How To...

You are installing Virtuoso for the first time and want to know the steps required to download, install, and configure it.

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1. Installing InstallScape
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✅ [Virtuoso Installation and Configuration - Using InstallScape GUI (Video)](#) ✅

Answer

✅ ✅ [Virtuoso Installation and Configuration - Using InstallScape GUI (Video)](#)
The steps can be covered in three main heads:
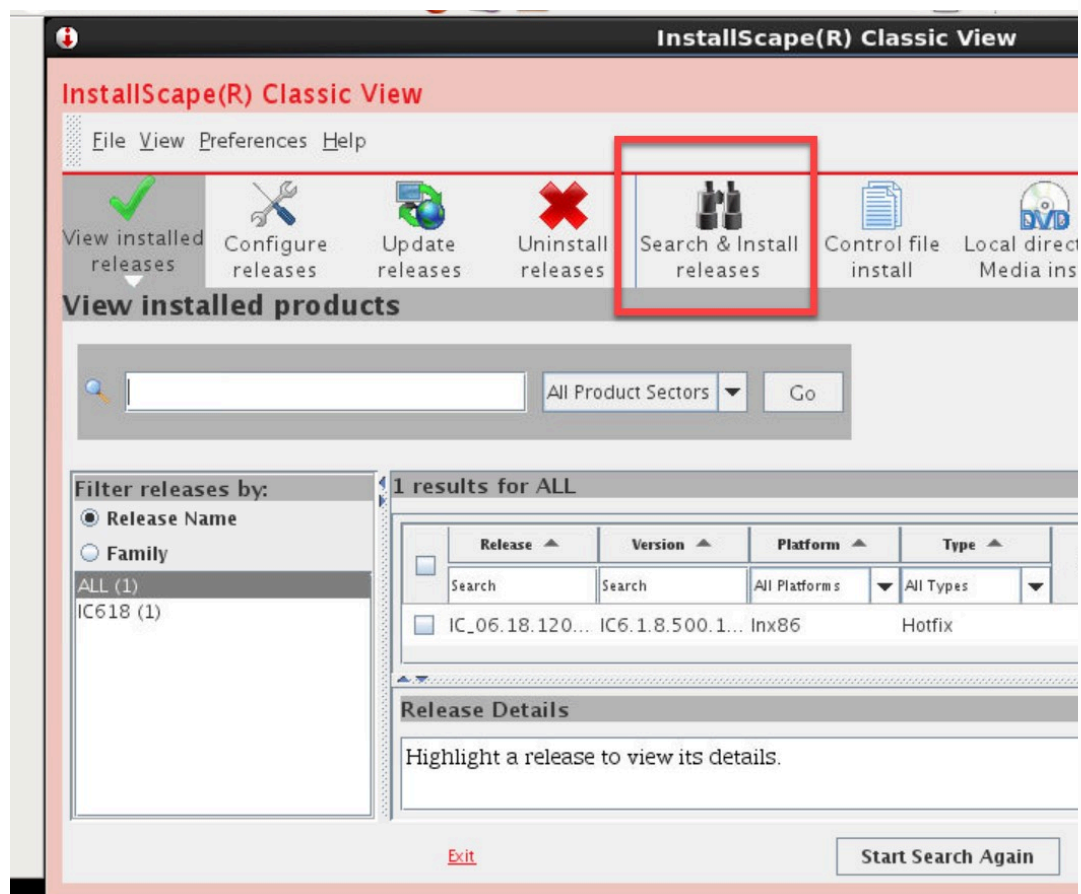
Installing InstallScape

Go to https://downloads.cadence.com and download InstallScape.

Downloading and installing Virtuoso release

1. After downloading InstallScape, run it using the following command:
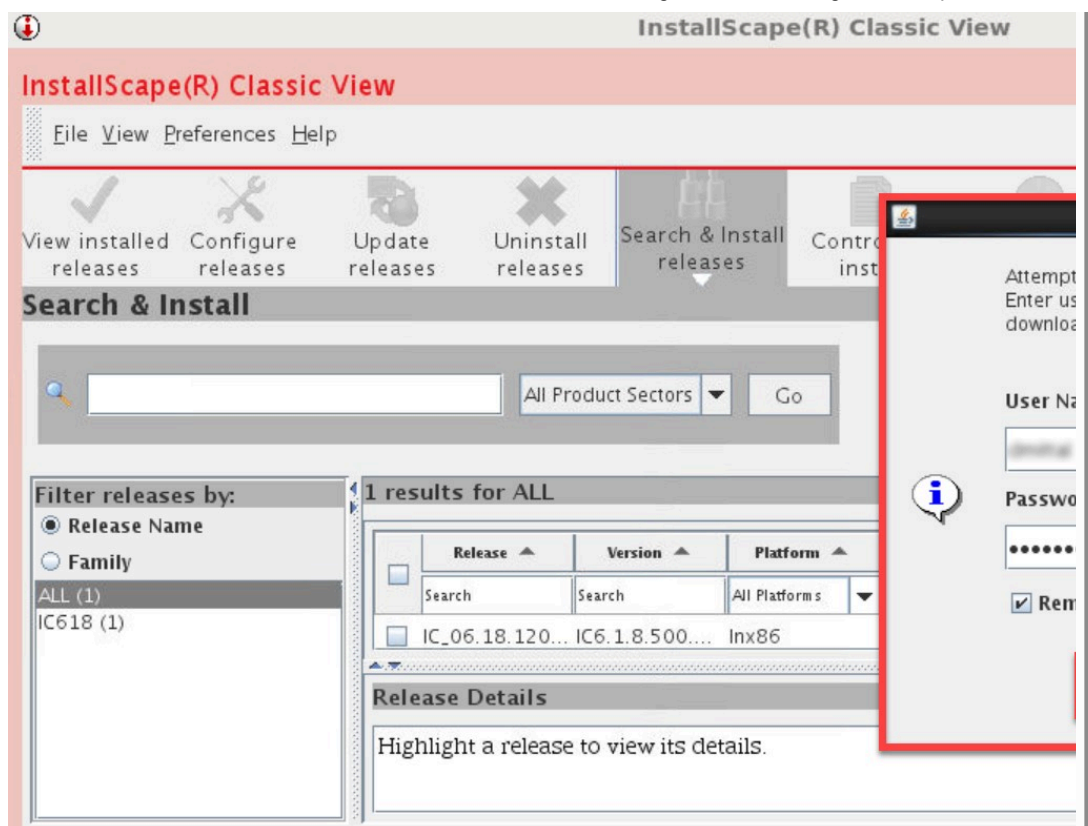
   Unix> `iscape/bin/iscape.sh &`

2. In the **InstallScape(R) Classic View** window, click on **Search & Install releases**.


3. On clicking the above button, a pop-up dialog box will ask for your **User Name** and **Password**. Give your support.cadence.com credentials and click **OK** to proceed.
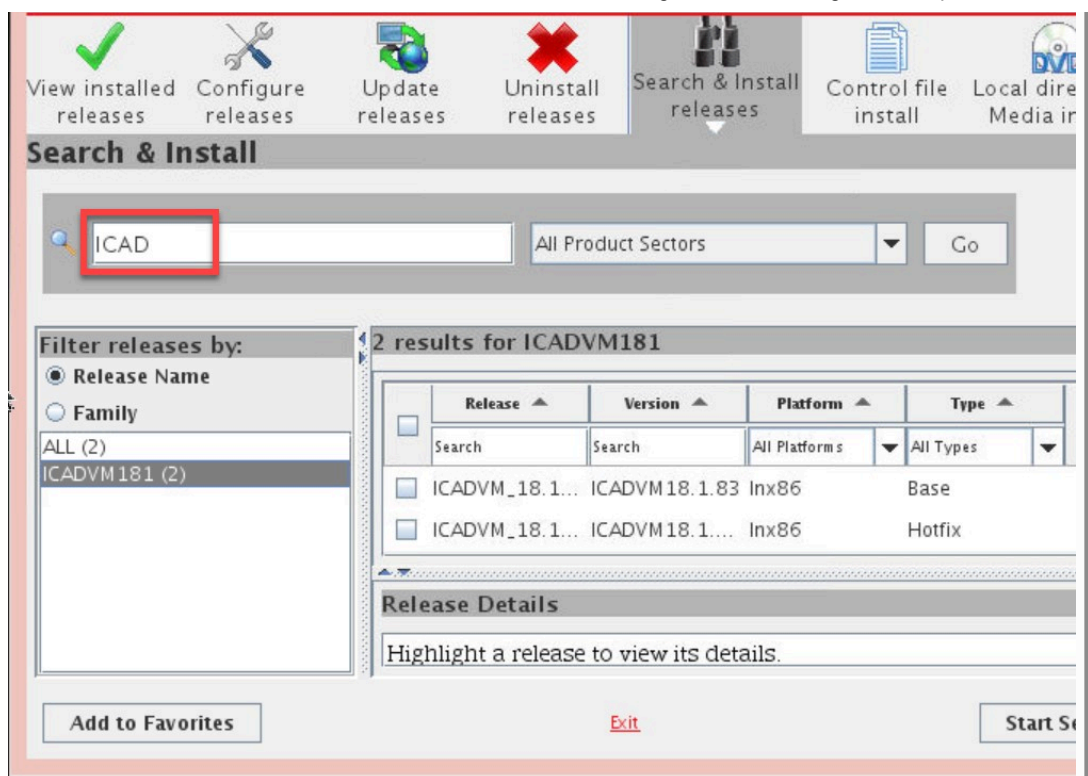
4. In the **Search & Install releases** tab, search **IC6** for mature nodes and **ICAD** for advanced nodes. In the results shown, select the release in the left pane and the latest ISR available in the right pane. The complete build gets installed and you do not need **Base** release installation for this.
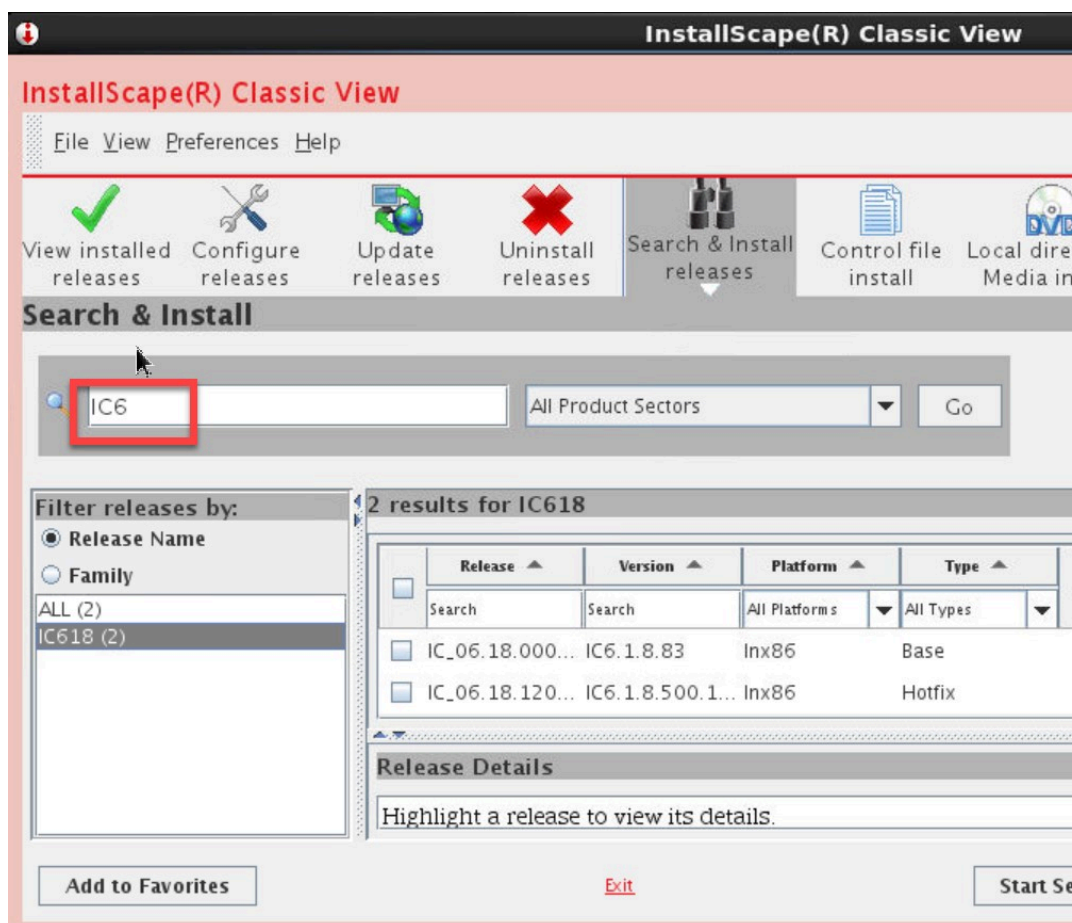
By following this method, you can select any Virtuoso Base release or ISR or both. In this document, you will install the ICADVM18.1 Hotfix release.
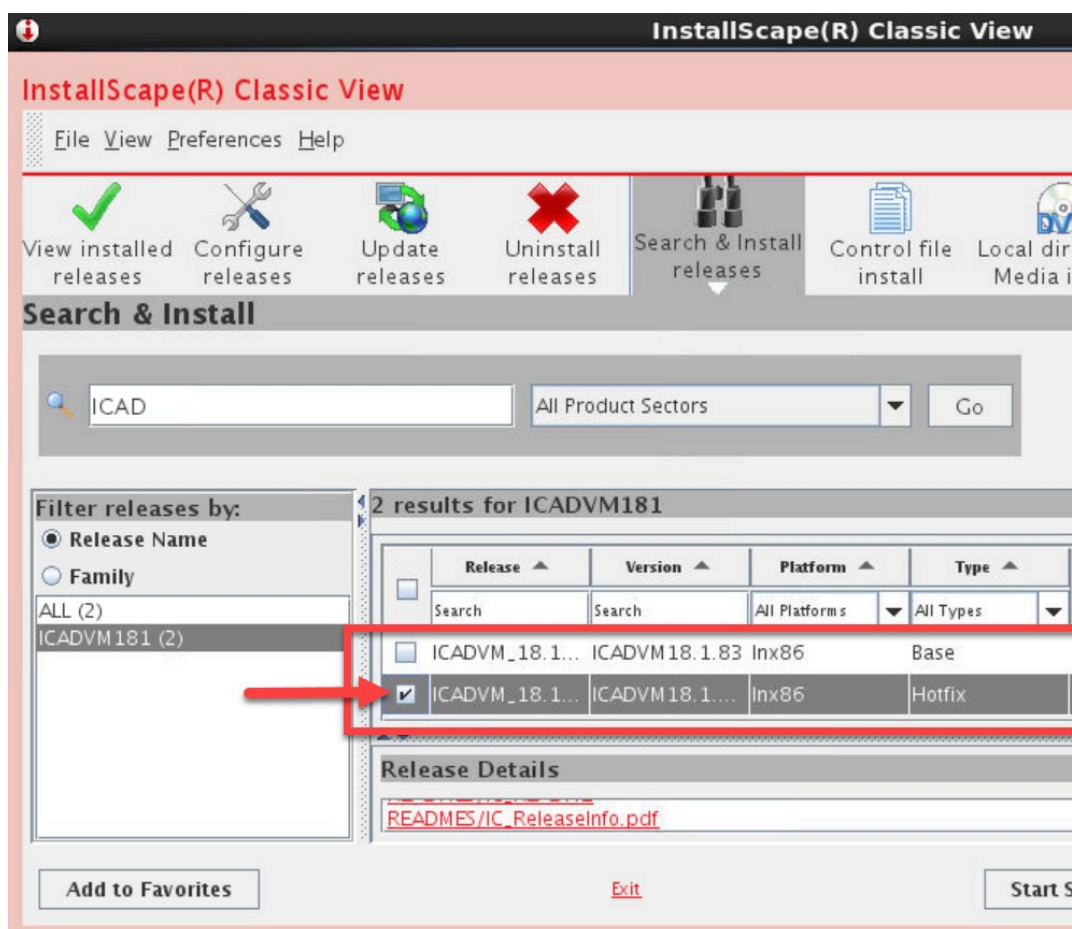

5. Select the Hotfix release and click on the **Continue** button, as shown in the above snapshot.
6. In the next window, select the **PICADVM** checkbox so that all products are selected for installation.
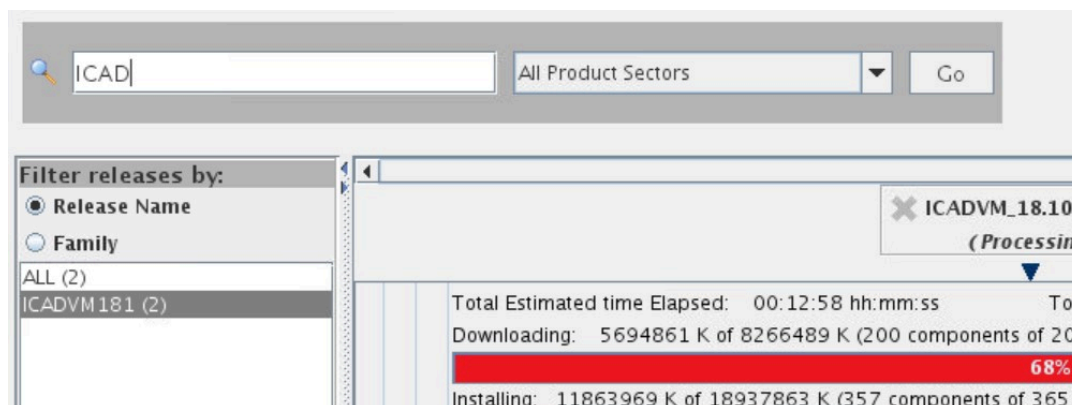
   In the **Choose Install Options** section, select **Download and Install** and specify the paths for the download directory and the install directory. You can use the **Browse** buttons (refer to the snapshot shown below). Make sure the specified directories exist.
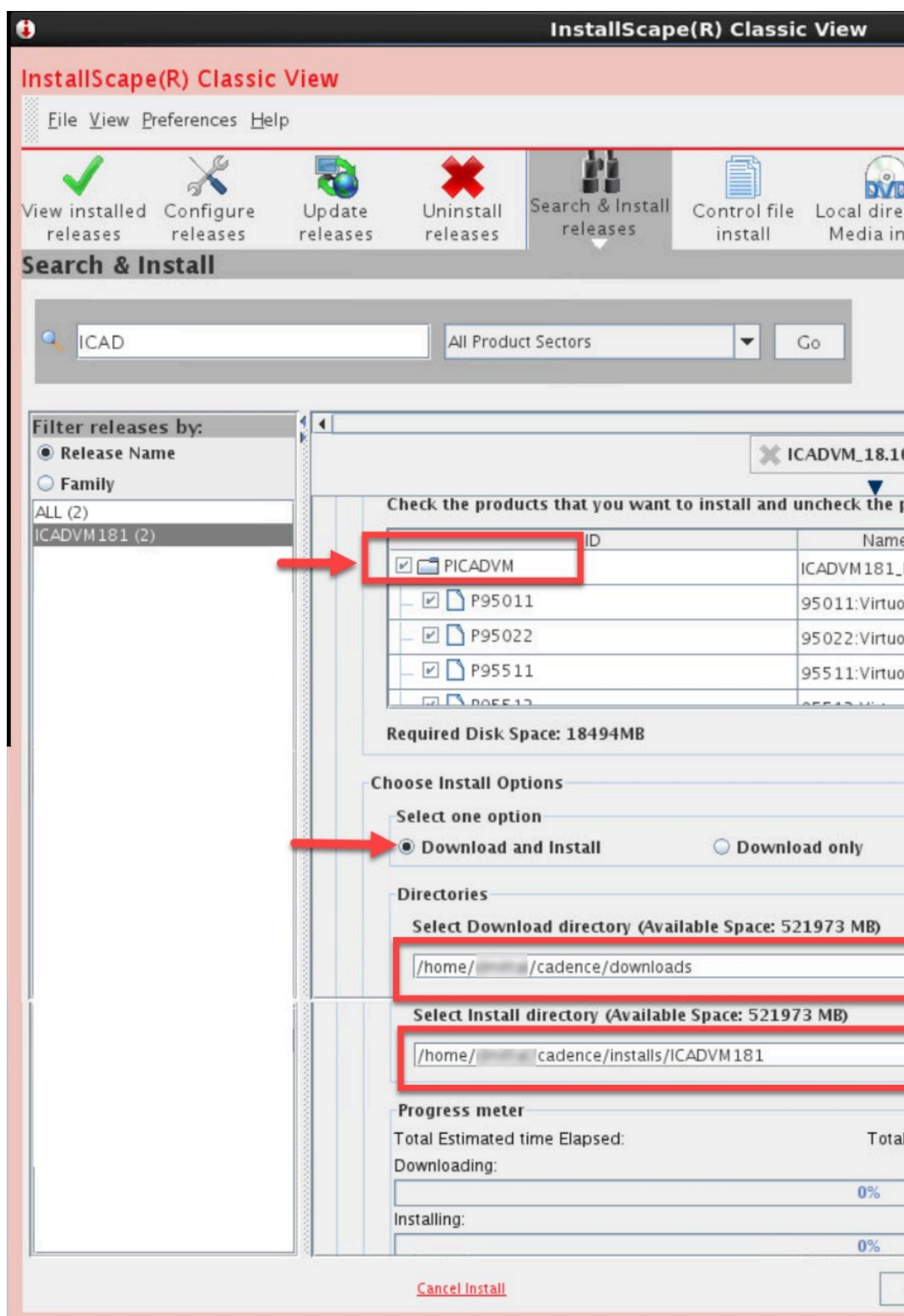
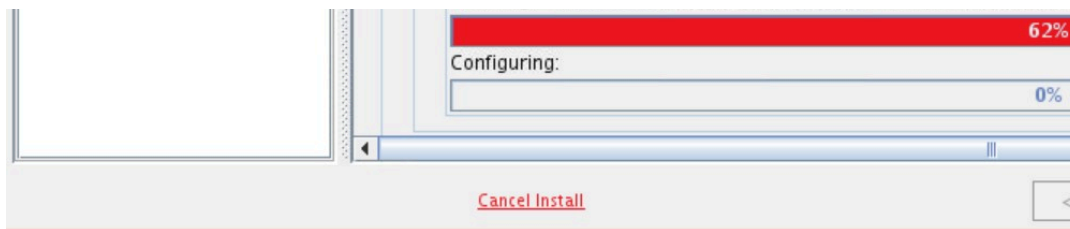Click on the **Start** button in the above window to start the installation. You will see the progress as shown below.

7. Once the progress bars are at 100%, you will get a pop-up window as shown below.

Press **Enter** in the above window to continue. The window will automatically close in 20 seconds.

8. Press **y** to install valid XL libraries and Sim libraries, as shown in the following snapshot.
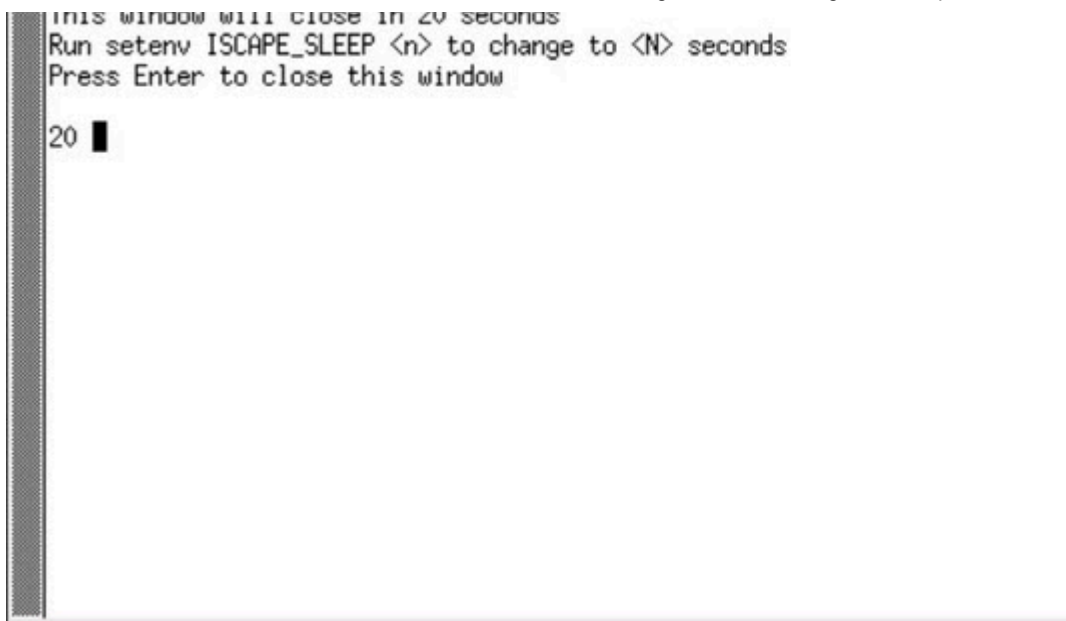
```
This window will close in 20 seconds
Run setenv ISCAPE_SLEEP <n> to change to <N> seconds
Press Enter to close this window

20 ▮
```

9. Choose option **2** to compile libraries for AMS Designer using the existing Xcelium hierarchy. This path is read from your $PATH. To specify a different path, choose option **1**.

```
┌─ ▪ ────────── Cadence_amsEnv64b06.18-s348lnx
│ Prepare libraries for AMS Designer
│
│ 1) Add an IUS installation directory to path
│ 2) Compile with /grid/avs/install/xcelium/1809/18.09.010
│ 3) Quit
│ #? 2  ⟵
│
│ Info: Compiling tools/dfII/etc/cdslib/basic/cds_alias/functional/verilog
│
│ xmvlog(64): 18.09-s010: (c) Copyright 1995-2019 Cadence Design Systems,
│ xmvlog: *W,NCEXDEP: Executable (ncvlog) is deprecated. Use (xmvlog) inst
│ file: tools/dfII/etc/cdslib/basic/cds_alias/functional/verilog.v
│         module basic.cds_alias:functional
│                 errors: 0, warnings: 0
│         Total errors/warnings found outside modules and primitives:
│                 errors: 0, warnings: 1
│
│ Info: Compiling tools/dfII/etc/cdslib/basic/cds_thru/functional/verilog.
│
│ xmvlog(64): 18.09-s010: (c) Copyright 1995-2019 Cadence Design Systems,
│ xmvlog: *W,NCEXDEP: Executable (ncvlog) is deprecated. Use (xmvlog) inst
│ file: tools/dfII/etc/cdslib/basic/cds_thru/functional/verilog.v
│         module basic.cds_thru:functional
│                 errors: 0, warnings: 0
│         Total errors/warnings found outside modules and primitives:
│                 errors: 0, warnings: 1
│
│ Info: Compiling tools/dfII/etc/cdslib/basic/cds_thrualias/functional/ver
│
│ xmvlog(64): 18.09-s010: (c) Copyright 1995-2019 Cadence Design Systems,
│ xmvlog: *W,NCEXDEP: Executable (ncvlog) is deprecated. Use (xmvlog) inst
│ file: tools/dfII/etc/cdslib/basic/cds_thrualias/functional/verilog.v
│         module basic.cds_thrualias:functional
│                 errors: 0, warnings: 0
│         Total errors/warnings found outside modules and primitives:
│                 errors: 0, warnings: 1
│ ▮
```

Note: If the Xcelium path/hierarchy is not available, we get below options:
```
1. Add an IUS installation directory to path
```

    2. Quit
  In this case, you may choose option 1 to add the Xcelium path/hierarchy first.

10. Press **Enter** in the following window to continue.

```
 ┌──────────────── Cadence_oaRedist22.6(
 │ ▓
 │ ▓
 │ ▓   ---------------------------------------------------------
 │ ▓   Welcome to the OpenAccess 2.2 Configuration Utility.
 │ ▓
 │ ▓   Important: Before continuing, first close all applications
 │ ▓   libraries. Then make sure that there are no oaDMTurboServe
 │ ▓   (kill these processes with the kill command on UNIX/Linux)
 │ ▓
 │ ▓   Press Enter to continue (q to quit): █
 │ ▓
 │ ▓
 │ ▓
 │ ▓
```

11. In response to the next question (**Do you want to use a different OpenAccess installation?**), type **n** and press **Enter**.

```
 ┌──────────────── Cadence_oaRedist22.60-p038lnx8
 │ ▓
 │ ▓
 │ ▓   ---------------------------------------------------------
 │ ▓   Welcome to the OpenAccess 2.2 Configuration Utility.
 │ ▓
 │ ▓   Important: Before continuing, first close all applications that use Open
 │ ▓   libraries. Then make sure that there are no oaDMTurboServer processes ru
 │ ▓   (kill these processes with the kill command on UNIX/Linux).
 │ ▓
 │ ▓   Press Enter to continue (q to quit):
 │ ▓   ---------------------------------------------------------
 │ ▓   This utility lets you specify a different OpenAccess installation to use
 │ ▓   ┌─────────────────────────────────────────────────────────────────────
 │ ▓   │ The current installation is [/export/home/▨▨▨▨▨▨/cadence/installs/ICADV
 │ ▓   │ Do you want to use a different OpenAccess installation (y/n/q) ? [y] n ◄
 │ ▓   └─────────────────────────────────────────────────────────────────────
 │ ▓   This window will close in 20 seconds
 │ ▓   Run setenv ISCAPE_SLEEP <n> to change to <N> seconds
 │ ▓   Press Enter to close this window
 │ ▓
 │ ▓   20 19 18 17 16 15 █
 │ ▓
```
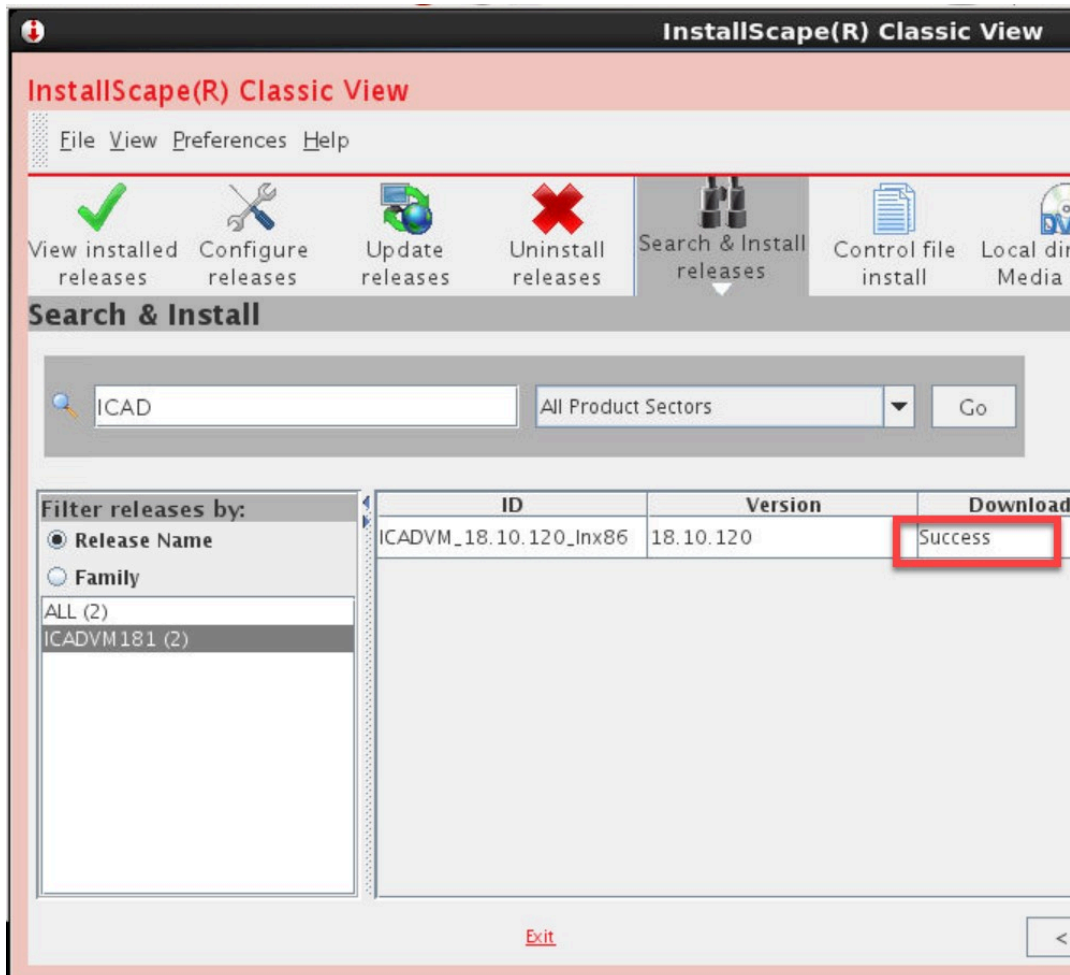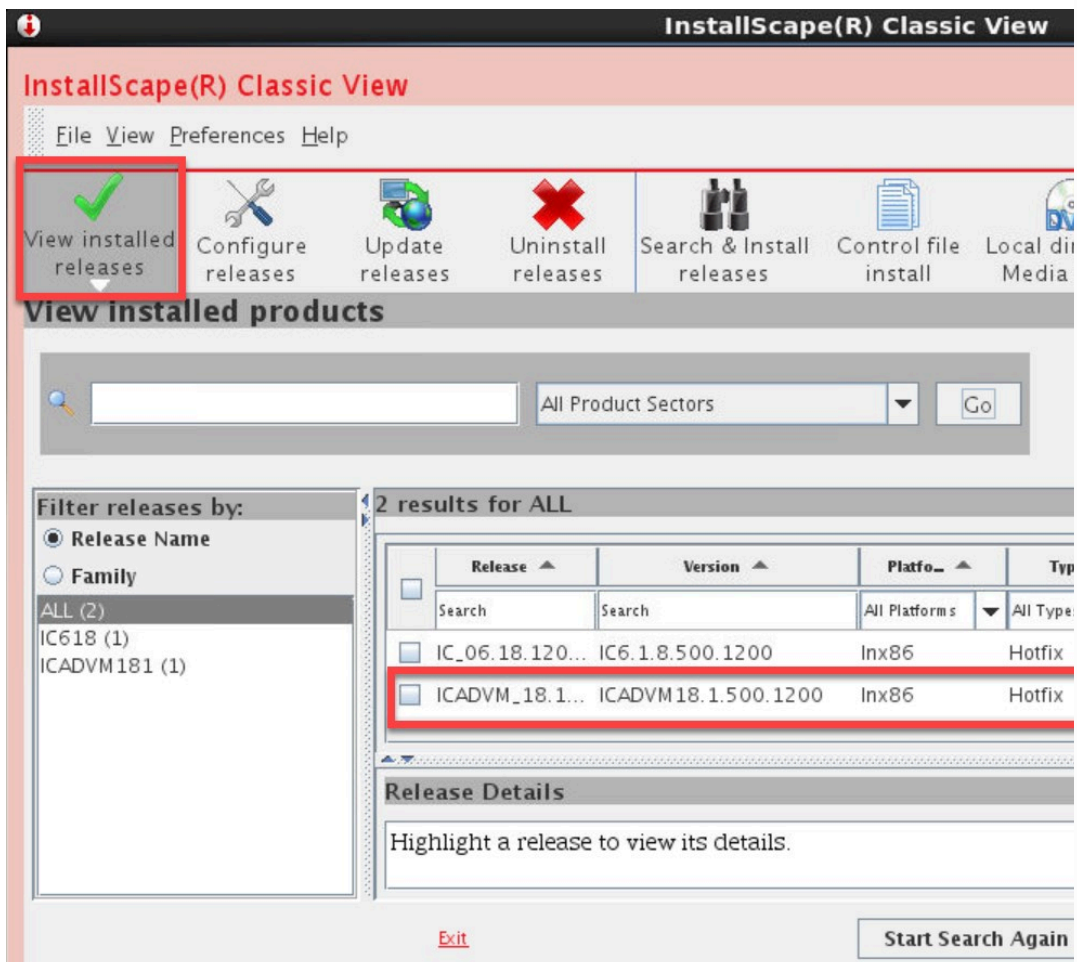
12. The following window will pop up as soon as download/installation/configuration succeeds.

Click on **Done** to complete the installation.

13. You can check the installed releases in the **View installed releases** tab, as shown below.

Setting up the License Server utility

In the above steps, it is assumed that you have already installed and configured the license server. You can refer to the following articles/video for installing and configuring the license server:

- [How to manually install and start the License Manager on Linux](#)
- [Installation of License Server Utilities (Video)](#)
- [How to install a Cadence License Server release in batch mode](#)

Setting up the environment to invoke Virtuoso

Follow the steps given below:

1. To configure the user environment for Virtuoso, make a `cshrc_cdns` file with the contents shown below. Note that the path specified in the below file for `CDSHOME` is the same that you selected in step 6 (above) during installation.

   ```
   ## setting aliases for IC tool installation path
   setenv CDSHOME /path/to/cadence/installs/ICADVM181
   ## Below setting is for license server, serverA and serverB are hostnames of the
   license server machines, and 5280 and 5281 are ports
   setenv CDS_LIC_FILE 5280@serverA:5281@serverB
   ## setting path in your environment
   set path = ($CDSHOME/tools/bin $CDSHOME/tools/dfII/bin $path)
   ```

2. To configure the user environment, source the `cshrc_cdns` file in a UNIX terminal by using the following command:

   ```
   UNIX> source cshrc_cdns
   ```

3. To ensure that your environment is configured, run the following commands in a UNIX terminal. The command should return the path to the IC tool.

   ```
   UNIX> which virtuoso
   > /path/to/cadence/installs/ICADVM181/tools/dfII/vin/virtuoso
   ```
   Note: It is important to check that your machine has all required patches for running the tool. You can use the `checkSysConf` utility to verify that the machine has the required patches and to identify the patches that need updates.

4. Run the `checkSysConf` utility from the Virtuoso installation. For example, if you have configured ICADVM18.1 in your environment, use the following command:

   ```
   Unix> $CDSHOME/tools/bin/checkSysConf ICADVM18.1
   ```

```
Normal exit. This workstation (       ) status is: PASS  ◄──────
Host        has a Cadence supported Linux configuration.

Exiting checkSysConf ... Good-bye
Output is saved as /tmp/checkSysConf.      -2020.07.09.16:13.1479
```

If the report status is FAIL, install the missing OS packages that are reported.

Refer to the following articles to know more about the checkSysConf utility:

- [Running checkSysConf to verify system patch levels1System](#)
- [Configuration Checker (checkSysConf)](#)
- [How to debug System Configuration Issues Using CheckSysConf](#)

To check the list of supported platform and OS patches, refer to the following links to know the supported platform matrix for Cadence tools:

- [Computing Platforms - Supported Platform Matrix for Cadence Applications](#)
- [What OS patches do I need for running Cadence Design Framework II?](#)
- [What Operating Systems (specifically CentOS and freeSUSE) and hardware platforms are supported by Cadence software?](#)