



Clear Ballot

## **ClearVote 2.3**

### **ClearDesign System Identification Guide**

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# ClearDesign System Identification Guide

Clear Ballot Part Number: 100074-10020

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## Document history

Date	Description	Version	Author
01/10/2017	Initial submission to EAC	1.0	Joe Srednicki
02/03/2017	Minor typographical and reference-related edits	1.0.1	Joe Srednicki
05/09/2017	Minor update based on feedback from the state of Colorado and Clear Ballot Quality Assurance	1.0.2	Joe Srednicki
06/16/2017	Minor updates for vote-by-mail campaign.	1.0.3	Joe Srednicki
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01/31/2018	Updated with final file digest data for 1.4 EAC	1.0.11	Joni G. McNutt
08/31/2018	Updated formatting and cover page	1.0.12	Joe Srednicki
10/03/2018	Updated with product and system files for 1.4.5	1.0.13	Joni G. McNutt
12/06/2018	Updated with product and system files for 1.5	1.0.14	Joni G. McNutt
08/15/2019	Updated with final product and system files for 2.0	1.1	Joni G. McNutt
02/12/2020	Updated with final product and system files for 2.1	1.2	Joni G. McNutt
12/17/2020	Update product and system files for 2.2	1.3	Joe Srednicki
09/16/2021	Update final product and system files for 2.2	1.3.1	Joe Srednicki
11/10/2021	Preliminary version for the 2.3 EAC application without software version numbers, file dates, and file digests.	1.4	Joe Srednicki
8/30/2022	Add product and system files for 2.3	1.5	Douglas McCulloch

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## Preface

This section defines the purpose of this document.

### About this document

This document enables election officials to verify the software files for the ClearDesign system.

### Scope of this document

This document contains the following chapters:

- Chapter 1. Verifying ClearDesign software
- Chapter 2. Installed third-party software

### Intended audience

This document is for election officials and election staff who are responsible for operations and maintenance before, during, and after an election. Clear Ballot personnel also use this document to support election officials and election staff.

### References to ClearVote products

A ClearVote® system can comprise the ClearAccess®, ClearCast®, ClearCount®, and ClearDesign® products. Jurisdictions are not required to purchase all products. You can ignore references to any ClearVote products that are not part of your voting system. Also ignore implementation options that are not relevant to your policies and procedures.

### Contact us

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If you have questions about using your product, contact your Clear Ballot representative.

## Chapter 1. Verifying ClearDesign software

After installing your ClearDesign software, you need to verify that the SHA-256 hash values of the installed software match those of the certified version. This process ensures that the contents of the software have not been changed by a third-party or altered by malware.

### 1.1 Steps to verify the installed software

To verify the installed software:

1. At a DesignStation computer, log in to the ClearDesign system.
2. Insert a USB drive into one of the computer's available USB ports.
3. Click the drop-down menu that appears at the top right of the screen next to your user name and select **About this software**.

ClearDesign displays the About screen with the ClearDesign Product Files tab selected.

4. Click the **Copy** button to copy the contents of the ClearDesign Product Files tab.
5. Click the Start button on the Windows taskbar and search for and select **Notepad** from the search results.
6. Paste the copied information into the Notepad window and save the file as a TXT file on the USB drive.
7. Close the About page and log out of the DesignStation computer.
8. Remove the USB drive from the DesignStation computer and insert it into another computer running Microsoft Windows.

Another computer is necessary because the ClearDesign hardening procedures prevent opening and viewing the file on the DesignStation computer.

9. Use a text or spreadsheet program, such as Notepad or Excel, to open and view the file.
10. Compare the hash values in the saved file to the hash values listed in Table 1-1 on page 7.
  - If the hash values match, the software is unmodified and matches the certified version.
  - If the hash values do not match, the software on the server does not match the certified version. The software has been modified, improperly installed, or is nonmatching for some other reason.
11. If any mismatch occurs, do one of the following:
  - Follow the jurisdictional procedures to resolve the discrepancy.
  - Contact Clear Ballot Technical Support for assistance (<https://clearballot.com/support>).

## 1.2 Installed ClearDesign product files

Table 1-1 lists the file specification, timestamp, and SHA-256 hash value for each of the Clear Ballot-authored files installed on the DesignServer.

**Table 1-1. ClearDesign product files.**

File	Date	File Digest
/usr/share/cbg/clearDesign/clearDesign.conf	7/15/2022 16:30	306a68151341a512b7667ed31120faaeab5b9fc3e9428c9f928f8df64db2a949
/usr/share/cbg/clearDesign/clearDesign.fcgi	7/15/2022 16:30	55f9ccd681b1782abd4227e579a0125dcbe8a21853d380624c5799f557e44be9
/usr/share/cbg/clearDesign/install	7/15/2022 16:30	dbc139cbc2eeae9656517a83f731ba76d4aad1025e9911ad0b77dda6c1f2aad
/usr/share/cbg/clearDesign/static/3rdParty/DataTables/css/buttons.bootstrap.min.css	7/15/2022 16:30	30b0bee385e1d7846bc61054c9d46259998a3ec8efa875ddb4b79760c9663cbe
/usr/share/cbg/clearDesign/static/3rdParty/DataTables/css/dataTables.bootstrap.min.css	7/15/2022 16:30	3db6982c169bf3afee084cf7762ba718c118be36a1dee0c5222203fa302d21fc
/usr/share/cbg/clearDesign/static/3rdParty/DataTables/js/buttons.bootstrap.min.js	7/15/2022 16:30	c366a71392cedf0d9735673f70a054baa6f9c25bf25dd37dd802a0722cf8685f
/usr/share/cbg/clearDesign/static/3rdParty/DataTables/js/buttons.colVis.js	7/15/2022 16:30	0dca4c8d40060444b7485a9a7b4ea22ab3a82eba827b8eb7f43b3c123cead3d6
/usr/share/cbg/clearDesign/static/3rdParty/DataTables/js/buttons.html5.js	7/15/2022 16:30	123beb805dc9a8eee95ff9bd51e44bd4eb7817cd1e4846da51fa9d1146c02dd1



Table 1-1. ClearDesign product files. (continued)

File	Date	File Digest
/usr/share/cbg/clearDesign/static/3rdParty/DataTables/js/dataTables.bootstrap.min.js	7/15/2022 16:30	5ffe7cb3959b946300c3d4a90edaa757c74b44d09ac2cc86c0daa7643d097bfb
/usr/share/cbg/clearDesign/static/3rdParty/DataTables/js/dataTables.buttons.js	7/15/2022 16:30	779a92be15003e2826eda841d207d64c93a452aab22548c718d972e709b2c9f1
/usr/share/cbg/clearDesign/static/3rdParty/DataTables/js/jquery.dataTables.min.js	7/15/2022 16:30	a9c575c2bf9b9f836806dc58aa0866cb558806fc5ea1ef2f4250a8c0b1be7278
/usr/share/cbg/clearDesign/static/3rdParty/DataTables/js/jszip.min.js	7/15/2022 16:30	9e170a21bb67ccf7dcab122c726e72637105a45d893350afa9b7a38369a0c1fd
/usr/share/cbg/clearDesign/static/3rdParty/DataTables/js/natural.js	7/15/2022 16:30	3777f8ce46801dfd7cb89365467710f8f3d09f03dc20233cdad27f0d09038d86
/usr/share/cbg/clearDesign/static/3rdParty/DataTables/js/pdfmake.min.js	7/15/2022 16:30	70bc19eb6a5b08b6d910b3c9cfd4461ec6b08a3db91d4d73eea6026812b56675
/usr/share/cbg/clearDesign/static/3rdParty/DataTables/js/vfs_fonts.js	7/15/2022 16:30	1cce3ba25673d6843c91e6264b8510cbf132a5567c82915e9e9b8d7984226fe8
/usr/share/cbg/clearDesign/static/3rdParty/bootstrap/css/bootstrap.min.css	7/15/2022 16:30	1cbda21998b65e08a7e936114cabd7f7783d0f590dd6efdd58c7faa8b6e7b9aa
/usr/share/cbg/clearDesign/static/3rdParty/bootstrap/fonts/glyphicons-halflings-regular.eot	7/15/2022 16:30	5ff7c239555476e939e86d457bb78424b945b733b2c23791d9807c2357259d43
/usr/share/cbg/clearDesign/static/3rdParty/bootstrap/fonts/glyphicons-halflings-regular.svg	7/15/2022 16:30	3a9760d706275d9ffe85a0042f3ee73f8425e3011cac1fa8a3c15a59e4053ffa
/usr/share/cbg/clearDesign/static/3rdParty/bootstrap/fonts/glyphicons-halflings-regular.ttf	7/15/2022 16:30	cb18b8d11f9698fc8cb3341cb5c882af1103ef8927d34e1602015b5f82eb234f



Table 1-1. ClearDesign product files. (continued)

File	Date	File Digest
/usr/share/cbg/clearDesign/static/3rdParty/bootstrap/fonts/glyphicons-halflings-regular.woff	7/15/202 2 16:30	71c12656535e99119c2a952c10554cd6f47c6923d2d96155a783 3276e68992af
/usr/share/cbg/clearDesign/static/3rdParty/bootstrap/js/bootstrap.min.js	7/15/202 2 16:30	54d21b0676784d0c983bbd4093898770adefa932d89b72c8afd8 8183a19172a7
/usr/share/cbg/clearDesign/static/3rdParty/jquery-impromptu/LICENSE.txt	7/15/202 2 16:30	88a6d51a87d98b805db3e83ccdb324a4547095eede78980f68e 51fe1ab211aea
/usr/share/cbg/clearDesign/static/3rdParty/jquery-impromptu/jquery-impromptu.min.css	7/15/202 2 16:30	80b3afaf83a26b397c901c086c6fa58235762852a73004b8ac8da 6d82baad9c1
/usr/share/cbg/clearDesign/static/3rdParty/jquery-impromptu/jquery-impromptu.min.js	7/15/202 2 16:30	bcfad844f6f43865cbd1756272a48a0290a4b5801d239dcff750fd e8af743cb3
/usr/share/cbg/clearDesign/static/3rdParty/jquery-qrcode/MIT-LICENSE.txt	7/15/202 2 16:30	4a792bac5ec29cf38a4d98ed588a305b6b5c26a8b4cc4f0337533 dda0fec2856
/usr/share/cbg/clearDesign/static/3rdParty/jquery-qrcode/jquery.qrcode.min.js	7/15/202 2 16:30	f4ccf02b69092819ac24575c717a080c3b6c6d6161f1b8d82bf0b b523075032d
/usr/share/cbg/clearDesign/static/3rdParty/jquery-splitter/css/jquery.splitter.min.css	7/15/202 2 16:30	3d76586cd15aa0888b7a7cc986cde523deccbdd2730e53e5f296 751ce0daef68
/usr/share/cbg/clearDesign/static/3rdParty/jquery-splitter/js/jquery.splitter.min.js	7/15/202 2 16:30	129ac0b4d2f4aecaa526f8da3587a022022518dc3c1cc0ef7b52b 309da246a12
/usr/share/cbg/clearDesign/static/3rdParty/jquery-ui/LICENSE.txt	7/15/202 2 16:30	de33fb695880d0b07615d4b86f78cd43796906959ade5fdfef709 68827a0db78
/usr/share/cbg/clearDesign/static/3rdParty/jquery-ui/js/jquery-ui.min.js	7/15/202 2 16:30	28ce75d953678c4942df47a11707a15e3c756021cf89090e3e6a a7ad6b6971c3



Table 1-1. ClearDesign product files. (continued)

File	Date	File Digest
/usr/share/cbg/clearDesign/static/3rdParty/jquery/LICENSE.txt	7/15/2022 16:30	f980a306a01e5881cc8004115f7e6dde44e7f5296477237d37d169a86ce7c094
/usr/share/cbg/clearDesign/static/3rdParty/jquery/js/jquery.min.js	7/15/2022 16:30	05b85d96f41fff14d8f608dad03ab71e2c1017c2da0914d7c59291bad7a54f8e
/usr/share/cbg/clearDesign/static/3rdParty/jscolor/arrow.gif	7/15/2022 16:30	096eb936bc9301c1c6fa86715eb306bec1b168dc5beb69b53cd4a81b9cb6a1a3
/usr/share/cbg/clearDesign/static/3rdParty/jscolor/cross.gif	7/15/2022 16:30	027d9c6711c32d0ca02e8b5c2831715b66923f0f6a0c4546a015b305658b13d0
/usr/share/cbg/clearDesign/static/3rdParty/jscolor/hs.png	7/15/2022 16:30	6607368e285a2bd53ae1632cc28fecbf718406716823d2e69802b9e0a1d9d7e8
/usr/share/cbg/clearDesign/static/3rdParty/jscolor/hv.png	7/15/2022 16:30	3883457013db9bfdecdbd7ae670c24bdfa171843a7fe94ab0484086adef4c8f2
/usr/share/cbg/clearDesign/static/3rdParty/jscolor/jscolor.js	7/15/2022 16:30	aa31f77b13d6c95c64bf40b5b5ffd63fd828c41b18dab20e7a7f1592deafb931
/usr/share/cbg/clearDesign/static/3rdParty/jszip/jszip.min.js	7/15/2022 16:30	570913eb0899c1751b8b66f804e4758b9870e375cccd5b0ff3c9297acbd161f5
/usr/share/cbg/clearDesign/static/3rdParty/libmp3lame/libmp3lame.min.js	7/15/2022 16:30	30bf0d4203df9065ee5b18af7d667335efa215c286f7e728c1c529bf031df313
/usr/share/cbg/clearDesign/static/3rdParty/papaparse/papaparse.min.js	7/15/2022 16:30	5440e664a406223765e8f9ea9a1039cb4a0272aa5c24f166f2a3f5984381c076
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/LICENSE.TXT	7/15/2022 16:30	5fda611b8191f00121f161a93e7399cdb71789dba923e8ed09b50a1f78d32c5e

Table 1-1. ClearDesign product files. (continued)

File	Date	File Digest
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/plugins/code/plugin.min.js	7/15/2022 16:30	6ab6ba2be22db7145ade29c2279002d7b2779c4cca5a056a15a7cdfa0b1235b1
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/plugins/fullscreen/plugin.min.js	7/15/2022 16:30	79445b6d6d9861b1f28da850d8b282476cc0aee507e10ef90a42e54f612dcc24
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/plugins/paste/plugin.min.js	7/15/2022 16:30	cdee876cadc7aa15d6f3e839d42d84d01c1926a5846c0c9248f95cbb551eb739
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/plugins/searchreplace/plugin.min.js	7/15/2022 16:30	2f770813adad3de782ffb0ce09476ea2c8dc30ed0b16a99b71259a7fb384fc45
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/plugins/table/plugin.min.js	7/15/2022 16:30	70d1e4cf0e1c148f328347f98c862d800dc2cf687eca8e22299e0970b3bafdfd
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/plugins/textcolor/plugin.min.js	7/15/2022 16:30	fa01a597b116ce8c6954c1c3e9f8b9f8fef2c92355753cef6b691370f1a19d1b
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/skins/lightgray/content.inline.min.css	7/15/2022 16:30	43e21c510a750ab7e110099c715efaae56fcc343811a2514db896b0f0b3e3bdb
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/skins/lightgray/content.min.css	7/15/2022 16:30	d6add77c881d254c581e06a4339a1ff6fa27876e3c6adfbccf89273cc3ea502a
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/skins/lightgray/fonts/tinymce-small.eot	7/15/2022 16:30	06978cb75d973f435cb4139d66b71387cdf819a421876fa42dcb0df2d1e2653c
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/skins/lightgray/fonts/tinymce-small.svg	7/15/2022 16:30	c44121def9cff9145faa04dd492791c15a291138cdeb0484132b6e1ed2bebeb0
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/skins/lightgray/fonts/tinymce-small.ttf	7/15/2022 16:30	d6382ba90b72e03282fa7c8113d59092106986f25067f1105553967e3d150e46



Table 1-1. ClearDesign product files. (continued)

File	Date	File Digest
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/skins/lightgray/fonts/tinymce-small.woff	7/15/2022 16:30	1f1936e2da99a2a24249c40fbb7df227ef6aed5add32704b0bd82001c0307b5e
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/skins/lightgray/fonts/tinymce.eot	7/15/2022 16:30	12822566832f372fd362ed9589052de80980182c06f08015c9e96d10dd6ada7f
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/skins/lightgray/fonts/tinymce.svg	7/15/2022 16:30	b5bbb12471fec75e2e551f18c9e0a61012e550251cd7c2da839cdbc2af00d66e
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/skins/lightgray/fonts/tinymce.ttf	7/15/2022 16:30	e31d6b896a3cb5b2fdf83ec7dcc5c124f4b05ec99cdc35e351244f9aa94c6b0a
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/skins/lightgray/fonts/tinymce.woff	7/15/2022 16:30	912d15ddc7906a65c785512a5ae9bb23fd24919f805fccfda1e5668913628888
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/skins/lightgray/img/anchor.gif	7/15/2022 16:30	2861666fd107d278d4449970615136d06d7f746be9bb19072cf9c8f30e565e1e
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/skins/lightgray/img/loader.gif	7/15/2022 16:30	eb7cfd3d959b2e09c170f532e29f8b825f9bc770b2279fde58e595617753e244
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/skins/lightgray/img/object.gif	7/15/2022 16:30	e6a15e52bc4a17b085073ba8debd4708ead6ae3d4cbeb3880c65cb7afc489777
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/skins/lightgray/img/trans.gif	7/15/2022 16:30	9cf020d7c3bba7f5ab10cda54aabef934f906d4f9a3acf99e9e7dc6c98579635
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/skins/lightgray/skin.ie7.min.css	7/15/2022 16:30	c069a6cad7aac75ea007fa94e053c114f97b2daa69c2482d02d6b898e248120
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/skins/lightgray/skin.min.css	7/15/2022 16:30	8b74587f001304ca8f37a42f79b30168c8a579adf774122c58493596b5f51d0f

Table 1-1. ClearDesign product files. (continued)

File	Date	File Digest
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/themes/modern/theme.min.js	7/15/2022 16:30	4f0b907d437de8cd0c707c2044e42c7364c078ddb08c9faca217c420b52df9d1
/usr/share/cbg/clearDesign/static/3rdParty/tinymce/tinymce.min.js	7/15/2022 16:30	cff3b319cabd853e4382ee1ba1cb8b2e3382dd10277326e7dc22f67c59e80546
/usr/share/cbg/clearDesign/static/clearBallot/css/base.css	7/15/2022 16:30	c45c537b44356cbbba8397522d399a1c916e14c2f8cd54579531ec5b7f236f49
/usr/share/cbg/clearDesign/static/clearBallot/css/digitalBallot.css	7/15/2022 16:30	078ee24666b59191b4aef68b152a5271dc9ffa1a06fb73a6b8a21276dade291f
/usr/share/cbg/clearDesign/static/clearBallot/css/fonts.css	7/15/2022 16:30	39c2c0b4a4ee34f048e355f02817a5a8be19ea3d5c10d1691f2c120a32baa951
/usr/share/cbg/clearDesign/static/clearBallot/css/fonts/NotoSans-Bold.ttf	7/15/2022 16:30	6c9841ae63e266b77ee79820d62095a244d2e76d638b8a45ba3cb2c23f3e1932
/usr/share/cbg/clearDesign/static/clearBallot/css/fonts/NotoSans-Regular.ttf	7/15/2022 16:30	a52fdd375fb885e6ac21471b34e26e5cb6e58f1fa944519bff08d4400605bfed
/usr/share/cbg/clearDesign/static/clearBallot/css/fonts/NotoSansCJKtc-Regular.otf	7/15/2022 16:30	f57e46120a3dd025ac993801981849622405d1359b32093b1f046490f7885711
/usr/share/cbg/clearDesign/static/clearBallot/css/fonts/NotoSansExtended-Bold.ttf	7/15/2022 16:30	db96d6e57a0efb09085bf3206ac5dc198d49c5d36795b8e5b63b9f73876973cd
/usr/share/cbg/clearDesign/static/clearBallot/css/fonts/NotoSansExtended-Regular.ttf	7/15/2022 16:30	97772692398cc0a7905de598e26c9580c5a21dc5af48a0885f3b9ab5adc5cc87
/usr/share/cbg/clearDesign/static/clearBallot/css/fonts/NotoSerif-Bold.ttf	7/15/2022 16:30	0d2e63318c3b0afefa01ac732e83f55e611b523a4ceb932271730cfe2ccb5ed0



Table 1-1. ClearDesign product files. (continued)

File	Date	File Digest
/usr/share/cbg/clearDesign/static/clearBallot/css/fonts/NotoSerif-Regular.ttf	7/15/2022 2 16:30	7bdc77de06e1bf1bf565c3c330c0d1a84eccc5acc4f3ffc436214ce68b987deb
/usr/share/cbg/clearDesign/static/clearBallot/css/fonts/OFL.txt	7/15/2022 2 16:30	3581e0d8b5cd5831d0378100c8cf52040201566c40d60ea93445fc35465f2e34
/usr/share/cbg/clearDesign/static/clearBallot/css/fonts/SourceCodePro-Bold.ttf	7/15/2022 2 16:30	72f35788b9ed009b4f2e9c947447e6b31fbdd00bb8d583e5675660a0e2bc40dd
/usr/share/cbg/clearDesign/static/clearBallot/css/fonts/SourceCodePro-Regular.ttf	7/15/2022 2 16:30	ef6ea62b6849bc1535aae941d32de8d7b3ad14eab87d681dd237d125e36aebec
/usr/share/cbg/clearDesign/static/clearBallot/css/languageEditor.css	7/15/2022 2 16:30	3258067366d1fa24684cb9a17395d94846b6e205058b2877c7ac3d8f194575b5
/usr/share/cbg/clearDesign/static/clearBallot/css/paperBallot.css	7/15/2022 2 16:30	e23840d07a122418dd066ae820555ebf6954f29ceb1f7d252c227509d95dabe0
/usr/share/cbg/clearDesign/static/clearBallot/css/paperBallot_access.css	7/15/2022 2 16:30	2f9fcc260f5dc42caf251402f24b502e3a9146561d4252dcf719d2cee896a19f
/usr/share/cbg/clearDesign/static/clearBallot/css/print.css	7/15/2022 2 16:30	9bc3598de813952b5d7fa708f0484af153179e9672143f0fac5005ef83a0c9d2
/usr/share/cbg/clearDesign/static/clearBallot/css/report.css	7/15/2022 2 16:30	aab5eb880ad36afdeaf29979df37c8fda1fdb03bed101d2d74b5679b6bdb6b6b
/usr/share/cbg/clearDesign/static/clearBallot/css/sampleBallot.css	7/15/2022 2 16:30	7a88b1c012c3e207f16a6381824606cc6906d7df74887384e03819ad313ba1f1
/usr/share/cbg/clearDesign/static/clearBallot/css/signin.css	7/15/2022 2 16:30	78a3e4efecc87db29d21aebd589a185eb70864e109a479077224dfe8c3048ccd

Table 1-1. ClearDesign product files. (continued)

File	Date	File Digest
/usr/share/cbg/clearDesign/static/clearBallot/css/tinymce.css	7/15/202 2 16:30	a10a514e880d21bfe04d999d183e1c1274634aa4c4ad08543563 dd76d667874b
/usr/share/cbg/clearDesign/static/clearBallot/css/tinymce_Candidate.css	7/15/202 2 16:30	da2eb116957ef2eb6b155fe3913ccf717b8eb837be550711f26e6 603d86722a2
/usr/share/cbg/clearDesign/static/clearBallot/css/tinymce_Contest.css	7/15/202 2 16:30	b502f91da135a712c68385f7ff00626efc69cf237c0feb2eb2ba59 855749fe03
/usr/share/cbg/clearDesign/static/clearBallot/css/tinymce_Header.css	7/15/202 2 16:30	15a61a7f103563f3fadb5e91ffe5817161620aae23effd9b568677 a96b71e760
/usr/share/cbg/clearDesign/static/clearBallot/css/tinymce_VoterGroup.css	7/15/202 2 16:30	6b161e9bf2d6b6dd33c9eb0187a600477abd3994b01220b1baf 54c144abc2c11
/usr/share/cbg/clearDesign/static/clearBallot/images/ClearDesign.png	7/15/202 2 16:30	def5e9879215e36d654af1496515ba7719b481776d59e9a79492 54e32bd57486
/usr/share/cbg/clearDesign/static/clearBallot/images/favicon.ico	7/15/202 2 16:30	c3164bf5b672736c062451b5f90dabeb116afabb4bd3369a478a 3e4192acc25f
/usr/share/cbg/clearDesign/static/clearBallot/images/navigator.png	7/15/202 2 16:30	bb83a86a480c7c7e016741da59592daad2e40a3a0d664e31a99 e68ca3876195f
/usr/share/cbg/clearDesign/static/clearBallot/js/audioEditor.min.js	7/15/202 2 16:30	52e7da4faba40511be379eef786c3c35081e7d22fe6410729942 23e4119ea35d
/usr/share/cbg/clearDesign/static/clearBallot/js/ballotModel.min.js	7/15/202 2 16:30	a615ab3a13db4fc4c82611252e4e1a97f14bcb944c22a61a371d 84a91c0ff83c
/usr/share/cbg/clearDesign/static/clearBallot/js/base.min.js	7/15/202 2 16:30	7e37e3d98dd765c194bf33b8aea56f3f9b69962a3859bdb2d92c 1e7a279e3040

Table 1-1. ClearDesign product files. (continued)

File	Date	File Digest
/usr/share/cbg/clearDesign/static/clearBallot/js/bkLayoutPaper.min.js	7/15/2022 16:30	aa538fbad8bf79a6fb7348a45b6037f1b718549a4e8fc662289e6b29dfcae833
/usr/share/cbg/clearDesign/static/clearBallot/js/cbg.min.js	7/15/2022 16:30	3bff1e978658fb3a307d54143f0c2b17527b0554ef15849067d3cf838d2ccfe3
/usr/share/cbg/clearDesign/static/clearBallot/js/digitalController.min.js	7/15/2022 16:30	ca3d2cd23c8b13226ef5b3346aaf59c1241f323215e098f674c0d8eed4fd41
/usr/share/cbg/clearDesign/static/clearBallot/js/digitalLayout.min.js	7/15/2022 16:30	19c1e8e666d2623f4e3827d7c4a5f1aefbceee7c78e3eb6de33b0e7a8e926aa7
/usr/share/cbg/clearDesign/static/clearBallot/js/digitalModel.min.js	7/15/2022 16:30	81048221e37b090cc4bd2427cb5bfa6845c8a78b9a5f6a7eed39df4093b5fbb5
/usr/share/cbg/clearDesign/static/clearBallot/js/languageEditor.min.js	7/15/2022 16:30	89feaa550e6b9c075fc7c4a853fac583cf9a5b504fb0f1e34803b5ffcd03fc90
/usr/share/cbg/clearDesign/static/clearBallot/js/package.json	7/15/2022 16:30	17451b89330917870c4ca9734102a84bbb590fc1ba98506ae655813fe19800c3
/usr/share/cbg/clearDesign/static/clearBallot/js/paperController.min.js	7/15/2022 16:30	08b30ecf8b1a96f4f101b247e733295385735f9a8256a6e0f3f5f0bb43d47110
/usr/share/cbg/clearDesign/static/clearBallot/js/paperLayout.min.js	7/15/2022 16:30	b3142f734a46849fab1a5e5edfbb2ada6ba9d89da2aa9a30878cd5b25c759b8e
/usr/share/cbg/clearDesign/static/clearBallot/js/paperViewer.min.js	7/15/2022 16:30	a4395d8917175c666511b9f173606a95a08fa9a06d0e27ece37f53b79fcc3d28
/usr/share/cbg/clearDesign/static/clearBallot/js/printPDF.min.js	7/15/2022 16:30	407ab28cbd4da4a3c69f4d758bfe1d0605ddb5fe89a74fd126882daceac79329



Table 1-1. ClearDesign product files. (continued)

File	Date	File Digest
/usr/share/cbg/clearDesign/static/clearBallot/js/record.min.js	7/15/2022 16:30	a9be98396a88b22ca02fe74137f29e626bde1b71715f979d9176a4df3527e863
/usr/share/cbg/clearDesign/static/clearBallot/js/sampleBallot.min.js	7/15/2022 16:30	32f8df365822232baa52536486f81522407e014f1d110fd5eae4da13bc04c130
/usr/share/cbg/clearDesign/static/clearBallot/js/textEditor.min.js	7/15/2022 16:30	9c0cd49d6352b1bf94655fa638eb1c64bd6aa6fd9ada5ba4357e941f44e4ba79
/usr/share/cbg/clearDesign/static/clearBallot/library/images/Filled oval.png	7/15/2022 16:30	deda9a3603eee2ab5cc558442fe60c9400a198a3050c44c5e9fac15dc6ef87f8

## Chapter 2. Installed third-party software

The following software is installed on the ClearDesign system. Clear Ballot does *not* modify any of the listed third-party software.

**Table 2-1. Third-party software.**

Package	Version	Description
accountsservice	0.6.45-1ubuntu1	query and manipulate user account information
acl	2.2.52-3build1	Access control list utilities
acpid	1:2.0.28-1ubuntu1	Advanced Configuration and Power Interface event daemon
adduser	3.116ubuntu1	add and remove users and groups
amd64-microcode	3.20191021.1+really3.20181128.1~ubuntu0.18.04.1	Processor microcode firmware for AMD CPUs
apache2	2.4.29-1ubuntu4.21	Apache HTTP Server
apache2-bin	2.4.29-1ubuntu4.21	Apache HTTP Server (modules and other binary files)
apache2-data	2.4.29-1ubuntu4.21	Apache HTTP Server (common files)
apache2-utils	2.4.29-1ubuntu4.21	Apache HTTP Server (utility programs for web servers)
apparmor	2.12-4ubuntu5.1	user-space parser utility for AppArmor
apparmor-utils	2.12-4ubuntu5.1	utilities for controlling AppArmor
apport	2.20.9-0ubuntu7.16	automatically generate crash reports for debugging
apport-symptoms	0.2	symptom scripts for apport
apt	1.6.12ubuntu0.1	commandline package manager
apt-utils	1.6.12ubuntu0.1	package management related utility programs

Table 2-1. Third-party software. (continued)

Package	Version	Description
at	3.1.20-3.1ubuntu2	Delayed job execution and batch processing
auditd	1:2.8.2-1ubuntu1.1	User space tools for security auditing
base-files	10.1ubuntu2.9	Debian base system miscellaneous files
base-passwd	3.5.44	Debian base system master password and group files
bash	4.4.18-2ubuntu1.2	GNU Bourne Again SHell
bash-completion	1:2.8-1ubuntu1	programmable completion for the bash shell
bc	1.07.1-2	GNU bc arbitrary precision calculator language
bcache-tools	1.0.8-2build1	bcache userspace tools
bind9-host	1:9.11.3+dfsg-1ubuntu1.12	DNS lookup utility (deprecated)
bsdmainutils	11.1.2ubuntu1	collection of more utilities from FreeBSD
bsdutils	1:2.31.1-0.4ubuntu3.6	basic utilities from 4.4BSD-Lite
btrfs-progs	4.15.1-1build1	Checksumming Copy on Write Filesystem utilities
btrfs-tools	4.15.1-1build1	transitional dummy package
busybox-initramfs	1:1.27.2-2ubuntu3.2	Standalone shell setup for initramfs
busybox-static	1:1.27.2-2ubuntu3.2	Standalone rescue shell with tons of builtin utilities
byobu	5.125-0ubuntu1	text window manager, shell multiplexer, integrated DevOps environment
bzip2	1.0.6-8.1ubuntu0.2	high-quality block-sorting file compressor - utilities

Table 2-1. Third-party software. (continued)

Package	Version	Description
ca-certificates	20190110~18.04.1	Common CA certificates
cloud-guest-utils	0.30-0ubuntu5	cloud guest utilities
cloud-initramfs-copymods	0.40ubuntu1.1	copy initramfs modules into root filesystem for later use
cloud-initramfs-dyn-netconf	0.40ubuntu1.1	write a network interface file in /run for BOOTIF
command-not-found	18.04.5	Suggest installation of packages in interactive bash sessions
command-not-found-data	18.04.5	Set of data files for command-not-found.
console-setup	1.178ubuntu2.9	console font and keymap setup program
console-setup-linux	1.178ubuntu2.9	Linux specific part of console-setup
coreutils	8.28-1ubuntu1	GNU core utilities
cpio	2.12+dfsg-6ubuntu0.18.04.1	GNU cpio -- a program to manage archives of files
crda	3.18-1build1	wireless Central Regulatory Domain Agent
cron	3.0pl1-128.1ubuntu1	process scheduling daemon
cryptsetup	2:2.0.2-1ubuntu1.1	disk encryption support - startup scripts
cryptsetup-bin	2:2.0.2-1ubuntu1.1	disk encryption support - command line tools
curl	7.58.0-2ubuntu3.9	command line tool for transferring data with URL syntax
dash	0.5.8-2.10	POSIX-compliant shell
dbus	1.12.2-1ubuntu1.2	simple interprocess messaging system (daemon and utilities)
debconf	1.5.66ubuntu1	Debian configuration management system

Table 2-1. Third-party software. (continued)

Package	Version	Description
debconf-i18n	1.5.66ubuntu1	full internationalization support for debconf
debiannutils	4.8.4	Miscellaneous utilities specific to Debian
diffutils	1:3.6-1	File comparison utilities
dirmngr	2.2.4-1ubuntu1.2	GNU privacy guard - network certificate management service
distro-info-data	0.37ubuntu0.7	information about the distributions' releases (data files)
dmeventd	2:1.02.145-4.1ubuntu3.18.04.3	Linux Kernel Device Mapper event daemon
dmidecode	3.1-1ubuntu0.1	SMBIOS/DMI table decoder
dmsetup	2:1.02.145-4.1ubuntu3.18.04.3	Linux Kernel Device Mapper userspace library
dns-root-data	2018013001	DNS root data including root zone and DNSSEC key
dnsmasq-base	2.79-1	Small caching DNS proxy and DHCP/TFTP server
dnsutils	1:9.11.3+dfsg-1ubuntu1.12	Clients provided with BIND
dosfstools	4.1-1	utilities for making and checking MS-DOS FAT filesystems
dpkg	1.19.0.5ubuntu2.3	Debian package management system
e2fsprogs	1.44.1-1ubuntu1.3	ext2/ext3/ext4 file system utilities
ebtables	2.0.10.4-3.5ubuntu2.18.04.3	Ethernet bridge frame table administration
ed	1.10-2.1	classic UNIX line editor
eject	2.1.5+deb1+cvs20081104-13.2	ejects CDs and operates CD-Changers under Linux

Table 2-1. Third-party software. (continued)

Package	Version	Description
ethtool	1:4.15-0ubuntu1	display or change Ethernet device settings
fdisk	2.31.1-0.4ubuntu3.6	collection of partitioning utilities
file	1:5.32-2ubuntu0.4	Recognize the type of data in a file using "magic" numbers
findutils	4.6.0+git+20170828-2	utilities for finding files--find, xargs
fontconfig	2.12.6-0ubuntu2	generic font configuration library - support binaries
fontconfig-config	2.12.6-0ubuntu2	generic font configuration library - configuration
fonts-dejavu-core	2.37-1	Vera font family derivate with additional characters
fonts-ubuntu-console	0.83-2	console version of the Ubuntu Mono font
friendly-recovery	0.2.38ubuntu1.1	Make recovery boot mode more user-friendly
ftp	0.17-34	classical file transfer client
fuse	2.9.7-1ubuntu1	Filesystem in Userspace
gawk	1:4.1.4+dfsg-1build1	GNU awk, a pattern scanning and processing language
gcc-8-base	8.4.0-1ubuntu1~18.04	GCC, the GNU Compiler Collection (base package)
geoip-database	20180315-1	IP lookup command line tools that use the GeoIP library (country database)
gettext-base	0.19.8.1-6ubuntu0.3	GNU Internationalization utilities for the base system
gir1.2-glib-2.0	1.56.1-1	Introspection data for GLib, GObject, Gio and GModule
git	1:2.17.1-1ubuntu0.7	fast, scalable, distributed revision control system

Table 2-1. Third-party software. (continued)

Package	Version	Description
git-man	1:2.17.1-1ubuntu0.7	fast, scalable, distributed revision control system (manual pages)
gnupg	2.2.4-1ubuntu1.2	GNU privacy guard - a free PGP replacement
gnupg-l10n	2.2.4-1ubuntu1.2	GNU privacy guard - localization files
gnupg-utils	2.2.4-1ubuntu1.2	GNU privacy guard - utility programs
gpg	2.2.4-1ubuntu1.2	GNU Privacy Guard -- minimalist public key operations
gpg-agent	2.2.4-1ubuntu1.2	GNU privacy guard - cryptographic agent
gpg-wks-client	2.2.4-1ubuntu1.2	GNU privacy guard - Web Key Service client
gpg-wks-server	2.2.4-1ubuntu1.2	GNU privacy guard - Web Key Service server
gpgconf	2.2.4-1ubuntu1.2	GNU privacy guard - core configuration utilities
gpgsm	2.2.4-1ubuntu1.2	GNU privacy guard - S/MIME version
gpgv	2.2.4-1ubuntu1.2	GNU privacy guard - signature verification tool
grep	3.1-2build1	GNU grep, egrep and fgrep
groff-base	1.22.3-10	GNU troff text-formatting system (base system components)
grub2-common	2.02-2ubuntu8.23	GRand Unified Bootloader (common files for version 2)
grub-common	2.02-2ubuntu8.23	GRand Unified Bootloader (common files)
grub-gfxpayload-lists	0.7	GRUB gfxpayload blacklist
grub-legacy-ec2	1:01	Handles update-grub for ec2 instances

Table 2-1. Third-party software. (continued)

Package	Version	Description
grub-pc	2.02-2ubuntu8.23	GRand Unified Bootloader, version 2 (PC/BIOS version)
grub-pc-bin	2.02-2ubuntu8.23	GRand Unified Bootloader, version 2 (PC/BIOS binaries)
gzip	1.6-5ubuntu1	GNU compression utilities
hdparm	9.54+ds-1	tune hard disk parameters for high performance
hostname	3.2	utility to set/show the host name or domain name
htop	2.1.0-3	interactive processes viewer
info	6.5.0.dfsg.1-2	Standalone GNU Info documentation browser
init	1.51	metapackage ensuring an init system is installed
init-system-helpers	1.51	helper tools for all init systems
initramfs-tools	0.130ubuntu3.9	generic modular initramfs generator (automation)
initramfs-tools-bin	0.130ubuntu3.9	binaries used by initramfs-tools
initramfs-tools-core	0.130ubuntu3.9	generic modular initramfs generator (core tools)
install-info	6.5.0.dfsg.1-2	Manage installed documentation in info format
installation-report	2.62ubuntu1	system installation report
intel-microcode	3.20200609.0ubuntu0.18.04.1	Processor microcode firmware for Intel CPUs
iproute2	4.15.0-2ubuntu1.2	networking and traffic control tools
iptables	1.6.1-2ubuntu2	administration tools for packet filtering and NAT
iputils-ping	3:20161105-1ubuntu3	Tools to test the reachability of network hosts



Table 2-1. Third-party software. (continued)

Package	Version	Description
iputils-tracepath	3:20161105-1ubuntu3	Tools to trace the network path to a remote host
irqbalance	1.3.0-0.1ubuntu0.18.04.1	Daemon to balance interrupts for SMP systems
isc-dhcp-client	4.3.5-3ubuntu7.1	DHCP client for automatically obtaining an IP address
isc-dhcp-common	4.3.5-3ubuntu7.1	common manpages relevant to all of the isc-dhcp packages
iso-codes	3.79-1	ISO language, territory, currency, script codes and their translations
iucode-tool	2.3.1-1	Intel processor microcode tool
iw	4.14-0.1	tool for configuring Linux wireless devices
kbd	2.0.4-2ubuntu1	Linux console font and keytable utilities
keyboard-configuration	1.178ubuntu2.9	system-wide keyboard preferences
klibc-utils	2.0.4-9ubuntu2	small utilities built with klibc for early boot
kmod	24-1ubuntu3.5	tools for managing Linux kernel modules
krb5-locales	1.16-2ubuntu0.1	internationalization support for MIT Kerberos
landscape-common	18.01-0ubuntu3.5	Landscape administration system client - Common files
language-pack-en	1:18.04+20190718	translation updates for language English
language-pack-en-base	1:18.04+20180712	translations for language English
language-selector-common	0.188.3	Language selector for Ubuntu
laptop-detect	0.16	system chassis type checker

Table 2-1. Third-party software. (continued)

Package	Version	Description
less	487-0.1	pager program similar to more
libaccountsservice0	0.6.45-1ubuntu1	query and manipulate user account information - shared libraries
libacl1	2.2.52-3build1	Access control list shared library
libaio1	0.3.110-5ubuntu0.1	Linux kernel AIO access library - shared library
libapache2-mod-apparmor	2.12-4ubuntu5.1	changehat AppArmor library as an Apache module
libapache2-mod-fcgid	1:2.3.9-1	FastCGI interface module for Apache 2
libapparmor1	2.12-4ubuntu5.1	changehat AppArmor library
libapr1	1.6.3-2	Apache Portable Runtime Library
libaprutil1	1.6.1-2	Apache Portable Runtime Utility Library
libaprutil1-dbd-sqlite3	1.6.1-2	Apache Portable Runtime Utility Library - SQLite3 Driver
libaprutil1-ldap	1.6.1-2	Apache Portable Runtime Utility Library - LDAP Driver
libapt-inst2.0	1.6.12ubuntu0.1	deb package format runtime library
libapt-pkg5.0	1.6.12ubuntu0.1	package management runtime library
libargon2-0	0~20161029-1.1	memory-hard hashing function - runtime library
libasn1-8-heimdal	7.5.0+dfsg-1	Heimdal Kerberos - ASN.1 library
libassuan0	2.5.1-2	IPC library for the GnuPG components
libatm1	1:2.5.1-2build1	shared library for ATM (Asynchronous Transfer Mode)

Table 2-1. Third-party software. (continued)

Package	Version	Description
libattr1	1:2.4.47-2build1	Extended attribute shared library
libaudit1	1:2.8.2-1ubuntu1	Dynamic library for security auditing
libaudit-common	1:2.8.2-1ubuntu1	Dynamic library for security auditing - common files
libauparse0	1:2.8.2-1ubuntu1.1	Dynamic library for parsing security auditing
libavahi-client3	0.7-3.1ubuntu1.3	Avahi client library
libavahi-common3	0.7-3.1ubuntu1.3	Avahi common library
libavahi-common-data	0.7-3.1ubuntu1.3	Avahi common data files
libbind9-160	1:9.11.3+dfsg-1ubuntu1.12	BIND9 Shared Library used by BIND
libblkid1	2.31.1-0.4ubuntu3.6	block device ID library
libbrotli1	1.0.3-1ubuntu1.3	library implementing brotli encoder and decoder (shared libraries)
libbsd0	0.8.7-1ubuntu0.1	utility functions from BSD systems - shared library
libbz2-1.0	1.0.6-8.1ubuntu0.2	high-quality block-sorting file compressor library - runtime
libc6	2.27-3ubuntu1.2	GNU C Library: Shared libraries
libc-bin	2.27-3ubuntu1.2	GNU C Library: Binaries
libcap2	1:2.25-1.2	POSIX 1003.1e capabilities (library)
libcap2-bin	1:2.25-1.2	POSIX 1003.1e capabilities (utilities)
libcap-ng0	0.7.7-3.1	An alternate POSIX capabilities library

Table 2-1. Third-party software. (continued)

Package	Version	Description
libcom-err2	1.44.1-1ubuntu1.3	common error description library
libcrack2	2.9.2-5build1	pro-active password checker library
libcryptsetup12	2:2.0.2-1ubuntu1.1	disk encryption support - shared library
libcups2	2.2.7-1ubuntu2.8	Common UNIX Printing System(tm) - Core library
libcurl3-gnutls	7.58.0-2ubuntu3.9	easy-to-use client-side URL transfer library (GnuTLS flavour)
libcurl4	7.58.0-2ubuntu3.9	easy-to-use client-side URL transfer library (OpenSSL flavour)
libdb5.3	5.3.28-13.1ubuntu1.1	Berkeley v5.3 Database Libraries [runtime]
libdbus-1-3	1.12.2-1ubuntu1.2	simple interprocess messaging system (library)
libdebconfclient0	0.213ubuntu1	Debian Configuration Management System (C-implementation library)
libdevmapper1.02.1	2:1.02.145-4.1ubuntu3.18.04.3	Linux Kernel Device Mapper userspace library
libdevmapper-event1.02.1	2:1.02.145-4.1ubuntu3.18.04.3	Linux Kernel Device Mapper event support library
libdns1100	1:9.11.3+dfsg-1ubuntu1.12	DNS Shared Library used by BIND
libdns-export1100	1:9.11.3+dfsg-1ubuntu1.12	Exported DNS Shared Library
libdouble-conversion1	2.0.1-4ubuntu1	routines to convert IEEE floats to and from strings
libdrm2	2.4.101-2~18.04.1	Userspace interface to kernel DRM services -- runtime
libdrm-amdgpu1	2.4.101-2~18.04.1	Userspace interface to amdgpu-specific kernel DRM services -- runtime

Table 2-1. Third-party software. (continued)

Package	Version	Description
libdrm-common	2.4.101-2~18.04.1	Userspace interface to kernel DRM services -- common files
libdrm-intel1	2.4.101-2~18.04.1	Userspace interface to intel-specific kernel DRM services -- runtime
libdrm-nouveau2	2.4.101-2~18.04.1	Userspace interface to nouveau-specific kernel DRM services -- runtime
libdrm-radeon1	2.4.101-2~18.04.1	Userspace interface to radeon-specific kernel DRM services - - runtime
libedit2	3.1-20170329-1	BSD editline and history libraries
libegl1	1.0.0-2ubuntu2.3	Vendor neutral GL dispatch library -- EGL support
libegl-mesa0	20.0.8-0ubuntu1~18.04.1	free implementation of the EGL API -- Mesa vendor library
libelf1	0.170-0.4ubuntu0.1	library to read and write ELF files
liberror-perl	0.17025-1	Perl module for error/exception handling in an OO-ish way
libestr0	0.1.10-2.1	Helper functions for handling strings (lib)
libevdev2	1.5.8+dfsg-1ubuntu0.1	wrapper library for evdev devices
libevent-2.1-6	2.1.8-stable-4build1	Asynchronous event notification library
libevent-core-2.1-6	2.1.8-stable-4build1	Asynchronous event notification library (core)
libexpat1	2.2.5-3ubuntu0.2	XML parsing C library - runtime library
libext2fs2	1.44.1-1ubuntu1.3	ext2/ext3/ext4 file system libraries
libfastjson4	0.99.8-2	fast json library for C

Table 2-1. Third-party software. (continued)

Package	Version	Description
libfdisk1	2.31.1-0.4ubuntu3.6	fdisk partitioning library
libffi6	3.2.1-8	Foreign Function Interface library runtime
libfontconfig1	2.12.6-0ubuntu2	generic font configuration library - runtime
libfreetype6	2.8.1-2ubuntu2.2	FreeType 2 font engine, shared library files
libfribidi0	0.19.7-2	Free Implementation of the Unicode BiDi algorithm
libfuse2	2.9.7-1ubuntu1	Filesystem in Userspace (library)
libgbm1	20.0.8-0ubuntu1~18.04.1	generic buffer management API -- runtime
libgcc1	1:8.4.0-1ubuntu1~18.04	GCC support library
libgcrypt20	1.8.1-4ubuntu1.2	LGPL Crypto library - runtime library
libgdbm5	1.14.1-6	GNU dbm database routines (runtime version)
libgdbm-compat4	1.14.1-6	GNU dbm database routines (legacy support runtime version)
libgeoip1	1.6.12-1	non-DNS IP-to-country resolver library
libgirepository-1.0-1	1.56.1-1	Library for handling GObject introspection data (runtime library)
libgl1	1.0.0-2ubuntu2.3	Vendor neutral GL dispatch library -- legacy GL support
libgl1-mesa-dri	20.0.8-0ubuntu1~18.04.1	free implementation of the OpenGL API -- DRI modules
libglapi-mesa	20.0.8-0ubuntu1~18.04.1	free implementation of the GL API -- shared library

Table 2-1. Third-party software. (continued)

Package	Version	Description
libglib2.0-0	2.56.4-0ubuntu0.18.04.6	GLib library of C routines
libglib2.0-data	2.56.4-0ubuntu0.18.04.6	Common files for GLib library
libglvnd0	1.0.0-2ubuntu2.3	Vendor neutral GL dispatch library
libglx0	1.0.0-2ubuntu2.3	Vendor neutral GL dispatch library -- GLX support
libglx-mesa0	20.0.8-0ubuntu1~18.04.1	free implementation of the OpenGL API -- GLX vendor library
libgmp10	2:6.1.2+dfsg-2	Multiprecision arithmetic library
libgnutls30	3.5.18-1ubuntu1.4	GNU TLS library - main runtime library
libgpg-error0	1.27-6	library for common error values and messages in GnuPG components
libgpm2	1.20.7-5	General Purpose Mouse - shared library
libgraphite2-3	1.3.11-2	Font rendering engine for Complex Scripts -- library
libgssapi3-heimdal	7.5.0+dfsg-1	Heimdal Kerberos - GSSAPI support library
libgssapi-krb5-2	1.16-2ubuntu0.1	MIT Kerberos runtime libraries - krb5 GSS-API Mechanism
libgstreamer1.0-0	1.14.5-0ubuntu1~18.04.2	Core GStreamer libraries and elements
libgstreamer-plugins-base1.0-0	1.14.5-0ubuntu1~18.04.3	GStreamer libraries from the "base" set
libgudev-1.0-0	1:232-2	GObject-based wrapper library for libudev
libharfbuzz0b	1.7.2-1ubuntu1	OpenType text shaping engine (shared library)
libhcrypto4-heimdal	7.5.0+dfsg-1	Heimdal Kerberos - crypto library

Table 2-1. Third-party software. (continued)

Package	Version	Description
libheimbase1-heimdal	7.5.0+dfsg-1	Heimdal Kerberos - Base library
libheimntlm0-heimdal	7.5.0+dfsg-1	Heimdal Kerberos - NTLM support library
libhogweed4	3.4-1	low level cryptographic library (public-key cryptos)
libhx509-5-heimdal	7.5.0+dfsg-1	Heimdal Kerberos - X509 support library
libhyphen0	2.8.8-5	ALTLinux hyphenation library - shared library
libice6	2:1.0.9-2	X11 Inter-Client Exchange library
libicu60	60.2-3ubuntu3.1	International Components for Unicode
libidn2-0	2.0.4-1.1ubuntu0.2	Internationalized domain names (IDNA2008/TR46) library
libidn11	1.33-2.1ubuntu1.2	GNU Libidn library, implementation of IETF IDN specifications
libinput10	1.10.4-1ubuntu0.18.04.2	input device management and event handling library - shared library
libinput-bin	1.10.4-1ubuntu0.18.04.2	input device management and event handling library - udev quirks
libip4tc0	1.6.1-2ubuntu2	netfilter libip4tc library
libip6tc0	1.6.1-2ubuntu2	netfilter libip6tc library
libiptc0	1.6.1-2ubuntu2	netfilter libiptc library
libirs160	1:9.11.3+dfsg-1ubuntu1.12	DNS Shared Library used by BIND
libisc169	1:9.11.3+dfsg-1ubuntu1.12	ISC Shared Library used by BIND



Table 2-1. Third-party software. (continued)

Package	Version	Description
libisc-export169	1:9.11.3+dfsg-1ubuntu1.12	Exported ISC Shared Library
libisccc160	1:9.11.3+dfsg-1ubuntu1.12	Command Channel Library used by BIND
libiscfg160	1:9.11.3+dfsg-1ubuntu1.12	Config File Handling Library used by BIND
libisns0	0.97-2build1	Internet Storage Name Service - shared libraries
libjansson4	2.11-1	C library for encoding, decoding and manipulating JSON data
libjpeg8	8c-2ubuntu8	Independent JPEG Group's JPEG runtime library (dependency package)
libjpeg-turbo8	1.5.2-0ubuntu5.18.04.4	IJG JPEG compliant runtime library.
libjson-c3	0.12.1-1.3ubuntu0.3	JSON manipulation library - shared library
libk5crypto3	1.16-2ubuntu0.1	MIT Kerberos runtime libraries - Crypto Library
libkeyutils1	1.5.9-9.2ubuntu2	Linux Key Management Utilities (library)
libklibc	2.0.4-9ubuntu2	minimal libc subset for use with initramfs
libkmod2	24-1ubuntu3.5	libkmod shared library
libkrb5-3	1.16-2ubuntu0.1	MIT Kerberos runtime libraries
libkrb5-26-heimdal	7.5.0+dfsg-1	Heimdal Kerberos - libraries
libkrb5support0	1.16-2ubuntu0.1	MIT Kerberos runtime libraries - Support library
libksba8	1.3.5-2	X.509 and CMS support library
libldap-2.4-2	2.4.45+dfsg-1ubuntu1.6	OpenLDAP libraries

Table 2-1. Third-party software. (continued)

Package	Version	Description
libldap-common	2.4.45+dfsg-1ubuntu1.6	OpenLDAP common files for libraries
libldb1	2:1.2.3-1ubuntu0.2	LDAP-like embedded database - shared library
libllvm10	1:10.0.0-4ubuntu1~18.04.2	Modular compiler and toolchain technologies, runtime library
liblocale-gettext-perl	1.07-3build2	module using libc functions for internationalization in Perl
liblua5.2-0	5.2.4-1.1build1	Shared library for the Lua interpreter version 5.2
liblvm2app2.2	2.02.176-4.1ubuntu3.18.04.3	LVM2 application library
liblvm2cmd2.02	2.02.176-4.1ubuntu3.18.04.3	LVM2 command library
liblwres160	1:9.11.3+dfsg-1ubuntu1.12	Lightweight Resolver Library used by BIND
liblxc1	3.0.3-0ubuntu1~18.04.1	Linux Containers userspace tools (library)
liblxc-common	3.0.3-0ubuntu1~18.04.1	Linux Containers userspace tools (common tools)
liblz4-1	0.0~r131-2ubuntu3	Fast LZ compression algorithm library - runtime
liblzma5	5.2.2-1.3	XZ-format compression library
liblzo2-2	2.08-1.2	data compression library
libmagic1	1:5.32-2ubuntu0.4	Recognize the type of data in a file using "magic" numbers - library
libmagic-mgc	1:5.32-2ubuntu0.4	File type determination library using "magic" numbers (compiled magic file)
libmn10	1.0.4-2	minimalistic Netlink communication library

Table 2-1. Third-party software. (continued)

Package	Version	Description
libmount1	2.31.1-0.4ubuntu3.6	device mounting library
libmpdec2	2.4.2-1ubuntu1	library for decimal floating point arithmetic (runtime library)
libmpfr6	4.0.1-1	multiple precision floating-point computation
libmspack0	0.6-3ubuntu0.3	library for Microsoft compression formats (shared library)
libmtdev1	1.1.5-1ubuntu3	Multitouch Protocol Translation Library - shared library
libncurses5	6.1-1ubuntu1.18.04	shared libraries for terminal handling
libncursesw5	6.1-1ubuntu1.18.04	shared libraries for terminal handling (wide character support)
libnetfilter-contrack3	1.0.6-2	Netfilter netlink-contrack library
libnetplan0	0.99-0ubuntu3~18.04.3	YAML network configuration abstraction runtime library
libnettle6	3.4-1	low level cryptographic library (symmetric and one-way cryptos)
libnewt0.52	0.52.20-1ubuntu1	Not Erik's Windowing Toolkit - text mode windowing with slang
libnfnetlink0	1.0.1-3	Netfilter netlink library
libnghttp2-14	1.30.0-1ubuntu1	library implementing HTTP/2 protocol (shared library)
libnih1	1.0.3-6ubuntu2	NIH Utility Library
libnl-3-200	3.2.29-0ubuntu3	library for dealing with netlink sockets
libnl-genl-3-200	3.2.29-0ubuntu3	library for dealing with netlink sockets - generic netlink

Table 2-1. Third-party software. (continued)

Package	Version	Description
libnpth0	1.5-3	replacement for GNU Pth using system threads
libnss-systemd	237-3ubuntu10.42	nss module providing dynamic user and group name resolution
libntfs-3g88	1:2017.3.23-2ubuntu0.18.04.2	read/write NTFS driver for FUSE (runtime library)
libnuma1	2.0.11-2.1ubuntu0.1	Libraries for controlling NUMA policy
liborc-0.4-0	1:0.4.28-1	Library of Optimized Inner Loops Runtime Compiler
libp11-kit0	0.23.9-2	library for loading and coordinating access to PKCS#11 modules - runtime
libpam0g	1.1.8-3.6ubuntu2.18.04.1	Pluggable Authentication Modules library
libpam-cap	1:2.25-1.2	POSIX 1003.1e capabilities (PAM module)
libpam-modules	1.1.8-3.6ubuntu2.18.04.1	Pluggable Authentication Modules for PAM
libpam-modules-bin	1.1.8-3.6ubuntu2.18.04.1	Pluggable Authentication Modules for PAM - helper binaries
libpam-pwquality	1.4.0-2	PAM module to check password strength
libpam-runtime	1.1.8-3.6ubuntu2.18.04.1	Runtime support for the PAM library
libpam-systemd	237-3ubuntu10.42	system and service manager - PAM module
libparted2	3.2-20ubuntu0.2	disk partition manipulator - shared library
libpcap0.8	1.8.1-6ubuntu1.18.04.1	system interface for user-level packet capture
libpci3	1:3.5.2-1ubuntu1.1	Linux PCI Utilities (shared library)

Table 2-1. Third-party software. (continued)

Package	Version	Description
libpciaccess0	0.14-1	Generic PCI access library for X
libpcre3	2:8.39-9	Old Perl 5 Compatible Regular Expression Library - runtime files
libperl5.26	5.26.1-6ubuntu0.3	shared Perl library
libpipeline1	1.5.0-1	pipeline manipulation library
libplymouth4	0.9.3-1ubuntu7.18.04.2	graphical boot animation and logger - shared libraries
libpng16-16	1.6.34-1ubuntu0.18.04.2	PNG library - runtime (version 1.6)
libpolkit-agent-1-0	0.105-20ubuntu0.18.04.5	PolicyKit Authentication Agent API
libpolkit-backend-1-0	0.105-20ubuntu0.18.04.5	PolicyKit backend API
libpolkit-gobject-1-0	0.105-20ubuntu0.18.04.5	PolicyKit Authorization API
libpopt0	1.16-11	lib for parsing cmdline parameters
libprocps6	2:3.3.12-3ubuntu1.2	library for accessing process information from /proc
libpsl5	0.19.1-5build1	Library for Public Suffix List (shared libraries)
libpwquality1	1.4.0-2	library for password quality checking and generation
libpwquality-common	1.4.0-2	library for password quality checking and generation (data files)
libpython2.7	2.7.17-1~18.04ubuntu1.6	Shared Python runtime library (version 2.7)
libpython2.7-minimal	2.7.17-1~18.04ubuntu1.6	Minimal subset of the Python language (version 2.7)

Table 2-1. Third-party software. (continued)

Package	Version	Description
libpython2.7-stdlib	2.7.17-1~18.04ubuntu1.6	Interactive high-level object-oriented language (standard library, version 2.7)
libpython3-stdlib	3.6.7-1~18.04	interactive high-level object-oriented language (default python3 version)
libpython3.6	3.6.9-1~18.04ubuntu1.1	Shared Python runtime library (version 3.6)
libpython3.6-minimal	3.6.9-1~18.04ubuntu1.1	Minimal subset of the Python language (version 3.6)
libpython3.6-stdlib	3.6.9-1~18.04ubuntu1.1	Interactive high-level object-oriented language (standard library, version 3.6)
libpython-stdlib	2.7.15~rc1-1	interactive high-level object-oriented language (default python version)
libqt5core5a	5.9.5+dfsg-0ubuntu2.6	Qt 5 core module
libqt5dbus5	5.9.5+dfsg-0ubuntu2.6	Qt 5 D-Bus module
libqt5gui5	5.9.5+dfsg-0ubuntu2.6	Qt 5 GUI module
libqt5network5	5.9.5+dfsg-0ubuntu2.6	Qt 5 network module
libqt5positioning5	5.9.5+dfsg-0ubuntu2	Qt Positioning module
libqt5printsupport5	5.9.5+dfsg-0ubuntu2.6	Qt 5 print support module
libqt5qml5	5.9.5-0ubuntu1.1	Qt 5 QML module
libqt5quick5	5.9.5-0ubuntu1.1	Qt 5 Quick library
libqt5sensors5	5.9.5-0ubuntu1	Qt Sensors module

Table 2-1. Third-party software. (continued)

Package	Version	Description
libqt5webchannel5	5.9.5-0ubuntu1	Web communication library for Qt
libqt5webkit5	5.212.0~alpha2-7ubuntu1	Web content engine library for Qt
libqt5widgets5	5.9.5+dfsg-0ubuntu2.6	Qt 5 widgets module
libreadline5	5.2+dfsg-3build1	GNU readline and history libraries, run-time libraries
libreadline7	7.0-3	GNU readline and history libraries, run-time libraries
libroken18-heimdal	7.5.0+dfsg-1	Heimdal Kerberos - roken support library
librtmp1	2.4+20151223.gitfa8646d.1-1	toolkit for RTMP streams (shared library)
libsasl2-2	2.1.27~101-g0780600+dfsg-3ubuntu2.1	Cyrus SASL - authentication abstraction library
libsasl2-modules	2.1.27~101-g0780600+dfsg-3ubuntu2.1	Cyrus SASL - pluggable authentication modules
libsasl2-modules-db	2.1.27~101-g0780600+dfsg-3ubuntu2.1	Cyrus SASL - pluggable authentication modules (DB)
libseccomp2	2.4.3-1ubuntu3.18.04.3	high level interface to Linux seccomp filter
libselinux1	2.7-2build2	SELinux runtime shared libraries
libsemanage1	2.7-2build2	SELinux policy management library
libsemanage-common	2.7-2build2	Common files for SELinux policy management libraries
libsensors4	1:3.4.0-4	library to read temperature/voltage/fan sensors
libsepol1	2.7-1	SELinux library for manipulating binary security policies
libsigsegv2	2.12-1	Library for handling page faults in a portable way
libslang2	2.3.1a-3ubuntu1	S-Lang programming library - runtime version

Table 2-1. Third-party software. (continued)

Package	Version	Description
libsm6	2:1.2.2-1	X11 Session Management library
libsmartcols1	2.31.1-0.4ubuntu3.6	smart column output alignment library
libsqlite3-0	3.22.0-1ubuntu0.4	SQLite 3 shared library
libss2	1.44.1-1ubuntu1.3	command-line interface parsing library
libssl1.0.0	1.0.2n-1ubuntu5.7	Secure Sockets Layer toolkit - shared libraries
libssl1.1	1.1.1-1ubuntu2.1~18.04.6	Secure Sockets Layer toolkit - shared libraries
libstdc++6	8.4.0-1ubuntu1~18.04	GNU Standard C++ Library v3
libsystemd0	237-3ubuntu10.42	systemd utility library
libtalloc2	2.1.10-2ubuntu1	hierarchical pool based memory allocator
libtasn1-6	4.13-2	Manage ASN.1 structures (runtime)
libtdb1	1.3.15-2	Trivial Database - shared library
libevent0	0.9.34-1	talloc-based event loop library - shared library
libtext-charwidth-perl	0.04-7.1	get display widths of characters on the terminal
libtext-iconv-perl	1.7-5build6	converts between character sets in Perl
libtext-wrapi18n-perl	0.06-7.1	internationalized substitute of Text::Wrap
libtinfo5	6.1-1ubuntu1.18.04	shared low-level terminfo library for terminal handling
libudev1	237-3ubuntu10.42	libudev shared library
libunistring2	0.9.9-0ubuntu2	Unicode string library for C



Table 2-1. Third-party software. (continued)

Package	Version	Description
libunwind8	1.2.1-8	library to determine the call-chain of a program - runtime
libusb-1.0-0	2:1.0.21-2	userspace USB programming library
libutempter0	1.1.6-3	privileged helper for utmp/wtmp updates (runtime)
libuuid1	2.31.1-0.4ubuntu3.6	Universally Unique ID library
libuv1	1.18.0-3	asynchronous event notification library - runtime library
libwacom2	0.29-1	Wacom model feature query library
libwacom-common	0.29-1	Wacom model feature query library (common files)
libwayland-client0	1.16.0-1ubuntu1.1~18.04.3	wayland compositor infrastructure - client library
libwayland-server0	1.16.0-1ubuntu1.1~18.04.3	wayland compositor infrastructure - server library
libwbclient0	2:4.7.6+dfsg~ubuntu-0ubuntu2.27	Samba winbind client library
libwebp6	0.6.1-2ubuntu0.18.04.1	Lossy compression of digital photographic images.
libwind0-heimdal	7.5.0+dfsg-1	Heimdal Kerberos - stringprep implementation
libwoff1	1.0.2-1build0.1	library for converting fonts to WOFF 2.0
libwrap0	7.6.q-27	Wietse Venema's TCP wrappers library
libx11-6	2:1.6.4-3ubuntu0.2	X11 client-side library
libx11-data	2:1.6.4-3ubuntu0.2	X11 client-side library
libx11-xcb1	2:1.6.4-3ubuntu0.4	Xlib/XCB interface library
libxau6	1:1.0.8-1ubuntu1	X11 authorisation library

Table 2-1. Third-party software. (continued)

Package	Version	Description
libxcb1	1.13-2~ubuntu18.04	X C Binding
libxcb-dri2-0	1.13-2~ubuntu18.04	X C Binding, dri2 extension
libxcb-dri3-0	1.13-2~ubuntu18.04	X C Binding, dri3 extension
libxcb-glx0	1.13-2~ubuntu18.04	X C Binding, glx extension
libxcb-icccm4	0.4.1-1ubuntu1	utility libraries for X C Binding -- icccm
libxcb-image0	0.4.0-1build1	utility libraries for X C Binding -- image
libxcb-keysyms1	0.4.0-1	utility libraries for X C Binding -- keysyms
libxcb-present0	1.13-2~ubuntu18.04	X C Binding, present extension
libxcb-randr0	1.13-2~ubuntu18.04	X C Binding, randr extension
libxcb-render0	1.13-2~ubuntu18.04	X C Binding, render extension
libxcb-render-util0	0.3.9-1	utility libraries for X C Binding -- render-util
libxcb-shape0	1.13-2~ubuntu18.04	X C Binding, shape extension
libxcb-shm0	1.13-2~ubuntu18.04	X C Binding, shm extension
libxcb-sync1	1.13-2~ubuntu18.04	X C Binding, sync extension
libxcb-util1	0.4.0-0ubuntu3	utility libraries for X C Binding -- atom, aux and event
libxcb-xfixes0	1.13-2~ubuntu18.04	X C Binding, xfixes extension
libxcb-xinerama0	1.13-2~ubuntu18.04	X C Binding, xinerama extension
libxcb-xkb1	1.13-2~ubuntu18.04	X C Binding, XKEYBOARD extension

Table 2-1. Third-party software. (continued)

Package	Version	Description
libxdamage1	1:1.1.4-3	X11 damaged region extension library
libxdmcp6	1:1.1.2-3	X11 Display Manager Control Protocol library
libxext6	2:1.3.3-1	X11 miscellaneous extension library
libxfixed3	1:5.0.3-1	X11 miscellaneous 'fixes' extension library
libxi6	2:1.7.9-1	X11 Input extension library
libxkbcommon0	0.8.2-1~ubuntu18.04.1	library interface to the XKB compiler - shared library
libxkbcommon-x11-0	0.8.2-1~ubuntu18.04.1	library to create keymaps with the XKB X11 protocol
libxml2	2.9.4+dfsg1-6.1ubuntu1.3	GNOME XML library
libxmlsec1	1.2.25-1build1	XML security library
libxmlsec1-openssl	1.2.25-1build1	Openssl engine for the XML security library
libxmuu1	2:1.1.2-2	X11 miscellaneous micro-utility library
libxshmfence1	1.3-1	X shared memory fences - shared library
libxslt1.1	1.1.29-5ubuntu0.2	XSLT 1.0 processing library - runtime library
libxtables12	1.6.1-2ubuntu2	netfilter xtables library
libxxf86vm1	1:1.1.4-1	X11 XFree86 video mode extension library
libyaml-0-2	0.1.7-2ubuntu3	Fast YAML 1.1 parser and emitter library
libzstd1	1.3.3+dfsg-2ubuntu1.1	fast lossless compression algorithm
linux-base	4.5ubuntu1.2	Linux image base package

Table 2-1. Third-party software. (continued)

Package	Version	Description
linux-firmware	1.173.19	Firmware for Linux kernel drivers
linux-generic	4.15.0.112.100	Complete Generic Linux kernel and headers
linux-headers-4.15.0-112	4.15.0-112.113	Header files related to Linux kernel version 4.15.0
linux-headers-4.15.0-112-generic	4.15.0-112.113	Linux kernel headers for version 4.15.0 on 64 bit x86 SMP
linux-headers-generic	4.15.0.112.100	Generic Linux kernel headers
linux-image-4.15.0-112-generic	4.15.0-112.113	Signed kernel image generic
linux-image-generic	4.15.0.112.100	Generic Linux kernel image
linux-modules-4.15.0-112-generic	4.15.0-112.113	Linux kernel extra modules for version 4.15.0 on 64 bit x86 SMP
linux-modules-extra-4.15.0-112-generic	4.15.0-112.113	Linux kernel extra modules for version 4.15.0 on 64 bit x86 SMP
locales	2.27-3ubuntu1.2	GNU C Library: National Language (locale) data [support]
login	1:4.5-1ubuntu2	system login tools
logrotate	3.11.0-0.1ubuntu1	Log rotation utility
lsb-base	9.20170808ubuntu1	Linux Standard Base init script functionality
lsb-release	9.20170808ubuntu1	Linux Standard Base version reporting utility
lshw	02.18-0.1ubuntu6.18.04.1	information about hardware configuration
lsuf	4.89+dfsg-0.1	Utility to list open files

Table 2-1. Third-party software. (continued)

Package	Version	Description
ltrace	0.7.3-6ubuntu1	Tracks runtime library calls in dynamically linked programs
lvm2	2.02.176-4.1ubuntu3.18.04.3	Linux Logical Volume Manager
lxdfs	3.0.3-0ubuntu1~18.04.2	FUSE based filesystem for LXC
lxd	3.0.3-0ubuntu1~18.04.1	Container hypervisor based on LXC - daemon
lxd-client	3.0.3-0ubuntu1~18.04.1	Container hypervisor based on LXC - client
man-db	2.8.3-2ubuntu0.1	on-line manual pager
manpages	4.15-1	Manual pages about using a GNU/Linux system
mawk	1.3.3-17ubuntu3	a pattern scanning and text processing language
mdadm	4.1~rc1-3~ubuntu18.04.4	tool to administer Linux MD arrays (software RAID)
mime-support	3.60ubuntu1	MIME files 'mime.types' & 'mailcap', and support programs
mlocate	0.26-2ubuntu3.1	quickly find files on the filesystem based on their name
mount	2.31.1-0.4ubuntu3.6	tools for mounting and manipulating filesystems
mtr-tiny	0.92-1	Full screen ncurses traceroute tool
multiarch-support	2.27-3ubuntu1.2	Transitional package to ensure multiarch compatibility
mysql-client-5.7	5.7.36-0ubuntu0.18.04.1	MySQL database client binaries
mysql-client-core-5.7	5.7.36-0ubuntu0.18.04.1	MySQL database core client binaries
mysql-common	5.8+1.0.4	MySQL database common files, e.g. /etc/mysql/my.cnf

Table 2-1. Third-party software. (continued)

Package	Version	Description
mysql-server	5.7.36-0ubuntu0.18.04.1	MySQL database server (metapackage depending on the latest version)
mysql-server-5.7	5.7.36-0ubuntu0.18.04.1	MySQL database server binaries and system database setup
mysql-server-core-5.7	5.7.36-0ubuntu0.18.04.1	MySQL database server binaries
nano	2.9.3-2	small, friendly text editor inspired by Pico
ncurses-base	6.1-1ubuntu1.18.04	basic terminal type definitions
ncurses-bin	6.1-1ubuntu1.18.04	terminal-related programs and man pages
net-tools	1.60+git20161116.90da8a0-1ubuntu1	NET-3 networking toolkit
netbase	5.4	Basic TCP/IP networking system
netcat-openbsd	1.187-1ubuntu0.1	TCP/IP swiss army knife
netplan.io	0.99-0ubuntu3~18.04.3	YAML network configuration abstraction for various backends
networkd-dispatcher	1.7-0ubuntu3.3	Dispatcher service for systemd-networkd connection status changes
nplan	0.99-0ubuntu3~18.04.3	YAML network configuration abstraction - transitional package
ntfs-3g	1:2017.3.23-2ubuntu0.18.04.2	read/write NTFS driver for FUSE
open-iscsi	2.0.874-5ubuntu2.10	iSCSI initiator tools
open-vm-tools	2:11.0.5-4ubuntu0.18.04.1	Open VMware Tools for virtual machines hosted on VMware (CLI)

Table 2-1. Third-party software. (continued)

Package	Version	Description
openssh-client	1:7.6p1-4ubuntu0.3	secure shell (SSH) client, for secure access to remote machines
openssl	1.1.1-1ubuntu2.1~18.04.6	Secure Sockets Layer toolkit - cryptographic utility
openssl1.0	1.0.2n-1ubuntu5.7	Secure Sockets Layer toolkit 1.0 - cryptographic utility
os-prober	1.74ubuntu1	utility to detect other OSes on a set of drives
overlayroot	0.40ubuntu1.1	use an overlays on top of a read-only root filesystem
parted	3.2-20ubuntu0.2	disk partition manipulator
passwd	1:4.5-1ubuntu2	change and administer password and group data
pastebinit	1.5-2	command-line pastebin client
patch	2.7.6-2ubuntu1.1	Apply a diff file to an original
pciutils	1:3.5.2-1ubuntu1.1	Linux PCI Utilities
perl	5.26.1-6ubuntu0.3	Larry Wall's Practical Extraction and Report Language
perl-base	5.26.1-6ubuntu0.3	minimal Perl system
perl-modules-5.26	5.26.1-6ubuntu0.3	Core Perl modules
phantomjs	2.1.1+dfsg-2	minimalistic headless WebKit-based browser with JavaScript API
pinentry-curses	1.1.0-1	curses-based PIN or pass-phrase entry dialog for GnuPG
plymouth	0.9.3-1ubuntu7.18.04.2	boot animation, logger and I/O multiplexer

Table 2-1. Third-party software. (continued)

Package	Version	Description
plymouth-theme-ubuntu-text	0.9.3-1ubuntu7.18.04.2	boot animation, logger and I/O multiplexer - ubuntu text theme
policykit-1	0.105-20ubuntu0.18.04.5	framework for managing administrative policies and privileges
pollinate	4.33-0ubuntu1~18.04.1	seed the pseudo random number generator
popularity-contest	1.66ubuntu1	Vote for your favourite packages automatically
powermgmt-base	1.33	common utils for power management
procps	2:3.3.12-3ubuntu1.2	/proc file system utilities
psmisc	23.1-1ubuntu0.1	utilities that use the proc file system
publicsuffix	20180223.1310-1	accurate, machine-readable list of domain name suffixes
python	2.7.15~rc1-1	interactive high-level object-oriented language (default version)
python2.7	2.7.17-1~18.04ubuntu1.6	Interactive high-level object-oriented language (version 2.7)
python2.7-minimal	2.7.17-1~18.04ubuntu1.6	Minimal subset of the Python language (version 2.7)
python3	3.6.7-1~18.04	interactive high-level object-oriented language (default python3 version)
python3-apparmor	2.12-4ubuntu5.1	AppArmor Python3 utility library
python3-apport	2.20.9-0ubuntu7.16	Python 3 library for Apport crash report handling
python3-apt	1.6.5ubuntu0.3	Python 3 interface to libapt-pkg



Table 2-1. Third-party software. (continued)

Package	Version	Description
python3-asn1crypto	0.24.0-1	Fast ASN.1 parser and serializer (Python 3)
python3-attr	17.4.0-2	Attributes without boilerplate (Python 3)
python3-automat	0.6.0-1	Self-service finite-state machines for the programmer on the go
python3-certifi	2018.1.18-2	root certificates for validating SSL certs and verifying TLS hosts (python3)
python3-cffi-backend	1.11.5-1	Foreign Function Interface for Python 3 calling C code - runtime
python3-chardet	3.0.4-1	universal character encoding detector for Python3
python3-click	6.7-3	Simple wrapper around optparse for powerful command line utilities - Python 3.x
python3-colorama	0.3.7-1	Cross-platform colored terminal text in Python - Python 3.x
python3-commandnotfound	18.04.5	Python 3 bindings for command-not-found.
python3-configobj	5.0.6-2	simple but powerful config file reader and writer for Python 3
python3-constantly	15.1.0-1	Symbolic constants in Python
python3-cryptography	2.1.4-1ubuntu1.3	Python library exposing cryptographic recipes and primitives (Python 3)
python3-dbus	1.2.6-1	simple interprocess messaging system (Python 3 interface)
python3-debconf	1.5.66ubuntu1	interact with debconf from Python 3

Table 2-1. Third-party software. (continued)

Package	Version	Description
python3-debian	0.1.32	Python 3 modules to work with Debian-related data formats
python3-distro-info	0.18ubuntu0.18.04.1	information about distributions' releases (Python 3 module)
python3-distupgrade	1:18.04.38	manage release upgrades
python3-gdbm	3.6.9-1~18.04	GNU dbm database support for Python 3.x
python3-gi	3.26.1-2ubuntu1	Python 3 bindings for GObject-introspection libraries
python3-httplib2	0.9.2+dfsg-1ubuntu0.2	comprehensive HTTP client library written for Python3
python3-hyperlink	17.3.1-2	Immutable, Pythonic, correct URLs.
python3-idna	2.6-1	Python IDNA2008 (RFC 5891) handling (Python 3)
python3-incremental	16.10.1-3	Library for versioning Python projects.
python3-libapparmor	2.12-4ubuntu5.1	AppArmor library Python3 bindings
python3-minimal	3.6.7-1~18.04	minimal subset of the Python language (default python3 version)
python3-netifaces	0.10.4-0.1build4	portable network interface information - Python 3.x
python3-newt	0.52.20-1ubuntu1	NEWT module for Python3
python3-openssl	17.5.0-1ubuntu1	Python 3 wrapper around the OpenSSL library
python3-pam	0.4.2-13.2ubuntu4	Python interface to the PAM library
python3-pkg-resources	39.0.1-2	Package Discovery and Resource Access using pkg_resources
python3-problem-report	2.20.9-0ubuntu7.16	Python 3 library to handle problem reports

Table 2-1. Third-party software. (continued)

Package	Version	Description
python3-pyasn1	0.4.2-3	ASN.1 library for Python (Python 3 module)
python3-pyasn1-modules	0.2.1-0.2	Collection of protocols modules written in ASN.1 language (Python 3)
python3-requests	2.18.4-2ubuntu0.1	elegant and simple HTTP library for Python3, built for human beings
python3-requests-unixsocket	0.1.5-3	Use requests to talk HTTP via a UNIX domain socket - Python 3.x
python3-serial	3.4-2	pyserial - module encapsulating access for the serial port
python3-service-identity	16.0.0-2	Service identity verification for pyOpenSSL (Python 3 module)
python3-six	1.11.0-2	Python 2 and 3 compatibility library (Python 3 interface)
python3-software-properties	0.96.24.32.13	manage the repositories that you install software from
python3-systemd	234-1build1	Python 3 bindings for systemd
python3-twisted	17.9.0-2ubuntu0.1	Event-based framework for internet applications
python3-twisted-bin	17.9.0-2ubuntu0.1	Event-based framework for internet applications
python3-update-manager	1:18.04.11.13	python 3.x module for update-manager
python3-urllib3	1.22-1ubuntu0.18.04.1	HTTP library with thread-safe connection pooling for Python3
python3-yaml	3.12-1build2	YAML parser and emitter for Python3
python3-zope.interface	4.3.2-1build2	Interfaces for Python3

Table 2-1. Third-party software. (continued)

Package	Version	Description
python3.6	3.6.9-1~18.04ubuntu1.1	Interactive high-level object-oriented language (version 3.6)
python3.6-minimal	3.6.9-1~18.04ubuntu1.1	Minimal subset of the Python language (version 3.6)
python-apt-common	1.6.5ubuntu0.3	Python interface to libapt-pkg (locales)
python-crypto	2.6.1-8ubuntu2	cryptographic algorithms and protocols for Python
python-dnspython	1.15.0-1	DNS toolkit for Python
python-ldb	2:1.2.3-1ubuntu0.2	Python bindings for LDB
python-minimal	2.7.15~rc1-1	minimal subset of the Python language (default version)
python-samba	2:4.7.6+dfsg~ubuntu-0ubuntu2.27	Python bindings for Samba
python-talloc	2.1.10-2ubuntu1	hierarchical pool based memory allocator - Python bindings
python-tdb	1.3.15-2	Python bindings for TDB
readline-common	7.0-3	GNU readline and history libraries, common files
rsync	3.1.2-2.1ubuntu1.1	fast, versatile, remote (and local) file-copying tool
rsyslog	8.32.0-1ubuntu4	reliable system and kernel logging daemon
run-one	1.17-0ubuntu1	run just one instance of a command and its args at a time
samba	2:4.7.6+dfsg~ubuntu-0ubuntu2.27	SMB/CIFS file, print, and login server for Unix
samba-common	2:4.7.6+dfsg~ubuntu-0ubuntu2.27	common files used by both the Samba server and client
samba-common-bin	2:4.7.6+dfsg~ubuntu-0ubuntu2.27	Samba common files used by both the server and the client
samba-libs	2:4.7.6+dfsg~ubuntu-0ubuntu2.27	Samba core libraries

Table 2-1. Third-party software. (continued)

Package	Version	Description
screen	4.6.2-1ubuntu1	terminal multiplexer with VT100/ANSI terminal emulation
sed	4.4-2	GNU stream editor for filtering/transforming text
sensible-utils	0.0.12	Utilities for sensible alternative selection
shared-mime-info	1.9-2	FreeDesktop.org shared MIME database and spec
snapd	2.45.1+18.04.2	Daemon and tooling that enable snap packages
software-properties-common	0.96.24.32.13	manage the repositories that you install software from (common)
sosreport	3.9.1-1ubuntu0.18.04.2	Set of tools to gather troubleshooting data from a system
squashfs-tools	1:4.3-6ubuntu0.18.04.1	Tool to create and append to squashfs filesystems
strace	4.21-1ubuntu1	System call tracer
sudo	1.8.21p2-3ubuntu1.4	Provide limited super user privileges to specific users
systemd	237-3ubuntu10.42	system and service manager
systemd-sysv	237-3ubuntu10.42	system and service manager - SysV links
sysvinit-utils	2.88dsf-59.10ubuntu1	System-V-like utilities
tar	1.29b-2ubuntu0.1	GNU version of the tar archiving utility
tasksel	3.34ubuntu11	tool for selecting tasks for installation on Debian systems
tasksel-data	3.34ubuntu11	official tasks used for installation of Debian systems
tcpdump	4.9.3-0ubuntu0.18.04.1	command-line network traffic analyzer

Table 2-1. Third-party software. (continued)

Package	Version	Description
tdb-tools	1.3.15-2	Trivial Database - bundled binaries
time	1.7-25.1build1	GNU time program for measuring CPU resource usage
tmux	2.6-3ubuntu0.2	terminal multiplexer
tzdata	2020a-0ubuntu0.18.04	time zone and daylight-saving time data
ubuntu-advantage-tools	17	management tools for Ubuntu Advantage
ubuntu-keyring	2018.09.18.1~18.04.0	GnuPG keys of the Ubuntu archive
ubuntu-minimal	1.417.4	Minimal core of Ubuntu
ubuntu-release-upgrader-core	1:18.04.38	manage release upgrades
ubuntu-standard	1.417.4	The Ubuntu standard system
ucf	3.0038	Update Configuration File(s): preserve user changes to config files
udev	237-3ubuntu10.42	/dev/ and hotplug management daemon
ufw	0.36-0ubuntu0.18.04.1	program for managing a Netfilter firewall
uidmap	1:4.5-1ubuntu2	programs to help use subuids
unattended-upgrades	1.1ubuntu1.18.04.14	automatic installation of security upgrades
unzip	6.0-21ubuntu1.1	De-archiver for .zip files
update-manager-core	1:18.04.11.13	manage release upgrades
update-notifier-common	3.192.1.7	Files shared between update-notifier and other packages

Table 2-1. Third-party software. (continued)

Package	Version	Description
ureadahead	0.100.0-21	Read required files in advance
usbutils	1:007-4build1	Linux USB utilities
util-linux	2.31.1-0.4ubuntu3.6	miscellaneous system utilities
uuid-runtime	2.31.1-0.4ubuntu3.6	runtime components for the Universally Unique ID library
vim	2:8.0.1453-1ubuntu1.3	Vi IMproved - enhanced vi editor
vim-common	2:8.0.1453-1ubuntu1.3	Vi IMproved - Common files
vim-runtime	2:8.0.1453-1ubuntu1.3	Vi IMproved - Runtime files
vim-tiny	2:8.0.1453-1ubuntu1.3	Vi IMproved - enhanced vi editor - compact version
wget	1.19.4-1ubuntu2.2	retrieves files from the web
whiptail	0.52.20-1ubuntu1	Displays user-friendly dialog boxes from shell scripts
wireless-regdb	2018.05.09-0ubuntu1~18.04.1	wireless regulatory database
x11-common	1:7.7+19ubuntu7.1	X Window System (X.Org) infrastructure
xauth	1:1.0.10-1	X authentication utility
xdelta3	3.0.11-dfsg-1ubuntu1	Diff utility which works with binary files
xdg-user-dirs	0.17-1ubuntu1	tool to manage well known user directories
xfspgms	4.9.0+nmu1ubuntu2	Utilities for managing the XFS filesystem
xkb-data	2.23.1-1ubuntu1.18.04.1	X Keyboard Extension (XKB) configuration data
xxd	2:8.0.1453-1ubuntu1.3	tool to make (or reverse) a hex dump

**Table 2-1. Third-party software. (continued)**

Package	Version	Description
xz-utils	5.2.2-1.3	XZ-format compression utilities
zerofree	1.0.4-1	zero free blocks from ext2, ext3 and ext4 file-systems
zlib1g	1:1.2.11.dfsg-0ubuntu2	compression library - runtime