw-
/opt/Informix_isql32/LI/isql	rw-rw-rw-	rw-rw-rw-
/opt/Informix/extend/spatial.8.21.FCS/metadata	rw-rw-rw-	rw-rw-rw-
/opt/Informix/uninstall/uninstall_ids	rw-rw-rw-	rw-rw-rw-