*Rancher*

Test Plan

Version *1.2.1*

*03.25.2022*

VERSION HISTORY

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Version #** | **Implemented**  **By** | **Revision**  **Date** | **Approved**  **By** | **Approval**  **Date** | **Reason** |
| 1.2.1 | *Rancher Team* | *03.25.2022* | *Rancher PR* | *03.25.2022* | Smoke testing  Load testing  E2E testing  Regression testing |

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# Introduction

## Purpose of The Test Plan Document

This Test Plan document was created to perform the best strategy on the newest version of the product and minimize the number of bugs. In addition, this manual will help the version to be more stable and might potentially decrease the resource usage.

# Smoke Testing

## Test Risks / Issues

There is a risk that user won’t be able to find a running Rancher app in the hidden apps menu, this test need to be tested on every OS (Windows, Linux, MacOS).

Change of Kubernetes version can break your connection to images.

App can use Kubernetes even with unchecked “Enable Kubernetes” box.

Port forwarding might not work correctly.

## Items to be Tested

|  |  |
| --- | --- |
| **Item to Test** | **Test Description** |
| Accessibility of Rancher app from hidden apps | On every OS open rancher app and find bull icon in the hidden apps, right click on it to test functionality. |
| Connection to images after altering Kub. version | Create an image and access it from rancher, then change the version of Kub. and try to connect again |
| Prohibition of using Kubernetes | If box for “Enable Kubernetes” is unchecked the version drop-down list must be disabled and the connect to Kubernetes should be stopped. |
| Port forwarding test | Create a test mongoDB and forward port to 27017. After this action, try to connect to mongo. |

## Test Pass / Fail Criteria

|  |  |  |
| --- | --- | --- |
| **Item to Test** | **Pass** | **Fail** |
| Accessibility of Rancher app from hidden apps | The bull icon exists in the hidden apps menu, right click access the pop-up menu. | Bull icon is missing. |
| Connection to images after altering Kub. version | User can connect to the image after changing the version of Kubernetes. | User can’t connect to the image. |
| Prohibition of using Kubernetes | The version drop-down is disabled, only containerization is allowed. | User can use Kubernetes even with unchecked box, the version drop down list is also accessible. |
| Port forwarding test | User can connect to container on the local machine by forwarding. | The connection is closed. |

# Load Testing

## Test Risks / Issues

Increase of memory or CPU cores can slow down the workflow (only on Linux and MacOS).

Create multiple image connections.

## Items to be Tested / Not Tested

|  |  |
| --- | --- |
| **Item to Test** | **Test Description** |
| Kubernetes configuration settings | Move the slider to the right site, on the red zone and analyze the speed and stability of connection. |
| Numerous images | Test the consumption of resources and performance after adding multiple images, also test the scan option for vulnerabilities. |

## Test Pass / Fail Criteria

|  |  |  |
| --- | --- | --- |
| **Item to Test** | **Pass** | **Fail** |
| Kubernetes configuration settings | The usage of resources is not at the max level. | The connection closed due to lack of resources, or system is overloaded. |
| Numerous images | Scanning shows normal level. | System is overloaded. |

# Regression Testing

## Test Risks / Issues

Functionality of menu can be changed in new version.

Show logs button might not redirect user to the logs directory.

## Items to be Tested / Not Tested

|  |  |
| --- | --- |
| **Item to Test** | **Test Description** |
| Test buttons from menu bar | User should be able to use any of the buttons: File, Edit, View, Help, or any of the buttons after accessing one of them.  The main functions are: Undo, Redo, Cut, Copy, Paste, Delete, Select all, Zoom in or out, toggle full screen, and redirecting to rancher websites in Help dropdown menu. |
| Show logs button | Test case to check if user gets redirected logs folder. |

## Test Pass / Fail Criteria

|  |  |  |
| --- | --- | --- |
| **Item to Test** | **Pass** | **Fail** |
| Test buttons from menu bar | Every button performs the action according to the inscription. | The button does not work at all or does the action different from inscription. |
| Show logs button | Rancher app opens a directory /logs | Nothing happens or wrong folder was opened. |

# End-to-end Testing

## Test Risks / Issues

Reinstallation Rancher app can cause troubles.

The connection to the Kubernetes can be off.

Image management might not be available after last build.

## Items to be Tested / Not Tested

|  |  |
| --- | --- |
| **Item to Test** | **Test Description** |
| Reinstallation of an app | Uninstall last version and follow the manual on github to install new version. |
| Kubernetes management | Test to verify that new version is not blocking the access to Kubernetes. |
| Image management | User can manage images from Images tab. |

## Test Pass / Fail Criteria

|  |  |  |
| --- | --- | --- |
| **Item to Test** | **Pass** | **Fail** |
| Reinstallation of an app | Installation was successfully completed after deinstallation. | Rancher app can’t be installed due to configuration issues. |
| Kubernetes management | User can connect and manage Kubernetes containers. | The connection is closed. |
| Image management | The connection to images is stable and user can configure them. | Images are not accessible. |

# Approval

The undersigned acknowledge they have reviewed the *Rancher App v.1.2.1* **Test Plan** document and agree with the approach it presents. Any changes to this Requirements Definition will be coordinated with and approved by the undersigned or their designated representatives.

|  |  |  |  |
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| Signature: |  | Date: |  |
| Print Name: |  |  |  |
| Title: |  |  |  |
| Role: |  |  |  |