

# How to create a passwordless SSH login to your Nutanix cluster

Article # KB-1895 | Last modified on Dec 17th 2024

**Summary:** This article describes how to set up passwordless SSH to a Nutanix cluster.

Networking

Troubleshooting

Security

## Description:

This article describes setting up passwordless SSH to a Nutanix cluster using key-based authentication. Refer to [Security Guide: Controlling Cluster Access](#) for additional information, including user accounts supported by this process.

To address Alert A6220 "The PC is using password based ssh access.", and for setting up key-based SSH access to Prism Central, refer to [Security Guide: Controlling Remote \(SSH\) Access](#)

## Solution:

### Contents

- [How to set up passwordless SSH from Mac/Linux](#)
- [How to set up passwordless SSH from Windows \(using PuTTY\)](#)
- [Adding a new public key to the cluster](#)
- [How to log in using passwordless SSH from Mac/Linux](#)
- [How to log in using passwordless SSH from Windows \(using PuTTY\)](#)

## How to set up passwordless SSH from Mac/Linux

1. Open a Terminal window
2. Run the ssh-keygen command. This will generate two files: a private key file (id\_rsa, by default) and a public key file (id\_rsa.pub, by default):

```
$ ssh-keygen
Generating public/private rsa key pair.
```

3. You can change the file name when prompted:

```
Enter file in which to save the key (/Users/johnsmith/.ssh/id_rsa):
```

4. If the file already exists, you will be prompted if you want to overwrite it:

```
/Users/johnsmith/.ssh/id_rsa already exists.  
Overwrite (y/n)?
```

5. You will be prompted for a passphrase. If you do not want to enter a passphrase, just press Enter for an empty passphrase:

```
Enter passphrase (empty for no passphrase):  
Enter same passphrase again:
```

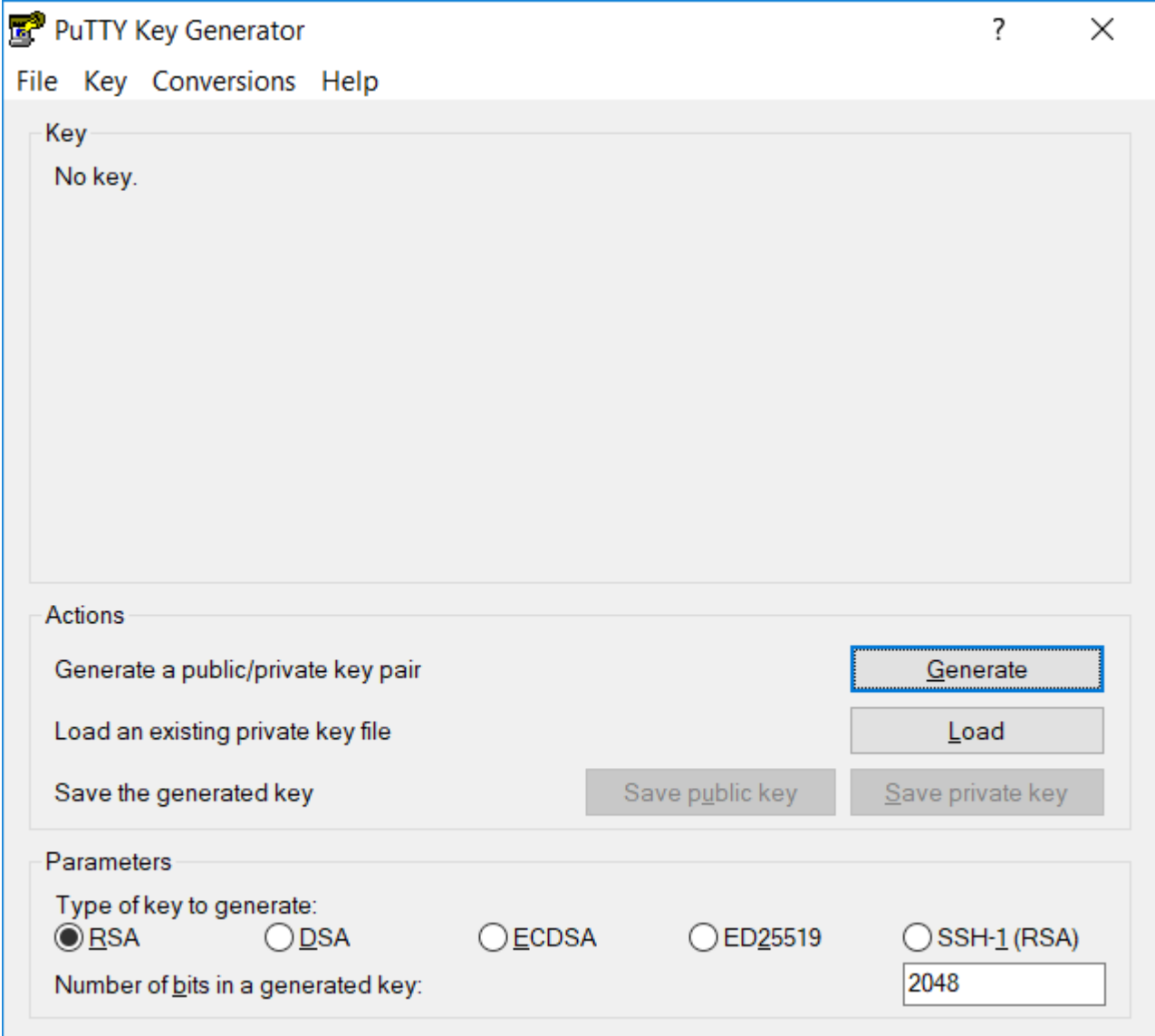
Below is the rest of a sample run:

```
Your identification has been saved in /Users/johnsmith/.ssh/id_rsa.  
Your public key has been saved in /Users/johnsmith/.ssh/id_rsa.pub.  
The key fingerprint is:  
0c:24:94:fe:d5:20:23:18:c6:57:e6:bd:2a:5d:39:4e johnsmith@JSMITH-MAC  
The key's randomart image is:  
+--[ RSA 2048 ]-----+  
| .o+oo+          |  
| .o +=o..       |  
|   o .oo.o      |  
|    .  o.o.     |  
|     . .E       |  
|    ..= .       |  
|   . o .        |  
|    .           |  
|                |  
+-----+-----+
```

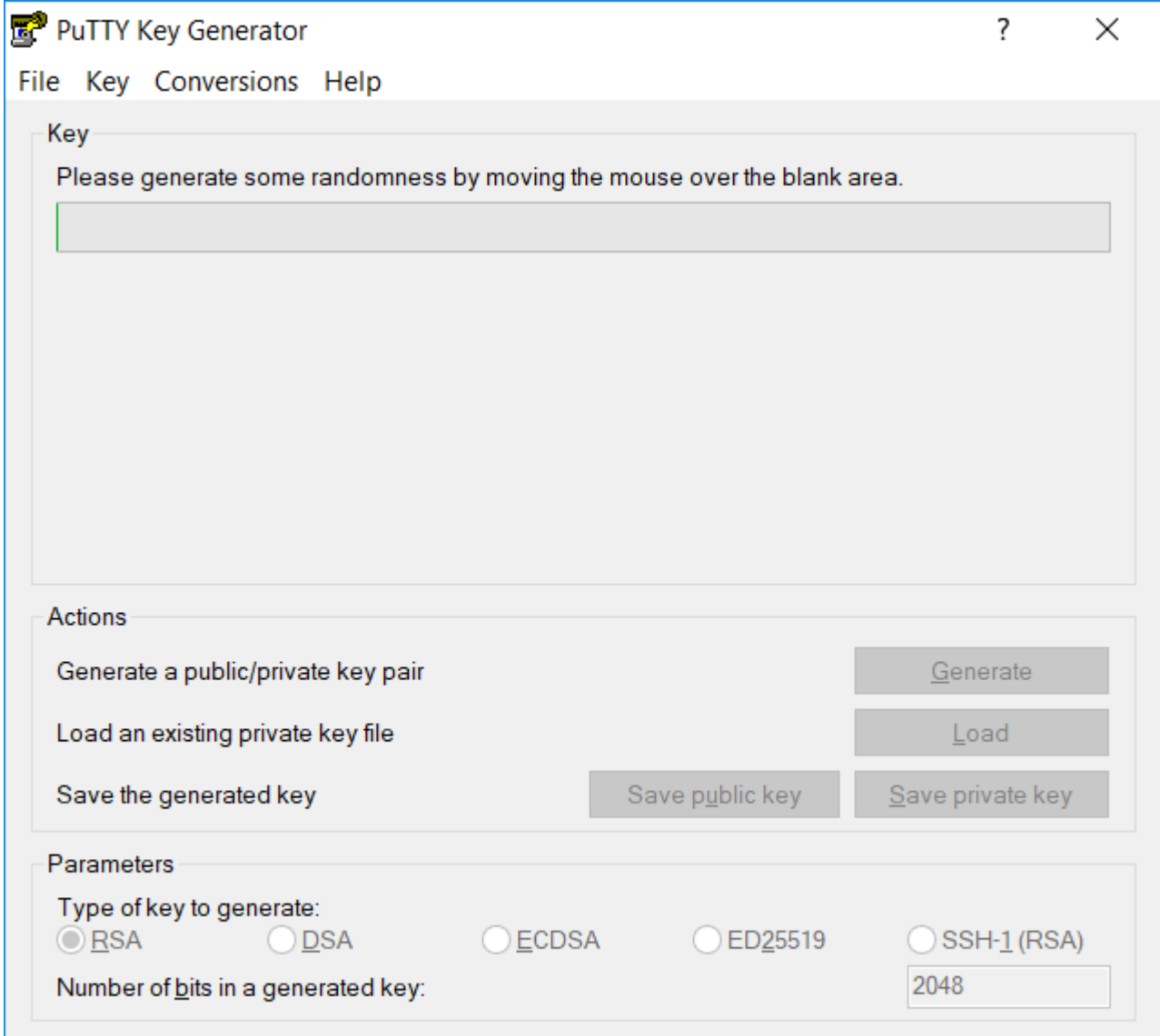
6. Add the new public key to the cluster using the ["Adding a new public key to the cluster"](#) procedure below.

## How to set up passwordless SSH from Windows (using PuTTY)

1. Download [PuTTYgen](#)
2. Run puttygen.exe



3. Select **Generate**



4. Move the mouse randomly over the PuTTYgen window until the key is generated. PuTTYgen uses random mouse movements to generate the key.
  5. Once the key is generated, select "**Save public key**" to save the public key to a file with a .pub extension (for example, id\_rsa.pub). The file will be saved with carriage returns, the key itself should be one line so you may need to delete the return characters. This is not caused by the text editor, they are characters there that putty inserts and understands but openssh does not like.
  6. Select "**Save private key**" to save the private key to a file with a .ppk extension (for example, id\_rsa.ppk).
7. Add the new public key to the cluster using the "[Adding a new public key to the cluster](#)" procedure below.

**Note:** PPK is PuTTY's proprietary private key format. This is not the same format as the private key generated by ssh-keygen above.

**Note:** When the key is generated via PuTTY, there needs to be a slight modification to the file before it can be copied and pasted into Prism.

Remove the first and last lines of the PuTTY file. The first line looks something like this:

```
----- BEGIN SSH2 PUBLIC KEY -----
```

The last line looks something like this:

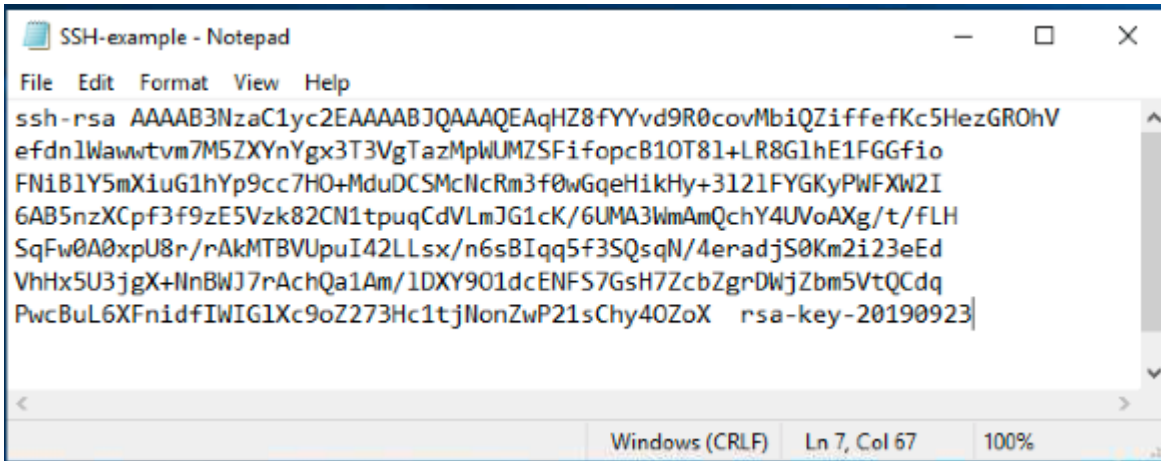
```
----- END SSH2 PUBLIC KEY -----
```

Then add "ssh-rsa" at the beginning of the public key itself, then add a comment, if desired.

For example:

```
ssh-rsa <PUBLIC KEY> rsa-key-20181107
```

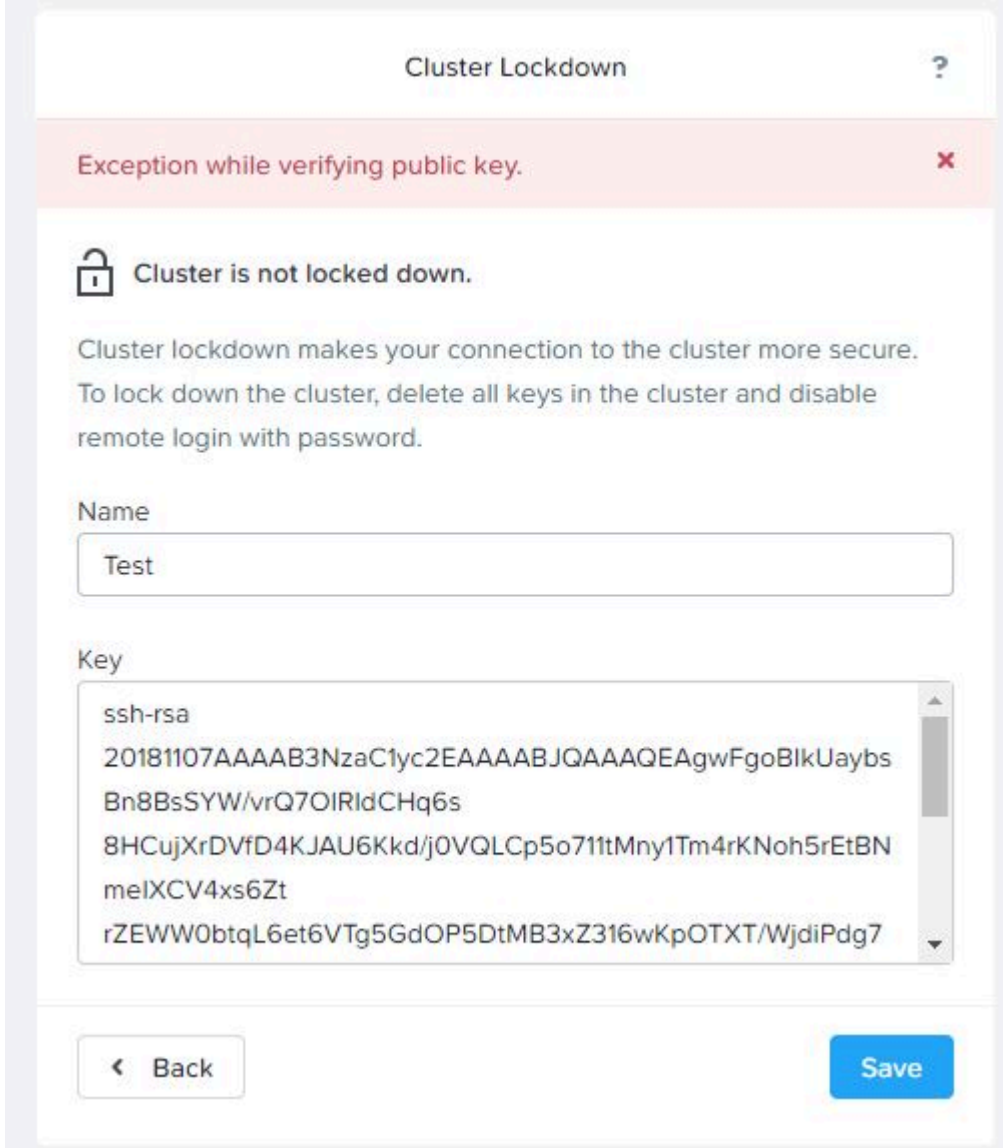
Here is an example of how the key should look before copying and pasting it into Prism.



The screenshot shows a Notepad window titled "SSH-example - Notepad". The text inside the window is an SSH public key with a comment: "ssh-rsa AAAAB3NzaC1yc2EAAAABJQAAAQEaQHZ8FYYvd9R0covMbiQZiffefKc5HezGROhVefdn1Wawwtvm7M5ZXynYgx3T3VgTazMplWUMZSFifopcB10T81+LR8G1hE1FGGfioFNiB1Y5mXiuG1hYp9cc7HO+MduDCSMcNcRm3f0wGqeHikHy+3121FYGKyPWFxW2I6AB5nzXCpf3f9zE5Vzk82CN1tpuqCdVlmJG1cK/6UMA3WmAmQchY4UVoAXg/t/FLHSqFw0A0xpU8r/rAkMTBVUpuI42LLsx/n6sBIqq5f3SqsqN/4eradjS0Km2i23eEdVhHx5U3jgX+NnBWJ7rAchQa1Am/1DXY901dcENFS7GsH7ZcbZgrDwjZbm5VtQCdqPwcBuL6XFnidfIWIg1Xc9oZ273Hc1tjNonZwP21sChy40ZoX rsa-key-20190923". The status bar at the bottom indicates "Windows (CRLF)", "Ln 7, Col 67", and "100%".

**Note:** Be aware that saving the public key in Notepad allows you to have access to it if you want to add it somewhere else. However, when copying the public key from Notepad, it can come with unwanted spaces causing the following error when attempting to save the key in Prism Element:

```
Exception while verifying public key.
```

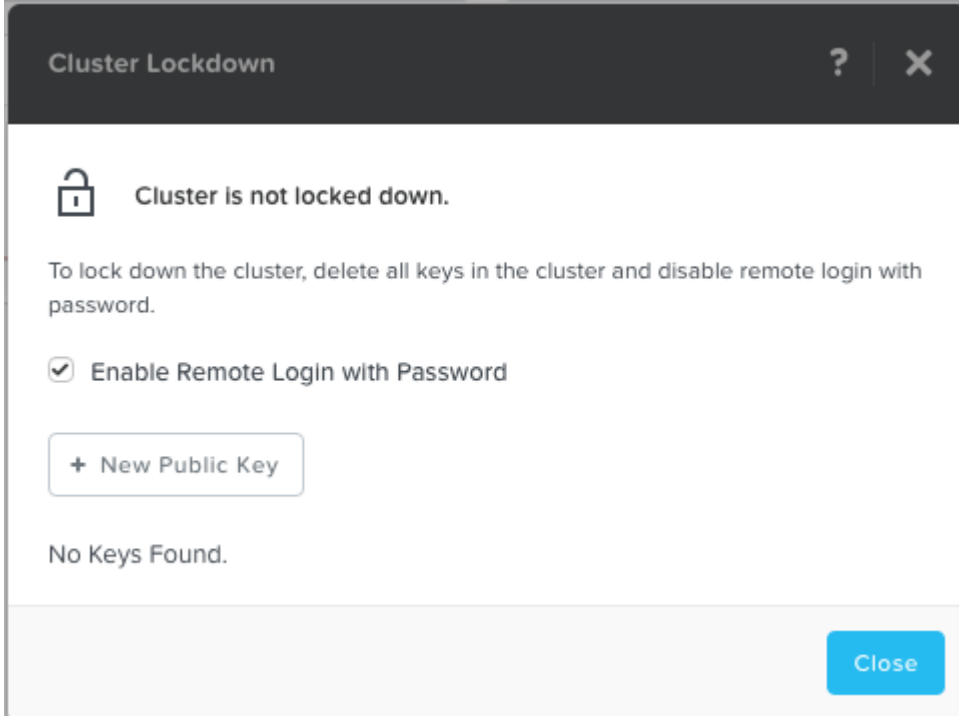


If you get the error above, make sure to delete the spaces seen in the image above within the key string or copy the public key directly from the PuTTY Key Generator window.

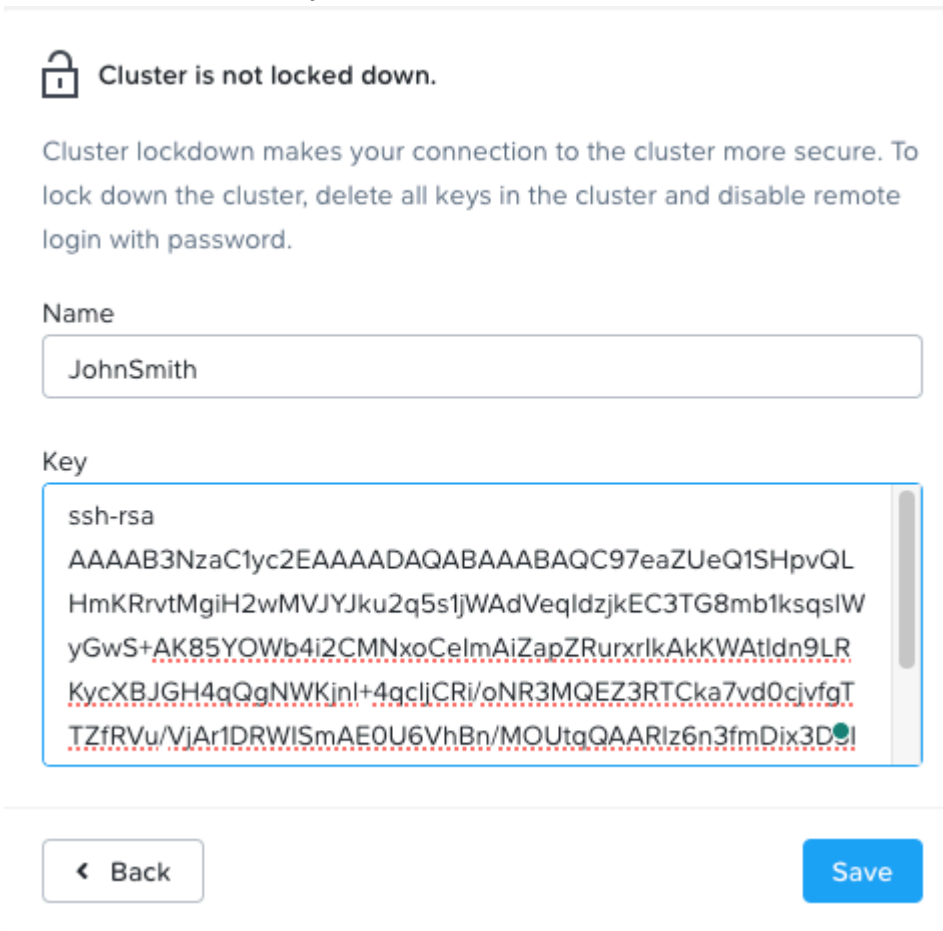
## Adding a new public key to the cluster

This procedure adds a new public key to all CVMs (Controller VMs) in the cluster:

1. Log in to Prism Element
2. Select **Settings** (gear icon)
3. Choose **Cluster Lockdown**



#### 4. Select **New Public Key**



5. Enter a **Name** to identify the public key (do not leave any spaces if using more than one word; otherwise, you will get an "Invalid public key name" error when saving it)

6. Copy the contents of the public key that has been created for either Windows/Linux/Apple Mac operating systems from the preceding steps:

**Tip:** If you want to do this from the command line, run the **clip** command (Windows) or the **pbcopy** command (Mac). For example:

On Windows:

```
C:\> clip < id_rsa.pub
```

On Mac:

```
$ pbcopy < ~/.ssh/id_rsa.pub
```

Then paste it onto the Key field in the New Public Key window.

7. Select **Save**

## How to log in using passwordless SSH from Mac/Linux

1. SSH to a CVM using the nutanix user, and it should log you in automatically without prompting for a password:

```
$ ssh nutanix@<CVM IP address>
Last login: Tue Dec  2 22:39:35 PST 2014 from x.x.x.x on ssh
Last login: Tue Dec  2 22:40:41 2014 from x.x.x.x
nutanix@NTNX-XXXXXXXXXXXX-X-CVM:x.x.x.x:~$
```

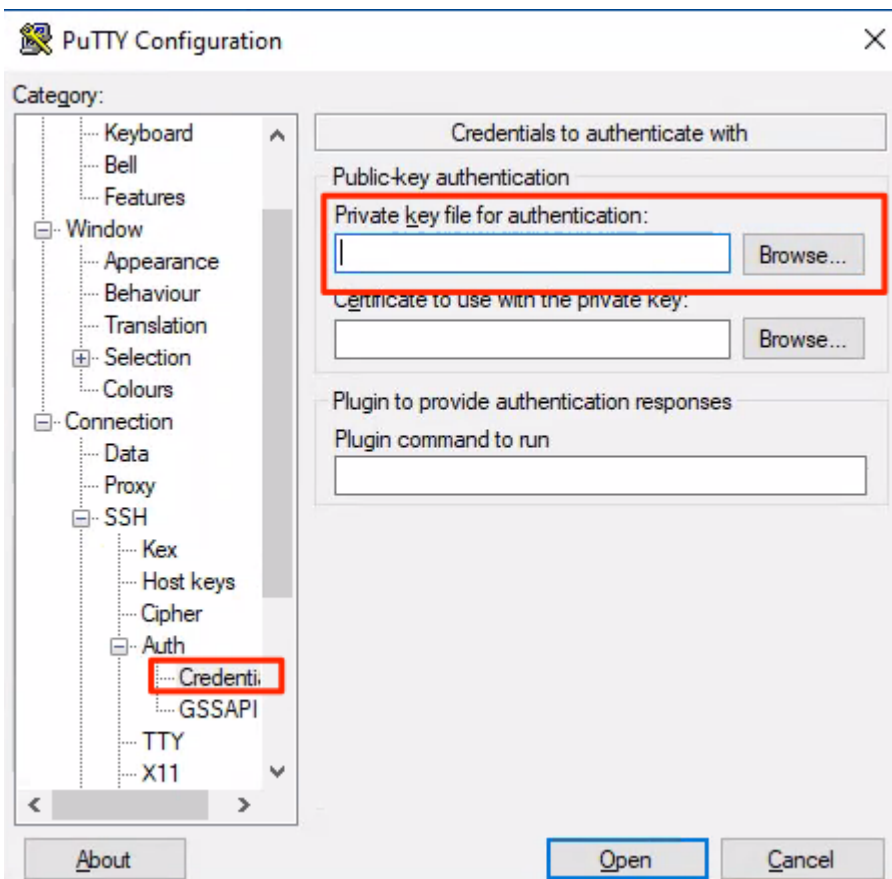
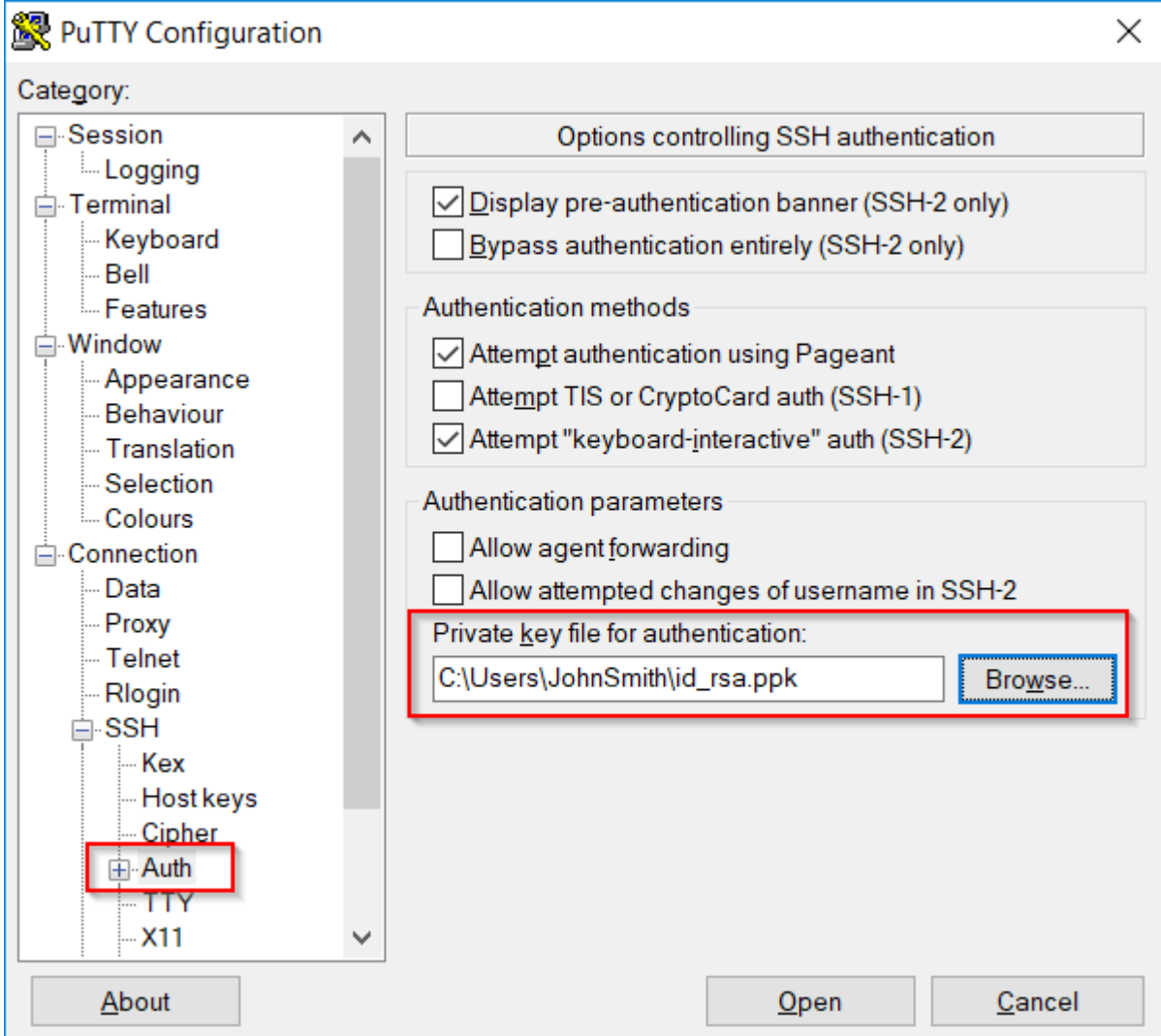
2. If it still prompts you for a password, try specifying the private key file using the -i flag. For example:

```
$ ssh -i ~/.ssh/id_rsa nutanix@<CVM IP address>
```

## How to log in using passwordless SSH from Windows (using PuTTY)

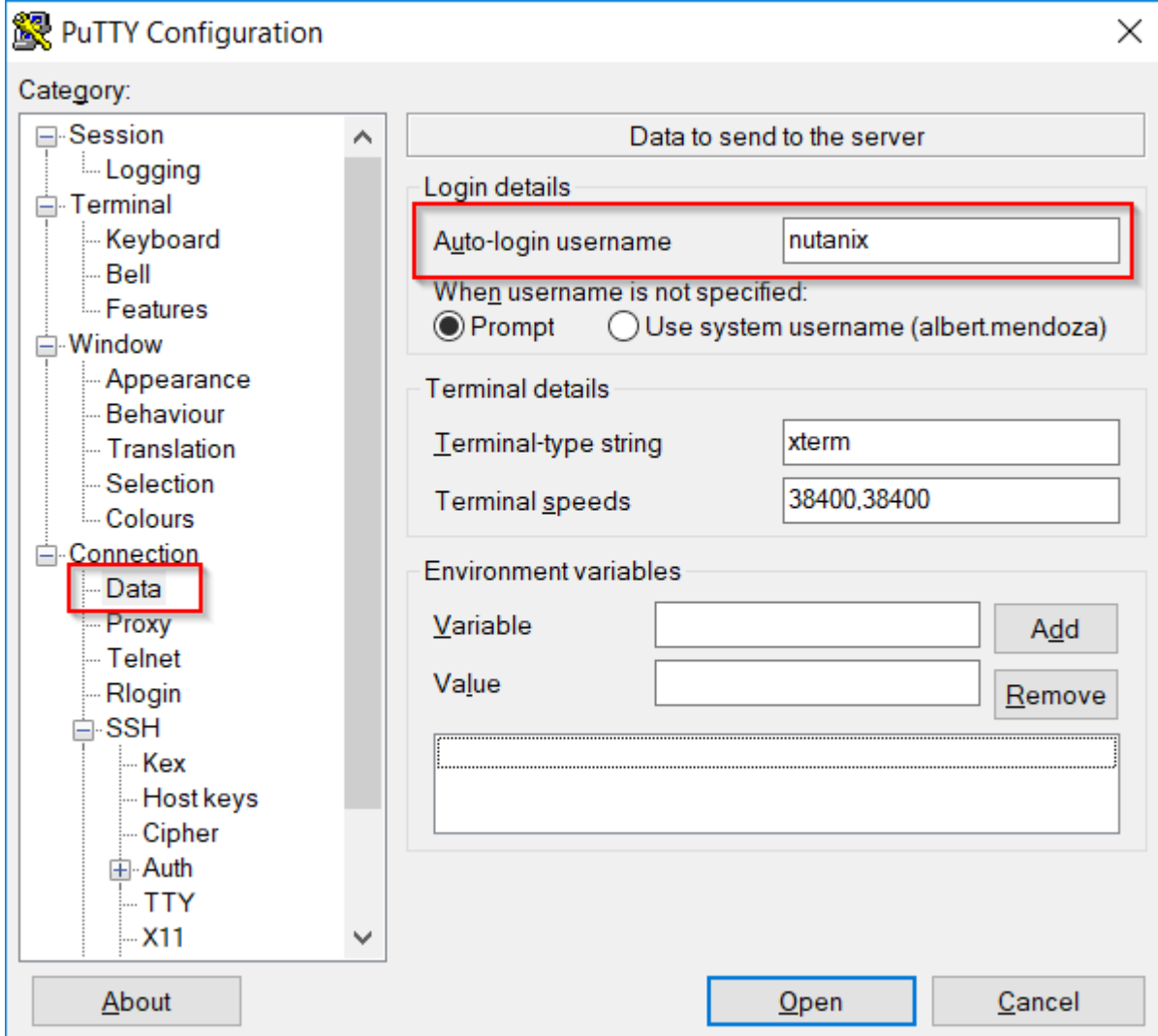
1. Download the latest version of PuTTY for Windows
2. Run putty.exe
3. Go to **Connection > SSH > Auth** or in the newer versions of PuTTY **Connection > SSH > Auth > Credentials to authenticate with**





Select **Browse** to select the PPK private key file that was saved earlier.

4. Go to **Connection > Data**



5. Set "**Auto-login username**" to "nutanix"
6. Go to **Session**
7. Enter a CVM's hostname or IP address
8. Save the session for future use
9. Select **Open** to connect to the CVM. You should not be prompted for a password.

Notes:

- If you enter a passphrase during the key creation in PuTTYgen, this passphrase will be required upon login. An alternative to avoid typing the passphrase every time is to use a pageant, which is a putty agent that stores the private keys and communicates with putty:
  - a. Download pageant.exe
  - b. Start pageant.exe, and you will see an icon on the Windows system tray.
  - c. From the context menu of the pageant icon and select "Add key", then select your private key and add it. Enter the passphrase when prompted.
  - d. Next time you open PuTTY and try to log in using the private key, the pageant will communicate with Putty, so you don't have to enter the passphrase.
- If the login attempt using the private key fails with the error "PuTTY key format too new", save the private key with PPK file version 2:
  1. In Putty Key Generator, select Key > Parameters for saving key files > Select PPK file version 2.
  2. Then save the PPK file again.

- The updated login and auth settings will not be applicable to the saved login sessions. Delete and recreate the login sessions to use the new settings.