Rational. DOORS





Using Rational DOORS for Serena Version Manager Interface

IBM Rational DOORS for Serena PVCS Version Manager Interface Using Rational DOORS for Serena PVCS Version Manager Interface

Release 1.4.1



Table of contents

Chapter 1: About this manual
Typographical conventions
Related documentation
Chapter 2: Concepts
About Rational DOORS for Serena PVCS Version Manager Interface
About Rational DOORS for Serena PVCS Version Manager Interface functions
Chapter 3: Importing from Serena PVCS Version Manager
Importing from Serena PVCS Version Manager to Rational DOORS
Importing structures
Updating imported structures
Imported attributes for structures
Viewing Serena PVCS Version Manager information
Understanding imported information
Graphics colors for structures
Version labels
Using Rational DOORS traceability
Link management
Applications of imported structures
Chapter 4: Labelling Rational DOORS baselines 1
Importing Serena PVCS Version Manager labels into Rational DOORS
Importing labels
Re-importing labels
Imported attributes for labels
Creating Rational DOORS baselines
Understanding baseline information
Graphics colors for labels
Viewing new baseline information

Using Rational DOORS traceability	
Link management for labels	
Applications of imported labels.	
Chapter 5: Contacting support	17
Contacting IBM Rational Software Support	
Prerequisites	
Submitting problems	
Other information	
Chapter 6: Notices	21
Trademarks	23

About this manual

Welcome to IBM® Rational® DOORS® for Serena PVCS Version Manager Interface.

Rational DOORS for Serena PVCS Version Manager Interface transfers data between Rational DOORS and Serena PVCS Version Manager. It allows complete lifecycle traceability from requirements through to configuration management.

This manual describes how to use version 1.4.1 of Rational DOORS for Serena PVCS Version Manager Interface. It assumes that you know how to use both Rational DOORS and Serena PVCS Version Manager.

Typographical conventions

The following typographical conventions are used in this manual:

Typeface or Symbol	Meaning
Bold	Book titles, important items, and items that you can select, including buttons and menus. For example: Click Yes to continue.
Courier	Commands, files, and directories; computer output. For example: Edit your .properties file.
>	A menu choice. For example: Select File > Open . This means select the File menu, then select the Open command from it.

Related documentation

The following table describes where to find information in the documentation set:

For information on	See
How to use Rational DOORS	The Rational DOORS documentation set

For information on	See
How to use Serena PVCS Version Manager	The Serena PVCS Version Manager documentation set
What's new in Rational DOORS for Serena PVCS Version Manager Interface 1.4.1	The Rational DOORS for Serena PVCS Version Manager Interface readme file
How to install Rational DOORS for Serena PVCS Version Manager Interface	Rational DOORS Installation Guide
How to set up licenses to use Rational DOORS for Serena PVCS Version Manager Interface	Rational Lifecycle Solutions Licensing Guide

These documents are on the Rational Information Center at http://publib.boulder.ibm.com/infocenter/rsdp/v1r0m0/index.jsp. Concepts

This chapter introduces Serena PVCS Version Manager Integration and explains the concepts you need to understand before using it:

- About Rational DOORS for Serena PVCS Version Manager Interface
- About Rational DOORS for Serena PVCS Version Manager Interface functions

About Rational DOORS for Serena PVCS Version Manager Interface

Rational DOORS is the world's leading tool for creating, structuring and managing complex sets of requirements, such as those for a typical software development project. Serena PVCS Version Manager from MERANT Solutions, Inc. is a widely used source code control system.

Rational DOORS for Serena PVCS Version Manager Interface is a bridge between these two products, enabling complete lifecycle traceability from requirements through configuration management.

Rational DOORS for Serena PVCS Version Manager Interface allows software project teams to:

- Establish traceability from Rational DOORS information to specific files, folders or file revisions in Serena PVCS Version Manager.
- Import release label information from Serena PVCS Version Manager to Rational DOORS.
- Import promotion group information from Serena PVCS Version Manager to Rational DOORS.
- Create Rational DOORS baselines to match Serena PVCS Version Manager version labels.
- Generate complete reports on combined Serena PVCS Version Manager and Rational DOORS configuration status.

About Rational DOORS for Serena PVCS Version Manager Interface **functions**

Rational DOORS for Serena PVCS Version Manager Interface provides two functions that are fundamental to integrating configuration management with lifecycle traceability:

The ability to represent the configuration item structure stored in Serena PVCS Version Manager as a Rational DOORS module.

In this operation, each folder, file and revision in the selected project is represented by a Rational DOORS object in a hierarchy that represents the complete version tree for that project.

Once you have replicated the Serena PVCS Version Manager configuration item structure in a Rational DOORS module, you can use normal Rational DOORS link functions to establish traceability from project information stored in Rational DOORS to the configuration items.

For example, a Serena PVCS Version Manager version object that implements a specific requirement can be directly linked to the corresponding Rational DOORS requirement object. This allows you to demonstrate conformance to requirements at source-code level.

The ability to baseline Rational DOORS modules using the same version labels as the Serena PVCS Version Manager data.

This operation uses another Rational DOORS module to store a list of labels that exist in each project, and to create baselines automatically for groups of modules. Each baseline is recorded in the Rational DOORS module, providing a configuration management record of which Rational DOORS baselines relate to which Serena PVCS Version Manager labels. This function also provides the ability to create baselines for many Rational DOORS modules simultaneously.

These two functions create a unified approach to both traceability and information release control, resulting in full lifecycle traceability and rigorous configuration management.

Importing from Serena PVCS Version Manager

This chapter describes:

- Importing from Serena PVCS Version Manager to Rational DOORS
- Viewing Serena PVCS Version Manager information
- Understanding imported information
- Using Rational DOORS traceability

Importing from Serena PVCS Version Manager to Rational DOORS

This operation reads the complete structure of a Serena PVCS Version Manager project into a Rational DOORS module, creating a Rational DOORS object for each folder, file and revision. Key properties, version labels and promotion groups are also imported.

Rational DOORS for Serena PVCS Version Manager Interface uses the Serena PVCS Version Manager project root to locate a project. If you want to point to a different project, you must change the PVCSRoot entry in your registry. You may need to change the value of the PVCSVersion entry to reflect the version of Serena PVCS Version Manager that you are using (from 6.0. to 6.7).

Importing structures

You can import into an empty module or into a module that already contains objects. Each Serena PVCS Version Manager project is always imported under its own top-level object.

Normally, you maintain your configuration item structure in a special module, though you might choose to store information for several projects in the same module. If you choose to do this, the new project is imported under a new level-one object at the end of the module.

To import from Serena PVCS Version Manager:

- Open the target Rational DOORS module.
- 2. From the Rational DOORS menu, select Serena PVCS Version Manager then **Synchronize/import**.

The **Enter PVCS Logon** dialog box is displayed.

3. Enter your username and password, then click **OK**. The **DOORSConnect PVCS** dialog box is displayed.

- Click the plus signs (+) to display more folders or files within a project.
- Select the project or files you want to import, then click **Import**.

One or more command prompt windows (DOS boxes) appear briefly during the import, depending on your version of Serena PVCS Version Manager. This happens when Rational DOORS for Serena PVCS Version Manager Interface is communicating with Serena PVCS Version Manager. The command prompt windows disappear automatically when the process is complete.

Note Command prompt windows will appear briefly whenever Rational DOORS for Serena PVCS Version Manager Interface communicates with Serena PVCS Version Manager.

When the import is complete, the import report is displayed.

This window shows how many new items were created during the import, how many items were updated and how many were deleted.

For information on how to use the report window functions, see "Viewing Serena PVCS Version Manager information," on page 8.

Updating imported structures

It is likely that your Serena PVCS Version Manager data will continue to evolve after you have imported it into Rational DOORS. Rational DOORS for Serena PVCS Version Manager Interface can synchronize existing imported data with the state of the Serena PVCS Version Manager projects, adding new folders, files, revisions, version labels and promotion groups as required.

To do this, select the Rational DOORS module to update and repeat the procedure in "Importing structures," on page 5. This object appears at the top of the structure, usually the first object in the module. A dialog box shows how many items have been created or updated.

If an item has been deleted from the project, the equivalent object in the Rational DOORS module has the **PVM Deleted** attribute set to **True**. The object has not been deleted in order to maintain correct traceability in Rational DOORS.

Imported attributes for structures

During the import process, Serena PVCS Version Manager data is stored as Rational DOORS attributes. All Serena PVCS Version Manager-related attributes are distinguished by a **PVM** prefix.

The following attributes are used to store Serena PVCS Version Manager properties:

Attribute	Description	
Object Heading	The name of the Serena PVCS Version Manager folder or file, or the number of the revision.	
Object Text	The Serena PVCS Version Manager check-in comment for revisions.	
PVM Archive Directory	The directory containing the archive.	
PVM Archive Name	The name of the archive.	
PVM Date	The date on which the element, version or branch was created.	
PVM Deleted	The date on which the element, version or branch was deleted.	
PVM Directory	The directory maintained by Serena PVCS Version Manager that corresponds to a folder. This attribute is only used when importing from a Serena PVCS Version Manager 6.0 database.	
PVM Kind	Identifies the type of the object. Possible values are Project , Folder , File , Label and Revision .	
PVM New	A boolean attribute that identifies new items added by importing or synchronizing data.	
PVM Updated	The date on which the element, version or branch was updated.	
PVM User	The name of the person who created the file or revision.	
PVM Work Directory	The directory where the work file is stored for files, or the directory where work files are extracted for a folder.	
PVM Work File	The name of the work file.	

Rational DOORS for Serena PVCS Version Manager Interface also imports Serena PVCS Version Manager labels and promotion groups. These too are stored as Rational DOORS attributes and the values are kept with each Rational DOORS object.

If you have a Serena PVCS Version Manager label Release 1, a Rational DOORS attribute of type Boolean called **PVM Label Release 1** is created. All versions that are marked with that label will have the Rational DOORS attribute set to **True.** A simple Rational DOORS filter immediately shows which items belong to which release.

If you have a Serena PVCS Version Manager promotion group **QA**, a Rational DOORS attribute of type Boolean called **PVM Promo QA** is created. When a revision belongs to that group, the attribute is set to **True**.

Rational DOORS for Serena PVCS Version Manager Interface also creates three attributes to store import metadata: PVM Deleted, PVM New and PVM **Updated**. These are set each time you import or synchronize and are the basis for the import report filters. You can create your own filters and views based on these attributes.

Viewing Serena PVCS Version Manager information

Rational DOORS provides many useful ways of viewing imported Serena PVCS Version Manager information. It has the advantage of being able to put all relevant information into a single screen.

This is particularly useful for any updated information, which is clearly shown using the standard Rational DOORS change bars. After an import, new or updated items have their change bars set to red, but the rest of the objects remain unchanged. For example, in the picture above you can see that one object has recently been added.

In the case of a re-import, you can use the **New items**, **Updated items** and **Deleted items** buttons in the Serena PVCS Version Manager Import Report window to show only the items that were new, updated, or deleted.

Understanding imported information

Serena PVCS Version Manager information is imported and turned into normal Rational DOORS objects. This section explains how to interpret this information and how to get the best from it.

Graphics colors for structures

When each item is imported, it is assigned a background color, used in graphics mode. This helps provide instant visual recognition of the structure of your data. The color allocations are as follows:

Туре	Color
Project	Black (no color on normal Rational DOORS background)
Folder	Green
File	Blue
Revision	Light blue

Version labels

Serena PVCS Version Manager version labels are typically used to mark which files were included in a particular release. Version labels are supplied when files are checked in and are a simple string such as **Patch 1.1**. The import process creates a Boolean attribute for each label prefixing the label name with **PVM Label**. For this example, the Boolean attribute would be **PVM Label Patch 1.1**.

Each version that is labeled with a given name has the Rational DOORS attribute set to **True**. This can be used in filters and gives instant indications of what versions were used in a given release.

Using Rational DOORS traceability

Once imported into Rational DOORS, the Serena PVCS Version Manager structure can be treated the same way as normal Rational DOORS objects. This means that they can be included in your traceability schema. A typical application of this is to link source code modules to requirements in order to check which requirements have been met.

Link management

You can use any of the following standard Rational DOORS methods for creating links between Serena PVCS Version Manager configuration items and other Rational DOORS information:

- Drag and drop
- Link > Create links

Link module matrix

In each case you must take the direction of each link into account to enable impact and traceability analyses to be performed. These analyses can be performed using the following standard tools:

- Pop-up menus
- Analysis > Impact or Analysis > Trace
- Layout DXL
- Analysis > Wizard

The last item, the analysis wizard, is particularly good for creating customized traceability reports. With this, you could create a report that shows the relationship between change requests and code check-ins, showing complete version names in the context of the change requests.

Links can be deleted by using any of the standard techniques.

Applications of imported structures

Rational DOORS can be used to store any kind of structured information, so it is likely that you already have information that can be usefully linked to the configuration items. In addition to the classic application of requirements traceability, you can also build links from change requests, bug reports, design information, test plans and project plans to Serena PVCS Version Manager versions.

Once in place, you can demonstrate that specific changes have been implemented, or create reports that justify all checked-in changes.

Another application is to create complete product manifests. Using the Rational DOORS export functions, you can create documents in Microsoft Word, HTML or any other supported format, that lists the document version included in a shipment.

4

Labelling Rational DOORS baselines

This chapter describes:

- Importing Serena PVCS Version Manager labels into Rational DOORS
- Creating Rational DOORS baselines
- Understanding baseline information
- Using Rational DOORS traceability

Importing Serena PVCS Version Manager labels into Rational DOORS

Serena PVCS Version Manager labels are typically used to mark which files were included in a particular release. Version labels are specified when revisions of files are checked in.

Rational DOORS baselines create frozen versions of modules that are similar to checked-in versions of files: they can be referenced, but not changed. Baselines are numbered progressively using major and minor versions, plus an optional text suffix.

Serena PVCS Version Manager version labels are ideal for Rational DOORS baseline suffixes, where they can be used for the same purpose as in Serena PVCS Version Manager.

Baseline labelling is a two-step process: importing labels from a project module and creating baselines. The import process sets up a structure where a record of each baseline is kept. This section describes the import step while "Creating Rational DOORS baselines," on page 13 describes baseline creation.

Importing labels

You can choose to import version labels into an empty module or into a module that already contains objects. The set of labels from each project is always imported under its own top-level object.

Normally you should maintain your label and baseline structure in a special module, though you might choose to store label information for several projects in the same module. If you choose to do this, the new project will be imported under a new level-one object at the end of the module.

Before using the baseline labelling process you must import the required Serena PVCS Version Manager project into a Rational DOORS module. The baseline process reads the version labels from this module.

Note You must be a Rational DOORS database manager to perform this function. It performs irrevocable module baseline operations.

To import labels:

- 1. Open your target Rational DOORS module. If the module is not empty, select a parent object for your imported structure.
- 2. From the Rational DOORS menu, select Serena PVCS Version Manager then Label baselines.
 - A DOORSConnect PVCS dialog box is displayed.
- 3. Select the Rational DOORS module previously used to import the Serena PVCS Version Manager project.
 - A dialog box is displayed, with one or more projects in the select box.
- **4.** Select the project whose labels you want to use.
- **5.** Click **Use project** to create the module structure.

When the import is complete, the Rational DOORS module is updated and the Apply Label to Modules window appears. For further information, see "Creating Rational DOORS baselines," on page 13.

Re-importing labels

After you have completed this baseline labelling operation, you may want more Serena PVCS Version Manager labels. Rational DOORS for Serena PVCS Version Manager Interface can synchronize existing imported labels with the Serena PVCS Version Manager project, adding new labels as required.

To do this, after selecting the project object at the top of the label and baseline structure, repeat the procedure in "Importing labels," on page 11.

Imported attributes for labels

During the import process, Serena PVCS Version Manager data is stored as Rational DOORS attributes. All Serena PVCS Version Manager-related attributes are distinguished by a **PVM** prefix.

The following attributes are used to store Serena PVCS Version Manager properties:

Attribute	Description
Object Heading	The name of the Serena PVCS Version Manager label.

Attribute	Description	
Object Text	The Serena PVCS Version Manager comment for the label, specified when the label was created.	
PVM Kind	Identifies the type of the object. Possible values are Project, Label and Baseline .	
PVM User	The name of the person who created the label.	
PVM Date	The date on which the label was created.	

Creating Rational DOORS baselines

Creating Rational DOORS baselines is the second step of the import process. Baselines are created using a DOORSConnect PVCS dialog box, which is displayed when the import is complete.

To create labeled baselines:

- 1. Ensure that all needed Rational DOORS modules are closed and not in use by anyone else.
- 2. Select the required label from the list in Serena PVCS Version Manager version labels.
- 3. Select the required module(s) from the list in **Rational DOORS** modules. Use **Select all** and **Clear all** to simplify the selection process.
- 4. Select the type of baseline required: **Suffix only, Minor version**, or **Major version**.
- Select whether to include a suffix by clicking Use suffix. The default suffix is the selected Serena PVCS Version Manager label. You can modify it if required.
- **6.** Modify the label comment, if necessary. It is used as annotation for the baseline.
- 7. Click **Baseline**. You are asked to confirm the operation, twice. Baseline creation requires exclusive, write access to all selected modules. This means you must ensure that no one else is using the modules.

Once a baseline has been created it cannot be destroyed or recreated, so you must be absolutely certain that a group baselining operation is correct before proceeding.

Baselines are created for each of the specified modules, and the label module is updated to contain a baseline-creation object for each module.

The attribute **PVM Baseline** is created and filled with the baseline name for each baseline-creation object.

When complete, a dialog box is displayed, indicating how many labels and baselines were created.

For further information on how to use the window functions, see "Understanding baseline information," on page 14.

Understanding baseline information

All the normal Rational DOORS viewing mechanisms can be used on the label and baseline structure. The information can be displayed in either document or graphics mode. Each object type has a color to aid visual identification.

Graphics colors for labels

When each item is imported, it is assigned a background color that is used in graphics mode. This helps provide instant visual recognition of the structure of your data.

The color allocations are as follows:

Туре	Color
Project	Black (no color on normal Rational DOORS background)
Label	Red
Baseline	Blue

Viewing new baseline information

If you re-import labels or create new labels in the same module, you can use the Baseline Labelling Report window's **Apply filter** button to show only the newly-created items.

A DOORSConnect PVCS dialog box is displayed.

Click **Apply filter**.

The formal module is displayed with the filter applied.

Using Rational DOORS traceability

By storing information on labels and baselines in a Rational DOORS module, they can be included in your traceability schema. In this way you can link details of released information directly to project plans and other applications, as outlined below.

Link management for labels

You can use any of the following standard Rational DOORS methods for creating links between label and baseline objects and other Rational DOORS information:

- Drag and drop
- Link > Create links
- Link module matrix

In each case, you must take into account the direction of links to allow impact and traceability analyses to be performed as required. These analyses can be performed using the following standard tools:

- Pop-up menus
- Analysis > Impact or Analysis > Trace
- Layout DXL
- Analysis > Wizard

The last item, the analysis wizard, is particularly good for creating customized traceability reports. With this, you could create a report that shows the relationship between code check-ins and module baselines, showing complete version names, baseline specifications and dates in the context of planning information.

Links can be deleted using any of the standard techniques.

Applications of imported labels

Rational DOORS can be used to store any kind of structured information, so it is likely that you already have information in your data that can be linked to baseline records. You might associate particular module baselines with deliveries made to customers, meeting specific requirements.

Another application is to create complete product manifests. Using the Rational DOORS export functions, you can create documents in Microsoft Word, HTML or any other supported format, that lists the document version included in a shipment.

Labelling	, Rational	DOORS	baselines
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5

Contacting support

This chapter contains the following topics:

- Contacting IBM Rational Software Support
- Prerequisites
- Submitting problems
- Other information

Contacting IBM Rational Software Support

If the self-help resources have not provided a resolution to your problem, you can contact IBM Rational Software Support for assistance in resolving product issues.

Note If you are a heritage Telelogic customer, you can go to http://support.telelogic.com/toolbar and download the IBM Rational Telelogic Software Support browser toolbar. This toolbar helps simplify the transition to the IBM Rational Telelogic product online resources. Also, a single reference site for all IBM Rational Telelogic support resources is located at http://www.ibm.com/software/rational/support/telelogic/

Prerequisites

To submit your problem to IBM Rational Software Support, you must have an active Passport Advantage® software maintenance agreement. Passport Advantage is the IBM comprehensive software licensing and software maintenance (product upgrades and technical support) offering. You can enroll online in Passport Advantage from

http://www.ibm.com/software/lotus/passportadvantage/howtoenroll.html.

- To learn more about Passport Advantage, visit the Passport Advantage
 FAQs at
 http://www.ibm.com/software/lotus/passportadvantage/brochures-faqs-quickguides.html.
- For further assistance, contact your IBM representative.

To submit your problem online (from the IBM Web site) to IBM Rational Software Support, you must additionally:

- Be a registered user on the IBM Rational Software Support Web site. For details about registering, go to http://www-01.ibm.com/software/support/.
- Be listed as an authorized caller in the service request tool.

Submitting problems

To submit your problem to IBM Rational Software Support:

Determine the business impact of your problem. When you report a problem to IBM, you are asked to supply a severity level. Therefore, you need to understand and assess the business impact of the problem that you are reporting.

Use the following table to determine the severity level.

Severity	Description
1	The problem has a <i>critical</i> business impact: You are unable to use the program, resulting in a critical impact on operations. This condition requires an immediate solution.
2	This problem has a <i>significant</i> business impact: The program is usable, but it is severely limited.
3	The problem has <i>some</i> business impact: The program is usable, but less significant features (not critical to operations) are unavailable.
4	The problem has <i>minimal</i> business impact: The problem causes little impact on operations or a reasonable circumvention to the problem was implemented.

- 2. Describe your problem and gather background information, When describing a problem to IBM, be as specific as possible. Include all relevant background information so that IBM Rational Software Support specialists can help you solve the problem efficiently. To save time, know the answers to these questions:
 - What software versions were you running when the problem occurred? To determine the exact product name and version, use the option applicable to you:

- Start the IBM Installation Manager and click File > View Installed Packages. Expand a package group and select a package to see the package name and version number.
- Start your product, and click Help > About to see the offering name and version number.
- What is your operating system and version number (including any service packs or patches)?
- Do you have logs, traces, and messages that are related to the problem symptoms?
- Can you recreate the problem? If so, what steps do you perform to recreate the problem?
- Did you make any changes to the system? For example, did you make changes to the hardware, operating system, networking software, or other system components?
- Are you currently using a workaround for the problem? If so, be prepared to describe the workaround when you report the problem.
- **3.** Submit your problem to IBM Rational Software Support. You can submit your problem to IBM Rational Software Support in the following ways:
 - Online: Go to the IBM Rational Software Support Web site at https://www.ibm.com/software/rational/support/ and in the Rational support task navigator, click Open Service Request. Select the electronic problem reporting tool, and open a Problem Management Record (PMR), describing the problem accurately in your own words.
 - For more information about opening a service request, go to http://www.ibm.com/software/support/help.html
 - You can also open an online service request using the IBM Support Assistant. For more information, go to http://www-01.ibm.com/software/support/isa/faq.html.
 - By phone: For the phone number to call in your country or region, go to the IBM directory of worldwide contacts at
 http://www.ibm.com/planetwide/ and click the name of your country or geographic region.
 - Through your IBM Representative: If you cannot access IBM
 Rational Software Support online or by phone, contact your IBM
 Representative. If necessary, your IBM Representative can open a
 service request for you. You can find complete contact information for
 each country at http://www.ibm.com/planetwide/.

If the problem you submit is for a software defect or for missing or inaccurate documentation, IBM Rational Software Support creates an Authorized Program Analysis Report (APAR). The APAR describes the problem in detail. Whenever possible, IBM Rational Software Support provides a workaround that you can implement until the APAR is resolved and a fix is delivered. IBM publishes resolved APARs on the IBM Rational Software Support Web site daily, so that other users who experience the same problem can benefit from the same resolution.

Other information

For Rational software product news, events, and other information, visit the IBM Rational Software Web site on http://www.ibm.com/software/rational/. **6** Notices

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Index imported structures applying 10 attributes 7 Α color allocation 9 updating 6 attributes imported version labels 9 imported labels 12 importing imported structures 7 attributes for imported labels 12 В attributes for imported structures 7 displaying imported information 8 baselines labels 11 creating 13 structures 5 filtering 14 understanding 14 L G links 9, 15 graphics mode 9, 14 R Rational DOORS for Serena PVCS Version Manager Interface IBM Customer Support 17 functions 3 imported information introduction 3 displaying 8 introduction 8 Т imported labels traceability 9, 15 applying 15 attributes 12 color allocation 14 introduction 11 re-importing 12 updating 12