

# **CheckSysConf User Guide**

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# CheckSysConf Components

CheckSysConf is a tool that verifies whether the machine on which you want to run the Cadence tools has the required system configuration and OS patches. This tool is available for Solaris (sun4v and sol86), HP-UX, AIX, and LINUX (32-bit and 64-bit) platforms.

## CheckSysConf Components

This tool consists of three parts:

- **A script**

checkSysConf is a script that performs the checks.

- **Data files**

A group of data files that define all the parameters and patches required for a particular release of operating system. The script uses these datafiles to determine whether the machine has the required system configuration and system patches.

- **Documentation**

The documentation set consists of the user guide, a README file, and the man pages. The README file and man pages are located in `your_inst_dir/doc/ check_conf`.

# CheckSysConf Installation Hierarchy

CheckSysConf is installed in the following directory structure:

Location	Description
your_inst_dir/tools.hppa	Contains the HP-UX script
your_inst_dir/tools.ibmrs	Contains the AIX script
your_inst_dir/tools.sun4v	Contains the Solaris (sparc) script
your_inst_dir/tools.lnx86	Contains the Linux script
your_inst_dir/doc/check_conf	Contains the README file and the man pages
your_inst_dir/share/patchData	Contains the data files

# CheckSysConf Syntax

The syntax for running CheckSysConf is as follows:

checkSysConf release [options]

where options can be a combination of one or more of the following:

Option	Description
release	Checks an OS configuration and patch list file located at your_inst_dir/share/patchData/platform type/OS/release for the required system configuration and patches for the Cadence product specified in release.
-c	Checks all existing data files for possible platform/OS conflicts. This option identifies if patches required in one release are known-problem patches in another release.
-h	Prints the help message.
-r	Returns the releases supported in the data directory. The output of this option represents the only valid release option.
-v	Returns the release version of this script.
-i	Suppresses title and other additional information output.
-l	Prints the patch data file associated with platform/OS/ release.
-q	Executes the script silently and outputs only PASS or FAIL. This switch will have no effect if used in conjunction with the -l or -p option.
-d	Provides the patch data from the path specified in the directory. The leading portion of the directory can be any valid path, but the last directory in the path must be named patchData.
-p	Prints the names of Cadence products that require this patch.

-noDISPLAY Allows skipping of the display test, even if there is a DISPLAY requirement in the data file. This argument should be used when running the tool on a remote host, where it is not possible to ascertain the display configuration (or it may not even have one). Using the -noDISPLAY argument prevents a false fail in these circumstances.

**Note:** The output is saved in the /tmp/checkSysConf.<hostname>-<date>.log file.

### Important:

You need to have root privileges in order to use the full functionality of this tool on HP-UX. This is not a requirement for Solaris, AIX or Linux.

## Examples

### Example 1

```
checkSysConf ABC10
```

Determines if the machine has the correct configuration and patches for the ABC10 release.

### Example 2

```
checkSysConf ABC10 -d /hm/aoyon/my_patches/patchData
```

Determines if this workstation has the correct configuration and patches for IC443 based on the patch data files found in the data directory /hm/aoyon/my\_patches/patchData. The specified directory must end with the patchData directory, such as /hm/aoyon/my\_patches/patchData.

### Example 3

```
checkSysConf ABC10 -p 109147
```

Queries the data file to determine which Cadence products require a particular patch. This feature allows users or system administrators to ignore a failure if the indicated product is not in use.

### Example 4

```
checkSysConf ABC10 -q
```

Runs the script silently from another script, which verifies the PASS or FAIL output.

# CheckSysConf Data Files

The data files are the actual files against which the configuration and the patch list are checked. By default, the data files except for LINUX are stored in `your_inst_dir/share/patchData`. There is a separate directory for each platform type and release. The actual patch data is in a Cadence tool release file, such as IC443, containing the minimum required system configuration and patch levels for that Cadence tool release. For example, the data file for the ABC10 release on Solaris 8 is located at `your_inst_dir/share/patchData/SunOS/5.8/ABC10`.

The datafiles for LINUX are stored in `your_inst_dir/share/patchData/Linux/architecture/vendor/version/data_file`

For example, the datafiles for the ABC10 release on LINUX RedHat 3 on all architecture variants are stored in the following locations

```
your_inst_dir/share/patchData/Linux/i686/redhat/3.0WS/ABC10
your_inst_dir/share/patchData/Linux/ia64/redhat/3.0WS/ABC10
your_inst_dir/share/patchData/Linux/x86_64/redhat/3.0WS/ABC0
```

## Data File Format

The data file format for the checkSysConf script is different for the Solaris, HP-UX, AIX, and LINUX platforms.

The following apply to all platforms:

- Any line that starts with a # is a comment.
- The first line contains the platform name, operating system name, and product release name for which the data file is meant. Note that it is a commented line.
- Each field within a record line must have at least one space separating it from the next field.
- The first field must be one of these keywords: BANNER, MEMORY, SWAP, or DISPLAY. There are other keywords, which are specific to platform, such as HARDWARE, LOCALE, GRAPHIC-PATCH, PATCH, NOT-PATCH (or FILESET, NOT-FILESET for the IBM platform), and PACKAGE for LINUX. The keywords can be divided into two categories:



### General

These keywords apply to all platform types. The following table describes the general keywords.

Keyword	Description
BANNER	For comments that are to be printed. The script prints out all information between the quotation marks. You should not use quotation marks as part of the comments.
MEMORY & SWAP	For representing value records. The second field on the line must be a number. The implied units are megabytes.
DISPLAY	For checking the display environment of the system. There are four fields for this key: depth (the depth of the visual, such as 8 planes, 24 planes), Class (the class of the visual, such as PseudoColor), Product list ( the list of product(s) that requires this check) and for Linux and AIX X-Render requirement (if X-render is required by the product).
EXIT	To be used directly after a BANNER command, so that checksysconf does no further reporting after printing the contents of the banner. This is to prevent important information held in the banner from scrolling off the top of the screen.

### Platform specific

Keyword	Description
PATCH	For required patches to be checked for a particular version excluding the patches for the GRAPHIC card. The keyword is used in Solaris and HP-UX data files.
NOT-PATCH	For patches that need to be removed. The keyword is used in Solaris and HP-UX data files.
PATCH, APAR	Patch indicators and require additional fields representing the APARA numbers that need to be installed. The keyword is used in AIX data files.
FILESET	For required OS filesets for the IBM platform.
NOT-FILESET	For OS filesets that need to be removed.
APAR	For required OS APARs for IBM platform.
PACKAGE	For required LINUX packages, excluding patches for GRAPHIC, HARDWARE, and LOCALE.
NOT-PACKAGE	For packages or package versions that are incompatible with the software. A specific version can be specified.

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GRAPHIC-PATCH	For patches specific to a certain graphic card. When the keyword is GRAPHIC-PATCH, the PRODUCT field must contain a known graphic type. These are in the script (more can be added) and currently are: PGX32, CREATOR, ELITE, SX, PGX, CG, and BW.
HARDWARE	For patches specific to a certain hardware model.
LOCALE	For LOCALE patches.
BUNDLE	Present in HP-UX datafiles. It enables product groups to specify a minimum set of software bundles installed on a HP system.

**Note:** The order of the keyword entries in the file is not important. Remember that there can be only one keyword rule per line.

## Sample Data Files

### SunOS

Example datafile:

---

```
# sun4v / 5.10 / c05.00 sample data file

# Cadence IT standard version 1.0 2/11/2009
# Version 1.0 November 13, 2008 tammy
# SPB 16.6

#KEY  PATCH#  MIN CURRENT  TITLE                                PRODUCTS

PATCH 119059 45 45  "Xsun patch"                        (All_Products)
PATCH 137137 09 09  "kernel patch"                      (All_Products)
PATCH 119963 10 10  "C++ shared library Patch"          (All_Products)
PATCH 120753 05 05  "Microtasking libraries Patch"      (All_Products)
PATCH 120201 05 05  "Xorg client libraries patch"       (Products_using_QT)

#Following patches are for OpenGL 1.5
PATCH 120812 25 25  "OpenGL Patch for Solaris 10"       (OpenGL_1.5)

GRAPHIC-PATCH 118707 05 05 "Expert3D IFB Graphics Patch"      (Expert)
GRAPHIC-PATCH 118711 03 03 "M64 Graphics Patch"                (PGX)
GRAPHIC-PATCH 119309 03 03 "PGX32 Graphics Patch"            (PGX32)
GRAPHIC-PATCH 118706 01 01 "Creator FFB Graphics Patch"      (CREATOR)
GRAPHIC-PATCH 118712 22 22 "XVR-100 Graphics Patch"          (XVR-100)
GRAPHIC-PATCH 124149 13 13 "XVR-300 Graphics Patch"          (XVR-300)
```

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```
GRAPHIC-PATCH 118705 01 01 "XVR-1000 Graphics Patch"      (XVR-1000)
GRAPHIC-PATCH 118708 17 17 "XVR-1200/XVR-600 Graphics Patch" (XVR-1200)
GRAPHIC-PATCH 120928 25 25 "XVR-2500 Graphics Patch"      (XVR-2500)
```

```
MEMORY 4096
SWAP 8192
```

```
#KEY          PACKAGE          PRODUCTS
PACKAGE       SUNWilof         (IC5.0)
# The following line is requested by IC 612, see CCR 461136
PACKAGE       SUNWgnome-base-libs (Products_using_QT)
```

```
#KEY          DEPTH          CLASS          PRODUCTS
#DISPLAY      8 planes      PseudoColor    (DFII)
#DISPLAY      24 planes     TrueColor      (DFII)
```

---

### HP-UX:

For HP-UX systems the same keywords exist. The only difference is that there are two fewer fields since HP systems do not use a -xx nomenclature to indicate

the version of patch. For this reason the second field alone is sufficient to properly indicate the patch and revision information.

### Example data-file:

---

```
# HP-UX 11i 2H2005 sample data-file

# Cadence IT standard version 1.0 2/22/05
# Version 1.0   Feb 22, 2005   tammy   Initial

#KEY  PATCH#    TITLE                                     PRODUCTS
# Following section is for Run-time patches
PATCH PHCO_31903 "libc cumulative patch"          (All_Products)
PATCH PHCO_29960 "Pthread enhancement and fixes"    (All_Products)
PATCH PHCO_27958 "mountall cumulative patch"        (All_Products)
PATCH PHKL_28122 "signals,threads enhancement"      (All_Products)
PATCH PHNE_30378 "ONC/NFS General Patch"           (All_Products)
PATCH PHSS_28303 "LIBCL patch"                     (All_Products)
PATCH PHSS_32573 "aC++ runtime libraries-A.03.61"  (All_Products)
PATCH PHSS_31281 "Xserver cumulative patch"         (All_Products)
PATCH PHSS_29371 "X/Motif Runtime Periodic Patch"  (All_Products)
PATCH PHSS_28470 "X Font Server SEP2001 Patch"      (All_Products)
PATCH PHSS_30970 "ld cumulative patch"              (All_Products)
PATCH PHSS_27700 "CPSlib patch-OMP V2.0 for 11.11" (All_Products)
```

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```
PATCH PHKL_28474 "signal cumulative patch"      (All_Products)
PATCH PHNE_30367 "Cumulative STREAMS Patch"     (All_Products)
PATCH PHKL_32669 "VxFS Cumulative Patch"        (All_Products)
PATCH PHNE_29887 "cumulative ARPA Transport patch" (JDK_1.4)
PATCH PHKL_25468 "eventport pseudo driver"      (JDK_1.4)
PATCH PHKL_25842 "Thread Abort"                 (JDK_1.4)
PATCH PHNE_30463 "Cumulative Mux and Pty Patch"  (C8000)

# Following section is for build-time patches
PATCH PHSS_29372 "X/Motif DevKit Periodic Patch" (All_Products)
PATCH PHSS_32508 "11.X HP aC++ Compiler-A.03.63" (All_Products)
PATCH PHSS_32509 "ANSI C compiler B.11.11.12"    (All_Products)
PATCH PHSS_32004 "+O4/PBO Compiler B.11.11.12 patch" (All_Products)
PATCH PHCO_25569 "libc cumulative header file patch" (All_Products)

MEMORY 128
SWAP 200

#KEY          DEPTH          CLASS          PRODUCTS
#DISPLAY      8 planes      PseudoColor (IC5.0)
#DISPLAY      24 planes     TrueColor   (IC5.0)
```

---

### AIX:

For IBM systems the same keywords exist. The difference being that the additional keywords of ASYNCIO and MAINTLVL are added for Base OS installation and configuration. PSSP has been added to work with SP installations.

### Example data-file:

---

```
# IC6.1.7 Data File
# AIX / 7.1.0.0 / c02.00 sample data-file
# Cadence IT standard version Proposed 11/06/2014
# December 11, 2013 Initial tammy

MEMORY 1024
SWAP 512
```

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---

```
#KEY      MAINTENANCE LEVEL
MAINTLVL      7100-03_AIX_ML
TLSPLVL      7100-03-03-1415

# This will check APARS and FILESETS
#KEY      APAR/FILESET#      TITLE      PRODUCTS
APAR      IV44247      "June 2011 PTF for XL C V12.1" (All Products)
APAR      IV44248      "June 2011 PTF for XL C/C++ V12.1" (All Products)
APAR      IV37964      "March 2013 PTF for XL F V14.1" (All Products)
APAR      IV36457      "February 2013 XL SMP Runtime" (All Products)
FILESET xlc.rte 12.1.0.3      "XL C/C++ Runtime for AIX" (All Products)
FILESET xlc.msg.en_US.rte 12.1.0.3 "XL C/C++ Runtime" (All Products)

#Following line is to check OpenGL fileset
#FILESET OpenGL.OpenGL_X.rte.base 6.1.6.0 "OpenGL Base RT" (SOC_CCO)
#The following check is for the tools link with Fortran run-time libs
FILESET xlfрте 14.1.0.7 "XL Fortran Runtime environment" (Products)
#The following check is for the Java6 version from OS
FILESET Java6.sdk 6.0.0.445 "Java6 SDK 32-bit" (Products)
#The following check is for the Java7 version from OS
FILESET Java7.sdk 7.0.0.120 "Java7 SDK 32-bit" (Products)

#KEY      DEPTH      CLASS      PRODUCTS
#DISPLAY      8 planes      PseudoColor      (DFII)
#DISPLAY      24 planes      TrueColor      (DFII)
```

---

### Red Hat:

For RedHat Linux systems the keywords include a KERNEL entry for determining the specific kernel version in use since this is not always a package but

rather a custom built component.

### Example datafile:

---

```
# RHEL6.5 c03.00 X86_64 data-file

MEMORY 1024
SWAP 2048

#KEY      MIN      CURRENT      TITLE      PRODUCT
```

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KERNEL	2.6.32-431.11.2	2.6.32-431.11.2	"Kernel Version"	(All Products)	
#KEY	PATCH#	MIN	TITLE	PRODUCT	ARCHITECTURE
PACKAGE	glibc-2.12	1.132	"Glibc"	(All_Products)	i[3456]86
PACKAGE	glibc-2.12	1.132	"Glibc"	(All_Products)	x86_64
PACKAGE	elfutils-libelf-0.152	1	"Libelf Library"	(All_Products)	i[3456]86
PACKAGE	elfutils-libelf-0.152	1	"Libelf Library"	(All_Products)	x86_64
PACKAGE	ksh-20120801	10	"ksh"	(All_Products)	x86_64
# The following two rpms are for the products that use OpenGL					
PACKAGE	mesa-libGL-9.2	0.5	"Mesa libGL Library" (OpenGL)		i[3456]86
PACKAGE	mesa-libGL-9.2	0.5	"Mesa libGL Library" (OpenGL)		x86_64
PACKAGE	mesa-libGLU-9.2	0.5	"Mesa libGLU Library" (OpenGL Util)		i[3456]86
PACKAGE	mesa-libGLU-9.2	0.5	"Mesa libGLU Library" (OpenGL Util)		x86_64
# The following rpm is for the products that need <a href="#">libreadline.so.4</a>					
#PACKAGE	compat-readline43-4.3	3	"Readline Compat lib" (MVS)		
# The following rpm is for the products that need <a href="#">libXm.so.3</a>					
PACKAGE	openmotif22-2.2.3	19	"openmotif" (ETS/SOC)		i[3456]86
PACKAGE	openmotif22-2.2.3	19	"openmotif" (ETS/SOC)		x86_64
# The following rpm is for the products that need <a href="#">libXp.so.6</a>					
PACKAGE	libXp-1.0.0	15.1	"libXp" (IC613)		i[3456]86
PACKAGE	libXp-1.0.0	15.1	"libXp" (IC613)		x86_64
# The following rpm is for the products that need <a href="#">libpng12.so.0</a>					
PACKAGE	libpng-1.2.49	1.el6_2	"libpng" (ICD_2011)		i[3456]86
PACKAGE	libpng-1.2.49	1.el6_2	"libpng" (ICD_2011)		x86_64
# The following rpm is for the products that need <a href="#">libjpeg.so.62</a>					
PACKAGE	libjpeg-turbo-1.2.1	1	"libjpeg" (ICD_2011)		i[3456]86
PACKAGE	libjpeg-turbo-1.2.1	1	"libjpeg" (ICD_2011)		x86_64
# The following rpm is for the products that need <a href="#">libexpat.so.0</a>					
PACKAGE	compat-expat1-1.95.8	8	" <a href="#">libexpat.so.0</a> " (finale)		i[3456]86
PACKAGE	compat-expat1-1.95.8	8	" <a href="#">libexpat.so.0</a> " (finale)		x86_64
# The following rpm is for the products that need <a href="#">libXtst.so.6</a>					
PACKAGE	libXtst-1.2.1	2	" <a href="#">libXtst.so.6</a> " (Specman)		i[3456]86
PACKAGE	libXtst-1.2.1	2	" <a href="#">libXtst.so.6</a> " (Specman)		x86_64
# The following rpm is for the products that need <a href="#">libreadline.so.5</a> and <a href="#">libhistory.so.5</a>					
PACKAGE	compat-readline5-5.2	17.1	"Readline Library" (MMSIM)		i[3456]86
PACKAGE	compat-readline5-5.2	17.1	"Readline Library" (MMSIM)		x86_64
# The following rpm is for the products that need <a href="#">libncurses.so.5</a>					
PACKAGE	ncurses-libs-5.7	3.20090208	"ncurses library" (MMSIM)		i[3456]86
PACKAGE	ncurses-libs-5.7	3.20090208	"ncurses library" (MMSIM)		x86_64
# The following check is for the tools that require using GCC to build					
PACKAGE	glibc-devel-2.12	1.132	"Glibc-devel" (GCC)		i[3456]86
PACKAGE	glibc-devel-2.12	1.132	"Glibc-devel" (GCC)		x86_64
#KEY	DEPTH	CLASS	PRODUCTS		
DISPLAY	8 planes	PseudoColor	(DFII)		