



PTC[®] Live Global

An Admin's guide to License Management

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As always, there is lots to cover and not much time.

Help!... I'm spending too much!

PTC Live
Global



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Have you ever looked at your maintenance bill and said I'm spending way too much?

It's all about the money!



This talk is all about saving you money.

It's all about the money!

Save money by:

- Managing licenses availability



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There are three basic ways to save money.

First make sure the licenses you have purchased are available when people need them.

It's all about the money!

Save money by:

- Managing licenses availability
- Properly allocating licenses



Next is to manage what license are available to specific individuals.

It's all about the money!

Save money by:

- Managing licenses availability
- Properly allocating licenses
- Knowing your usage



Finally you need to know how many licenses are really being used.

It's all about the money!

Save money by:

- Managing licenses availability
- Properly allocating licenses
- Knowing your usage



Topics

- License Management
- What's with the new Flexnet software?

After going over License Management we'll spend a little time looking at the new license manager that ships with Creo.

1. Users can choose an appropriate license

Here's what I think License Management is: This is the same three points just stated differently.

First, making sure your license configurations allow users to choose the appropriate license when needed.

1. Users can choose an appropriate license
2. Specific folks can access specific licenses

Making sure the correct individuals can access the license they need.

1. Users can choose an appropriate license
2. Specific folks can access specific licenses
3. Ensure you have enough licenses

Making sure you have enough licenses, without going overboard.

1. Users can choose an appropriate license
2. Specific folks can access specific licenses
3. Ensure you have enough licenses

Must understand:

- License types and how to configure them

The first item requires understanding the license types and how to configure them.

1. Users can choose an appropriate license
2. Specific folks can access specific licenses
3. Ensure you have enough licenses

Must understand:

- License types and how to configure them
- License options file

The second item requires understanding the license options file.

1. Users can choose an appropriate license
2. Specific folks can access specific licenses
3. Ensure you have enough licenses

Must understand:

- License types and how to configure them
- License options file
- How to track usage

And the last item requires knowing how many of which licenses are being used.

Creo comes in different offerings



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Creo comes in different flavors from basic to all the topping.

If you have a large organization, it's doubtful that everyone needs the banana split with all the toppings. This can be a useful way of reducing your cost.

Creo comes in different offerings



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Optional Components

There are many optional components.

Creo comes in different offerings



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Optional Components

- Floating Options
- Startup Extensions

These are licensed in one of two ways: Startup Extensions, or Floating Options

Creo comes in different offerings



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Optional Components

- Floating Options - Used when you access it
- Startup Extensions

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With at least one exception, Floating Options can be added to your Creo session after you start the software. The license is only used when you access it.

Creo comes in different offerings



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Optional Components

- Floating Options - Used when you access it
- Startup Extensions - Used when you start Creo

Startup options on the other hand must be configured during the install. These licenses are used as soon as you start Creo.

Creo comes in different offerings



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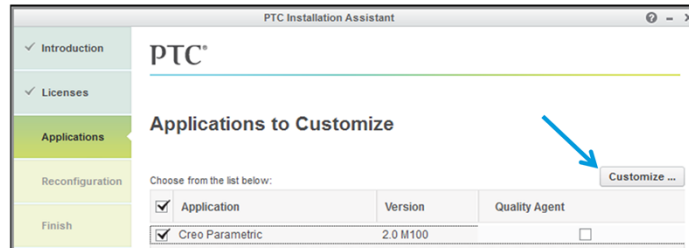


\$\$\$\$

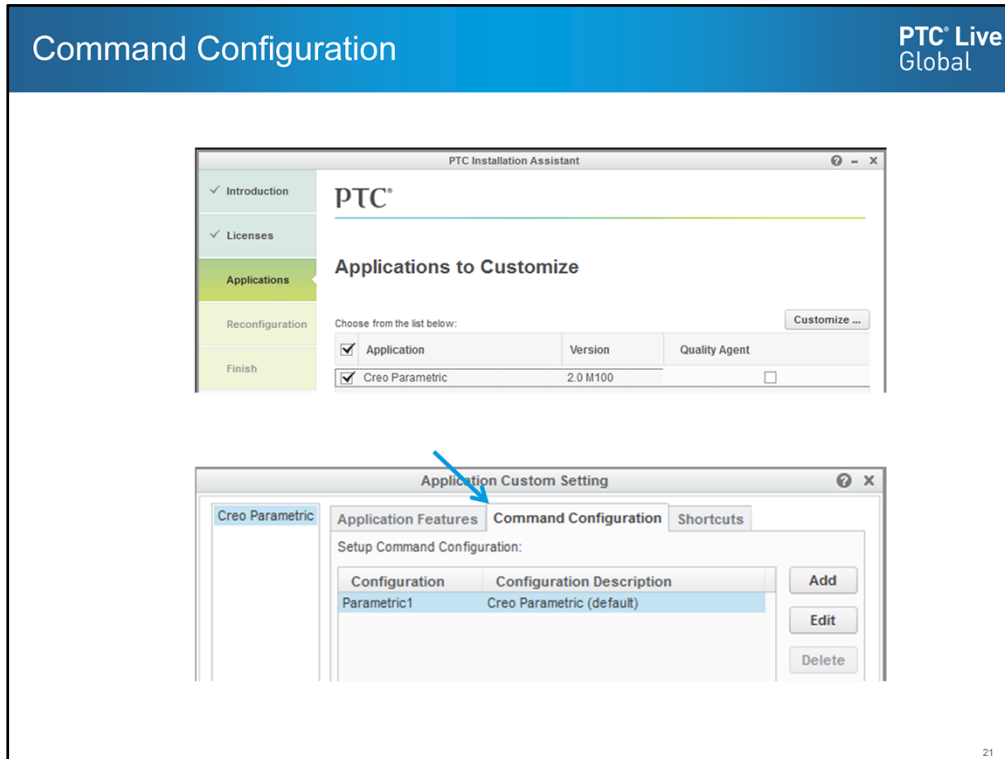
Optional Components

- Floating Options - Used when you access it
- Startup Extensions - Used when you start Creo - these float also

It's a common misconception that you can't float startup options between users. That's not true. You just can't add the option to a running session of Creo for which it wasn't already configured.

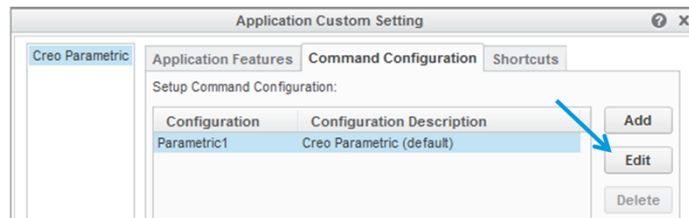
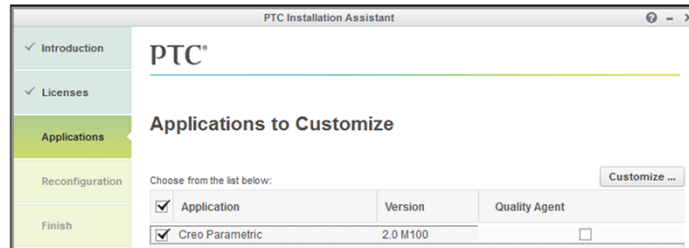


In order to create a command configuration, during the software install, you need to pick "Customize" button

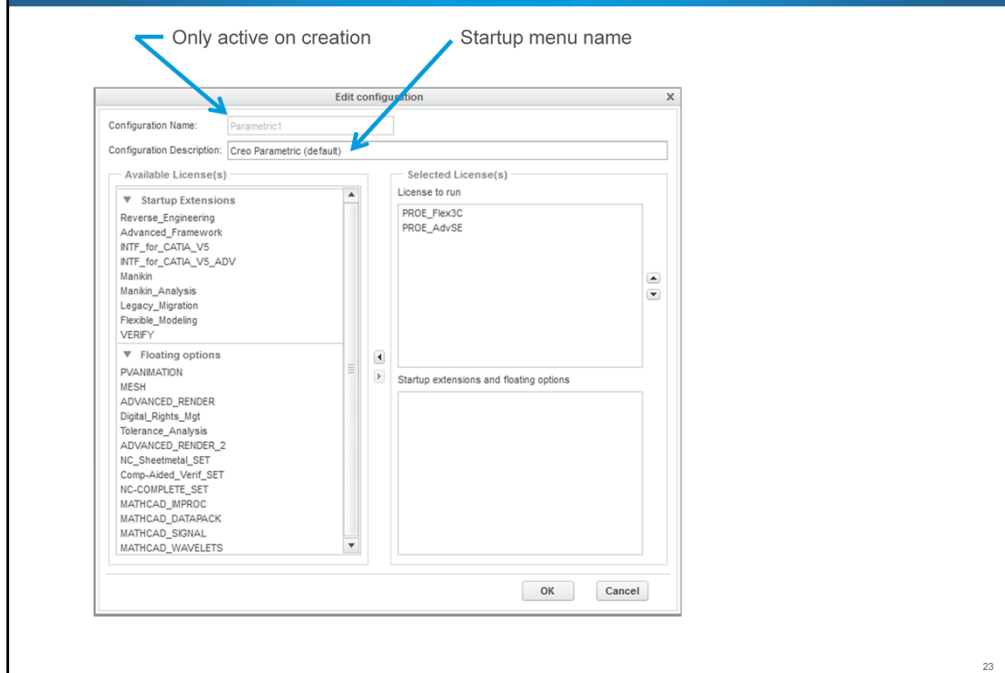


and then pick the “Command Configuration” tab

By default with you open up the configuration, you will see “Parametric1”, with the description “Creo Parametric (default)”

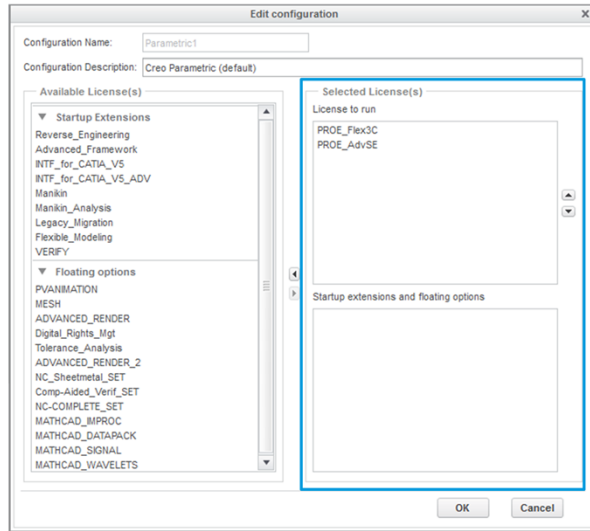


Picking the Edit button will let use modify the licenses for this configuration.

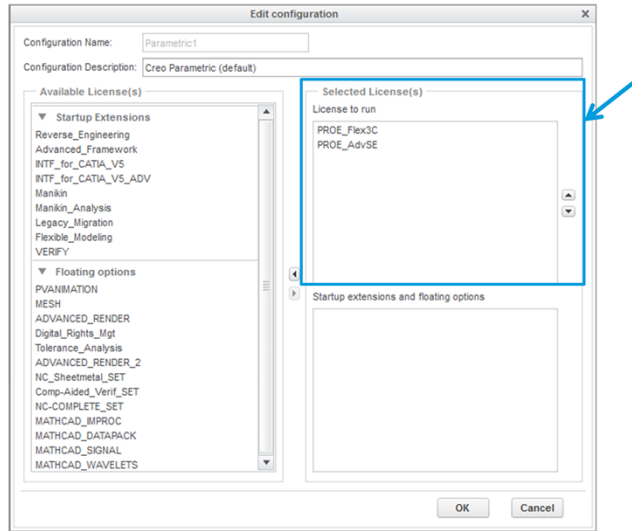


This is the Command Configuration Window. The top two lines are the labels we saw in the previous window.

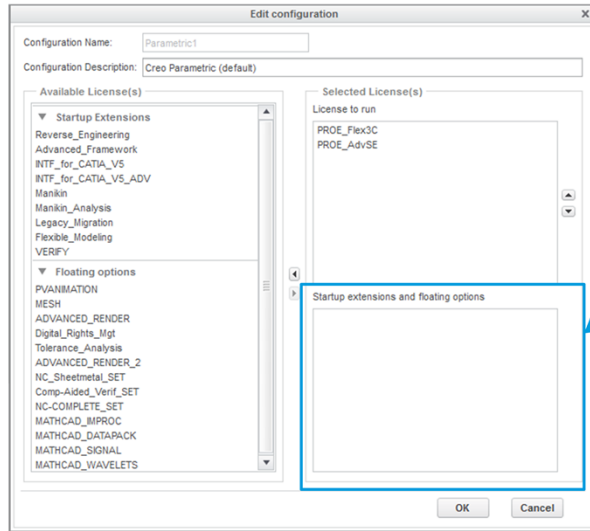
“Parametric1” & “Creo Parametric (default)”



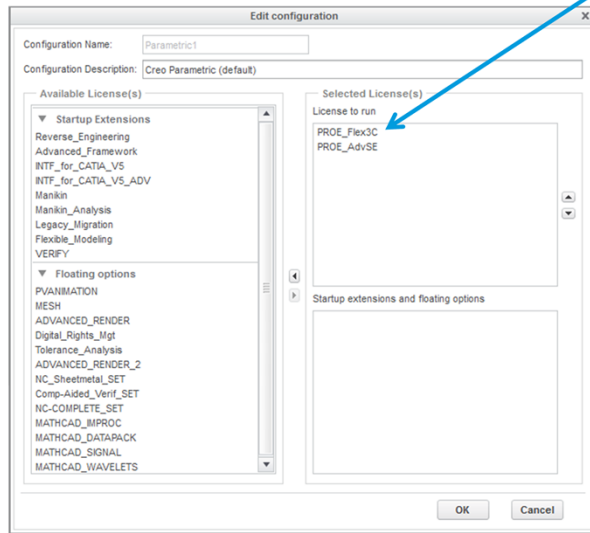
On the right is a section labeled Selected Licenses



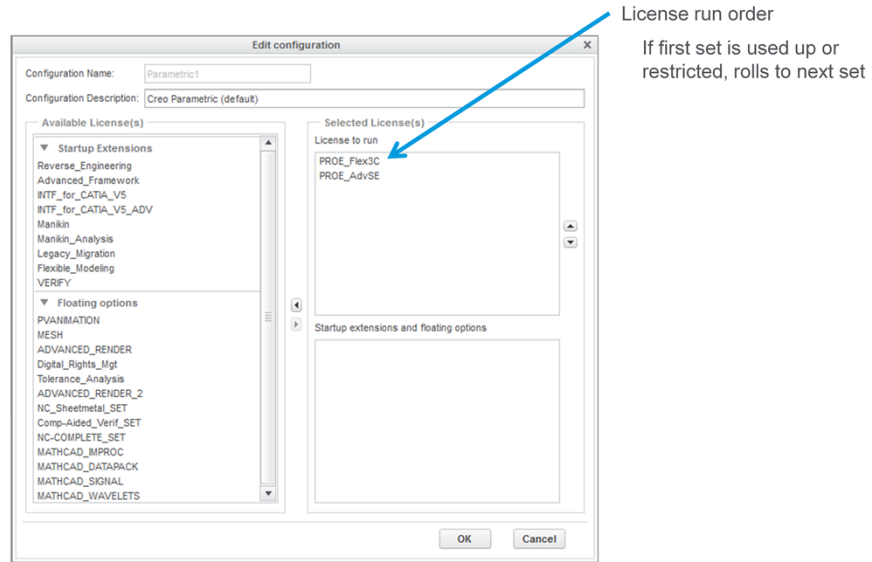
The top part lists the licenses to run



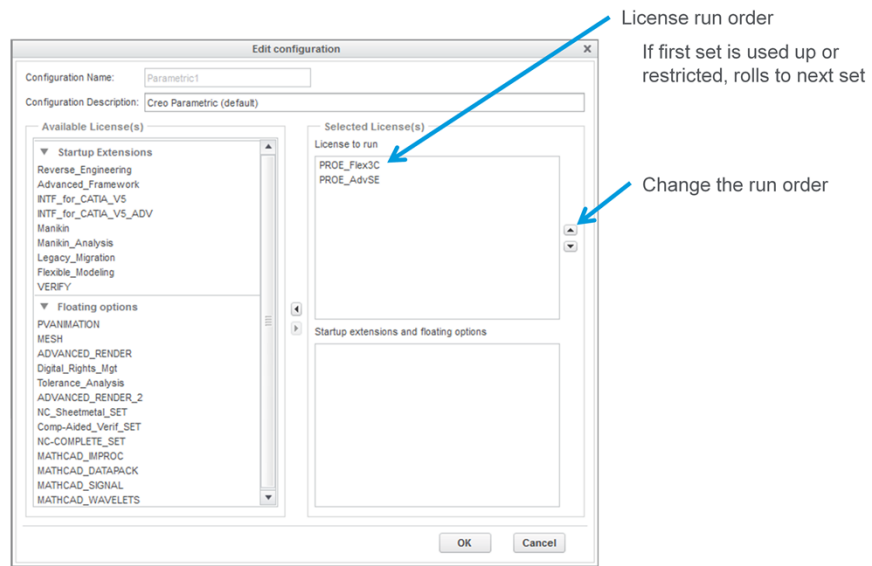
the bottom part list the extensions.



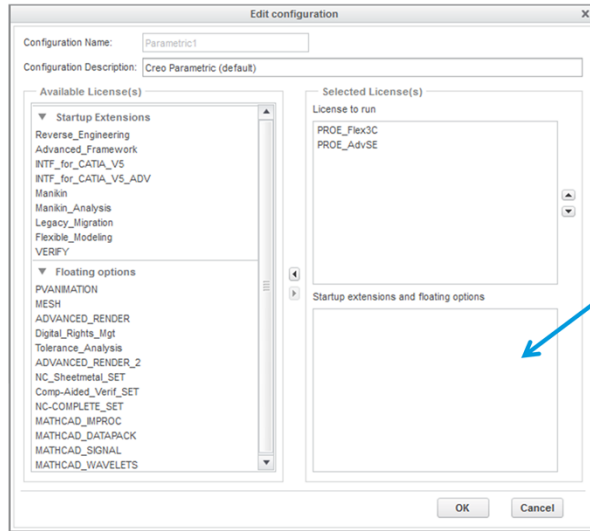
I have two flavors of Creo that are available. Advanced SE, and Flex 3C.



When Creo starts, it will try the first item in this list. If the licenses are used up, or there is a restriction, it will try the next one.

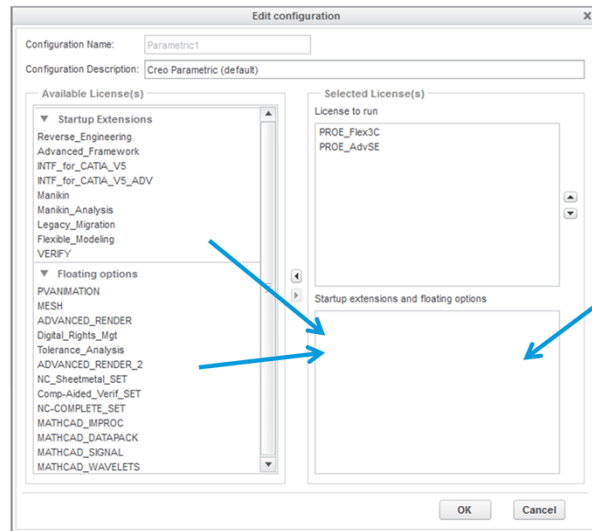


I always change this order, I put the high end license first.
Select a license, then use the arrows to move it up or down.



These licenses are used when Creo starts up

The bottom window shows what additional licenses will be activated when Creo starts.

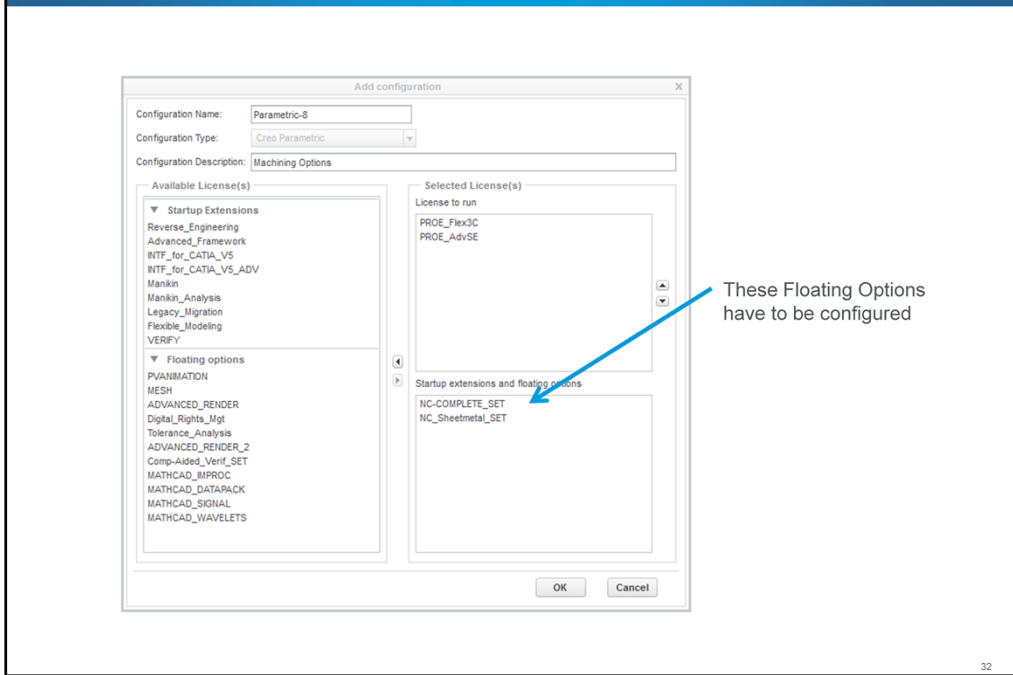


These licenses are used when Creo starts up

You populate this from the “Available Licenses” in the left hand window.

Expanding the floating options allows you to select those also.

You move the options by hi-lighting them and using the arrows.



Normally you shouldn't have to add floating options. This isn't true for the "Complete Machining Set".

If the Basic Machining option that comes with all Creo installations gets loaded, you'll never be able to access the menus for the "Complete Machining Set".

This Has to be configured it as a selected license.

So this floating option behaves more like a startup option.

Command Configuration PTC Live Global

Startup Extensions are **unavailable** if they are **not** configured into a command

Floating Options are **used up** if they are configured into a command

Available License(s)

- ▼ Startup Extensions
 - Reverse_Engineering
 - Advanced_Framework
 - INTF_for_CATIA_V5
 - INTF_for_CATIA_V5_ADV
 - Manikin
 - Manikin_Analysis
 - Legacy_Migration
 - Flexible_Modeling
 - VERIFY
- ▼ Floating options
 - PVANIMATION
 - MESH
 - ADVANCED_RENDER
 - Digital_Rights_Mgt
 - Tolerance_Analysis
 - ADVANCED_RENDER_2
 - NC_Sheetmetal_SET
 - Comp-Aided_Verif_SET
 - NC-COMPLETE_SET
 - MATHCAD_IMPROC
 - MATHCAD_DATAPACK
 - MATHCAD_SIGNAL
 - MATHCAD_WAVELETS

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Startup Extensions are unavailable if they are not configured into a command

If Floating options are added to a command, they are used when Creo starts.

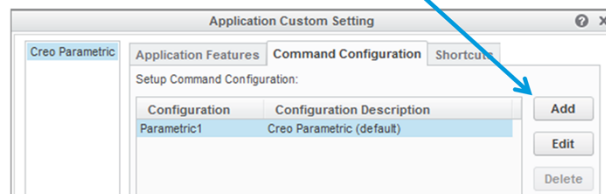
As you can see we have some high dollar options. When I took over managing our ProE installation, I noticed we had these options, but none had been configured.

A complete waste of money.

Worse yet, floating options like Advanced Render, had been added to the license. We have two of these. So guess what, the first two users got those licenses.

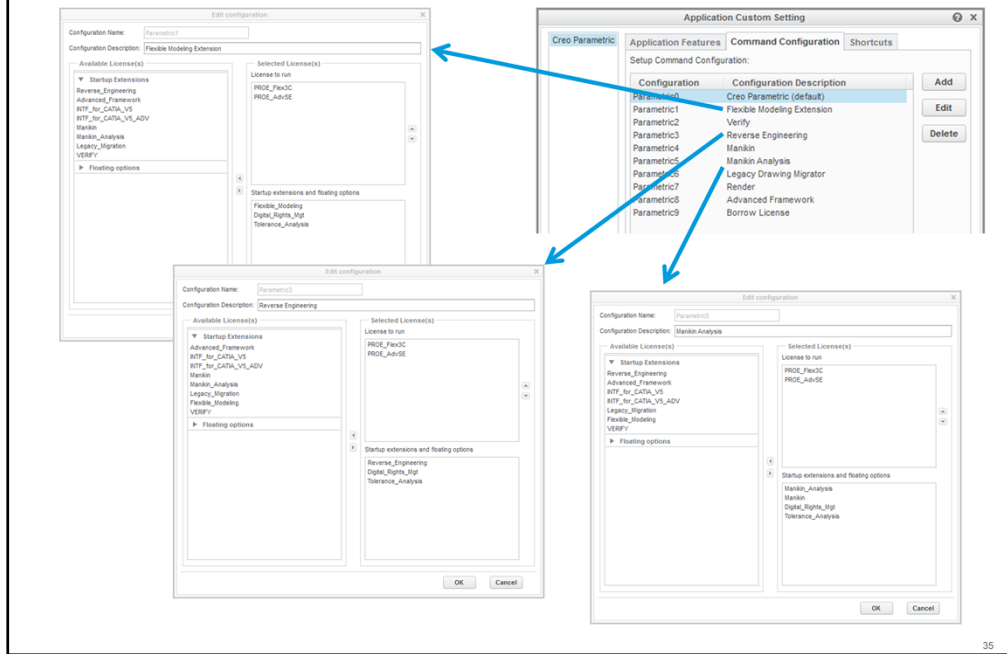
So let me show you what our previous Admin didn't understand, and honestly, I don't think he's alone.

You can add additional startup commands
each can have their own licenses configuration



In the Command Configuration tab, notice on the right there are three buttons, Add, Edit, and Delete.

You can add multiple configurations here



each one can have a different set of licenses assigned.

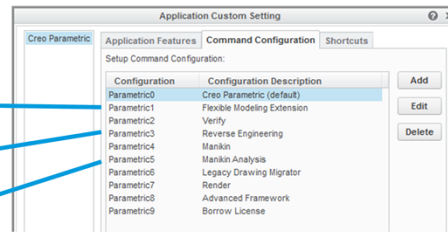
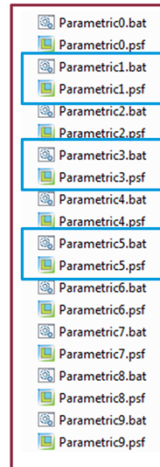
Command Configuration

PTC Live Global

Configuration	Configuration Description
Parametric0	Creo Parametric (default)
Parametric1	Flexible Modeling Extension
Parametric2	Verify
Parametric3	Reverse Engineering
Parametric4	Mankin
Parametric5	Mankin Analysis
Parametric6	Legacy Drawing Migrator
Parametric7	Render
Parametric8	Advanced Framework
Parametric9	Borrow License

I think it's important to understand what's going on under the hood when you create a command configuration.

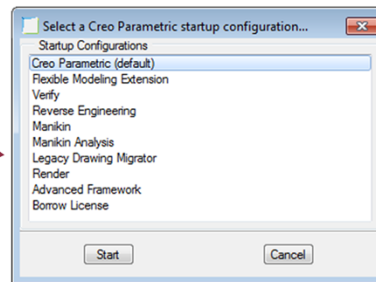
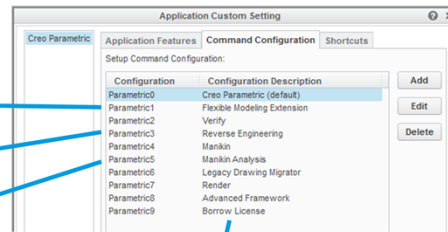
Files created in parametric/bin folder



Down in the load point for Creo, in the Parametric/bin folder a .bat and a .psf file is created for each configuration you make.

Files created in parametric/bin folder

- Parametric0.bat
- Parametric0.psf
- Parametric1.bat
- Parametric1.psf
- Parametric2.bat
- Parametric2.psf
- Parametric3.bat
- Parametric3.psf
- Parametric4.bat
- Parametric4.psf
- Parametric5.bat
- Parametric5.psf
- Parametric6.bat
- Parametric6.psf
- Parametric7.bat
- Parametric7.psf
- Parametric8.bat
- Parametric8.psf
- Parametric9.bat
- Parametric9.psf



When a user starts the software, Creo sees the multiple configurations and presents the user with a menu of choices.

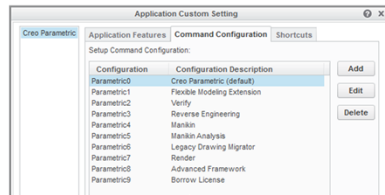
The names come from the Command Description

The default configuration should be first one in the list.

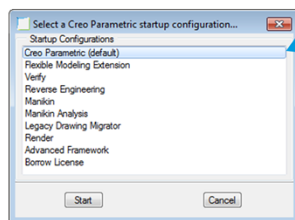
With the advent of Creo, PTC changed how this list was ordered.

Menu Order Weirdness

Creo 2.0 f000 – m090
Reverse order of creation
Order of Description column



Default choice
Should be 1st

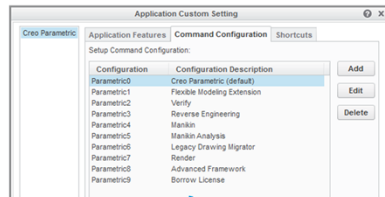


It was based on the reverse order of creation of the commands. Which was pretty inconvenient.
If you wanted to change one configuration you had to change them all and do it in a specific order.

Menu Order Weirdness

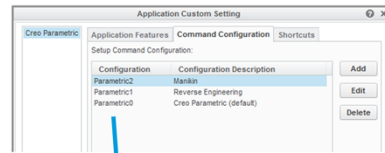
Creo 2.0 f000 – m090

Reverse order of creation
Order of Description column

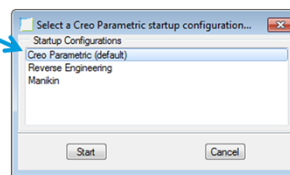
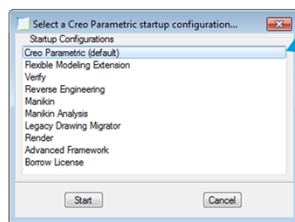


Creo 2.0 m100 & all ProE

Alphabetical order of
Configuration name



Default choice
Should be 1st



Now in m100 & 110, the order is now back to the old ProE default, it's based on the configuration name.

The Good:

- Buy few copies of expensive options and float them to any user

The beauty of using multiple configurations is you can buy one copy of an expensive rarely used license, and let anyone in your company use it.

The Good:

- Buy few copies of expensive options and float them to any user
- All clients get the same licenses

Also, all machines get the same install.

One added benefit is every the user starts Creo, they get a reminder of the licenses available.

The Good:

- Buy few copies of expensive options and float them to any user
- All clients get the same licenses

The Bad:

- Most users are not used to selecting the license at run time

Most users are not used to picking the license they want when they start Creo.

The Good:

- Buy few copies of expensive options and float them to any user
- All clients get the same licenses

The Bad:

- Most users are not used to selecting the license at run time
- You have to exit and restart to get a license you might need

Also if you want an option that your current session of Creo doesn't have, you have to exit Creo and start again to pick the license you want.

Command Configuration PTC Live
Global

The Ugly:
Configure unique licenses on client machines

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Even with the downsides, this is far better than going to a users computer and customizing their installation to give them access to some option.

If you do that, then you are going to have multiple computers with different configurations.

The Ugly:
Configure unique licenses on client machines



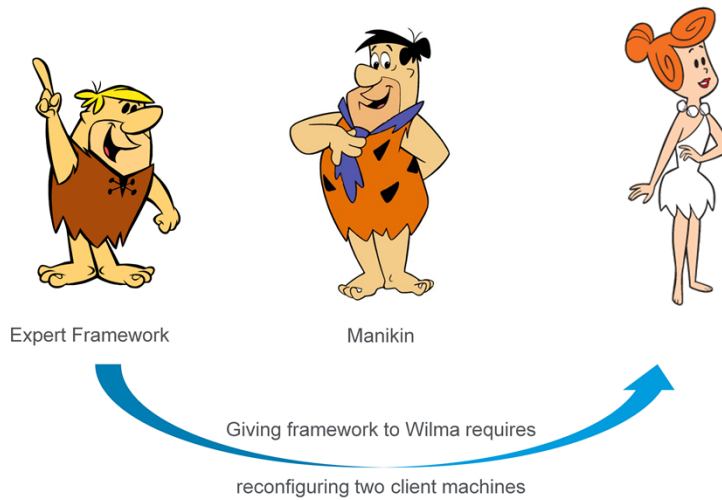
Expert Framework



Manikin

Now you have to keep track that Barney has Expert Framework, and Fred has Manikin.

The Ugly:
Configure unique licenses on client machines



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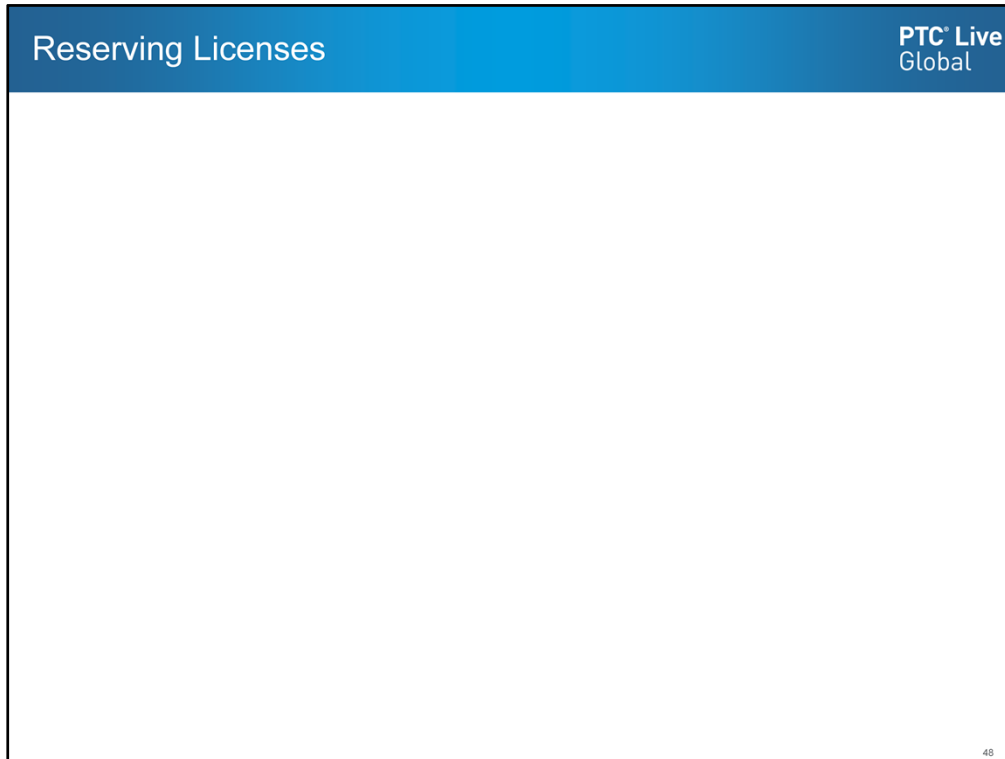
Let's now suppose you want to remove Framework from Barney and give it to Wilma.

You now have to reconfigure Creo on both machines.

That's license mismanagement. It's a time bandit, keeping you from other useful things you could be doing. I don't want that job!

Now of course, some of you may be thinking, but I want to limit some options to an individual or group. You don't want a person doing drafting, grabbing one of my few Complete Machining Option.

That's where my second point come in.



Reserving Licenses

Making sure the correct individuals can access the licenses they need, is done with the PTC options file.

The best way to make sure certain people can get the licenses they need, is to “reserve” licenses for them.

Your License File

```
##### FLOATING License #####  
# Serviceable = Creo Enterprise SE (formerly Pro/ENGINEER)  
# Feature Name = PRO_Flex3C  
# Feature Version = 33.0  
  
##### Super Bundle 10114 Instance #####  
# Serviceable = Complete Machining Option  
# Feature Name = 10114  
# Feature Version = 33.0
```

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But before we can reserve licenses, we need to know what to reserve, and the version of that item.

So if we look at the feature information in your license file you'll see this

Your License File

```
##### FLOATING License #####  
# Serviceable = Creo Enterprise SE (formerly Pro/ENGINEER)  
# Feature Name = PROE_Flex3C ←  
# Feature Version = 33.0  
  
##### Super Bundle 10114 Instance #####  
# Serviceable = Complete Machining Option  
# Feature Name = 10114 ←  
# Feature Version = 33.0
```

you will find the name of the feature here

Your License File

```
##### FLOATING License #####  
# Serviceable = Creo Enterprise SE (formerly Pro/ENGINEER)  
# Feature Name = PROE_Flex3C  
# Feature Version = 33.0 ←  
  
##### Super Bundle 10114 Instance #####  
# Serviceable = Complete Machining Option  
# Feature Name = 10114  
# Feature Version = 33.0 ←
```

and the version of the feature is here.

Your License File

```
##### FLOATING License #####  
# Serviceable = Creo Enterprise SE (formerly Pro/ENGINEER)  
# Feature Name = PROE_Flex3C  
# Feature Version = 33.0 ←  
  
##### Super Bundle 10114 Instance #####  
# Serviceable = Complete Machining Option  
# Feature Name = 10114  
# Feature Version = 33.0 ←
```

The version changes with each release of Creo

Just a warning, the version changes with each release of the software. So when you move from Creo 2 to Creo 3, this version is going to change. Likewise if move up from Advanced SE to Flex 3C, the feature name will change also.

Reserving Licenses PTC Live
Global

Your users:
Need the active directory username for each user

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Once you know what it is you want to reserve, we need to know who to reserve it for.

What you need are the Active Directory usernames.

Even if it's only one individual, I think it's always best to create a group for them.

Reserving Licenses **PTC Live**
Global

Your users:
Need the active directory username for each user

The ptc.opt file
Located in:
`C:\Program Files\PTC\FLEXnet Admin License Server\licensing`

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Now that you have all that information, We are ready to set up the ptc.opt file

In the licensing folder you're going to find an existing ptc.opt file.

Your users:

Need the active directory username for each user

The ptc.opt file

Located in:

`C:\Program Files\PTC\FLEXnet Admin License Server\licensing`

By default has two lines:

1. `REPORTLOG +"C:\Program Files\PTC\FLEXnet Admin License Server\logs\ptcreport.log"`
2. `TIMEOUTALL 7200`

By default it has two lines in it.

Creating Groups:

GROUP flintstone



Group name

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To define a group you enter GROUP,

And the name you want to give the group.

For example flintstone

Creating Groups:

GROUP flintstone fred wilma pebbles dino

Group name Group members

And then add the members of the group.

Creating Groups:

GROUP flintstone fred wilma pebbles dino

The diagram shows the text "GROUP flintstone fred wilma pebbles dino". A blue box highlights the names "fred wilma pebbles dino". Two blue arrows point from labels below to the highlighted names: one from "Group name" to "fred" and one from "Group members" to "fred wilma pebbles dino".

Another group:

GROUP rubble barney betty bammbamm

You can create as many groups as you want.

Here's one for the rubble's

Creating Groups:

GROUP flintstone fred wilma pebbles dino

Group name Group members

Another group:

GROUP rubble barney betty bammbamm

Reserve Licenses for a group:

```
RESERVE 4 PROE_Flex3c:VERSION=33.0 GROUP flintstone  
RESERVE 3 PROE_Flex3c:VERSION=33.0 GROUP rubble
```

After defining your groups, you can use the group name when reserving licenses.

Flintstone has 4 licenses reserved

Rubble has 3 licenses

Creating Groups:

GROUP flintstone fred wilma pebbles dino

Group name Group members

Another group:

GROUP rubble barney betty bammbamm

Reserve Licenses for a group:

```
RESERVE 4 PROE_Flex3c:VERSION=33.0 GROUP flintstone  
RESERVE 3 PROE_Flex3c:VERSION=33.0 GROUP rubble
```

Can be any option or Creo flavor
ProE_AdvSE – Foundation Creo
10114 – Complete Machining Set

You can reserve floating options, startup options, or any flavor of Creo.

ptcstatus.bat output:

PROE_Flex3C	3	7		
			^(fred@coaststarlight)	PROE_Flex3C stonequarry 7788 3750
			(barney@southwestchief)	PROE_Flex3C stonequarry 7788 3472
			(betty@californiazephyr)	PROE_Flex3C stonequarry 7788 4837
			(flintstone@)	PROE_Flex3C stonequarry 7788 0
Reserved, in use			(flintstone@)	PROE_Flex3C stonequarry 7788 0
			(flintstone@)	PROE_Flex3C stonequarry 7788 0
Reserved, not in use			(rubble@)	PROE_Flex3C stonequarry 7788 0

After the license server has reread the license, you should see something like this in the ptcstatus output.

If the license is in use you'll see the username & client.

Reserved licenses will just show the group name.

ptcstatus.bat output:

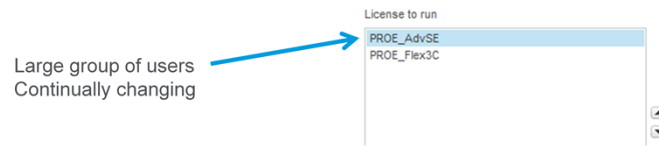
PROE_Flex3C	3	7	^(fred@coaststarlight)	PROE_Flex3C stonequarry 7788 3750
			(barney@southwestchief)	PROE_Flex3C stonequarry 7788 3472
			(betty@californiazephyr)	PROE_Flex3C stonequarry 7788 4837
			(flintstone@)	PROE_Flex3C stonequarry 7788 0
Reserved, in use			(flintstone@)	PROE_Flex3C stonequarry 7788 0
			(flintstone@)	PROE_Flex3C stonequarry 7788 0
Reserved, not in use			(rubble@)	PROE_Flex3C stonequarry 7788 0

Fred has borrowed this license

^(fred@coaststarlight)

the up caret indicates that the license is borrowed by fred on the machine coaststarlight

Why change the order of licenses to run?



Earlier I said that I like to change the order of how the licenses are read.

Reserving Licenses PTC Live Global

Why change the order of licenses to run?

Large group of users
Continually changing

License to run
PROE_AdvSE
PROE_Flex3C

Smaller group of users
Mostly static

I reserve for this group

Let anyone use
PROE_AdvSE

License to run
PROE_Flex3C
PROE_AdvSE

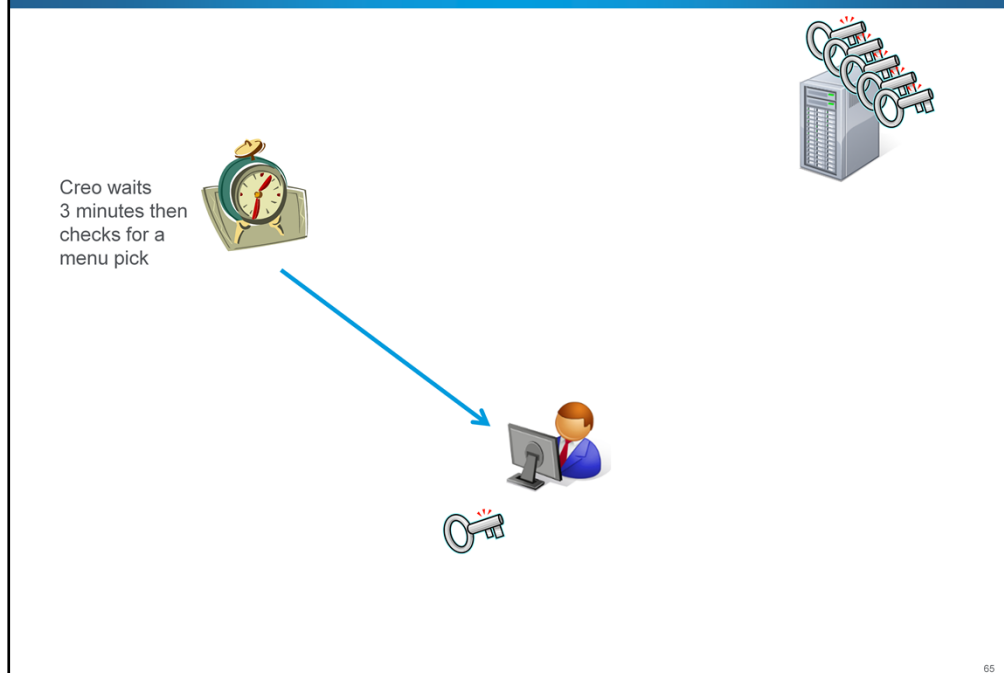
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The Flex3C's are for our heavy users, the AdvSE is for our occasional users.

I know who the heavy users are, and they don't change much.

I'm always getting request for Creo from casual users, I don't want to have to edit the options file every time someone new comes along.

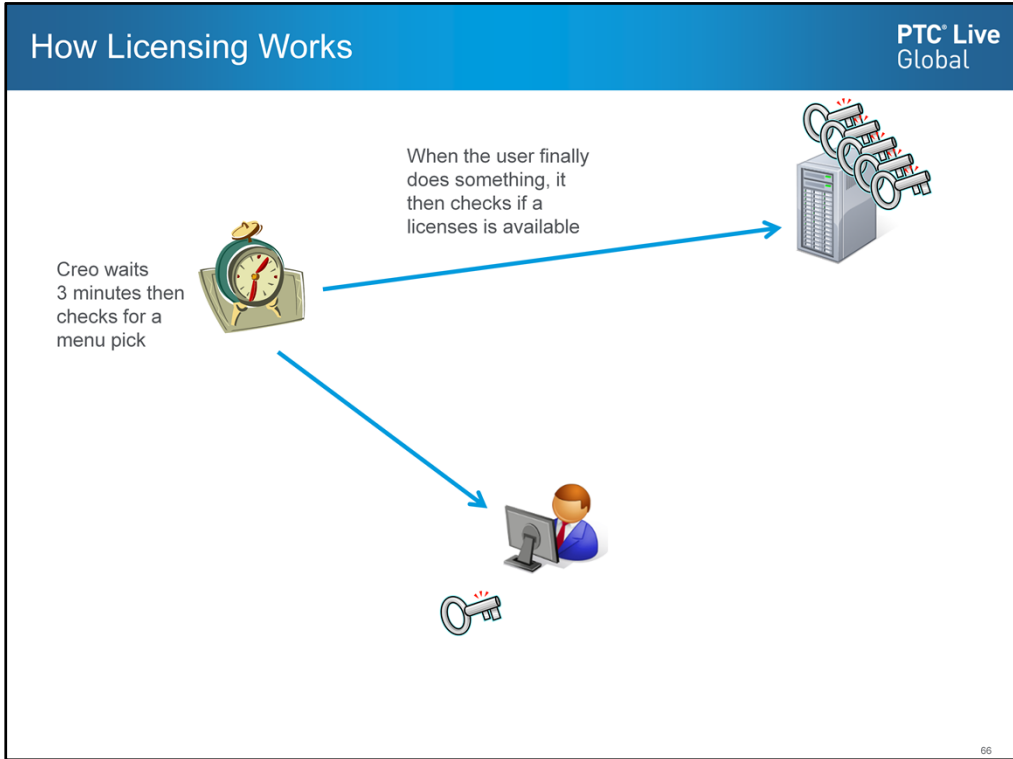
When a casual users starts Creo, all the Flex3C licenses are reserved, so it rolls over to an AdvSE licenses.



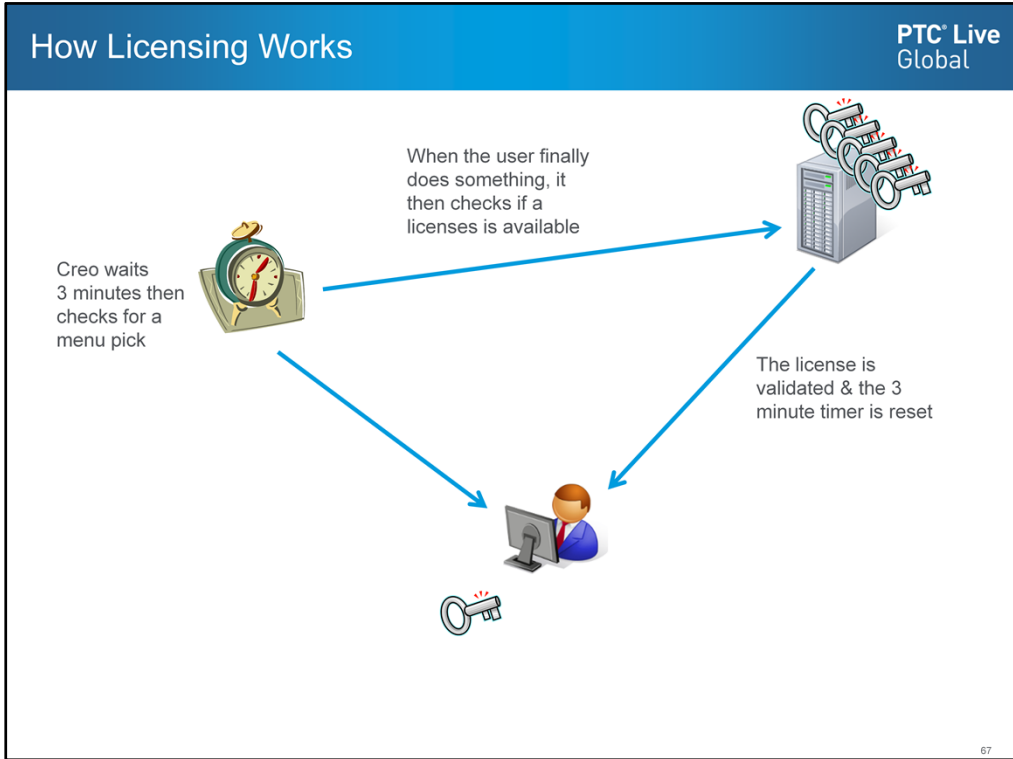
Before we can talk about how many licenses you should buy from PTC, we need to understand how licensing works under the hood.

Here is how the software makes sure you have a valid license.

After a 3 minute interval Creo waits for the user to make a menu pick.

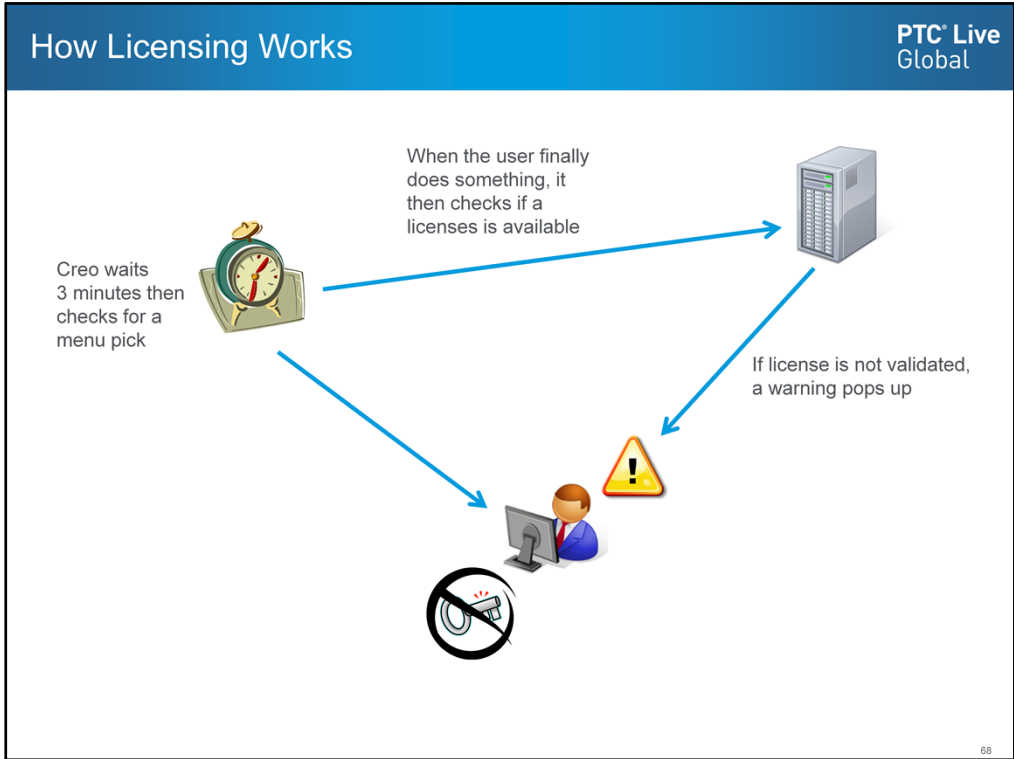


As soon as the user does something, the client machine then asks the server if the license is still available



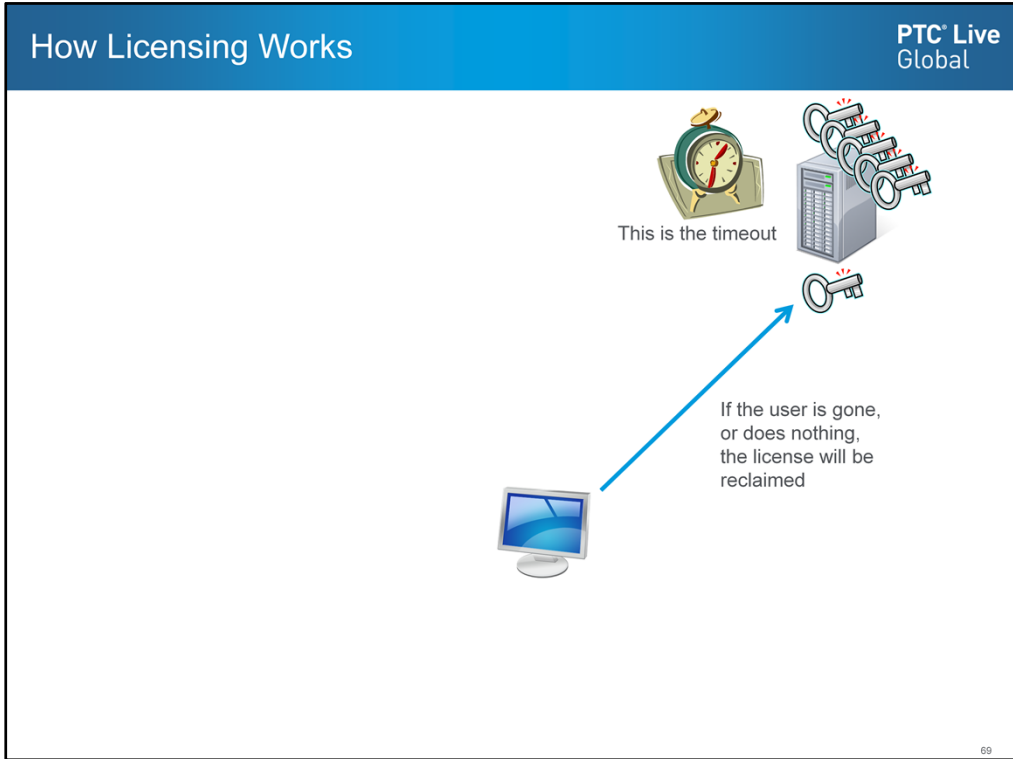
If the license is available the Key is issued again. And Creo waits for another 3 minutes before checking again.

Notice it's not checking for the license every 3 minutes, it's checking when the user makes a menu selection 3+ minutes after the last key was issued.



If no licenses are available a warning pops up and your going to get an phone call from an angry user.

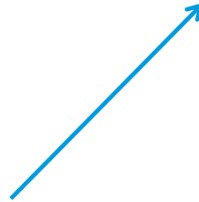
The software gives you 1 minute to validate, before popping up the warning



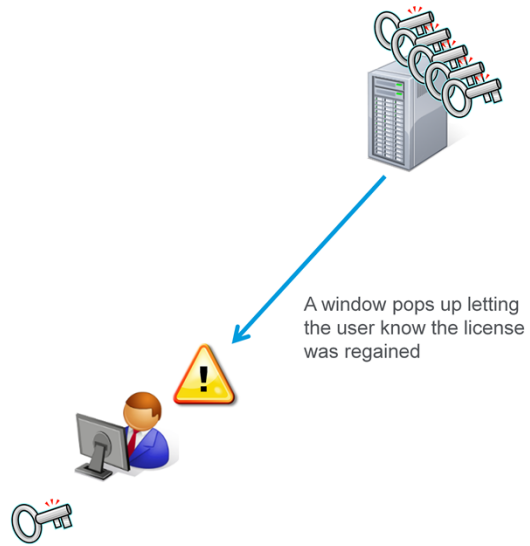
There is another timer running. This one is on the server. It's called the timeout

When Creo has been idle for more than the timeout setting, that is, when the user hasn't made a menu selection for that time period, then the license is released back to the pool of available licenses.

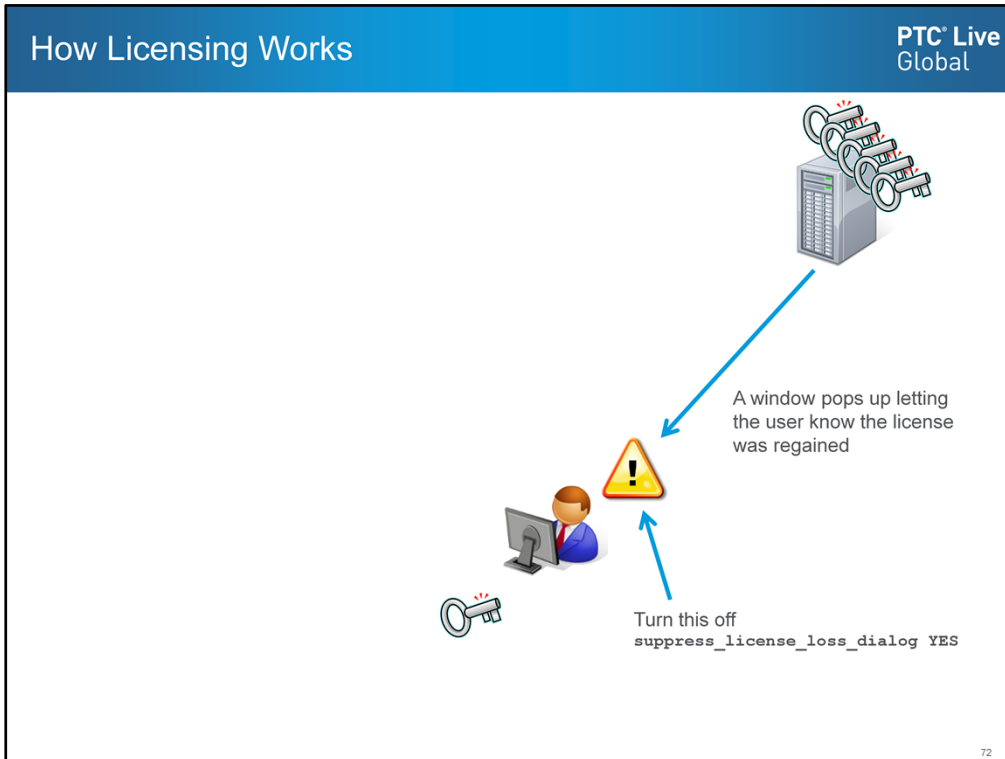
When the user finally
does something,
Creo checks for a
licenses



When the user comes back and starts picking menus, then the client asks the server if a license is available.



If a license is available Creo pops up a window and let you know you regained a license.

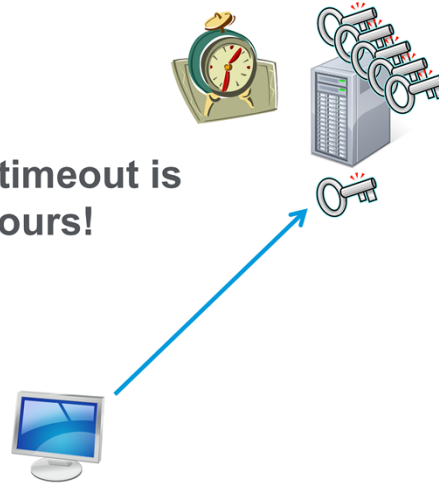


Honestly, the user doesn't care. So turn off the warning.

You can turn it off with this config option:

Besides in the distant past, that popup caused problems in ProE.

**Default timeout is
2 hours!**



If you have not explicitly set it, the timeout value is 2 hours. The license would have to sit idle for two hours before it gets released.

With a two hour timeout, almost no licenses will ever get released.

Three general categories

1. Working hard on Creo most of the day

So let's look at how people really work.

Sometimes you will be banging on the software for most of the day with hardly any break.

Three general categories

1. Working hard on Creo most of the day
2. Meetings or product research, big breaks in usage

Other times you have meetings, or you're doing research on the internet or in catalogs.

During the day you may have several large breaks in your usage.

Three general categories

1. Working hard on Creo most of the day
2. Meetings or product research, big breaks in usage
3. Writing a document, in Creo very little

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Other times you may be writing a document, you need a screen shot, so you open up Creo, get the image you want and then go back to work on your document.

You may only use Creo 2 or 3 times all day. Even then, for just a few minutes each time.

I think categories #2 & #3 are more typical than #1.

The exception would be dedicated drafting users. They would fall into category #1 most of the time.

Three general categories

1. Working hard on Creo most of the day
2. Meetings or product research, big breaks in usage
3. Writing a document, in Creo very little

Floating Licenses are so you can take advantage of this varied usage

77

The whole point of floating licenses is so you can take advantage of this type of variable usage.

If you're not taking advantage of it, then you're wasting a lot of money paying for idle licenses.

The more licenses you have the more important this is.

Three general categories

1. Working hard on Creo most of the day
2. Meetings or product research, big breaks in usage
3. Writing a document, in Creo very little

Floating Licenses are so you can take advantage of this varied usage

2 hour timeout means almost no licenses would be released

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The minimum timeout is 20 minutes.

Consider that the user who goes to a meeting for 30 minutes, that license is going to get released. You might think, "big deal, it's only going to be free for 10 minutes, what's the point". I'll bet dollars to donuts that that user is gone from his desk for more than 30 minutes. It's likely closer to 45 minutes, now were talking 25 minutes a license is freed up.

Also the meeting room is scheduled the next hour for another design meeting, and some other engineer attends that one. Now his license is going to timeout.

In the mean time you have someone writing a safety note, they pop up Creo and make a screenshot to include in their document. They used the license for 5 minutes, now it's just sitting idle.

Honestly, it doesn't take a lot of users to make this kind of savings add up.

Three general categories

1. Working hard on Creo most of the day
2. Meetings or product research, big breaks in usage
3. Writing a document, in Creo very little

Floating Licenses are so you can take advantage of this varied usage

2 hour timeout means almost no licenses would be released

Minimum timeout is 20 minutes

```
TIMEOUTALL 1200
```

Modify your ptc.opt file to set the timeout to 20 minutes.

The value is in seconds. 1200 seconds is the minimum allowed value. (20 minutes)

The default is 7200 seconds (2 hours)

```
REPORTLOG +"C:\Program Files\PTC\FLEXnet Admin License Server\logs\ptcreport.log"  
TIMEOUTALL 1200  
GROUP flintstone fred wilma pebbles dino  
RESERVE 4 PROE_Flex3c:VERSION=33.0 GROUP flintstone  
GROUP rubble barney betty bammamm  
RESERVE 3 PROE_Flex3c:VERSION=33.0 GROUP rubble
```

The complete ptc.opt file should now look something like this.

All the blue text is stuff we added or modified.

How Many Licenses?

PTC Live Global

You have to track licenses to know

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This now brings us to the question how many licenses do you really need.

Before you start tracking usage, let me emphasize that you need to set the timeout to 20 minutes, or your numbers will be wildly inflated.

There are applications out there that will track your usage and give you pretty graphs and such.

But all you really need to know for your purchase decision are the maximum concurrent users.

How Many Licenses?

PTC Live
Global

You have to track licenses to know

`ptcstatus` command reports the current usage

Use information from it to build data files at 15 minute intervals

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We can get this number with a script that calls the `ptcstatus` command. I have mine set to run every 15 minutes.

How Many Licenses?

PTC Live
Global

You have to track licenses to know

ptcstatus command reports the current usage

Use information from it to build data files at 15 minute intervals

Need Perl for this script:

Suggest "Active Perl" <http://www.activestate.com/activeperl>

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I'll apologize at the outset, I tried to do this with just windows commands, but I'm evidently not smart enough.

This script requires that you have PERL installed on your computer. We use Active Perl.

It's simple to install.

You have to reboot before using it.

How Many Licenses?

PTC Live
Global

You have to track licenses to know

ptcstatus command reports the current usage

Use information from it to build data files at 15 minute intervals

Need Perl for this script:

Suggest "Active Perl" <http://www.activestate.com/activeperl>

Track_licenses.bat:

```
1. set PATH=%PATH%;"C:\ptc\Creo
   2.0\Parametric\bin\";"C:\Perl64\bin\perl.exe"
2.
3. ptcstatus.bat /nopause | perl -ne "print $1, \"\t\",
   scalar localtime(time), \"\t\", $2, \"\n\" if $_ =~
   /\s+(PROE_Flex3C)\s+(\d+)\s+\d+/ ">>c:\PTC\tracking\data-FLEX3C.txt
4. ptcstatus.bat /nopause | perl -ne "print $1, \"\t\",
   scalar localtime(time), \"\t\", $2, \"\n\" if $_ =~
   /\s+(PROE_AdvSE)\s+(\d+)\s+\d+/ ">>c:\PTC\tracking\PROE_AdvSE.txt
5. ptcstatus.bat /nopause | perl -ne "print $1, \"\t\",
   scalar localtime(time), \"\t\", $2, \"\n\" if $_ =~
   /\s+(Mathcad)\s+(\d+)\s+\d+/ ">>c:\PTC\tracking\data-Mathcad.txt
```

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This is the script. I won't go over it in great detail. But I want to point out a couple things.

I'm going to use scheduled task to run this batch file.

That task is going to run as a different user, so it's not going to recognize PERL as a program.

That's why the paths to Perl and the Parametric/bin folder are added in line one.

How Many Licenses?

You have to track licenses to know

ptcstatus command reports the current usage

Use information from it to build data files at 15 minute intervals

Need Perl for this script:

Suggest "Active Perl" <http://www.activestate.com/activeperl>

Track_licenses.bat:

```
1. set PATH=%PATH%;"C:\ptc\Creo
   2.0\Parametric\bin\";"C:\Perl64\bin\perl.exe"
2.
3. ptcstatus.bat /nopause | perl -ne "print $1, \"\t\",
   scalar localtime(time), \"\t\", $2, \"\n\" if $_ =~
   /\s+(PROE_Flex3C)\s+(\d+)\s+\d+/ ">c:\PTC\tracking\data-FLEX3C.txt
4. ptcstatus.bat /nopause | perl -ne "print $1, \"\t\",
   scalar localtime(time), \"\t\", $2, \"\n\" if $_ =~
   /\s+(PROE_AdvSE)\s+(\d+)\s+\d+/ ">c:\PTC\tracking\PROE AdvSE.txt
5. ptcstatus.bat /nopause | perl -ne "print $1, \"\t\",
   scalar localtime(time), \"\t\", $2, \"\n\" if $_ =~
   /\s+(Mathcad)\s+(\d+)\s+\d+/ ">c:\PTC\tracking\data-Mathcad.txt
```

Also notice I have separate data files for each item I'm tracking.

```
ptcstatus.bat /nopause | perl -ne "print $1, \"\t\",  
scalar(localtime(time)), \"\t\", $2, \"\n\" if $_ =~  
/s+(PROE_Flex3C)\s+(\d+)\s+\d+/" ">>c:\PTC\tracking\data-FLEX3C.txt
```

Here's one line that gathers a data point for a specific license feature.

How Many Licenses?

PTC Live
Global

```
ptcstatus.bat /nopause | perl -ne "print $1, \"\t\",  
scalar(localtime(time)), \"\t\", $2, \"\n\" if $_ =~  
/\s+(PROE_Flex3C)\s+(\d+)\s+\d+/" ">>c:\PTC\tracking\data-FLEX3C.txt
```

Look for this:
(PROE_Flex3C)

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This orange section tells perl what to look for in the output of ptcstatus.

How Many Licenses?

PTC Live
Global

```
ptcstatus.bat /nopause | perl -ne "print $1, \"\t\",  
scalar(localtime(time)), \"\t\", $2, \"\n\" if $_ =~  
/s+(PROE_Flex3C)s+(\d+)s+\d+/" ">>c:\PTC\tracking\data-FLEX3C.txt
```

Look for this:

```
(PROE_Flex3C)
```

Append the data to this file:

```
">>c:\PTC\tracking\data-FLEX3C.txt
```

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This red section defines what data file to append to.

How Many Licenses?

PTC Live
Global

```
ptcstatus.bat /nopause | perl -ne "print $1, \"\t\",  
scalar(localtime(time)), \"\t\", $2, \"\n\" if $_ =~  
/s+(PROE_Flex3C)s+(\d+)\s+\d+/ ">>c:\PTC\tracking\data-FLEX3C.txt
```

Look for this:

```
(PROE_Flex3C)
```

Append the data to this file:

```
">>c:\PTC\tracking\data-FLEX3C.txt
```

The output line is tab delimited.

```
PROE_Flex3C      Fri May  9 11:46:51 2014  11
```



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When you run this script it will output a single line into a data file.

How Many Licenses?

PTC Live
Global

```
ptcstatus.bat /nopause | perl -ne "print $1, \"\t\",  
scalar(localtime(time)), \"\t\", $2, \"\n\" if $_ =~  
/s+(PROE_Flex3C)s+(\d+)\s+\d+/" ">>c:\PTC\tracking\data-FLEX3C.txt
```

Look for this:

```
(PROE_Flex3C)
```

Append the data to this file:

```
">>c:\PTC\tracking\data-FLEX3C.txt
```

The output line is tab delimited.

```
PROE_Flex3C      Fri May  9 11:46:51 2014  11
```



Create a scheduled task to output data periodically

```
schtasks /create /sc minute /mo 15 /ru "System" /tn "Track PTC Licenses" /tr C:\PTC\Track_licenses.bat
```

In order to track your licenses over time, you need to set up a scheduled task that will run this command periodically.

How Many Licenses?

PTC Live
Global

Create a scheduled task to output data periodically

```
schtasks /create /sc minute /mo 15 /ru "System" /tn "Track PTC Licenses" /tr C:\PTC\Track_licenses.bat
```

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Let's look at the schtasks command in detail.

How Many Licenses?

PTC Live
Global

Create a scheduled task to output data periodically

```
schtasks /create /sc minute /mo 15 /ru "System" /tn "Track PTC Licenses" /tr C:\PTC\Track_licenses.bat
```

run the script every 15 minutes:

```
/sc minute /mo 15
```

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The orange section of the line is telling it to run the script every 15 minutes:

How Many Licenses?

PTC Live
Global

Create a scheduled task to output data periodically

```
schtasks /create /sc minute /mo 15 /ru "System" /tn "Track PTC Licenses" /tr C:\PTC\Track_licenses.bat
```

run the script every 15 minutes:

```
/sc minute /mo 15
```

Name of the scheduled task:

```
/tn "Track PTC Licenses"
```

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The red section is the name of the task it will create:

How Many Licenses?

PTC Live
Global

Create a scheduled task to output data periodically

```
schtasks /create /sc minute /mo 15 /ru "System" /tn "Track PTC Licenses" /tr C:\PTC\Track_licenses.bat
```

run the script every 15 minutes:

```
/sc minute /mo 15
```

Name of the scheduled task:

```
/tn "Track PTC Licenses"
```

Command to run: (my bat file)

```
/tr C:\PTC\Track_licenses.bat
```

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The green section tells it what command to run: (my bat file)

How Many Licenses?

Create a scheduled task to output data periodically

```
schtasks /create /sc minute /mo 15 /ru "System" /tn "Track PTC Licenses" /tr C:\PTC\Track_licenses.bat
```

run the script every 15 minutes:

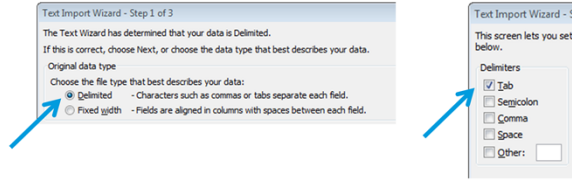
```
/sc minute /mo 15
```

Name of the scheduled task:

```
/tn "Track PTC Licenses"
```

Command to run: (my bat file)

```
/tr C:\PTC\Track_licenses.bat
```



Import data file into Excell as tab delimited

	A	B	C
4036	PROE_Flex3C	Tue Apr 15 09:06:00 2014	7
4037	PROE_Flex3C	Tue Apr 15 09:21:00 2014	10
4038	PROE_Flex3C	Tue Apr 15 09:36:00 2014	11
4039	PROE_Flex3C	Tue Apr 15 09:51:01 2014	12
4040	PROE_Flex3C	Tue Apr 15 10:06:00 2014	9
4041	PROE_Flex3C	Tue Apr 15 10:25:22 2014	11
4042	PROE_Flex3C	Tue Apr 15 10:36:55 2014	13
4043	PROE_Flex3C	Tue Apr 15 10:51:03 2014	13
4044	PROE_Flex3C	Tue Apr 15 11:06:02 2014	10
4045	PROE_Flex3C	Tue Apr 15 11:21:02 2014	8
4046	PROE_Flex3C	Tue Apr 15 11:36:01 2014	9
4047	PROE_Flex3C	Tue Apr 15 11:51:01 2014	9
4048	PROE_Flex3C	Tue Apr 15 12:06:00 2014	9
4049	PROE_Flex3C	Tue Apr 15 12:21:00 2014	5
4050	PROE_Flex3C	Tue Apr 15 12:36:00 2014	3

Now after some time collecting data you can read the data file into excel as a tab delimited file. You'll get the feature name, date, and number of license, in separate columns.

How Many Licenses?

Create a scheduled task to output data periodically

```
schtasks /create /sc minute /mo 15 /ru "System" /tn "Track PTC Licenses" /tr C:\PTC\Track_licenses.bat
```

run the script every 15 minutes:

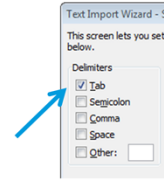
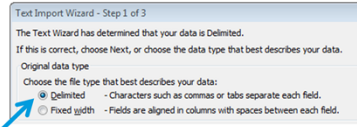
```
/sc minute /mo 15
```

Name of the scheduled task:

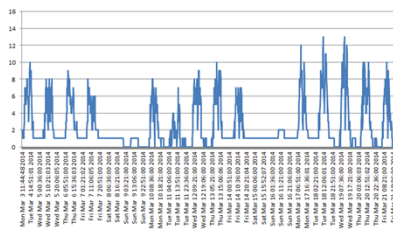
```
/tn "Track PTC Licenses"
```

Command to run: (my bat file)

```
/tr C:\PTC\Track_licenses.bat
```



Import data file into Excell as tab delimited



	A	B	C
4036	PROE_Flex3C	Tue Apr 15 09:06:00 2014	7
4037	PROE_Flex3C	Tue Apr 15 09:21:00 2014	10
4038	PROE_Flex3C	Tue Apr 15 09:36:00 2014	11
4039	PROE_Flex3C	Tue Apr 15 09:51:01 2014	12
4040	PROE_Flex3C	Tue Apr 15 10:06:00 2014	9
4041	PROE_Flex3C	Tue Apr 15 10:25:22 2014	11
4042	PROE_Flex3C	Tue Apr 15 10:36:55 2014	13
4043	PROE_Flex3C	Tue Apr 15 10:51:03 2014	13
4044	PROE_Flex3C	Tue Apr 15 11:06:02 2014	10
4045	PROE_Flex3C	Tue Apr 15 11:21:02 2014	8
4046	PROE_Flex3C	Tue Apr 15 11:36:01 2014	9
4047	PROE_Flex3C	Tue Apr 15 11:51:01 2014	9
4048	PROE_Flex3C	Tue Apr 15 12:06:00 2014	9
4049	PROE_Flex3C	Tue Apr 15 12:21:00 2014	5
4050	PROE_Flex3C	Tue Apr 15 12:36:00 2014	3

- If you want, you can use columns B & C to make a pretty graph for your boss.
- They always like that sort of thing.
- Or, just sort on the third column to find the maximum usage number.

This script will not...

PTC Live
Global

- Will not track usage of groups or divisions

Flexera has software for that – may be worth the money

Or use “CADminTools license tracker”
See Edwin’s talk later this morning

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What this script is not going to do for you is track how much time specific people are using the software.

So it won't help you figure out how much to charge different groups for their usage.

There is software from Flexera that will track all types of events and usage, but it's not free. If you have lots of users, it may be worth buying.

There's another talk later this morning that may also help you with that task.

That complete my first topic, now let's talk about the flexnet software that ships with Creo.

Former ProE sites may still be running lmgrd

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If you were already using ProE, it's highly likely you didn't install the license server that comes with Creo.

The old license will continue to work just like it always has.

Imadmin – new licensing software PTC® Live Global

Former ProE sites may still be running Imgrd

Imadmin comes with Creo

How to install???

No button in user interface!

Source	Status
P:_bin\license management screens\shdpsr_53030517.txt	Installing License Server...

If you did a fresh install, you will have noticed that there is no menu or pick in the UI to install the license server.

It's so non-obvious I had to call PTC to find out how.

That seems like bad UI design to me. But then I'm a luddite.

Imadmin – new licensing software

PTC® Live
Global

Former ProE sites may still be running Imgrd

Imadmin comes with Creo

How to install?? No button in user interface!

Drag & drop license file here

PTC Installation Assistant

PTC®

Welcome to PTC Installation Assistant

Select a task:

- Install or add new software
- Reconfigure existing software
- Setup license

PTC Installation Assistant

PTC®

License Identification

Licenses allow PTC to identify which applications are authorized to run on your machine.

Simple License Entry

Enter your Sales Order # or Product Code

Advanced License Entry

License Summary

Selected license sources for you, they are listed below. Click the "+" button to remove unwanted sources from the list. Click the "+" button to add more entries into the list. If you already have a license file, drag and drop it into the field below.

Source	Status
..._ptc_licensing_management_screenshots_53030517.pdf	Installing License Server...

100

What you do is drag and drop the license file you received from PTC into the licensing field.

Imadmin – new licensing software PTC® Live Global

Former ProE sites may still be running Imgrd
Imadmin comes with Creo
How to install?? No button in user interface!

Drag & drop license file here

Source	Status
..._p_...license management screen..._53030517.txt	Installing License Server...

Install starts automatically

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At that point flexnet will automatically start installing.

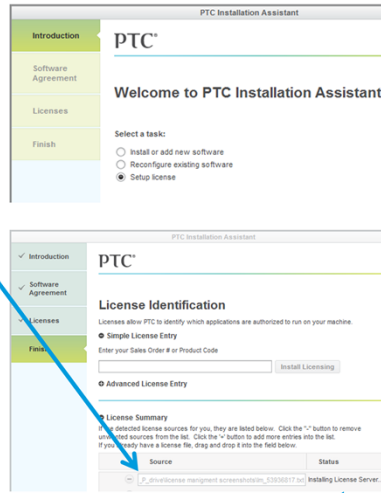
You don't have any control over where it gets installed.

Imadmin – new licensing software

Former ProE sites may still be running Imgrd
Imadmin comes with Creo
How to install??? No button in user interface!

Drag & drop license file here

Default install location
`C:\Program Files\PTC\FLEXnet Admin License Server`

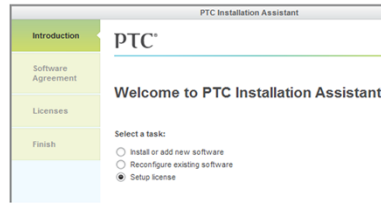


Install starts automatically

The default location is here:

Imadmin – new licensing software

Former ProE sites may still be running Imgrd
Imadmin comes with Creo
How to install??? No button in user interface!



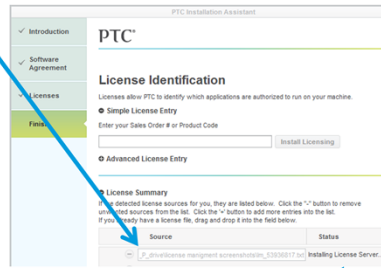
Drag & drop license file here

Default install location

C:\Program Files\PTC\FLEXnet Admin License Server

Differences

Imadmin bin =====	Imgrd bin =====
	i486_nt_ptc_setvars.exe
	lmtools.bat
	lmutil.bat
	ptcshutdown.bat
ptcflush.bat	ptcflush.bat
ptchostid.bat	ptchostid.bat
reconfigure.exe	ptcsetup.bat
ptcadminstartservice.bat	ptcstartserver.bat
ptcstatus.bat	ptcstatus.bat
uninstall.exe	



Install starts automatically

You will notice some differences in the bin folder.
Familiar commands like ptcshutdown are missing.

Imtools is still in the installation

```
C:\Program Files\PTC\FLEXnet Admin License Server\i486_nt\obj
```

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Now Imtools is still here, but it's in a different directory.

However you don't really need it.

Imtools is still in the installation

`C:\Program Files\PTC\FLEXnet Admin License Server\i486_nt\obj`

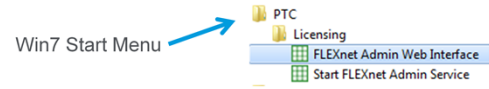
Imadmin has a web interface

Lmadmin has a web base interface.

Imtools is still in the installation

`C:\Program Files\PTC\FLEXnet Admin License Server\i486_nt\obj`

Imadmin has a web interface



You can access it on the server from the Windows Start Menu, under All Programs, as shown here.

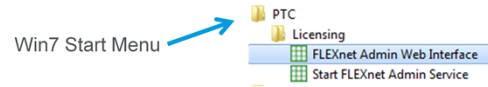
Imtools is still in the installation

C:\Program Files\PTC\FLEXnet Admin License Server\i486_nt\obj

Imadmin has a web interface

<http://stonequary:8080>

License server name



Or from any machine you can go to this web address:

In this example “stonequary” is the name of the server.

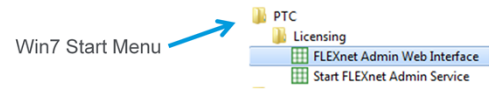
Imtools is still in the installation

`C:\Program Files\PTC\FLEXnet Admin License Server\i486_nt\obj`

Imadmin has a web interface

<http://stonequary:8080>

License server name



Advantages of Imadmin

- Reread license from web interface

There are some advantages of the new software.

- You can reread the license from the web interface.

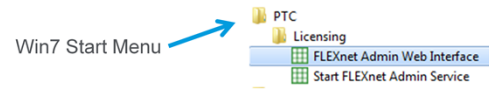
Imtools is still in the installation

`C:\Program Files\PTC\FLEXnet Admin License Server\i486_nt\obj`

Imadmin has a web interface

<http://stonequary:8080>

License server name



Advantages of Imadmin

- Reread license from web interface
- Ptcflush restricted by default to license admins

- Ptcflush is now restricted by default to license admins.

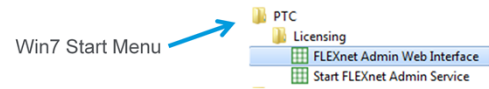
Imtools is still in the installation

`C:\Program Files\PTC\FLEXnet Admin License Server\i486_nt\obj`

Imadmin has a web interface

<http://stonequary:8080>

License server name



Advantages of Imadmin

- Reread license from web interface
- Ptcflush restricted by default to license admins
- Early return of borrowed licenses

- You can return borrowed licenses early

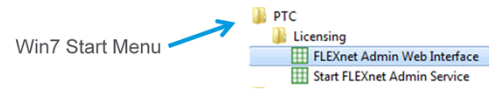
Imtools is still in the installation

`C:\Program Files\PTC\FLEXnet Admin License Server\i486_nt\obj`

Imadmin has a web interface

<http://stonequary:8080>

License server name



Advantages of Imadmin

- Reread license from web interface
- Ptcflush restricted by default to license admins
- Early return of borrowed licenses
- Email alerts can be set up

- You can set up email alerts.

Differences in Imadmin

- Ptcflush, (Imremove) requires admin access
- Remote shut down is disabled by default

Service default settings are here:

C:\Program Files\PTC\FLEXnet Admin License Server\confserver.xml

startup options:

-adminOnly <yes|no>

A value of 'yes' restricts usage of Imutils such as Imdown, Imreread, Imswitch, Imswitchr, Imremove and Imnewlog to license administrator who is by default root. If there is a UNIX group called Imadmin, then use is restricted to only members of that group. If root is not a member of this group, then root does not have permission to use any of the above utilities. On Windows no user can use the above command-line utilities. The Default value is 'yes'.

-allowLicenseReclaim <yes|no>

Controls whether or not one can reclaim licenses that are currently checked out. This setting is recorded in the configuration file and will apply to all subsequent executions until changed. Default value is 'no'.

-allowStopServer <yes|no>

Controls whether or not one can stop the license server from a local client (Imadmin or the web UI). This setting is recorded in the license server configuration file and will apply to all subsequent executions until changed. Setting this value to 'no' will also force the option -allowRemoteStopServer to 'no'. The default value is 'yes'.

-allowRemoteStopServer <yes|no>

Controls whether or not one can stop the license server from a remote client (Imadmin or the web UI). This setting is recorded in the license server configuration file and will apply to all subsequent executions until changed. The default value is 'no'.

Waiting on PTC for recommend process
To modify these settings.

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The major differences are:

- it takes an admin to flush licenses
- You can't remotely shutdown the server.

These and other things can be changed with startup options.

I'm still waiting on PTC for the recommended method of changing them.

Web User Interface

Creo Licenses shown here

Alerts



This is what the web UI looks like when you open it.

Imadmin – new licensing software PTC Live Global

Web User Interface Creo Licenses shown here Admin Login

Alerts

Default =
admin
admin

Must change
after login

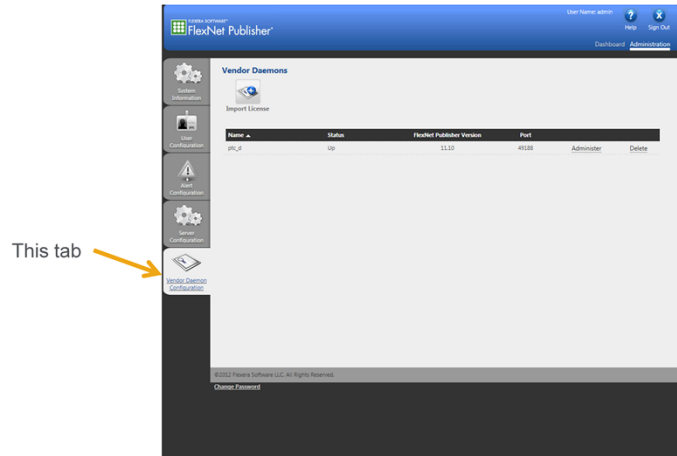
114

To modify the setup you need to pick on the Administration link and log in.

The default log in is admin, admin,

but you will have to change the password as soon as you log in.

Update license file

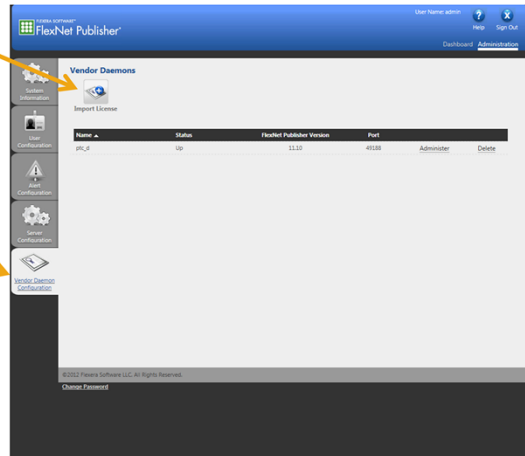


If you want to load in a new license file you pick the Vendor Daemon Configuration tab on the left

Update license file

Read new license file

This tab



and Import License at the top.

Update license file

Read new license file

This tab

See details

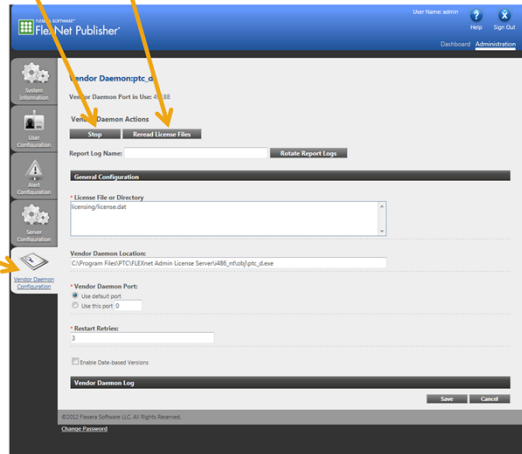
Name	Status	FlexNet Publisher Version	Port		
9PCF	Up	11.1.0	4020	Administer	Delete

Picking on Administer lets you do other tasks.

Reread License – update ptc.opt

Stop the license

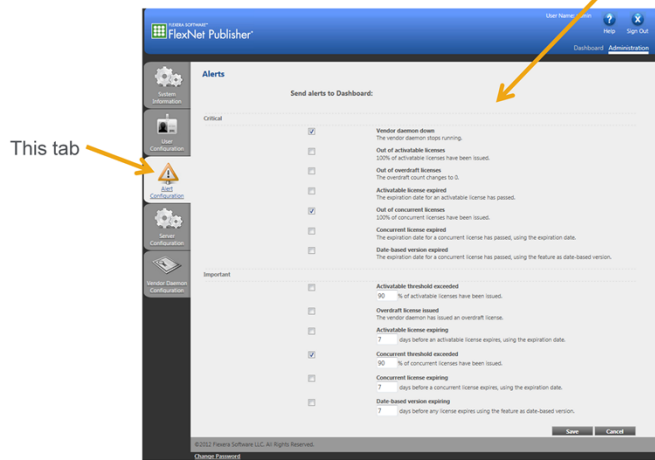
This tab



You can stop the server, or you can re-read the license, which is how you would get modifications to the ptc.opt file into the system.

Alert Condition Setup

- I only want these alerts
- Vendor daemon down
 - Out of concurrent licenses
 - Concurrent threshold exceeded



The alert Configuration tab allows you to select what Alerts you want to be notified of.

I decided I only need to know:
 if it can't serve licenses
 If I'm out of licenses,
 And it my license usage hits a threshold limit.

Send alerts via email

C:\Program Files\PTC\FLEXnet Admin License Server\examples\alerter.

Modify the last line in runalerter.bat

```
From :      java -classpath lib\alerter.jar alerter.Alerter %CMD_LINE_ARGS%
To :       java -classpath "lib\alerter.jar;lib\*" alerter.Alerter %CMD_LINE_ARGS%
```

On the license server, open a command shell with "Run as Administrator".

CD to the folder where the alerter is: C:\Program Files\PTC\FLEXnet Admin License Server\examples\alerter

Command syntax is:

```
runalerter.bat -port "8080" -user "<username>" -password "*****" -smtpServer "<SMTP
servername>" -smtpUser "<username>" -smtpPassword "*****" -toAddress "<email address>" -
fromAddress "<email address>" -interval "60"
```

where:

- user = the license server admin name. If you haven't changed it it's admin
- password = the license server admin password. You are forced to change this when you first log in as admin in the web interface.
- smtpServer = the name of your mail server
- smtpUser = your username on the mail server
- smtpPassword = your password on the mail server
- toAddress = The email address you want the alert sent to. Your address typically. If you have major domo, this can be a group
- fromAddress = Your email address
- interval = number of seconds to wait after an alert happens before the email gets sent.

Important Note: You have to leave the command window up. The process will exit, if you exit the window.

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Now you can set up Imadmin to send emails to you whenever there is an alert condition.

I won't go over this in detail. There should be a TPI coming from PTC pretty soon.

I just got this information from PTC last week.



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Livermore, CA 94550

Check out my previous presentations

[ProE Admin 101](#)

[Creo Admin 101](#)

[Creo Admin 102](#)

[An Admins Guide to Product View Publishing](#)

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Licensing Log file

In the flexnet folder, look in Licensing/ptclmgrd.log

You can see:

- When and who has licenses
- When they have been released
- When someone has been denied a license
- When a license has been flushed manually

Allowable options in the ptc.opt file:

- EXCLUDE
- EXCLUDEALL
- GROUP
- HOST_GROUP
- INCLUDE
- INCLUDEALL
- MAX
- RESERVE
- TIMEOUT
- TIMEOUTALL

Some of these are high overhead for the administrator.

I only use Group, Reserve, and Timeoutall.

Laptop Install

Installing on a laptop or other machine with multiple NIC cards.

There are two common problems you will run into when trying to license to a laptop.

1. Windows will disable the NIC card if it's not plugged into a network. This is called media sensing
2. Since you likely have a wireless card and a hardwire NIC, there can be confusion between them.

Media Sensing

Add this registry setting:

```
HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Tcpip\Parameters\  
Name: DisableDHCPMediaSense  
Data type: REG_DWORD (Boolean)  
Value: 1
```

Laptop Install – NIC sort order

The PTC_HOSTID must be derived from the Physical Address of a network card installed on the machine

- The network card from which the PTC_HOSTID was derived must be enabled but need not be connected to an active network
- Change the priority of desired network card

Open the Windows registry editor by running regedit from a command prompt or the Windows "Run" Menu.

Expand the following key

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\NetworkCards

- This key will contain numbered folders corresponding to all of the network cards installed on the machine
- Locate the desired folder by matching the "Description" field in the Registry Editor to the "Description" line from the ipconfig /all output for the desired network card
- Rename this folder to number 1
- Close the registry editor
- Restart the machine

Licensing through a firewall

Here is what you need to do.

Add the port to the daemon line in your licenses file.

```
SERVER __HOSTNAME__ PTC_HOSTID=<mac address> 7788  
DAEMON ptc_d __PTCD_PATH__ 7788
```

Then open that port in your firewall

Borrowing Licenses

You can make it easy for your users to borrow licenses by giving them a shortcut to the borrow program.

Create a shortcut of <loadpoint>\parametric\bin folder\ptcborrow.bat



I renamed it and gave it a unique icon & put it on the users desktop

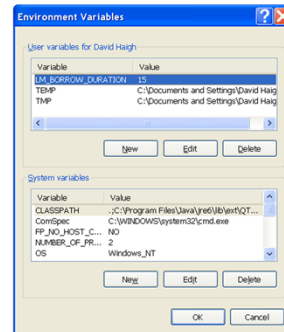
PTC status shows if you have borrowed a license with an up caret.

```
PROE_Flex3C      3      7
                  ^ (fred@coaststarlight)
PROE_Flex3C stonequarry 7788 3750
```

To borrow for more than 5 days

Set up a Windows Environment Variable for the borrow duration set it at 15 days

LM_BORROW_DURATION



Borrowing Simulate Licenses

In order to borrow these applications, you have to:

- Get in to simulate
- Do a solve before you exit Creo

If you just get into the application you will not be able to solve once your disconnected from the server.

Check `ptcstatus` to see that you have the up caret next to both of these:

```
MECBASICENG_License    0    33
MECBASICUI_License     0    33
```