BigFix
Patch for Debian User's Guide

Special notice

Before using this information and the product it supports, read the information in Notices *(on page xvii)*.

Edition notice

This edition applies to BigFix version 10 and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

Chapter 1. Overview

BigFix Patch for Debian provides unified, real-time visibility, and enforcement to deploy and manage patches to all Debian endpoints from a single console. It keeps your Debian clients current with the latest packages.

With a few keystrokes, the BigFix console operator can apply the patch to all the relevant computers and visualize its progress as it deploys throughout the network. The BigFix client checks the operating system version, processors, and the existing installed packages to determine when and if a patch is necessary.

For new supported security updates that become available, BigFix releases a Fixlet that identifies and updates all the computers in your enterprise that need it. These Fixlets are available from the **Patches for Debian 11** site.

Note: Patches for Debian 7 site has been deprecated and this will no longer provide Fixlet content or support for these sites after the deprecation date.

Using Fixlets, you can manage large numbers of updates and patches with comparative ease, enabling automated, highly targeted deployment on any schedule that you want. Large downloads can be phased to optimize network bandwidth and the entire deployment process can be monitored, graphed, and recorded for inventory or audit control.

Supported platforms and updates

BigFix supports Debian security updates on Debian 11 (Bullseye) platforms (amd64).

The Patch for Debian Fixlet sites provide support for the following versions and platforms:

Table 1. Versions and platforms supported by the Patch for Debian Fixlet sites

Version	Platform (Supports servers and desktops)	Fixlet Site Name
Debian 7*	(i386 and amd64)	Patches for Debian 7
Debian 11 (Bullseye)	(amd64)	Patches for Debian 11

Debian releases packages without associated announcements. Such packages have "Unspecified" indicated in the Fixlet title.

Note: The repository includes the packages from **required**, **standard**, **important** and **extra** categories. The packages from the **optional** category are not included.

Note: The current available patch content is from BigFix version 10.0.7.52 only.

Note: *Debian 7 security updates on platforms (i386 and amd64) has been deprecated. BigFix in turn, no longer provides content and support for products that have reached its end of support date.

Note: Debian 7 "Wheezy" support has reached its end of life on May 31, 2018. After this date, support for Debian 7 has been deprecated and site will no longer provide support.

Site subscription

Sites are collections of Fixlet messages that are created internally by you, by HCL, or by vendors.

Subscribe to the Patches for Debian site to access the Fixlet messages to patch systems in your deployment.

You can add a site subscription by acquiring a Masthead file from a vendor or from HCL or by using the Licensing Overview Dashboard. For more information about subscribing to Fixlet sites, see the *BigFix Installation Guide*. For more information about sites, see the *BigFix Console Operator's Guide*.

After gathering the available sites, you must run the following tasks, depending on what is applicable to your deployment.

Task ID: 73 Set up Download Whitelist for Debian (Windows server)

This task is applicable to Windows servers.

Task ID: 74 Set up Download Whitelist for Debian (Linux Server)

This task is applicable to Linux servers.

You must run the task because otherwise you might encounter the following error: *The requested URL does not pass this deployment's download whitelist.*

Debian uses dynamic download while fetching the packages. As a security measure, the server blocks every dynamic download request except those with URLs that match the patterns in the whitelist file. Ensure that both the endpoints and the BigFix relay are subscribed.

Chapter 2. Managing security updates with Patch for Debian

Access Debian Fixlets sites for Debian updates from the BigFix console.

You can manage the security updates that Debian releases with the use of the Patch Management for Debian Fixlets. These Fixlets are available in the Patches for Debian Fixlets sites, which you can access from the Endpoint Manager console.

In Bigfix, Superseded Fixlets are Fixlets that contain outdated packages. If a Fixlet is superseded, a newer Fixlet exists with newer versions of the packages. You can find the new Fixlet ID in the description of the superseded Fixlet.

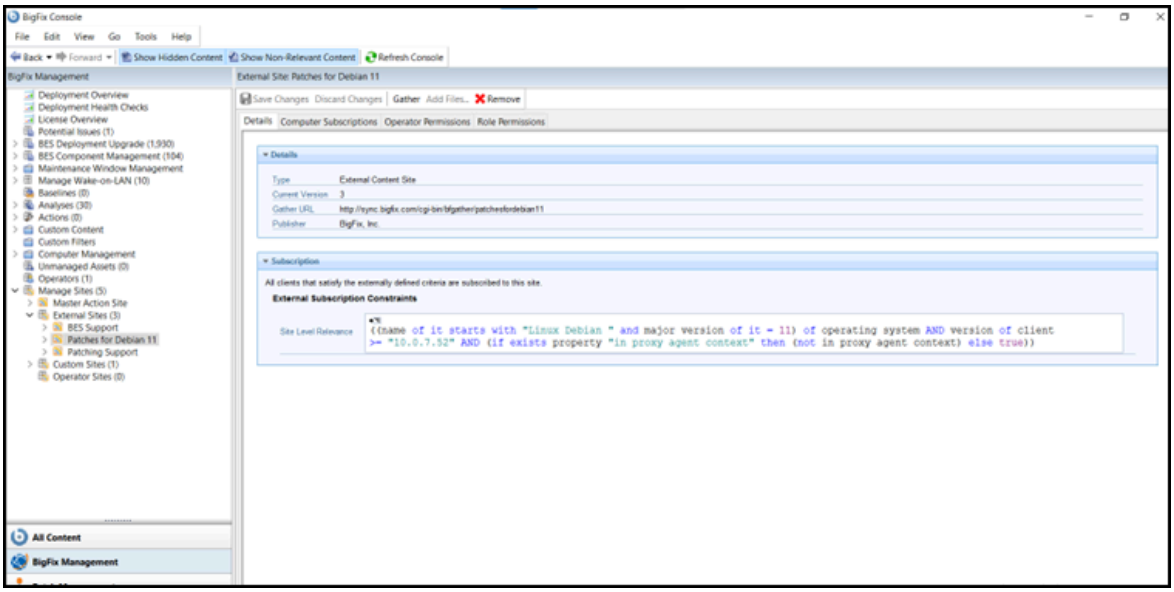
Deploying patches by using Fixlets

This topic describes how to deploy Patches by using Fixlets.

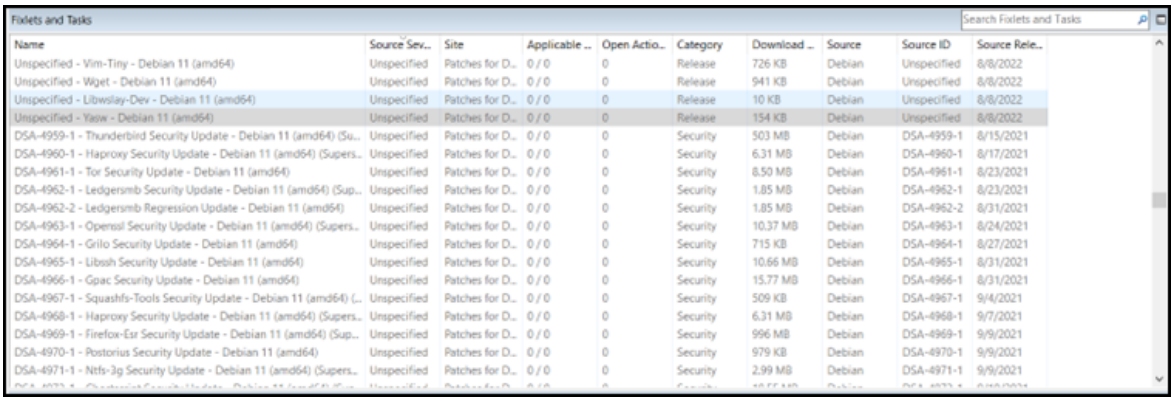
From the console, select the action for the appropriate Fixlets that you want to deploy. The action propagates throughout your deployment and applies patches based on the settings that you make in the Fixlet work area and the Take Action dialog box.

Deploy the Debian Fixlets from the BigFix Console:

1. In the BigFix Management domain, click **Management Sites**.
2. From the BigFix Management navigation tree, click **External Sites**. The navigation tree expands.
3. Select the correct version of Patches for Debian.

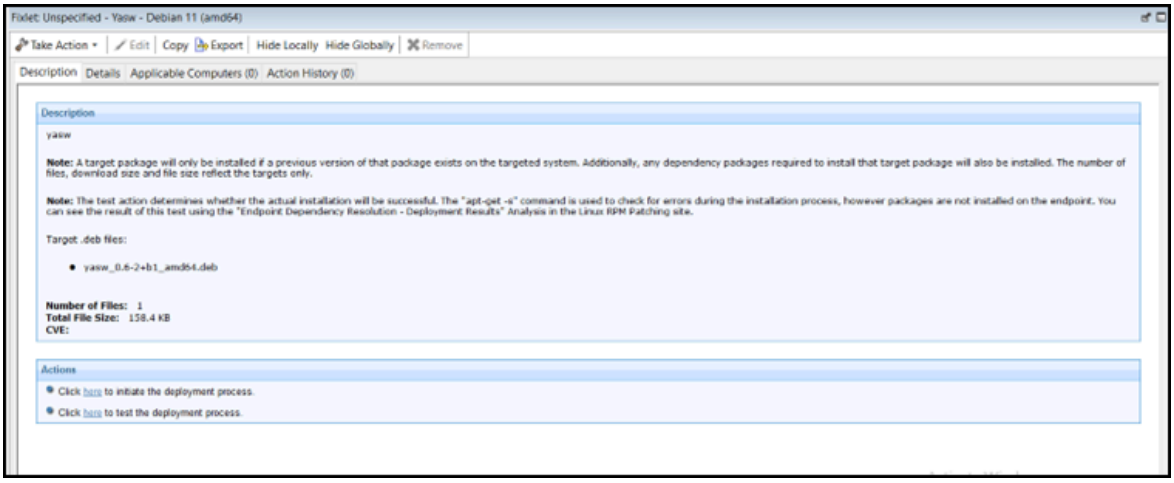


4. From the list panel on the right, double-click the Fixlet to deploy.



The Fixlet opens in the work area. Click the individual tabs to review details about the selected Fixlet.

5. Click the link in the **Actions** group to start the deployment. The Debian website opens to display the package information and links to download files.



Patches for Debian Fixlet sites

Debian updates are available through the Debian website.

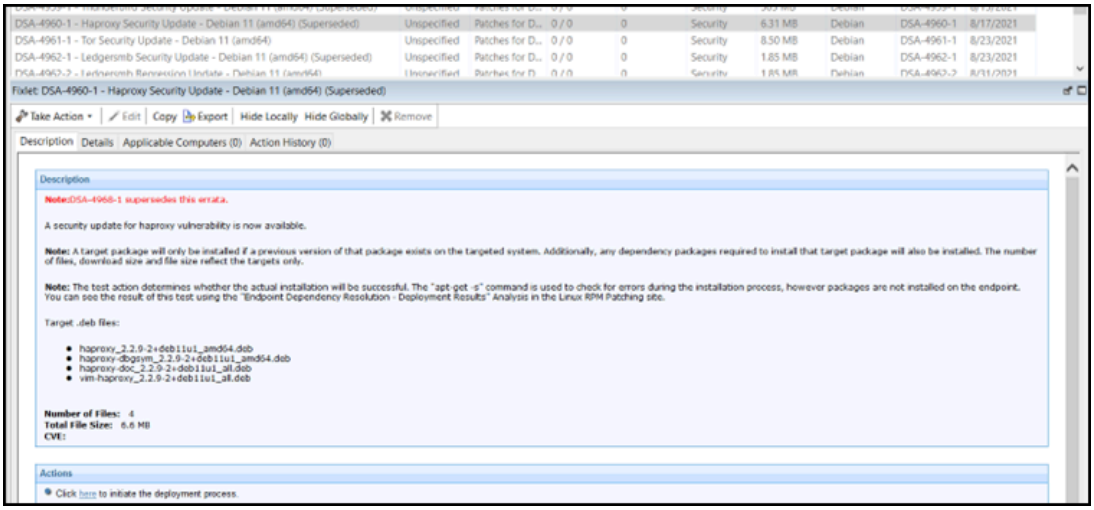
The Patches for Debian Fixlet sites provide the corresponding Fixlet content for Debian updates. Installation packages and details of the security notices are also released through the Debian website. The Debian website maintains an archive of the security notices.

Superseded Fixlets

Superseded Fixlets are Fixlets that contain outdated packages. If a Fixlet is superseded, a newer Fixlet exists with newer versions of the packages. You can find the new Fixlet ID in the description of the superseded Fixlet.

In BigFix, supersedence is a property of Fixlets that provides multiple packages. In Launchpad, the host website for applications such as Debian, supersedence is a property of every package.

Figure 1. Description of a superseded Fixlet showing the newer Fixlet ID



Supersedence as defined by BigFix and Launchpad

BigFix for Patch Management and Launchpad use the term *supersedence* differently. A package with superseded status on the Launchpad website does not mean the same as when a fixlet is described as superseded in BigFix.

In Launchpad terminology, *supersedence* is a property of every package. For BigFix for Patch, *supersedence* is a property of Fixlets that provides multiple packages. When a Fixlet is superseded, it means that there is an newer and more advanced Fixlet with the same set of packages.

Frequently Asked Questions - Supersedence

Learn the answers to frequently asked questions about Supersedence in Debian patching with BigFix.

What is Supersedence?

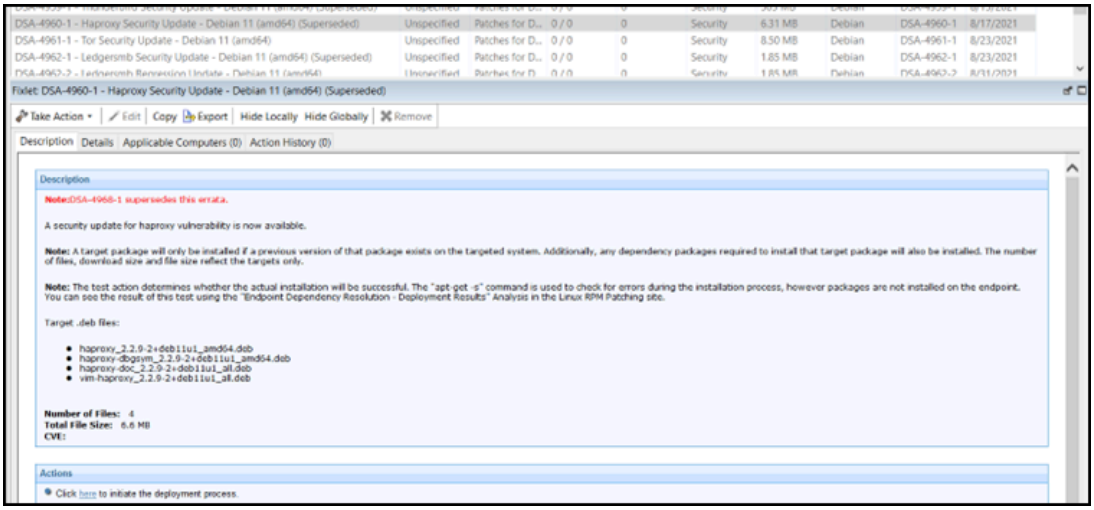
Supersedence is all about replacing an outdated Fixlet with the latest Fixlet.

How does Supersedence work in Bigfix Patching?

Supersedence helps you update BigFix application Fixlets to their latest version by using newly released Fixlets. The superseded Fixlet replaces the outdated Fixlet containing the following details for backtracking.

Note: The `x-Fixlet-Superseded` field in the Fixlet states the newer version number.

Figure 2. Supersedence Information



The **superseded by** version (newer version) is displayed in the Description tab as shown in the sample Debian Fixlet screenshot.

What is a superseder?

Superseder is the **latest** Fixlet that replaces or updates the outdated version.

What is a supersedee?

Supersedee is an **outdated** Fixlet that is replaced by the latest Fixlet.

Can I use the superseded Fixlet to deploy an application even if a latest version is available for the same application?

Yes. You can update the application to the latest version. You can also still use the superseded Fixlet to deploy the application. The Fixlet description mentions that there is an update available for the application.

What are the exceptions when the superseded Fixlets cannot be used?

Applications like Google Chrome allows you to download only the latest version available.

- **Downloadable version**: In such applications, the superseded Fixlets would deploy only the **latest** available version.
- **Reason**: The download link remains constant in all the Fixlets regardless of being a regular Fixlet or a superseded Fixlet.

Does the architecture of the package play a role in supersedence?

Yes. For example, the amd64 architecture Fixlet can be superseded only by another amd64 architecture Fixlet and not by any other architecture Fixlet.

How does supersedence work in Debian?

Superseding Fixlets in Debian work based on the package name and version number.

Will the same Fixlet be superseded two or more times?

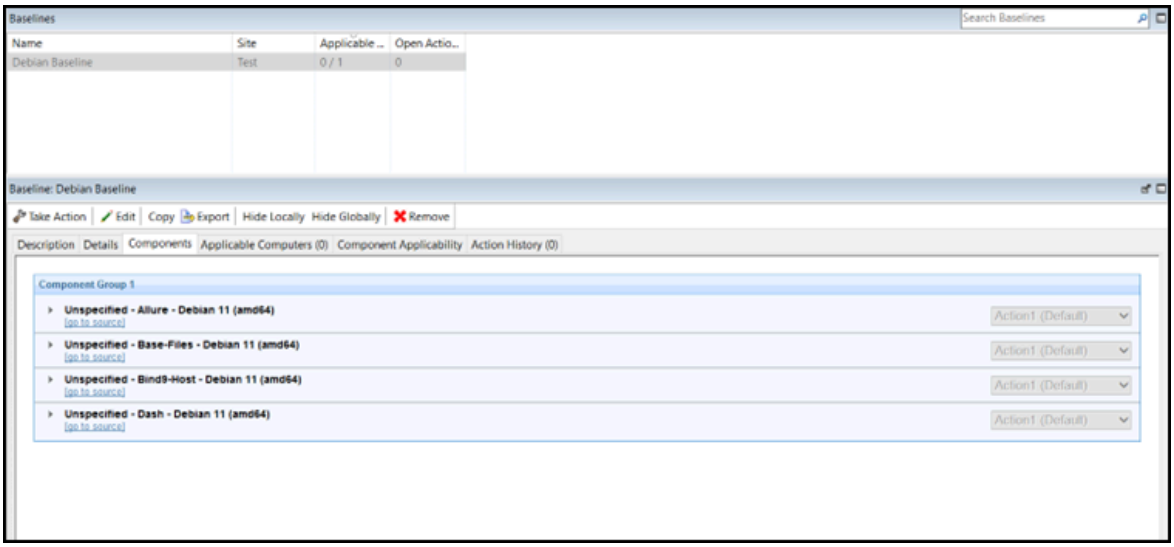
No, when a Fixlet is superseded by the latest version, the Fixlet is marked as superseded:True in the `seenfile` of the corresponding OS code to avoid superseding the Fixlet again.

Installing multiple package baselines

With BigFix Patch you can combine the installation of updates for multiple packages in a baseline into a single task, which can reduce the execution time of the baseline installation.

Baselines can help you gather multiple Fixlets into groups, which you can apply immediately to any set of target computers. Baselines are powerful ways to deploy a group of actions across an entire network. The multiple-package baseline installation solution helps address the poor performance that arises because of the dependency resolution and package installation that is done separately for each Fixlet.

The multiple-package baseline installation feature helps you to save time when you deploy Fixlets with multiple unique packages from a baseline.

1. Create a baseline.
   Highlight the Fixlets from a Fixlet site and select **Add to New Baseline** from the menu. You can also select **Create New Baseline** from the **Tools** menu. You can give a custom name to the baseline.
   

2. Selectively add the patch Fixlets to the baseline.
   Ensure that for all Fixlets, the baseline remains relevant on applicable computers where this component is relevant option is selected.

   Note: If you add two or more Fixlets to the baseline that affect different versions of the same package, the installation task will skip the older versions of the package and install the latest version of the package.

Attention: Before you run the baseline, ensure that you meet the following requirements:

- The repositories that are registered on the endpoint must contain the target packages and all the required dependency packages.
- Do not run multiple baselines from the same site on the same endpoint.
- Follow the baseline best practices that are documented in the following technote: https://hclpnpsupport.service-now.com/csm?id=kb_article&sys_id=d288c2021b098c9477761fc58d4bcbdf

Appendix A. Support

For more information about this product, see the following resources:

- BigFix Support Portal
- BigFix Developer
- BigFix Playlist on YouTube
- BigFix Tech Advisors channel on YouTube
- BigFix Forum

Appendix B. Frequently asked questions

Learn from these questions and answers that are designed to help you better understand BigFix Patch for Debian.

Which support fixlet can I use for installing the newest versions of all the packages installed on an endpoint?

You can use the *"Run `dist-upgrade` to install and intelligently handle dependencies of new packages"* support fixlet for installing the latest versions of all the packages installed on a system/endpoint. The *"apt-get dist-upgrade"* command installs the newest versions of all packages that are currently installed on the system from the sources that are defined for `apt`. The command also attempts to intelligently handle changing dependencies.

Using which support fixlet can I install all available security updates from a vendor repository?

You can use the *"Install all available updates from the vendor security repository (amd64)"* support fixlet to install all the security updates from your vendor repository. This fixlet gets a list of all the available updates from the vendor security package repository and installs them on the system/endpoint.

What are Unspecified Fixlets and why do we need them?

Unspecified Fixlets are for the packages found in Debian's security repositories and that do not have a security notice (DSA) associated with them. Not all security packages released by Debian have a DSA associated with them - Unspecified Fixlets covers such packages.

Where can I search and download the packages?

The current version of packages can be found and downloaded from the Debian website at https://www.debian.org/security/, while previous versions can be found in the Debian snapshot (http://snapshot.debian.org). You can also search packages at https://www.debian.org/distrib/packages.

Are there other Debian resources I should be aware of?

Here are a few helpful resources:

- Debian website: https://www.debian.org/security/
- Mail list: https://lists.debian.org/debian-security-announce/
- Debian snapshot: http://snapshot.debian.org/
- Search package: https://www.debian.org/distrib/packages
- Debian security repository host: http://security.debian.org
- Security Bug Tracker: https://security-tracker.debian.org/tracker/

If a patch fails to install, what should I do?

Ensure that you applied the patch to the correct computers. Also, check the following logs:

- /`var/opt/BESClient/__BESData/__Global/Logs/<YYYYMMDD>.log`
- `/var/opt/BESClient/EDRDeployData/EDR_DeploymentResults.txt`

For debugging purposes, you can add an extra `-n` to the last line of the action script after wait `/bin/bash "{parameter "cwd"}/InstallPackages.sh"`.

The `-n` flag disables the cleanup of following files:

- `/var/opt/BESClient/EDRDeployData/EDR_RepoData.txt`
- `/var/opt/BESClient/EDRDeployData/EDR_PackageList.txt`
- `/var/opt/BESClient/EDRDeployData/EDR_ResolverOutput.log`
- `/var/opt/BESClient/EDRDeployData/EDR_ResolverError.log`
- `/var/opt/BESClient/__BESData/Patches for Debian 7/apt`

These extra files provide the context information of the patching and can help in investigating the failure.

What are superseded patches?

Superseded Fixlets are Fixlets that contain outdated packages. If a Fixlet is superseded, then a newer Fixlet exists with newer versions of the packages. The newer Fixlet ID can be found in the description of the superseded Fixlet.

How do I find out if the Debian package is upgradeable?

You must first install the apt-show-versions, which is a rpm package to find out if any Debian packages are upgradeable.

1. To install apt-show-versions, enter `apt-get install apt-show-versions`.
2. To get a list of only the upgradeable packages, enter `apt-show-versions -u | less`. You can also use grep as follows: `apt-show-versions -u | grep "apache"`

How do I upgrade specific packages?

You should specify the package name. For example, if you want to upgrade apache-perl package, type the following command: `apt-get install apache-perl`. This command is useful if you just want to upgrade a single package and not the entire system.

The client logs contains a prefetch plug-in error that prevents the Fixlet from completing successfully. What is causing the error? What should I do?

The ActionScript that was running on the endpoint might have been blacklisted, causing the prefetch plug-in issue.

To resolve this issue, restart the BigFix client to clear the blacklist. To prevent the script from being blacklisted, set the `_BESClient_ActionManager_PrefetchPlugInTimeoutSeconds` client configuration setting with sufficient time for the patch to install and resolve dependencies. This client setting indicates how long the client should wait before blacklisting the script. You can use the **Change Timeout for Prefetch Plugins** task, available from the Patching Support site, to set the setting to 30 minutes (1800 seconds).

The `_BESClient_ActionManager_PrefetchPlugInTimeoutSeconds` setting varies based on the endpoint and the Fixlet being installed. To get the desired value, take the slowest endpoint and increase the setting to a high number, such as 3,000 seconds, then run a large Fixlet and see how long it takes. You can then

take that number and multiple it by two. Alternatively, set the client setting to 600 seconds and adjust it accordingly if the suggested value does not work for you.

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