

# Appendix A – Planning, Ordering, Installing, Getting Help

## IBM Corporate Accounts

This appendix is for individual modelers or small companies who have no previous relationship with IBM. If you work for a company that already has a relationship with IBM, you will need to work through your **Site Technical Contact (STC)** in order to understand how your company purchases and administers IBM software licenses.

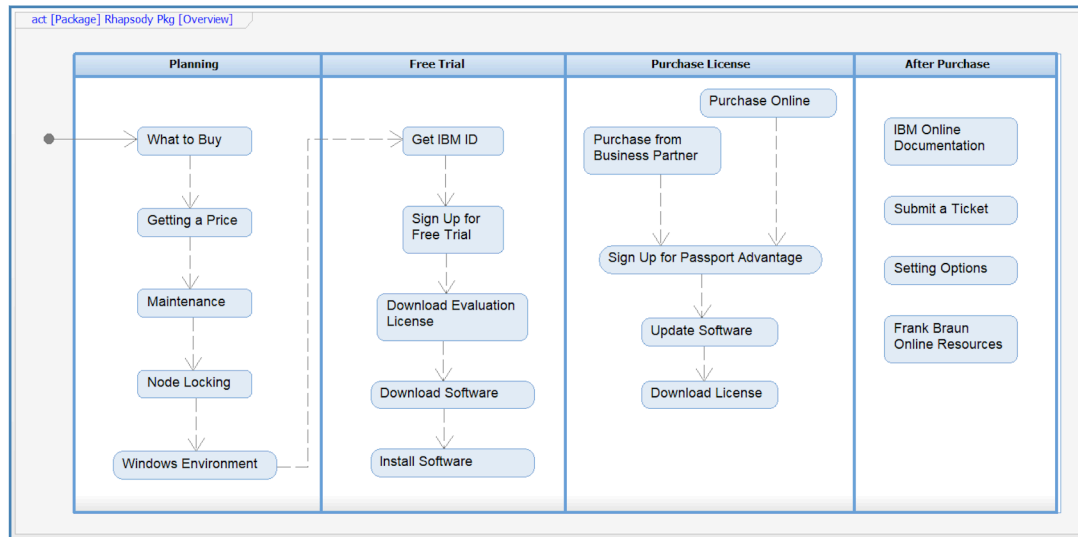


Figure A-1 – Overview: planning, ordering, installing, getting help

IBM's main marketing focus is large companies. If you are an individual modeler or small company, your path to obtaining *Rhapsody* will be a bit more complicated than it would be for a similar tool produced by another company. Figure A-1 shows the general flow of topics which are covered in the following sections. <sup>(1)</sup>

- 1) **Planning** – *IBM Engineering Systems Design Rhapsody* <sup>(2)</sup> is an engineering tool, not a social media application. Installing and learning to use *Rhapsody* will involve a significant commitment of time and effort. You will want to do some planning before you get started.
- 2) **Free Trial** – All things considered, the most practical approach to getting started will be to sign up for the free trial.

<sup>(1)</sup> This diagram is a SysML activity diagram. However, it is not rigorously constructed. SysML diagrams don't always have to be rigorously constructed to be helpful.

<sup>(2)</sup> In most of the text, we will refer to only the tool name: *Rhapsody* for brevity. However, if you are looking for information on the tool, be sure to include the string "IBM". We also recommend that you use the Google search engine as IBM has put considerable effort into optimizing its websites for Google.

- 3) **Purchase License** – Once you have completed your free trial and are ready to purchase a permanent license, the most straightforward approach will be to contact an IBM business partner. However, depending on which country you are in, IBM may be able to assign an internal sales representative to take your order directly.
- 4) **After Purchase** – We have also included some information about routine needs after purchase such as finding online help and contacting support.

Note that the screen captures in the following sections are current for *IBM Engineering Systems Design Rhapsody* version 9.0.1 and IBM's websites as of June 2021. Both the tool and IBM's websites are subject to change.

## Planning

### What to Buy

IBM offers a number of different editions of *Rhapsody*. Frank has prepared a very nice, short video that explains the ins and outs of the different editions:

<http://url4ap.net/Rhapsody-Overview>

IBM also provides an overview of the editions here:

<http://url4ap.net/Rhapsody-Pricing>

Any of the four editions should work for learning SysML. Beginners may appreciate the systems engineering-focused interface provided by the “Architect for Systems Engineers” and “Designer for Systems Engineers” editions. <sup>(3)</sup>

Most of the screen captures in this book were made using the “Designer for Systems Engineers” edition.

### Getting a Price

IBM does not directly publish a full price list on its website.

<sup>(3)</sup> Software developers and other advanced users who would like to experiment with limited generation of code skeletons can also use the “Architect for Software” edition which also includes the SysML functionality covered in this book.

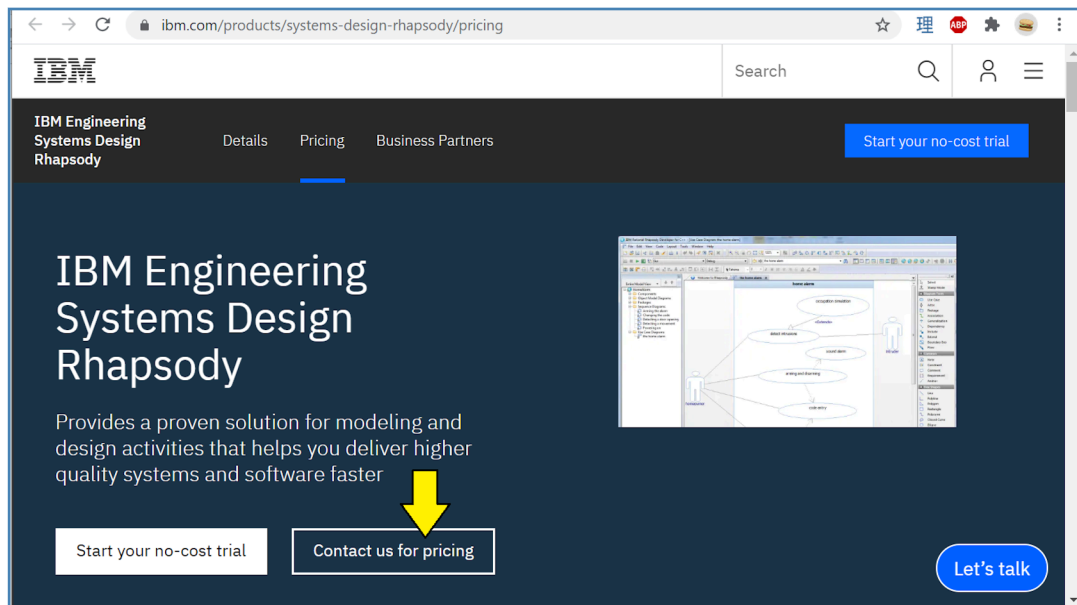


Figure A-2 – Follow the contact us for pricing link

The most straightforward approach to investigate pricing is to go to product overview website:

<http://url4ap.net/Rhapsody-Pricing>

and click on the “Contact us for pricing” link. IBM will put you in touch with an authorized IBM business partner who will quote pricing for you. Depending on the circumstances, the IBM business partner might be able to offer some level of discount from list price. The business partner will also provide you with personal support during your trial, answer your questions, and provide detailed information as needed.

Note that the “Architect for Systems Engineers” and “Architect for Software” editions are quite competitively priced. However, there is a substantial jump in price from these editions to the next two editions. Your IBM business partner will provide more detailed pricing information.

You will also want to plan for annual support and maintenance costs. Like most suppliers of commercial enterprise software, and like all suppliers of commercial SysML tools that we are aware of, IBM charges an annual support and maintenance fee for *Rhapsody*. Your IBM business partner should be able to provide information on typical ranges for these charges.

## Node Locking

IBM sells some engineering tool licenses on an “authorized user” basis which allows one user to have the software installed on multiple machines. However, for *Rhapsody*, the authorized user license only allows the software to be used on a single machine. At the time you generate and download your license, a host ID will be generated for your computer and built into the license key.

See Figure A-20 on page 15 for more information on how the node locking process works.

## Maintenance

IBM provides a variety of site license and maintenance plans for enterprise customers. However, even as an individual or small business, once you purchase a license and sign up for *IBM Passport Advantage* or *IBM Passport Advantage Express* you will be able to submit tickets (See *Contact Support* on page 19 ) and download software version updates and fixes (See *Update Software* on page 19 ).

## Windows Environment

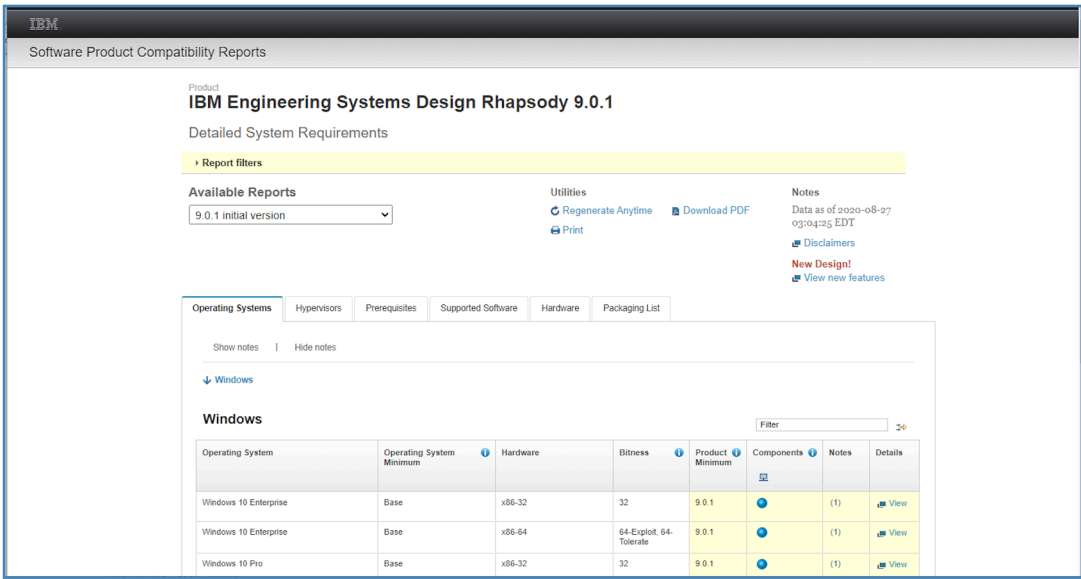


Figure A-3 – IBM's software and hardware prerequisites page

The hardware and software prerequisites for *Rhapsody* can be found by accessing:

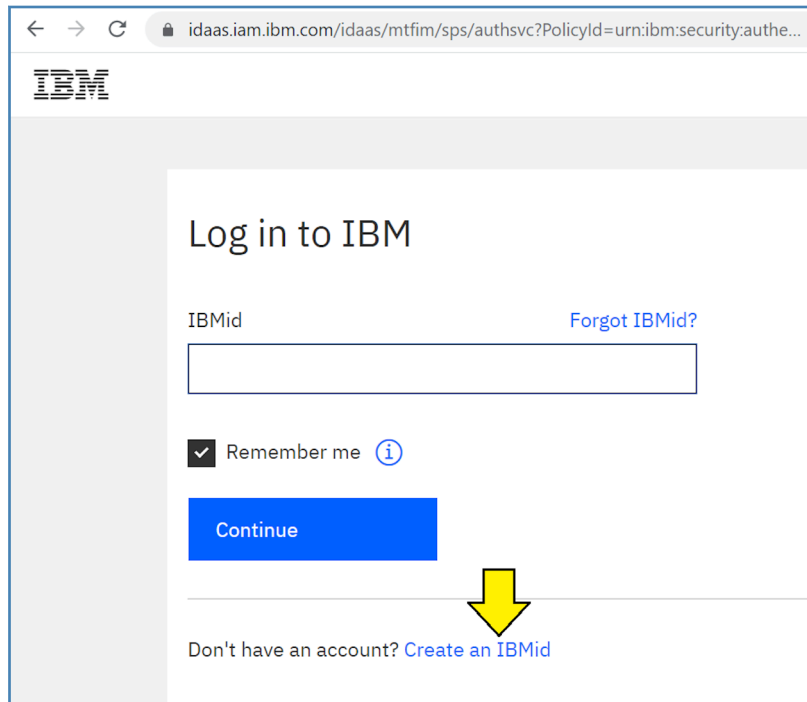
<http://url4ap.net/Rhapsody-Prereqs>

## Free Trial

As we mentioned above, the most practical approach for an individual or a small business to take in getting started with *Rhapsody* is to sign up for a free trial.

## Get an IBM ID

Before you start your free trial, you will need an IBM ID. If you do not already have one, you will need to register. This ID is free and will be your main identity for interacting with IBM across all of its websites.



*Figure A-4 – Follow the link to create an IBM ID*

Follow the “Create an IBM ID” link to:

<http://url4ap.net/Create-IBM-ID>

and register an ID.

### ***Sign Up for Free Trial***

After you have registered your IBM ID, go to product overview website:

<http://url4ap.net/Rhapsody-Pricing>

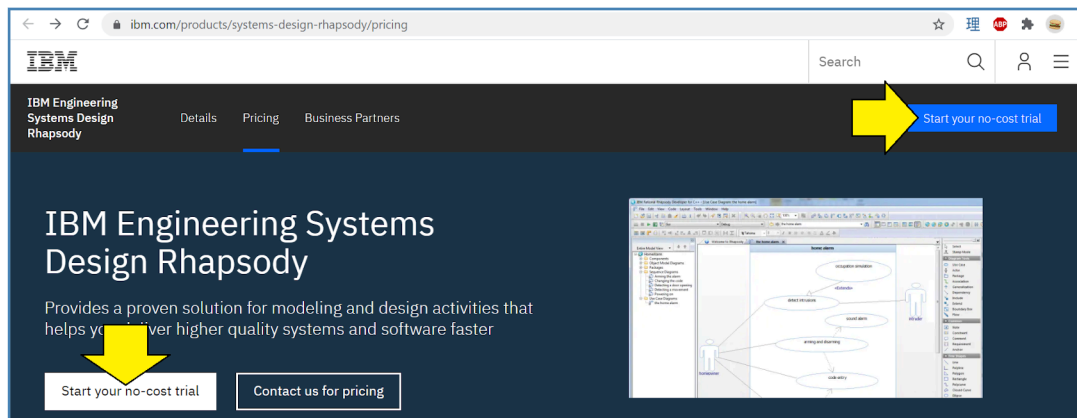


Figure A-5 – Click on the Start your no-cost trial link

Click on either one of the “Start your no-cost trial” links to start the free trial process. When prompted, log in with your IBM ID.

Figure A-6 – IBM marketing information screen

An IBM marketing information screen will appear. Answer the questions and click “I Confirm” at the bottom of the screen.

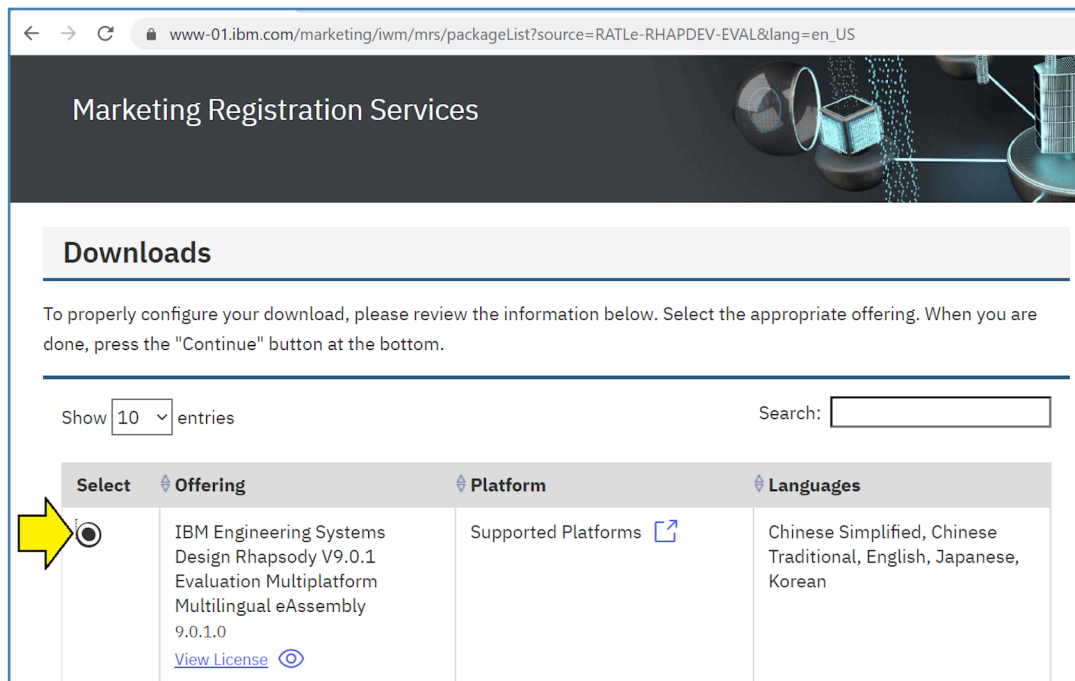


Figure A-7 – Select the product

On the next screen, select the product as shown. Scroll down and click “Continue” at the bottom of the screen.

## Download Evaluation License

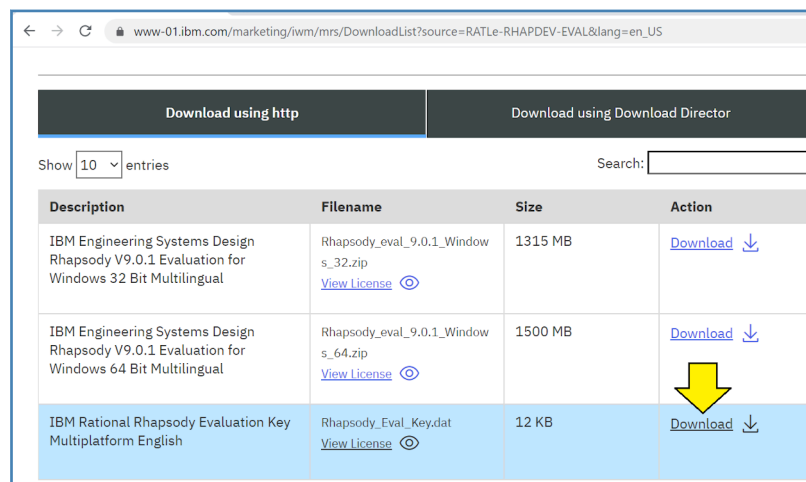
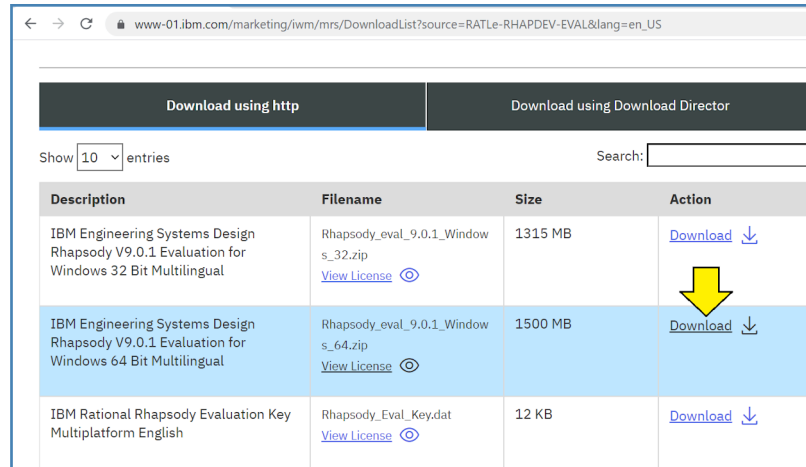


Figure A-8 – Download the evaluation license key

It is slightly easier at this point to download the evaluation license key before downloading the software. <sup>(4)</sup>

**Note:** The directory you place your license file in will become part of your *Rhapsody* installation. As such, it is important to place the license key file in a suitable permanent directory. We recommend something like: “C:\IBM\Licenses”

## Download Software







Download using http		Download using Download Director	
Show 10 entries		Search:	
Description	Filename	Size	Action
IBM Engineering Systems Design Rhapsody V9.0.1 Evaluation for Windows 32 Bit Multilingual	Rhapsody_eval_9.0.1_Windows_32.zip <a href="#">View License</a>	1315 MB	<a href="#">Download</a> 
IBM Engineering Systems Design Rhapsody V9.0.1 Evaluation for Windows 64 Bit Multilingual	Rhapsody_eval_9.0.1_Windows_64.zip <a href="#">View License</a>	1500 MB	<a href="#">Download</a>  
IBM Rational Rhapsody Evaluation Key Multiplatform English	Rhapsody_Eval_Key.dat <a href="#">View License</a>	12 KB	<a href="#">Download</a> 

Figure A-9 – Download the software

Next select the software edition you want, <sup>(5)</sup> and download. The file is quite large (1.5GB) and may take a while to download, depending on the speed of your internet link.

## Install Software

IBM's instructions for installing *Rhapsody* on a Windows system are available here:

<http://url4ap.net/Rhapsody-Install>

Here are some recommendations and additional information to consider as you follow the steps documented on IBM's website:

- 1) **Between Steps 3 and 4, Choose Edition** – Between steps 3 and 4, a panel will appear allowing you to select the edition. For the purposes of this trial, we recommend that you select the “Developer” edition. This is a superset of all of the other editions. Later, if you choose to purchase the license for an edition with fewer features, you will not need to re-install the software. The software will simply present itself as the edition enabled by the license you have paid for.

<sup>(4)</sup> The name “IBM Rational Rhapsody Evaluation Key” represents IBM's previous branding and does not quite match the current product name. Don't worry, this is the right key for the product.

<sup>(5)</sup> Apparently, there are some minor features in the 32-bit version that have not quite been ported to the 64-bit version. These are not important for this book and we will be using the 64-bit version.



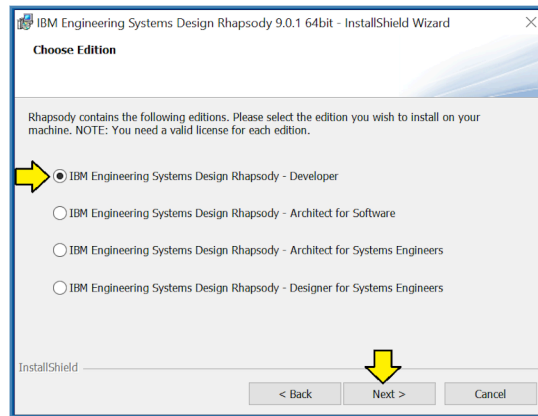


Figure A-10 – Select developer edition

- 2) **Step 8, Selecting Languages** – Selecting Java or ADA will increase the complexity of the installation process. C and C++ will be sufficient for simulation and other advanced systems modeling tasks. Select Java and/or ADA only if you have a specific interest in generating code for these languages.
- 3) **Step 9, Selecting Directories** – Like almost all current Windows software packages, the installer defaults to installing the software in the “C:\Program Files\”. However, like most similar SysML tools, parts of the software that support older, less common, or more sophisticated features may not handle file paths containing spaces gracefully. Although the exercises in this book should run fine from “C:\Program Files\”, we recommend that you override this setting and install the program in a directory not containing spaces in its name such as: “C:\IBM\Rhapsody”.

## Purchase License

Once the term on your evaluation license runs out, you will want to purchase a permanent license key. IBM prefers to have customers directly supported by authorized IBM business partners (or by the IBM sales team for larger customers).

### Purchase from Business Partner

If you are ready to purchase a license from an IBM business partner and have not already contacted one for pricing, return to the link shown in Figure A-2 on page 3. After you fill out the contact information, an authorized IBM business partner will contact you directly to arrange pricing and payment for your license.

**Note:** The IBM business partner will be setting up some additional IBM accounts for you. Don't forget to give the IBM Business Partner the IBM ID you created in *Get an IBM ID* on page 4 above so that the IBM business partner can keep all the accounts tied together properly.

# Passport Advantage Express

Assuming that you are working for a small company with no previous relationship with IBM, after accepting your money, the IBM business partner will create an ID for you in IBM Passport Advantage Express.

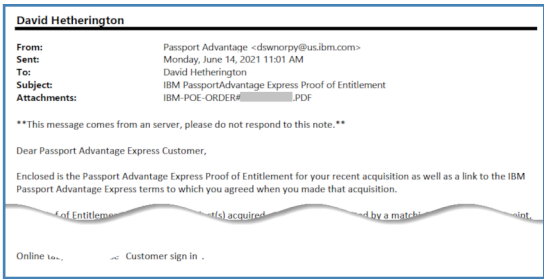


Figure A-11 – E-Mail from IBM Passport Advantage Express

You will receive an e-mail from IBM Passport Advantage Express titled: “IBM Passport Advantage Express Proof of Entitlement”.

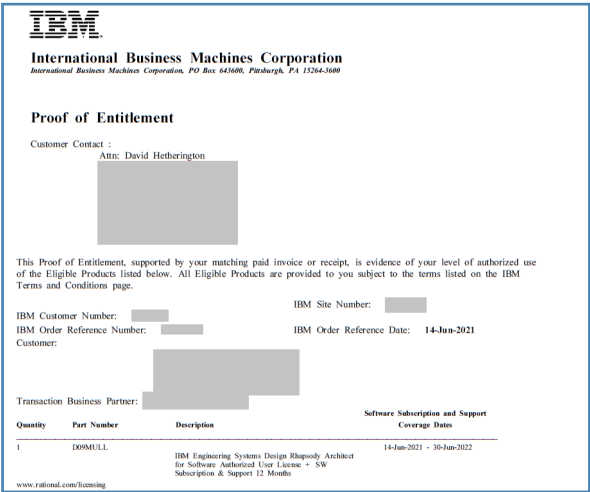


Figure A-12 – Proof of Entitlement

The e-mail will contain your **proof of entitlement** as an attached PDF file.

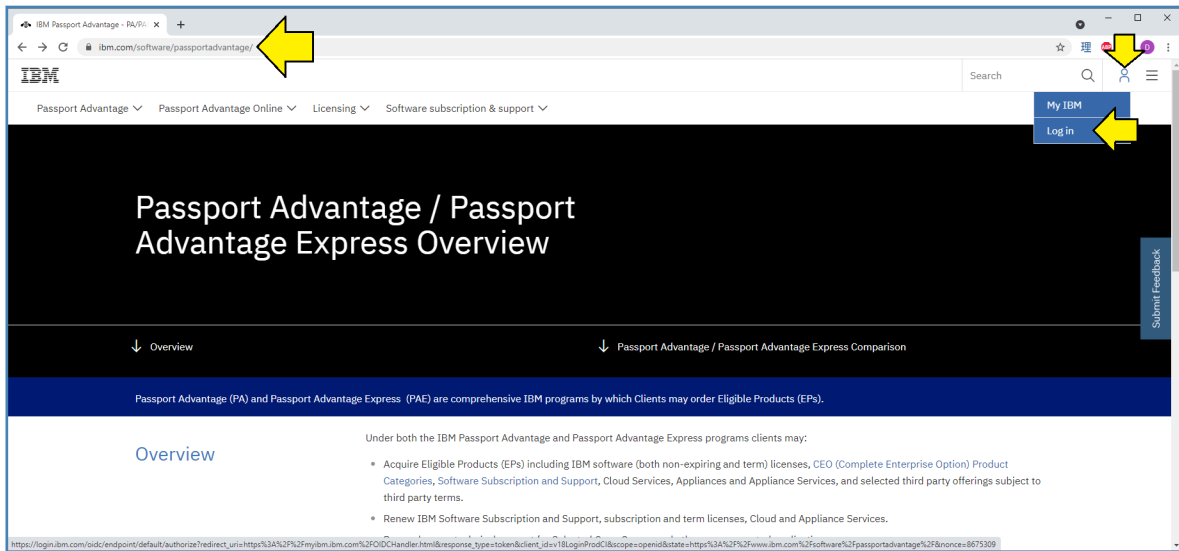


Figure A-13 – Log in

The e-mail will prompt you to log into Passport Advantage Express at:

<https://www.ibm.com/software/passportadvantage/>

Use the IBM ID you created in *Get an IBM ID* on page 4 above to login.

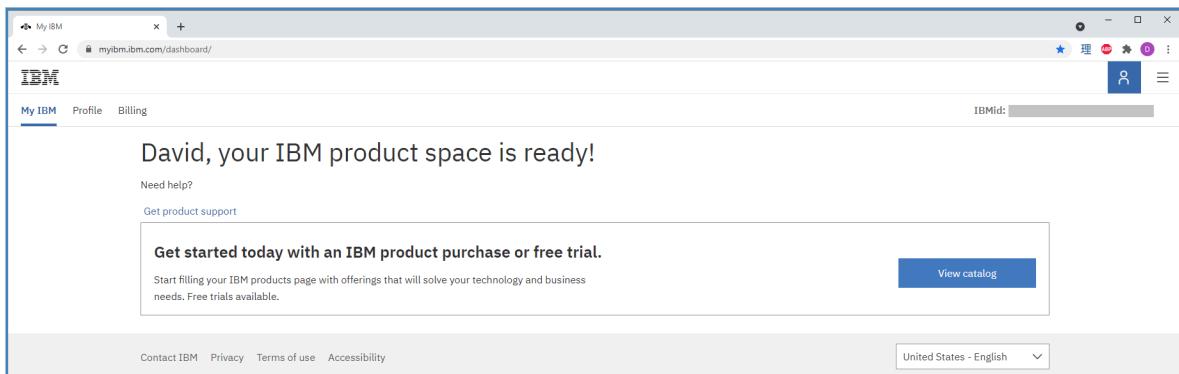


Figure A-14 – Dashboard

Once you are registered, you can also access your IBM dashboard at:

<https://myibm.ibm.com/dashboard/>

## IBM License Key Center

Next, you will receive an e-mail giving you access to the **IBM License Key Center**.

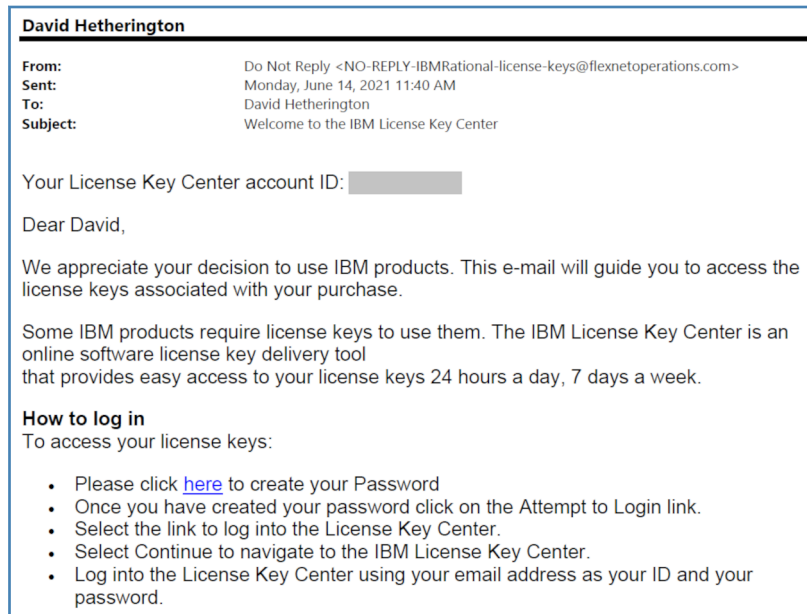


Figure A-15 – E-Mail from the IBM License Key Center

Note your license center account id and follow the link to set your password.

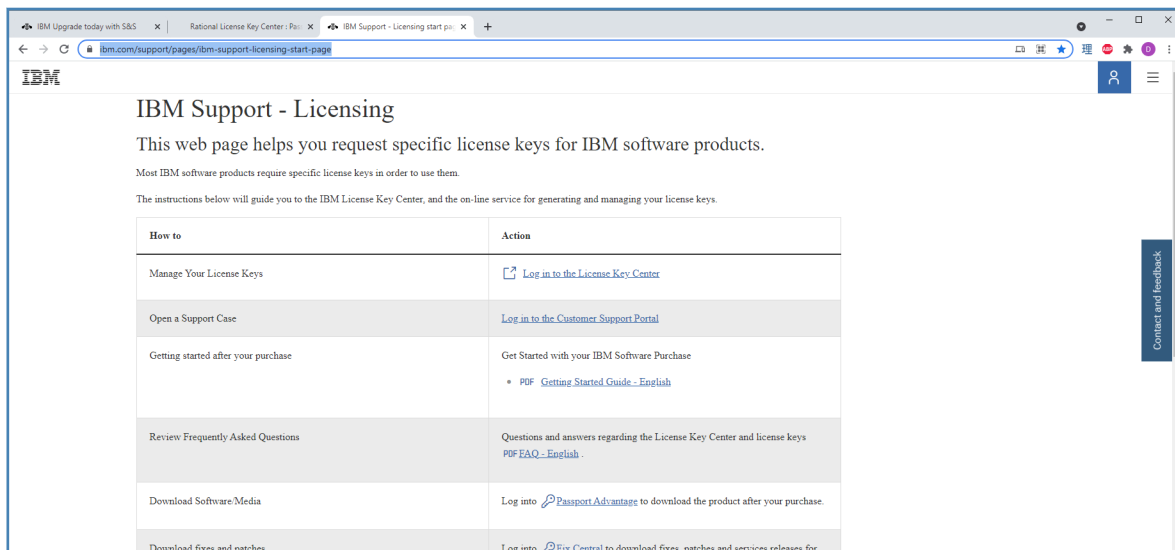


Figure A-16 – IBM support licensing start page

After setting your license key center, you will want to bookmark the IBM support licensing start page:

<https://www.ibm.com/support/pages/ibm-support-licensing-start-page>

This page contains a handy set of links for all things related to IBM licensing.

## Download License

Once you have purchased your permanent license (online or from an IBM business partner) you will receive an email instructing you to log in to the IBM Rational License Key Center.<sup>(6)</sup> The license you have purchased will be either for an “authorized user” node-locked license or for a floating license. The procedure shown below is for the node-locked license. Frank has prepared a video showing a little more about both types and how to install them:

<http://url4ap.net/Rhapsody-Licenses>

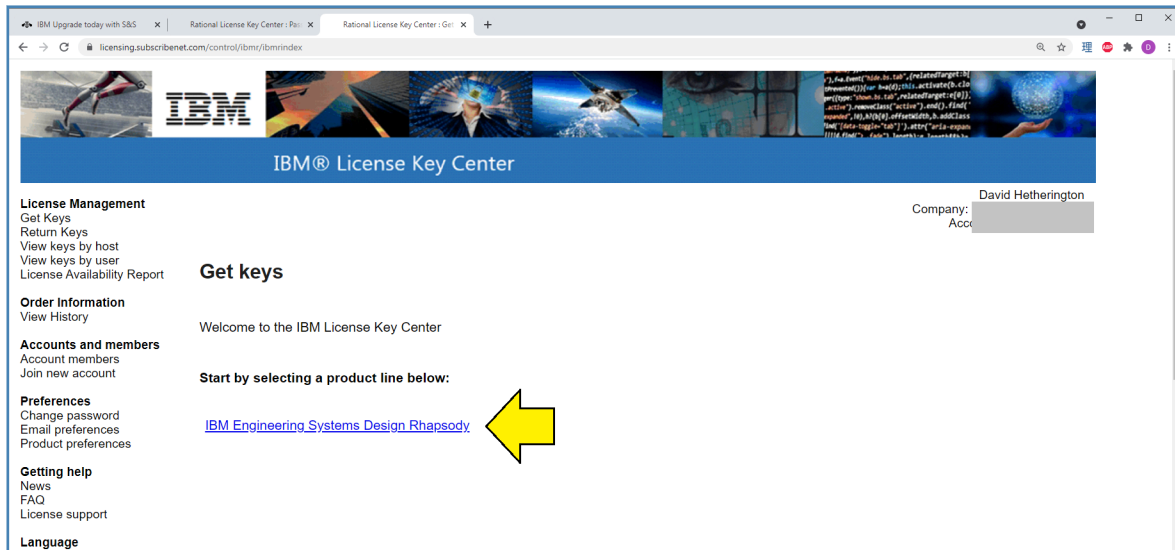


Figure A-17 – Click link to access the license

Once you are logged in, you will see links for one or more licenses, depending on what you have purchased from IBM. Click the link for *Rhapsody* to access your purchased license.

<sup>(6)</sup> The screenshots and procedure shown in this section are current as of September 2020. However, the reader will notice that the branding and look of these web pages are not current. We expect IBM to redesign this process and introduce new web pages for license download.

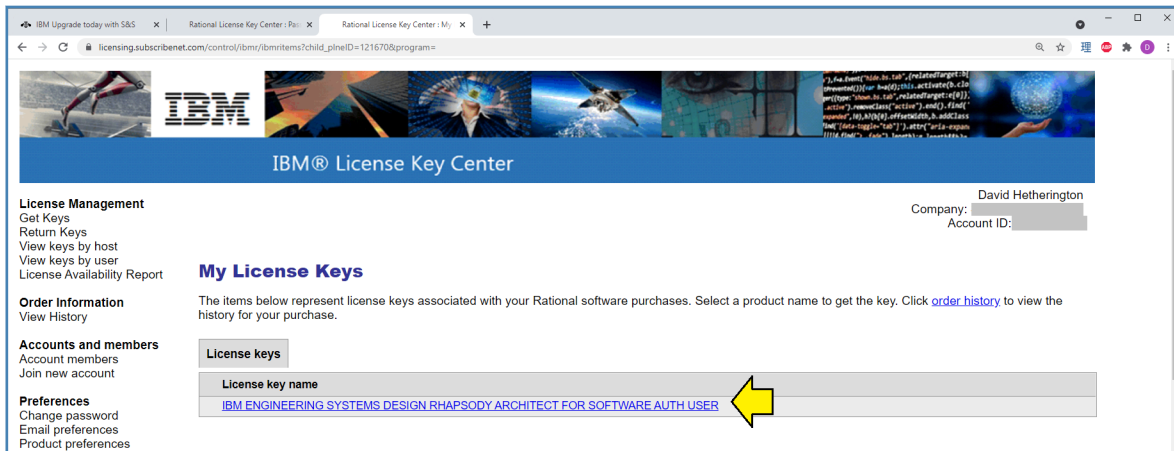


Figure A-18 – Click to select the license

Click to select the license.

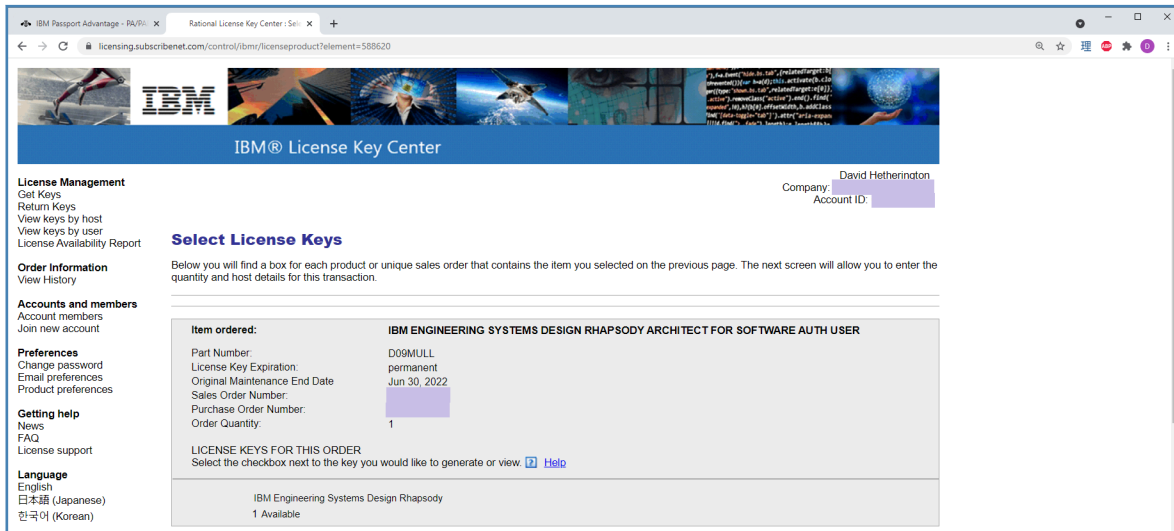


Figure A-19 – Check the information and click next

Review the information in the next panel and click: “Next”.

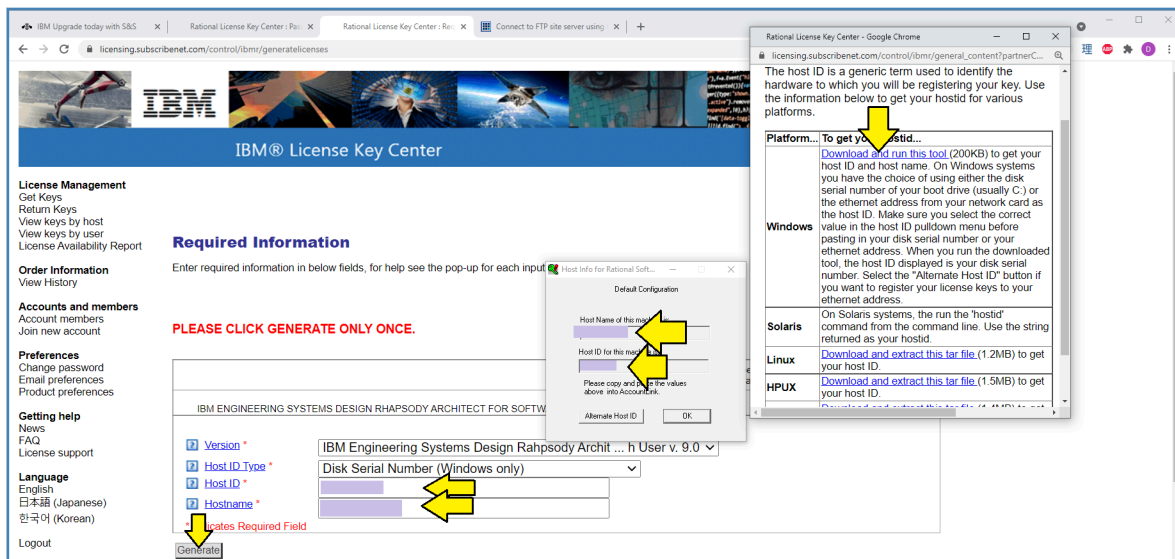


Figure A-20 – Get host ID and generate license

Next you will need to generate your license key. **It is important that you perform the next few steps below in exactly this sequence and that you perform them only once.**

- 1) Make sure that “Version” matches the license that you purchased.
- 2) Make sure that “Host ID Type” is “Disk Serial Number (Windows only)”.
- 3) Click on the blue “Host ID” link.
- 4) A dialog box will open containing a list of operating systems with instructions for each operating system.
- 5) In the Windows box, click the blue “Download and run this tool” link. <sup>(7)</sup>
- 6) A tool should download and/or run. The tool will use the information in your system to calculate and display the “Hostname” and “Host ID” for your system. <sup>(8)</sup>
- 7) Make sure that these have been transferred into the main panel properly (should be automatic) and click “OK”.
- 8) Click “Generate” once-and-only once.

<sup>(7)</sup> This link may not work. As of June 23, 2021 Chrome and Edge browsers no longer allow direct access to ftp links. The file you are trying to access is: [ftp://ftp.software.ibm.com/software/rational/web/lkc/get\\_host\\_info.exe](ftp://ftp.software.ibm.com/software/rational/web/lkc/get_host_info.exe) You may need to use the “Add a network location” procedure in Windows 10 to add <ftp://ftp.software.ibm.com> as a location and then browse down to the “get\_host\_info.exe” file, copy it to your hard disk, and run it. IBM Support Case number TS005994865 was created for this issue on June 24, 2021.

<sup>(8)</sup> The algorithm IBM uses to generate these fields is sensitive to your exact Windows installation. If you have to reinstall Windows for some reason, you will need to contact IBM support, have them reset your license count, and generate a fresh key for your new installation of Windows.

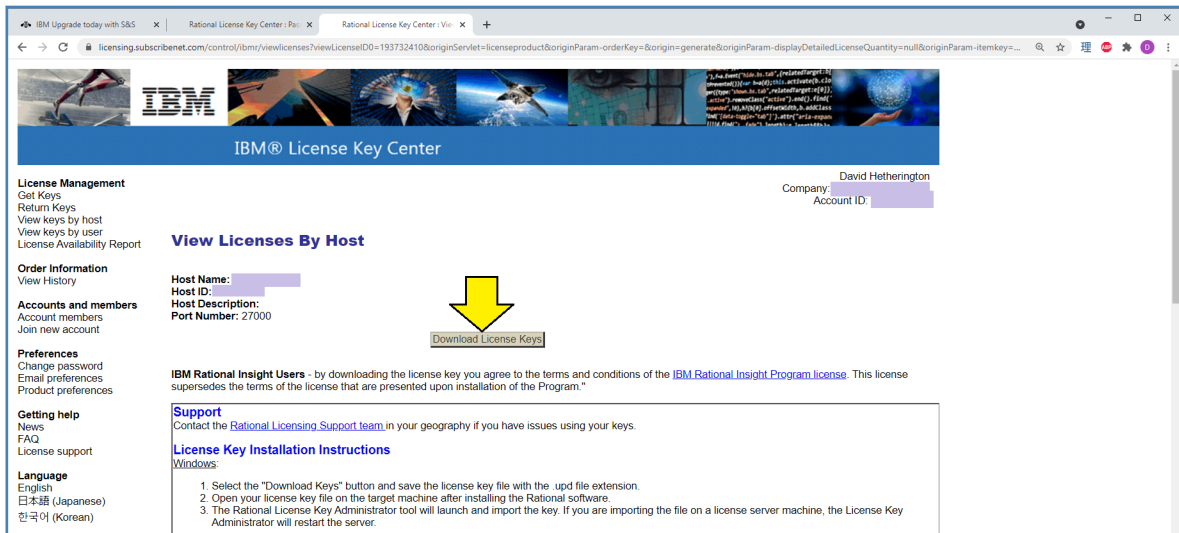


Figure A-21 – Download license key

In the next screen you should see that the information has been set for the license key to match your host information. Click “Download License Keys”.

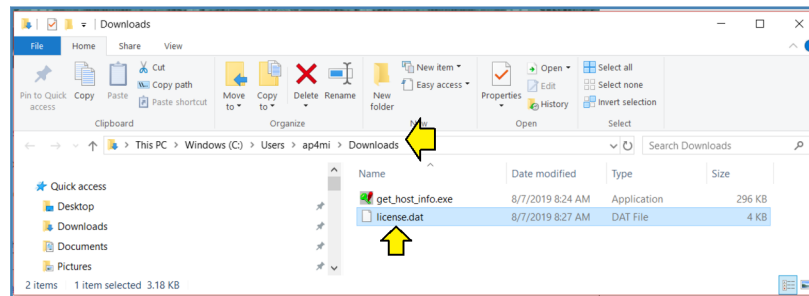


Figure A-22 – License data in download folder

The license key should now download to your Windows “Downloads” folder.

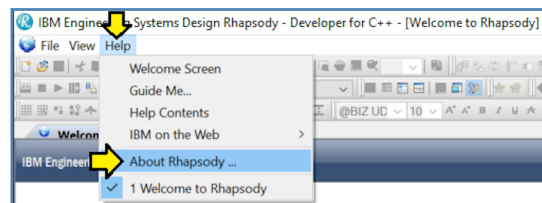


Figure A-23 – Start Rhapsody, select help, about

Start *Rhapsody* and click “Help” and then “About Rhapsody ...”



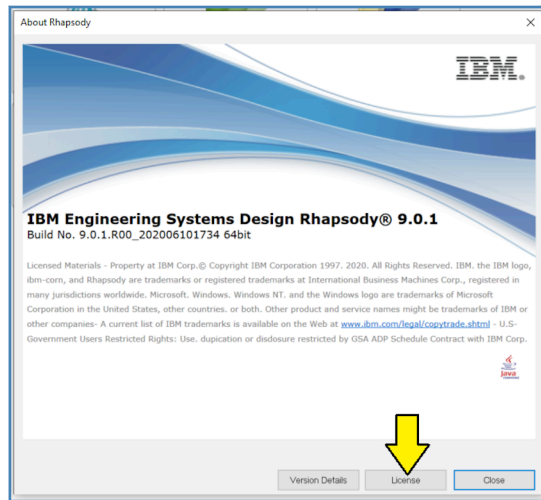


Figure A-24 – Click License

Click “License”.

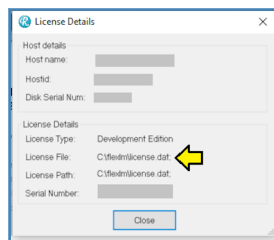


Figure A-25 – License information panel will appear

A license information panel will appear.

- 1) Note the path to and name of the license key file. Both of these may be different from the name and path you specified when you installed the evaluation key.
- 2) Find the existing license key file.
- 3) Make a backup copy of the existing license key file.
- 4) Make a backup copy of the new permanent license key file.
- 5) Rename the downloaded permanent license key to match the filename of the existing license.
- 6) Copy the renamed permanent license key to the directory, overwriting the previous license key file.

The next time you restart *Rhapsody* the new permanent license key will be activated.

## After Purchase

## Setting Options

*Rhapsody* is a highly configurable tool. A small number of key options for how the tool behaves can be set directly from the “View” menu. The rest (the vast majority) of the configurable options are set by manipulating properties.

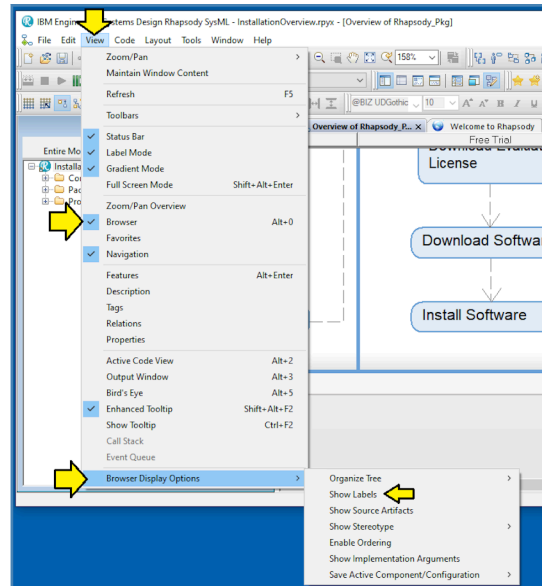


Figure A-26 – View options

In order to see the options in the view menu, you need to have a project loaded. Open any of the tutorial example models. After opening a project, you should be able to see the menu as shown in Figure A-26.

“Label Mode” is an important option. If this option is not set, *Rhapsody* will assume that you are constructing models for the purpose of generating software source code and will impose the usual requirements for software source code identifiers on your element names. Notably, you will not be allowed to have names like: “Big Red Car” as the spaces would violate identifier rules for most compilers. In Systems Engineering, we are usually modeling for humans, not compilers. Set “Label Mode” to allow normal human-friendly names. <sup>(9)</sup>

Additional persistent option settings are available under the “Browser Display Options” submenu of “View”.

<sup>(9)</sup> Setting label mode will not preclude you from trying to generate software source code later. Under the covers, *Rhapsody* will automatically generate a compiler-friendly name from your label. That compiler-friendly name will be the formal “Name” from a UML point-of-view. The human-friendly text you see on the screen will merely be the “Label” which UML does not care about.

The rest of the (much more numerous) options can generally be set for specific diagrams, for a project, or for the tool in general. IBM provides detailed online documentation on how to configure properties here:

<http://url4ap.net/Rhapsody-Options>

## **IBM Online Documentation**

IBM provides extensive online documentation for *Rhapsody* here:

<http://url4ap.net/Rhapsody-Doc>

## **Contact Support**

Once you have purchased a license for *Rhapsody* you can open a support ticket to ask questions or report a bug by contacting IBM through the IBM support website:

<https://www.ibm.com/mysupport/s/>

Note that the first time you need to open a case, the website will prompt you to register for access. You will need your IBM customer number from the proof of entitlement certificate you received as shown in Figure A-12 on page 10.

## **Sign Up for Passport Advantage**

Once you have purchased a license (either online or through an IBM business partner) you should be able to set up your *IBM Passport Advantage* account. If you are an individual or a small business, you will probably want to enroll in the “IBM Passport Advantage Express” program. Your IBM business partner will help you get this account set up.

## **Update Software**

One of the key benefits of the *IBM Passport Advantage* program is that you will have continuous access to the latest software versions and patches.

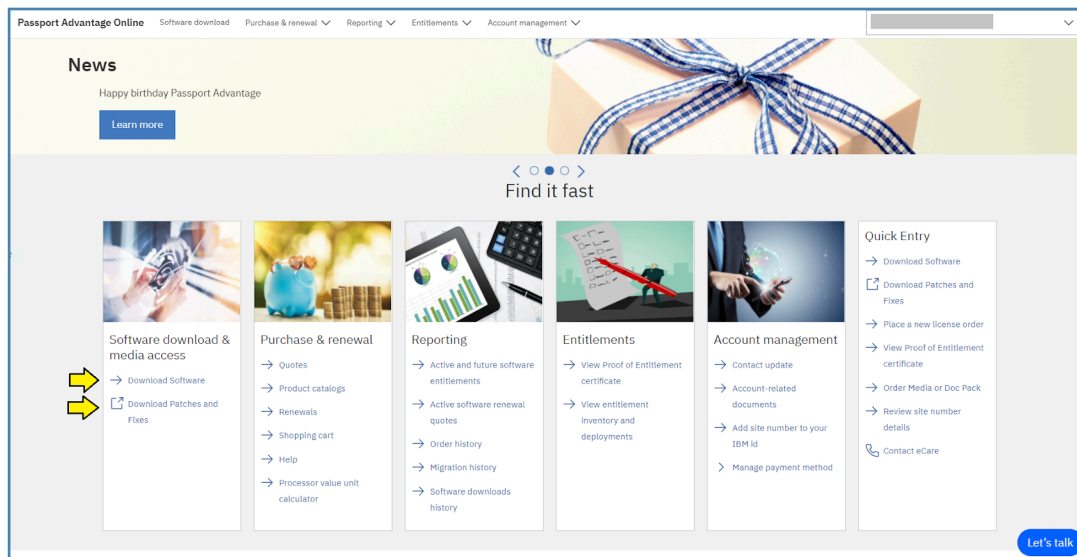


Figure A-27 – Software and updates can be downloaded from the IBM Passport Advantage website

## Frank Braun Online Resources

The first stop for online help for *Rhapsody* is Frank Braun's site:

<https://www.rhapsody.guru/>

Frank also has a YouTube channel of tips:

<https://www.youtube.com/c/RhapsodyGuru>

Frank also has a number of friends and former colleagues who provide online resources related to *Rhapsody*:

- <http://www.merlinscave.info/>
- <https://www.bruce-douglass.com/>
- <http://www.mbsetraining.com/>