

# Prior Version Support

Prior to AutoCAD 2009, Autodesk allowed Subscription customers to run prior product versions by contractual agreement. Autodesk satisfied the need for customers to run multiple versions of the same product by supplying licenses for each version. For example, if a customer owned a license for 10 seats of AutoCAD 2007, Autodesk would provide them a new license for 10 seats of AutoCAD 2008. This would allow the customer to run both versions of a product but essentially provided them 20 seats when they were only legally entitled to 10. Many customers complained that Autodesk was enabling them to be out of legal license compliance, through no fault of their own.

In AutoCAD 2009, Autodesk introduced a new Subscription feature called Prior Version Support. This feature allowed Subscription customers to receive a single Package License file that enabled them to run the current version plus three prior release versions for the number of seats to which they were entitled.

## How Does Prior Versioning Work?

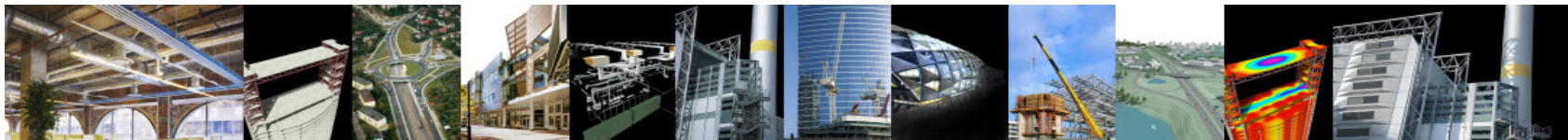
Prior version support is provided using a package license file that allows you use of a set of products that are packaged and sold together. The package license file contains a set number of licenses for four different versions of your software. For example, an AutoCAD 2010 package license file will contain a set number of licenses that can be used for AutoCAD 2010, 2009, 2008 or 2007. Running an instance of any one of these versions will consume one license in the package. Running more than one version, even on the same machine, will consume more than one license in the package.

For example, if you have a package license for two seats of AutoCAD 2010, the following scenarios can be expected:

- Two computers, each running AutoCAD 2010, will consume two licenses.  
No licenses will be available for other users.
- One computer, running AutoCAD 2009 and AutoCAD 2010 simultaneously, will consume two licenses.  
No licenses will be available for other users.
- One computer, running three instances of AutoCAD 2008, will consume only one license.  
One license will be available for other users.

## Example Package License File

The following is an example of a package license file for three seats of Revit Structure. The first two lines after COMPONENTS list the network feature codes for the products licensed by this package. In this case, it is Revit Structure 2010, Revit Structure 2009, Revit Structure 2008 and Revit Structure 4.



```
SERVER servername 0123456789ab
USE_SERVER
VENDOR adskflex port=2080
PACKAGE 66900REVITST_F adskflex 2.000 \
  COMPONENTS="73900REVITST_2010_OF 62200REVITST_2009_OF \
  57200REVITST_2008_OF 54400REVITST_4_OF" OPTIONS=SUITE \
  SUPERSEDE ISSUED=05-Feb-2009 SIGN="15E8 DFEA 92AB 192E A94C \
  76F1 FEA3 11BD B141 2B12 8856 80B9 1234 B7BD 1154 0B95 8E21 \
  4CF5 A14C A423 ACEB 1702 CAD8 9C29 B007 7EEA DFF5 FE2C 6E6E \
  19CC" SIGN2="1260 1A55 1B51 D1CB 0496 0854 361A 852A 0AD6 8745 \
  EA3C 9FDA A355 39DA 1520 1A61 BF9C A20A 14F3 CD64 DC66 6CD3 \
  2D4E 0B9D 9C57 EFCF 8B60 2972 B869 A41C"
INCREMENT 66900REVITST_F adskflex 2.000 06-mar-2009 3 \
  VENDOR_STRING=commercial:extendable BORROW=4320 SUPERSEDE \
  DUP_GROUP=UH SUITE_DUP_GROUP=UHV ISSUED=05-Feb-2009 \
  SN=399-99999999 SIGN="1B3E 009F FC93 52B6 B6EE 9E56 023F 9B32 \
  1870 A8BE 9CDC 66C1 48C9 B1DC 43C5 10E6 35F9 8ACB 3017 6D48 \
  D235 61DE E23D 412D B11A 2383 7374 376D 3E1C 4B7E" SIGN2="01C3 \
  D94E 80AF D924 52F1 EEB2 3D7D 9041 0554 4089 1E52 77D8 DD54 \
  52BE 8435 1D5A FEF8 10E5 ADD6 DD3D ACB1 4978 ACFC FF4F 5CD9 \
  7D06 442D 7E66 1817 729E"
```



## Package License FAQ

**Q:** Can I obtain a package license even though I am not on Subscription?

**A:** No. Package Licenses are only available to Subscription customers.

**Q:** Can I get a Package License for my standalone product?

**A:** Package License files are only available for network versions of products. Standalone versions will continue to use existing business rules allowing for activation of the current version plus three prior versions on the same machine.

**Q:** Can I configure which products or product versions are licensed in a package?

**A:** No. Package license files come with the current version and three previous versions of the same product only. It is not possible to configure the products included in the package in any way.

**Q:** I have a Package License for five seats of AutoCAD 2010 (on subscription). I also have a non-Package License for 30 seats of AutoCAD 2009 (not on Subscription). Can I combine these two license files?

**A:** No. Package license files cannot be combined with non-package license files for product versions contained in the package. Doing so will disable the older license INCREMENT for the product and only the package license count will be available. You can't combine an AutoCAD 2010 package license file with a regular license file for AutoCAD 2009, 2008 or 2007. In this case, you need to request a new 2010 Package License with 35 seats.

**Q:** How do package licenses work with regard to borrowing and cascading?

**A:** License borrowing, options files and license cascading work the same for package license files as they do for regular license files

**Q:** What happens if I get a new Package License file.

**A:** A new license file will supersede an older license file.



# Cascade Licensing

Cascade Licensing was implemented primarily to address customer issues in mixed-product environments where both Suite and Base products co-exist. Cascade Licensing allows a product to obtain a license from a network license manager pool when that license manager is servicing more than one product. For Autodesk products that are included in a product suite and are also sold as an individual product, licenses are allocated based on a sequence of priorities defined in the PLIST (priority list) of a license file.

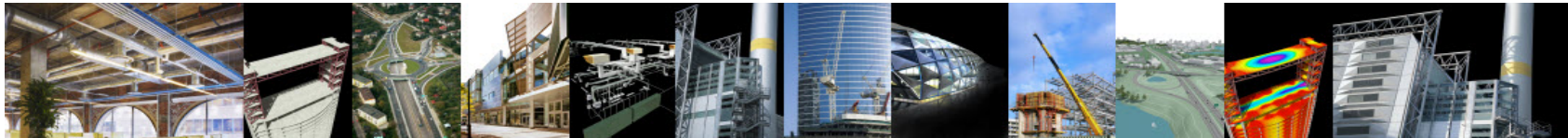
The PLIST is one or more lines in a license file containing a list of products. The list is ordered based on cascade order with the first product in the list being the least expensive and the last product in the list being the most expensive. Thus, products cascade up from the cheaper individual products to the more expensive Suite products. Fundamentally, it no longer matters what product has been installed – if available, the ‘cheapest’ license will be used first – based on the priority assigned to the product. This cascade order is determined by the individual product groups.

## How does Cascade Licensing work?

For 2000-based products, the network license manager allows product groups to ship a series of software which can all run using a single license. For example, Revit Architecture Suite 2000 contains AutoCAD, AutoCAD Architecture and Revit Architecture. A user who has installed all three of these applications from the Suite can launch all three products concurrently, and will only consume a single license from the pool. Cascade Licensing allows users who have purchased licenses for a Suite product, and have purchased separate licenses for a product that is also included in a Suite, to draw licenses from the cheaper individual product first before drawing licenses from the more expensive Suite pool. Which licenses get pulled depends on what Base products or Suite products you have installed.

## Cascade Licensing Order

The order in which products in a Suite are launched affects the way licenses are initially pulled. If there is an active AutoCAD session and the same user attempts to launch Revit, the license manager will identify that there is no usable license already active and will pull a second license. This is because Revit (the more expensive product) cannot use an AutoCAD (the cheaper product) license. On the other hand, if there is an active Revit session and the same user attempts to launch AutoCAD, the license manager sees that there is a usable license already active and will not pull a second license. This is because AutoCAD **can** use a Revit license. Basically, cascading moves in one direction – up – from least expensive to most expensive. Cascading does not happen in the opposite direction.



## Returning Licenses

When a cheaper product is started first, followed by a more expensive product, the more expensive product will pull the more expensive license because it cannot use the cheaper license that is already in use. At that point, two licenses are in use. Periodically, the licensing system scans for such conditions and will automatically return the cheaper license to the pool so that only one license is active. If the cheaper license does not eventually get returned, verify that both licenses being pulled are, in fact, in the same cascading group. If they are not in the same group, this is expected behavior.

## Cascade Licensing Example

Let's assume a network licensed environment where a customer has two AutoCAD licenses, one Revit Architecture license, and one Revit Architecture Suite license.

- User A runs AutoCAD and pulls one AutoCAD license. User A then runs Revit Architecture, pulling one Revit Architecture license. At this point, User A has consumed two licenses on his machine: one AutoCAD license and the one, and only, Revit Architecture license.
- User B runs AutoCAD and pulls one AutoCAD license. User B then runs Revit Architecture. Since User A has already consumed the only Revit Architecture license, there are no licenses remaining and User B cascades up and pulls the Revit Architecture Suite license. At this point, User B has two licenses on his machine and all available licenses have been consumed by both users. Within approximately two minutes, the Cascade Licensing logic will recognize that the Revit Architecture Suite license is present and will automatically return the AutoCAD license to the pool. This leaves User B as having consumed only one license on his machine.

## Key Concepts from this Example

- It is only when the cheaper AutoCAD or Revit licenses are gone, that a product will cascade up to get the Suite license.
- Once there is a Suite license on the user's machine, any cheaper license will automatically be returned.
- If the first two licenses checked out are both the cheaper AutoCAD and cheaper Revit licenses, then no Suite license or cascading will occur for that user and they will have consumed two licenses.



## Autodesk Products that Cascade

The following is a list of some of the products that support Cascade Licensing (this is not a complete list):

3DS Max Design

AutoCAD

AutoCAD Architecture

AutoCAD Civil 3D

AutoCAD MEP

AutoCAD Visualization Suite

Inventor Suite

Inventor Routed Systems Suite

Inventor Simulation Suite

Inventor Tooling Suite

Inventor Professional Suite

Revit Architecture

Revit Architecture Suite

Revit Architecture Visualization Suite

Revit Structure Suite

Revit MEP Suite



## PLIST (Priority LIST) Example

Here is an example of a PLIST entry from a license file:

```
INCREMENT PLIST adskflex 1.000 permanent 1 \
```

```
VENDOR_STRING=A07:51600ACDLAND_2007_0F:52200CIV3D_2007_0F;B07:51900AMECH_PP_2007_0F:51300INVBUN_11_0F:52900INVPRORS_11_0F:53000INVPROSIM_11_0F:51400INVPRO_11_0F;C07:51200ACD_2007_0F:52500REVITS_9_0F:54100REVITS_9_1F:53700REVSU_3_0F:54200REVSU_4_0F;D07:52600REVIT_9_0F:52500REVITS_9_0F;E07:57600ACD_2009_0P:59300INVBUN_2009_0P;F07:51800BLDSYS_2007_0F:53100REVSYP_1_0F:54500REVSYP_2_0F;G07:53400REVITST_3_0F:53700REVSU_3_0F;H07:54300REVIT_9_1F:54100REVITS_9_1F;I07:54400REVITST_4_0F:54200REVSU_4_0F;A08:55500ACDLAND_2008_0F:55400CIV3D_2008_0F;B08:54900AMECH_PP_2008_0F:55000INVBUN_2008_0F:55100INVPRORS_2008_0F:55200INVPROSIM_2008_0F:55300INVPRO_2008_0F;C08:54600ACD_2008_0F:54700REVITS_2008_0F:54800REVSU_2008_0F;D08:57100REVIT_2008_0F:54700REVITS_2008_0F;F08:55600BLDSYS_2008_0F:55700REVSYP_2008_0F;G08:57200REVITST_2008_0F:54800REVSU_2008_0F;A09:59800ACDLAND_2009_0F:59700CIV3D_2009_0F;B09:59200AMECH_PP_2009_0F:59300INVBUN_2009_0F:59400INVPRORS_2009_0F:61700INVMFG_2009_0F:59500INVPROSIM_2009_0F:59600INVPRO_2009_0F;C09:57600ACD_2009_0F:59200AMECH_PP_2009_0F:78400ACDDS_2009_0F:60900REVITS_2009_0F:61000REVSU_2009_0F;D09:62100REVIT_2009_0F:60900REVITS_2009_0F:78200RAV-S_2009_0F;F09:59900BLDSYS_2009_0F:60000REVSYP_2009_0F;G09:62200REVITST_2009_0F:61000REVSU_2009_0F;J09:67800RVTMPJ_2009_0F:60000REVSYP_2009_0F;K09:68800CIVIL_2009_0F:59700CIV3D_2009_0F;L09:60100ARCHDESK_2009_0F:60900REVITS_2009_0F:78200RAV-S_2009_0F;M09:68900NAVREV_2009_1F:78200RAV-S_2009_0F \
```



The `VENDOR_STRING` is split into semi-colon delimited groups: `<GroupID:Feature:Feature>`. The products and suites are identified by their FLEXlm® feature codes. Here are just a few of these groups and what products they indicate:

**AutoCAD Civil 3D 2007 w/Land Desktop 2007 Companion**

A07:51600ACDLAND\_2007\_OF:52200CIV3D\_2007\_OF

**AutoCAD Mechanical 2007/Inventor Series 11/Inventor Professional 11**

B07:51900AMECH\_PP\_2007\_OF:51300INVBUN\_11\_OF:52900INVPRORS\_11\_OF:53000INVPROSIM\_11\_OF:51400INVPRO\_11\_OF

**AutoCAD 2007 for Revit Series 9**

C07:51200ACD\_2007\_OF:52500REVITS\_9\_OF

**Revit Building 9 for Revit Series 9**

D07:52600REVIT\_9\_OF:52500REVITS\_9\_OF

**Building Systems 2007 for Revit Series - Systems Plus 1**

F07:51800BLDSYS\_2007\_OF:53100REVSYP\_1\_OF

You can get a list of FLEXlm® feature codes for various Autodesk products by visiting the Autodesk Support web pages.

## Prior Version Support

As discussed in the previous section on Prior Version Support, Subscription customers can receive a single Package License file enabling them to run the current product version plus three prior release versions. If you inspect the PLIST of a newer license, you may notice that the PLIST also contains entries for the older versions however only the PLIST from the most recent license increment gets used.



## Troubleshooting PLIST-related Network Licensing Errors

By way of example, let's assume you installed the network version of Revit Architecture, Revit Structure and/or AutoCAD from the AutoCAD Revit Suite. Your license server has a valid Revit Suite license and the license server is running. You start one of these products and get an error indicating that the license manager is not able to get a valid license. This kind of error can have a variety of causes but the following steps can help verify that the PLIST is being properly referenced.

Check the debug log file for errors. The debug log should include an entry indicating that the PLIST is being referenced – something like this:

```
10:05:13 (adskflex) PLIST          62100REVIT_2009_OF 60900REVITS_2009_OF
78200RAV-S_2009_OF
```

Verify that your license file has a PLIST. A PLIST must exist for cascading to work. You can verify that there is a PLIST in the license file by running LMTOOLS, choosing the Server Status tab, and clicking the Perform Status Enquiry button. Look for errors related to missing PLIST information and verify that the PLIST increment is being read correctly.

Verify that you have the most recent PLIST increment. Cascading can only happen with a Suite or Series license of the same version. For example, AutoCAD 2008 can cascade to a Revit Architecture 2008 Suite license, but it cannot cascade to a Revit Series 9 (2007) license. Verifying that you have the most recent PLIST increment in your license file helps ensure that products are able to cascade to the appropriate license.

Verify that you have the necessary client-side components installed. Client-side components are installed to download and interpret the PLIST increment from the license file. However, these components are only installed if the Network license option was selected during installation or deployment. If a product was installed as a standalone (the default mode), and then switched to a network installation it will not have these components installed and the Suite or Series license cannot be used. To resolve this issue, reinstall the product and select the Network license option or do a side-by-side installation of a network-licensed version.

Check the client machine for the AdskNetSrv.dat file. If this file doesn't exist, set the ADSKFLEX\_LICENSE\_FILE environment variable to direct the software only to the license manager that contains the correct PLIST and license information. Do not include multiple license managers in the environment variable until a license has been successfully pulled. Note: if the PLIST increment does not exist or cannot be downloaded, an AdskNetSrv.log file will be created in its place.



## Cascade Licensing FAQ

**Q:** Does Cascade Licensing work for stand-alone licenses?

**A:** No. This feature relates only to Network Licensing, and the manner in which licenses are drawn from a network license pool on the server.

**Q:** What happens when a new product is installed?

**A:** When a new product that supports Cascade Licensing is installed, the cascading sequence is automatically enabled on the server.

**Q:** How can I turn Cascading on?

**A:** Cascading licenses are not turned on or turned off. Cascading licensing is a feature of the network license manager and is enabled through the license file. If an application supports cascading, the license file will contain a PLIST, or prioritized list of products.

**Q:** Can I change how cascading is prioritized?

**A:** No, the cascade order is pre-determined by the individual product groups and the cascade order in the PLIST is not editable.

**Q:** I'm still running much older versions of AutoCAD. Is there a way to make Cascade Licensing work for those as well?

**A:** PLIST licenses cannot be used for products shipped prior to the AutoCAD 2007 release.

**Q:** If I need to borrow a license, which license will get borrowed?

**A:** Licenses are borrowed for the feature that is in use at the time of borrowing.

**Q:** How can I tell which feature is in use before I borrow against it?

**A:** You can use the Product Information dialog to verify which particular feature is in use. This dialog updates dynamically and the license ID will change to reflect the license that is currently checked out.



