BPPM – Patrol Agent Installation Steps on Linux and Automation Integration

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CONTENTS

OVERVIEW

The purpose of this document to is show how to step through installing Patrol Agents on Linux. Also, the steps show how you can create 2 tar files from an installed agent and use that for deployments with automation tools such as Puppet or Chef.

REQUIREMENTS

The following are required:

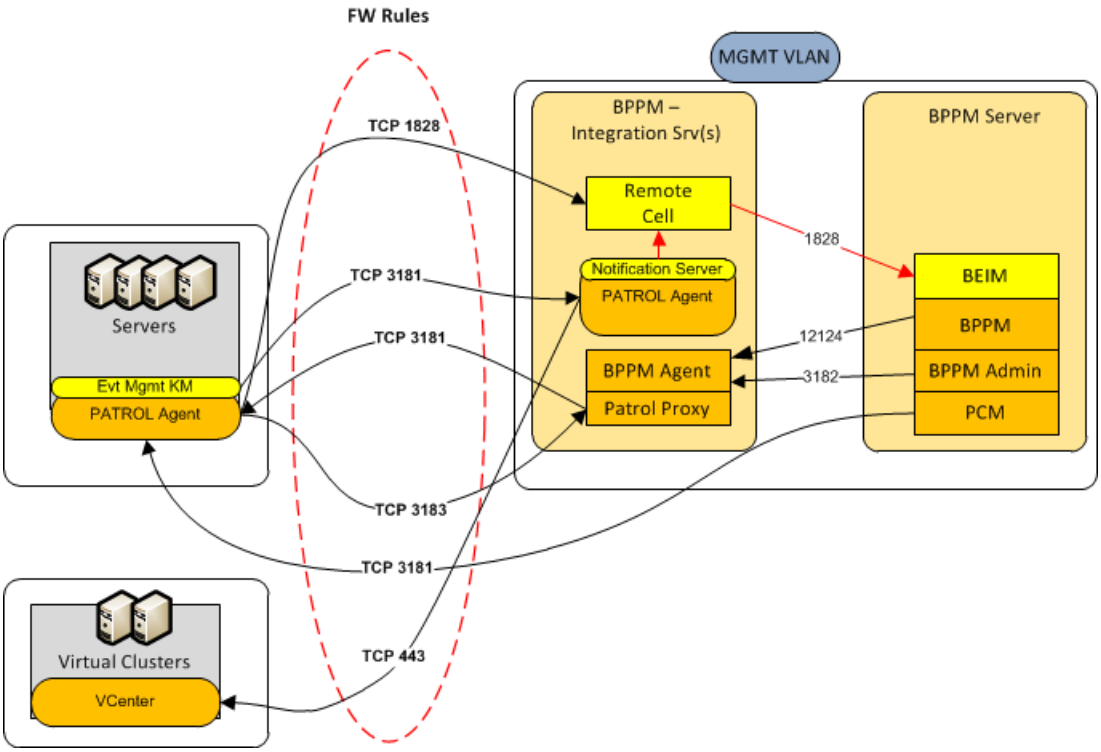
- BPPM CMA (*not required, but these steps assume BPPM Repository is installed)
- Patrol Agent User Account
- Sudo Account for running privileged commands
- Firewall or IpTables open for required ports (incoming and outgoing)

PATROL AGENT INSTALLATION PRE-REQS

This section describes the steps for creating an installable image for Linux.

IPTABLES OR FIREWALL

IP Tables or Firewall Ports need to open. Below is a summary of ports:



Here is an example of shutting off the iptables. You may just want to add the incoming and outgoing rules per the diagram above.

[root@bldb01 bmc]# **/etc/init.d/iptables stop**

Flushing firewall rules:	[OK]
Setting chains to policy ACCEPT: filter	[OK]
Unloading iptables modules:	[OK]

REQUIRED OS LIBRARIES

Install the following packages which are required for the agent to run properly. This document has attached the RPMs for your convenience.

Linux 32bit OS	compat-libstdc++-33-3.2.3-55.fc5.i386.rpm
Linux 64bit OS	compat-libstdc++-33-3.2.3-55.fc5.i386.rpm **AND** compat-libstdc++-33-3.2.3-61.x86_64.rpm

1. Log in as root or *sudo user* and type the following command at a shell prompt. In this example, a sudo user is installing the rpms on a 64bit System.

   sudo rpm -Uvh compat-libstdc++-33-3.2.3-55.fc5.i386.rpm
   sudo rpm -Uvh compat-libstdc++-33-3.2.3-61.x86_64.rpm

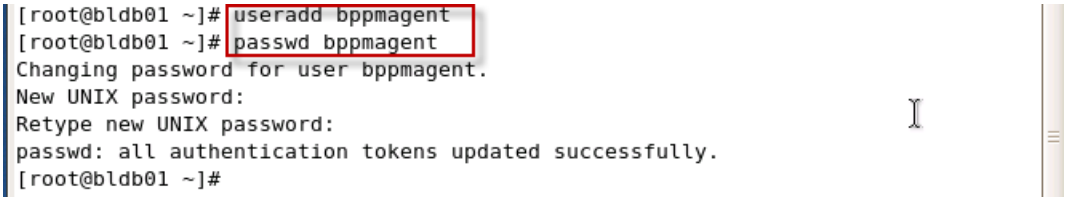
   Note: you may see that the package is already installed – if so, just move on the next section.

CREATING A USER FOR PATROL AGENT

Steps for creating a regular user which will be used to run the Patrol Agent:

1. As root or sudo user type the following. Below is an example of adding a user "bppmagent" which will be used to run the Patrol Agent.

   adduser bppmagent
   passwd bppmagent

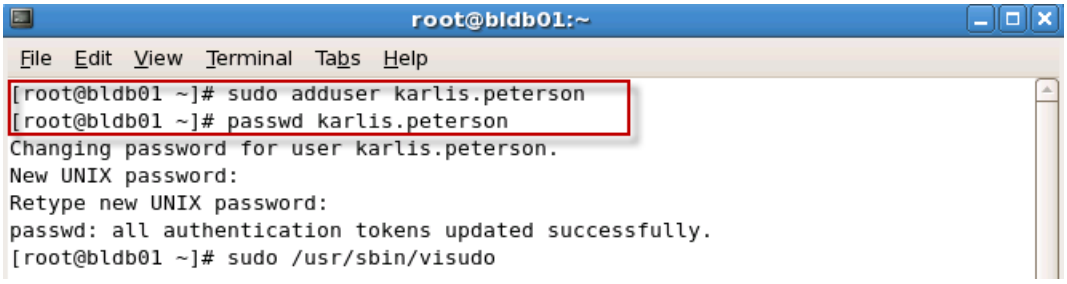


CREATING A SUDO USER FOR POST INSTALLATION SCRIPTS

Steps for creating a sudo user or validating sudoers file for an *existing* sudo user:

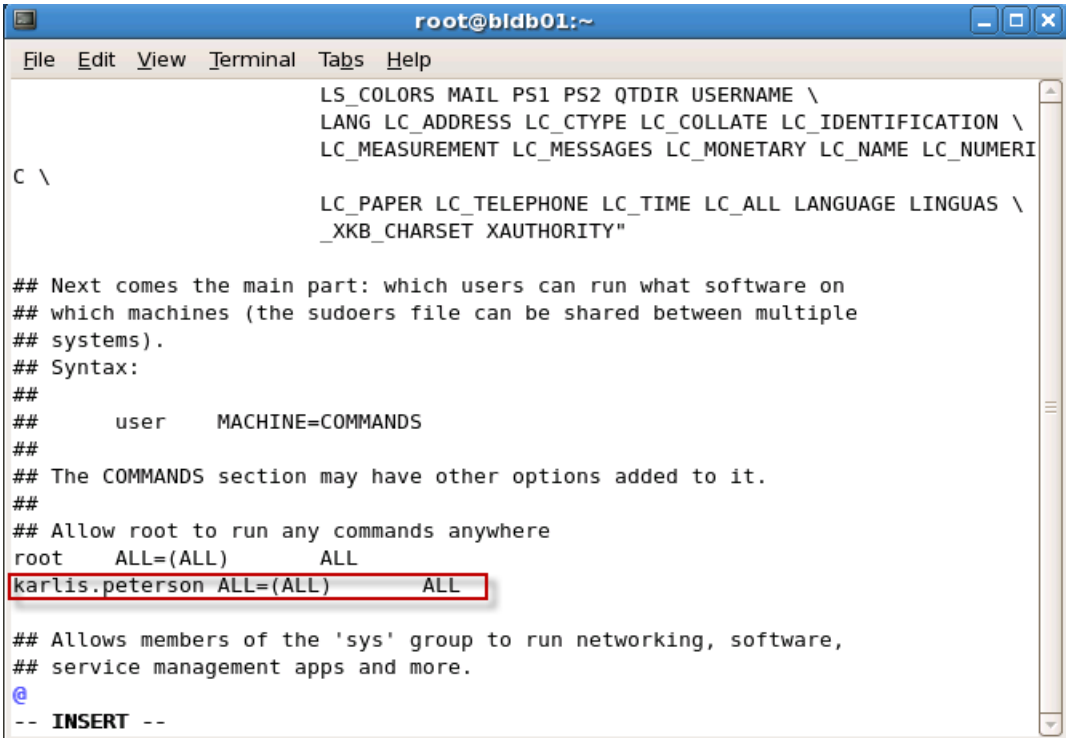
2. As root type the following – a sudo account is probably already created for the user logging in. Skip this step and goto step #2 to validate sudoers file. Below is an example of adding a user.

   adduser karlis.peterson
   passwd karlis.peterson



3. You can create the sudo user by opening the sudoers file with this command. On the computer where you install sudo, enter the following lines for the User. Privilege specification in the sudoers file located in the local /etc directory:

   sudo /usr/sbin/visudo


root@bldb01:~
File Edit View Terminal Tabs Help
LS_COLORS MAIL PS1 PS2 QTDIR USERNAME \
LANG LC_ADDRESS LC_CTYPE LC_COLLATE LC_IDENTIFICATION \
LC_MEASUREMENT LC_MESSAGES LC_MONETARY LC_NAME LC_NUMERI
C \
LC_PAPER LC_TELEPHONE LC_TIME LC_ALL LANGUAGE LINGUAS \
_XKB_CHARSET XAUTHORITY"
Next comes the main part: which users can run what software on
which machines (the sudoers file can be shared between multiple
systems).
Syntax:
##
user MACHINE=COMMANDS
##
The COMMANDS section may have other options added to it.
##
Allow root to run any commands anywhere
root ALL=(ALL) ALL
karlis.peterson ALL=(ALL) ALL
Allows members of the 'sys' group to run networking, software,
service management apps and more.
@
-- INSERT --

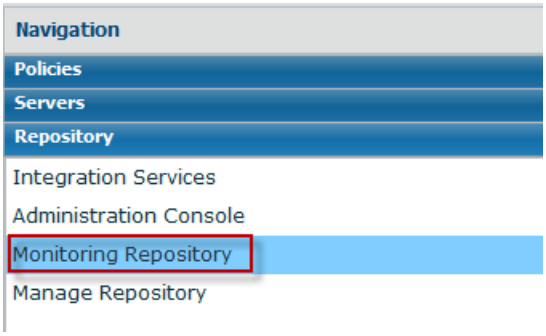
CREATING PATROL INSTALLABLE IMAGE

This section requires you to login to the BPPM CMA and create an Installable image

1. Login to the BPPM CMA Console:

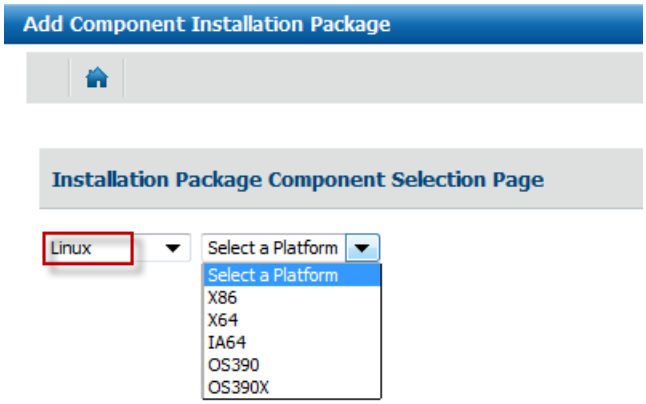
   http://<BPPM_Hostname>/admin
   admin / admin

2. Click on Monitoring Repository

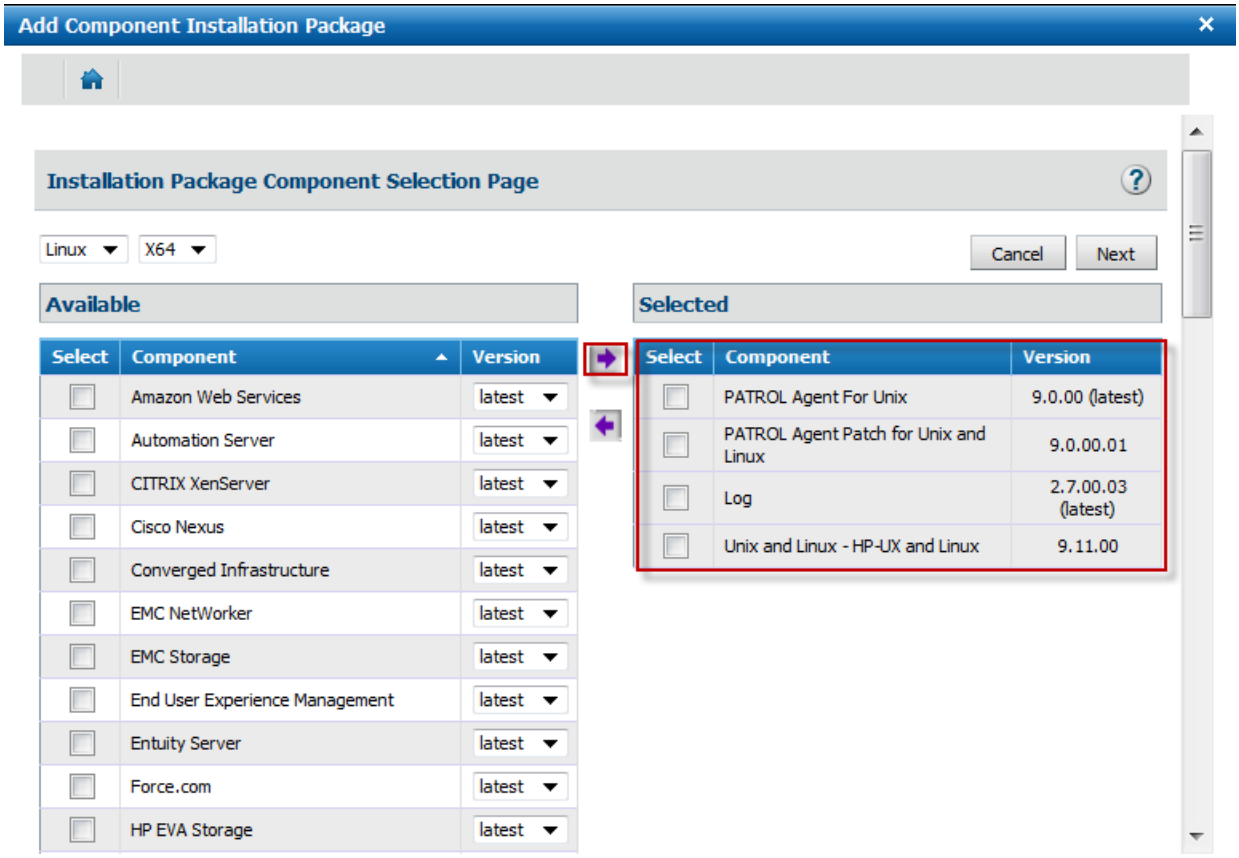


3. Click on the "+" to a Add a Monitoring Solution

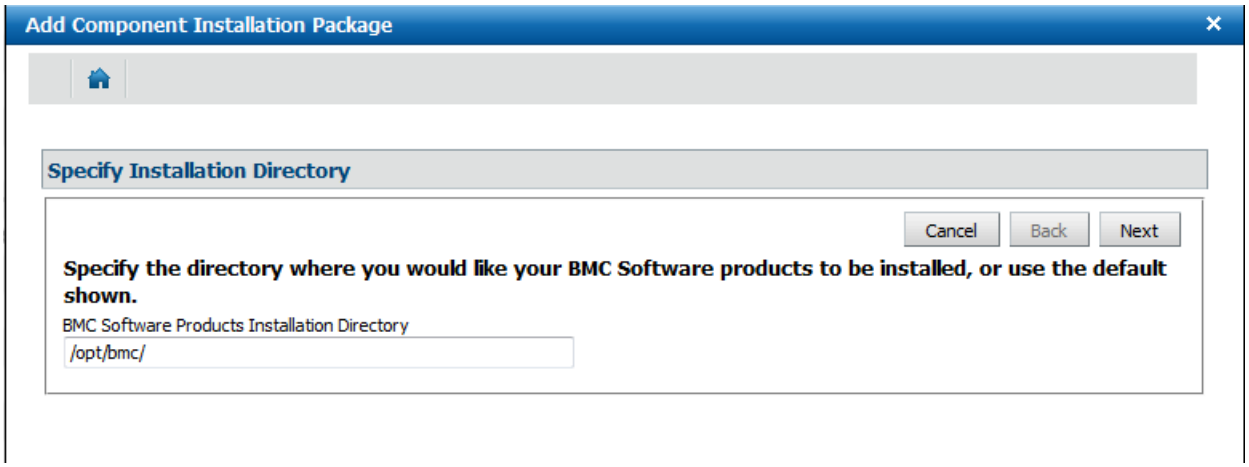
4. Select OS and Linux:



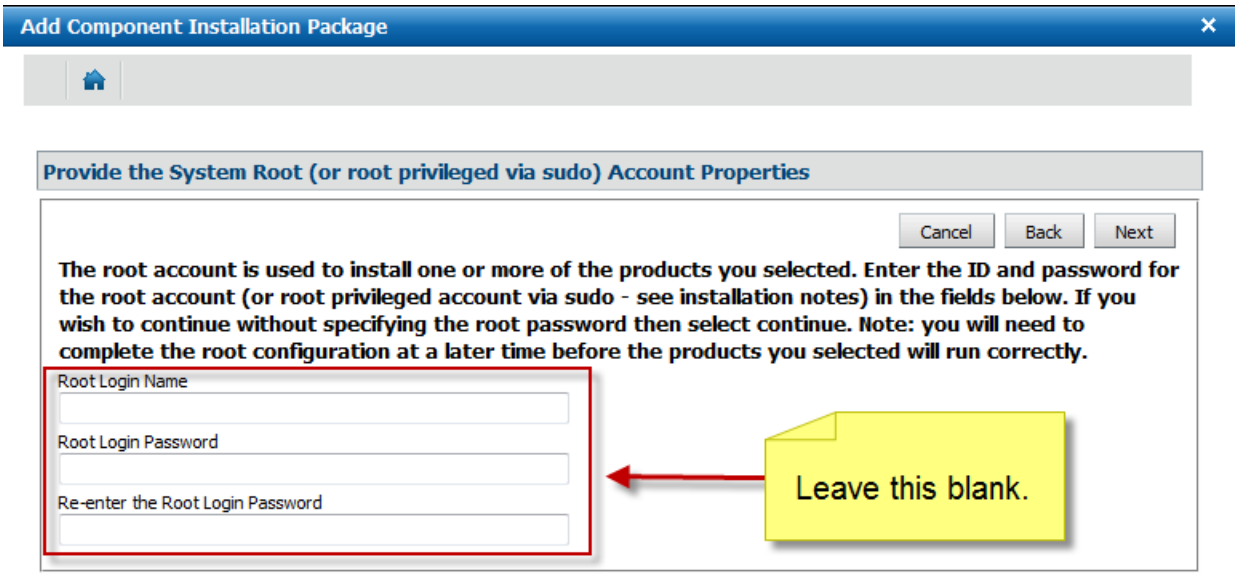
5. Select components for the Silent Install:



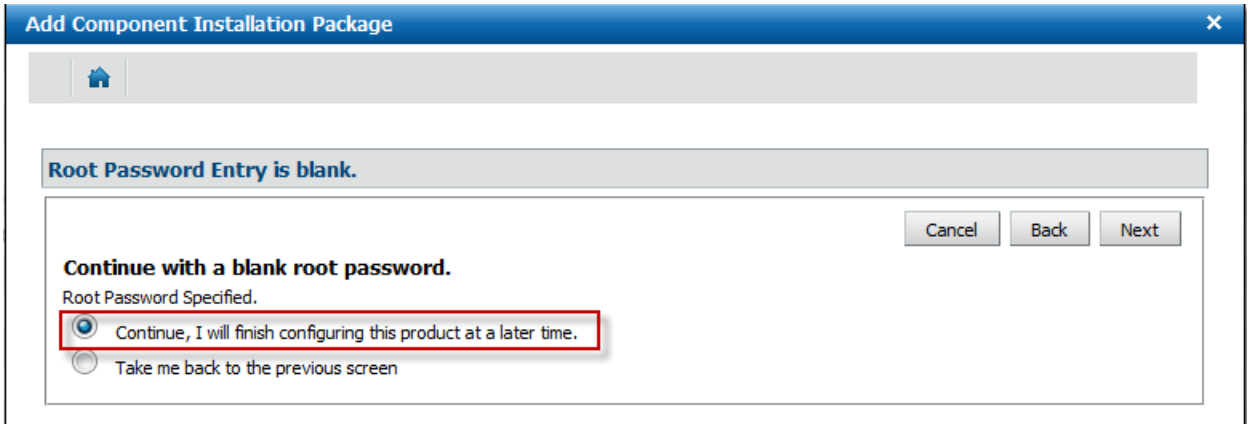
6. Click Next
7. Type the installation directory and click next:



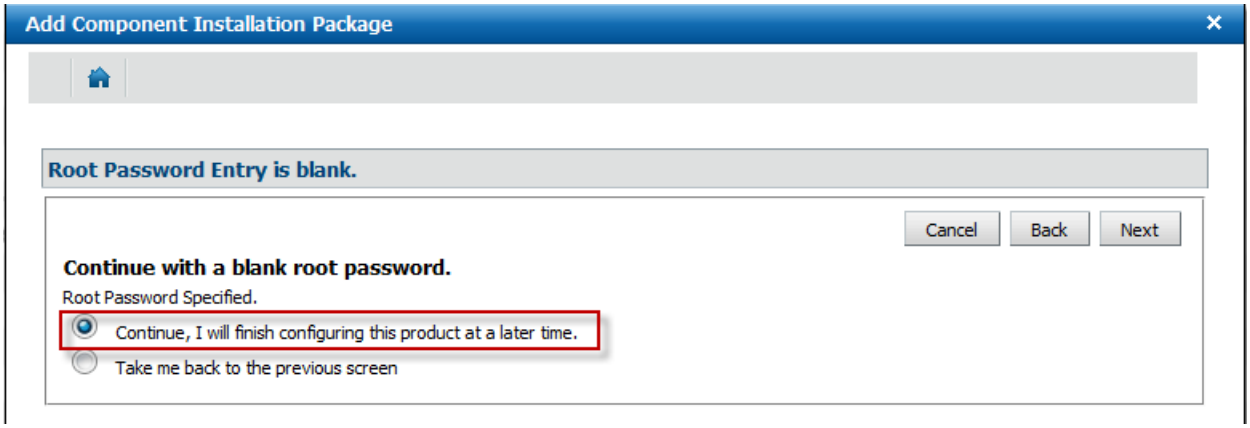
8. Leave this section BLANK for System Root (or root privileged via sudo) and click Next:



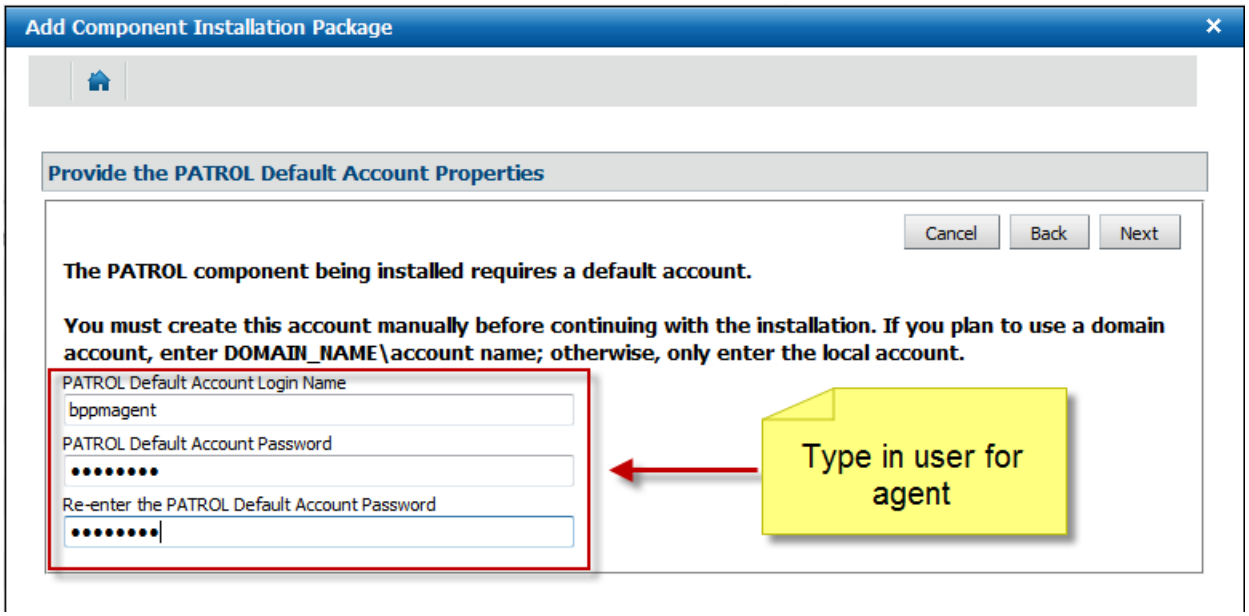
9. Leave default and click Next:



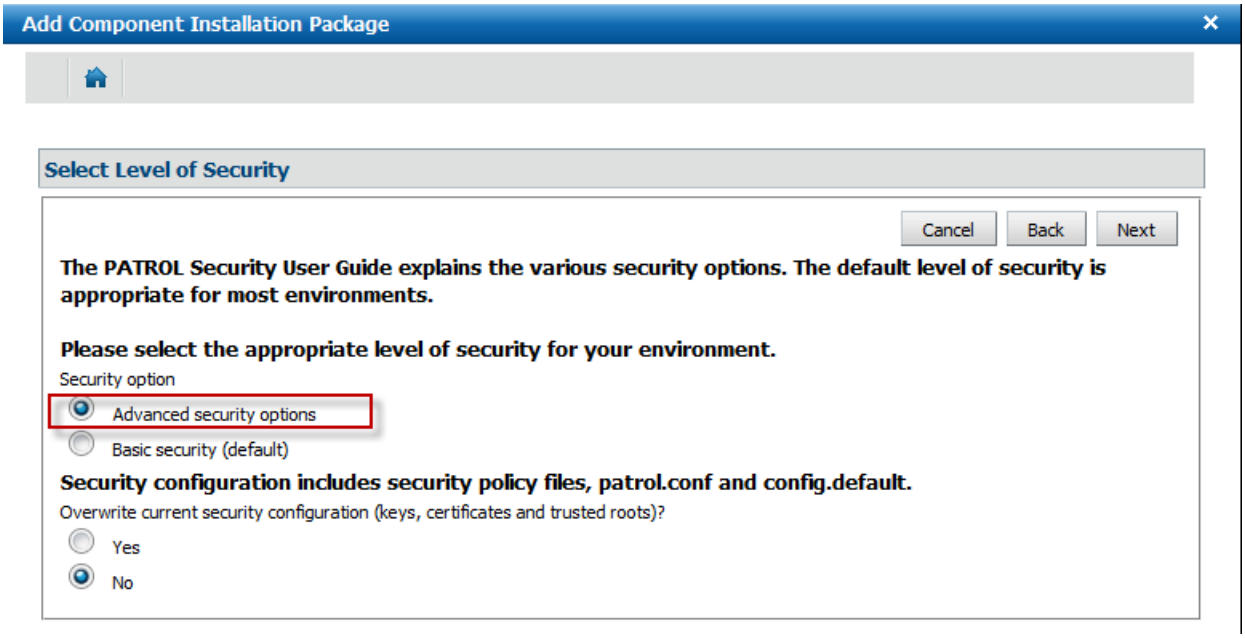
10. Leave default and click Next:



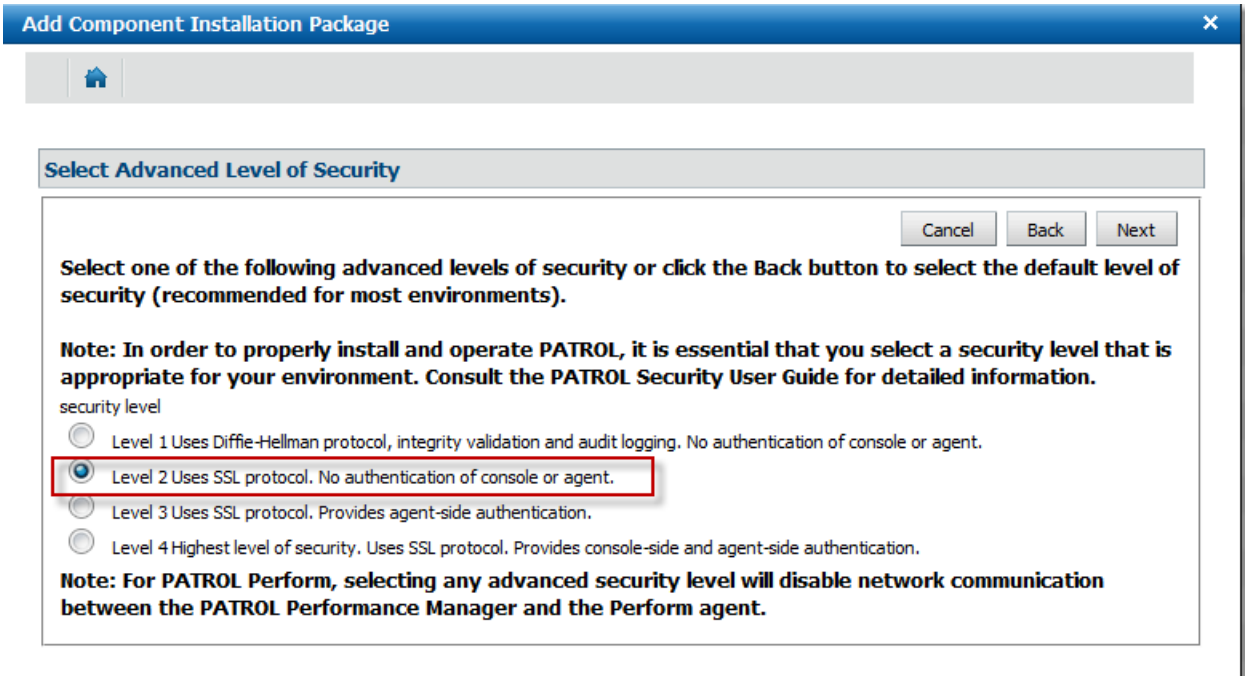
11. Type in the User created to run the agent:



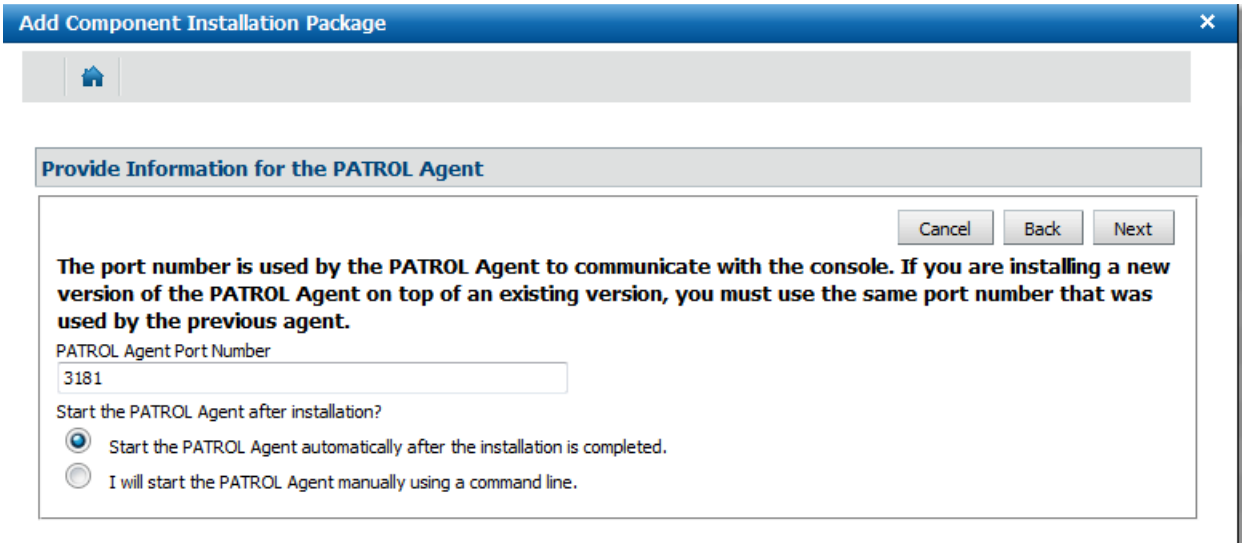
12. Select Advanced Security Options and select Next:



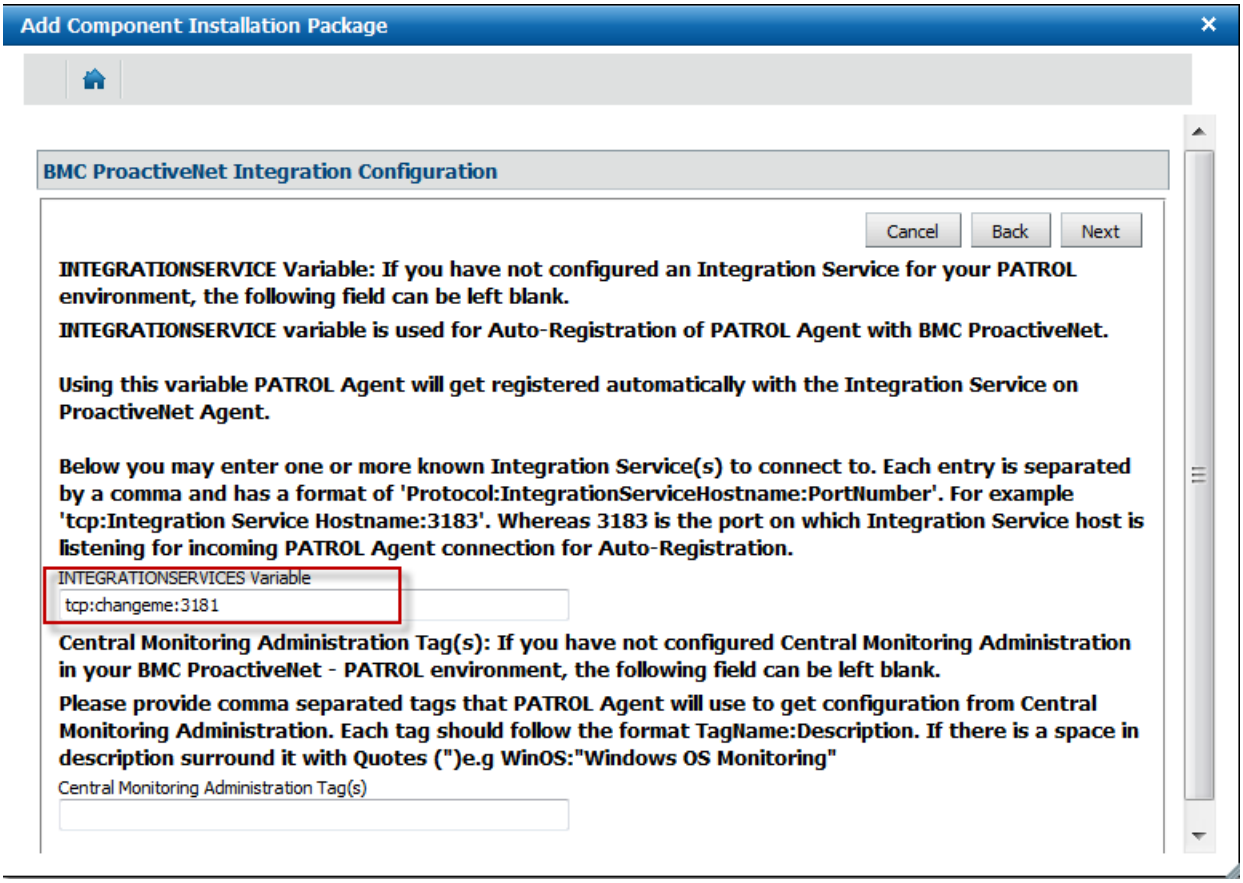
13. Select **Security Level 2** and click Next:



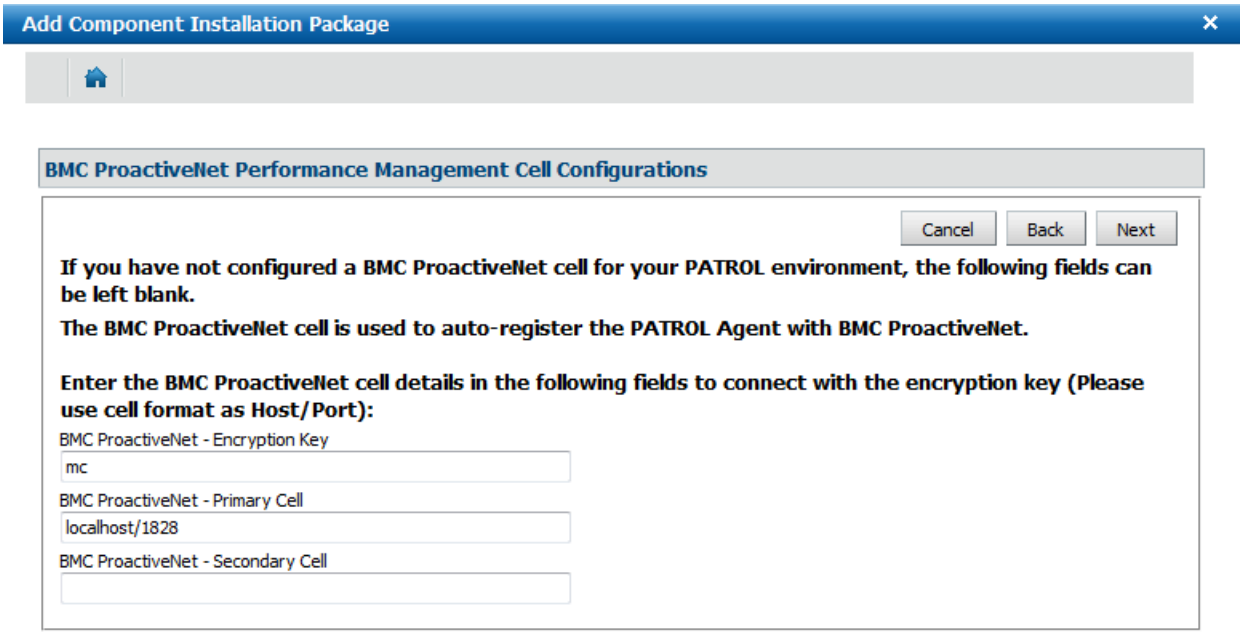
14. Leave Default and select Next:



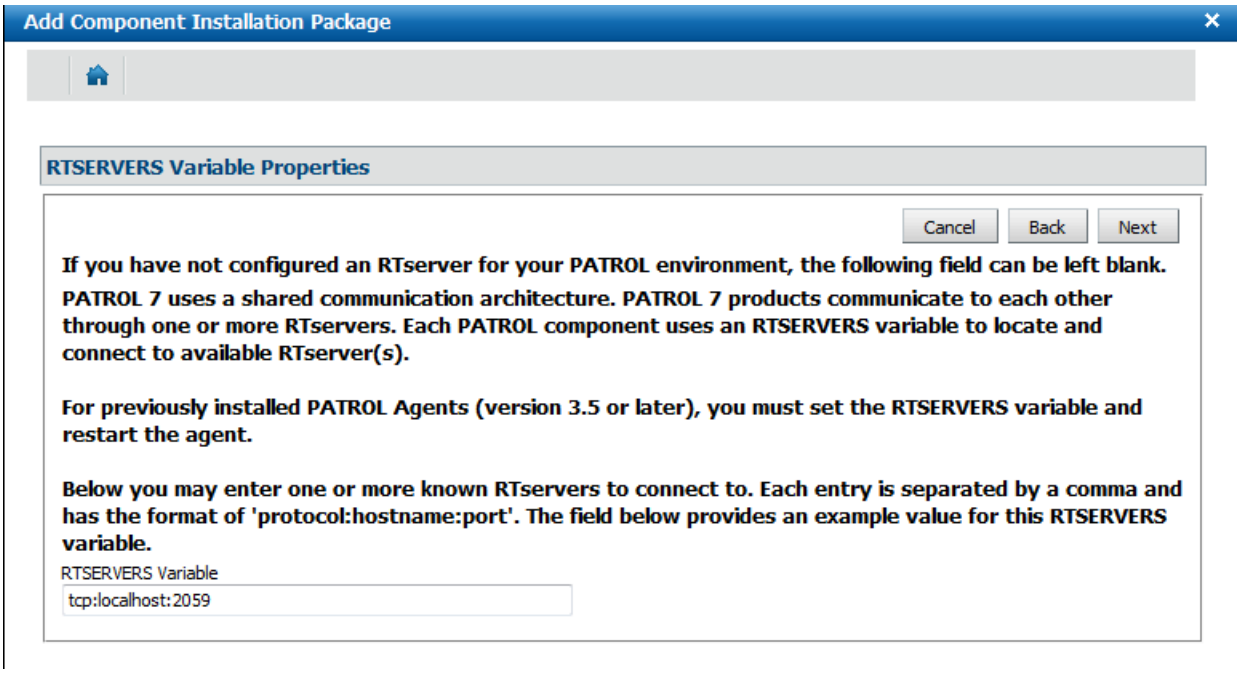
15. Type in “tcp:changeme:3181” – the *changeme* host will be configured after the agent is installed and running.



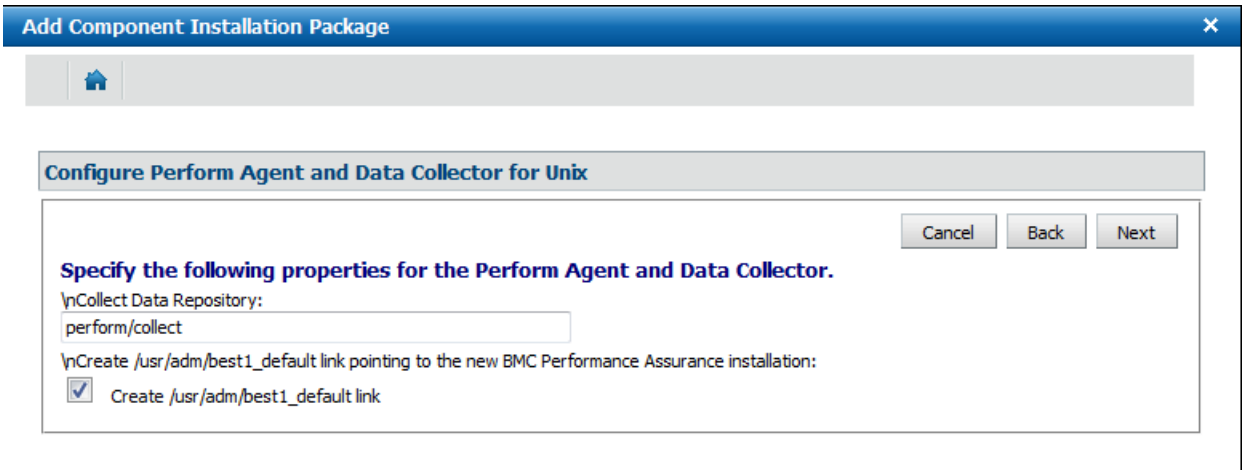
16. Leave Default and select Next:



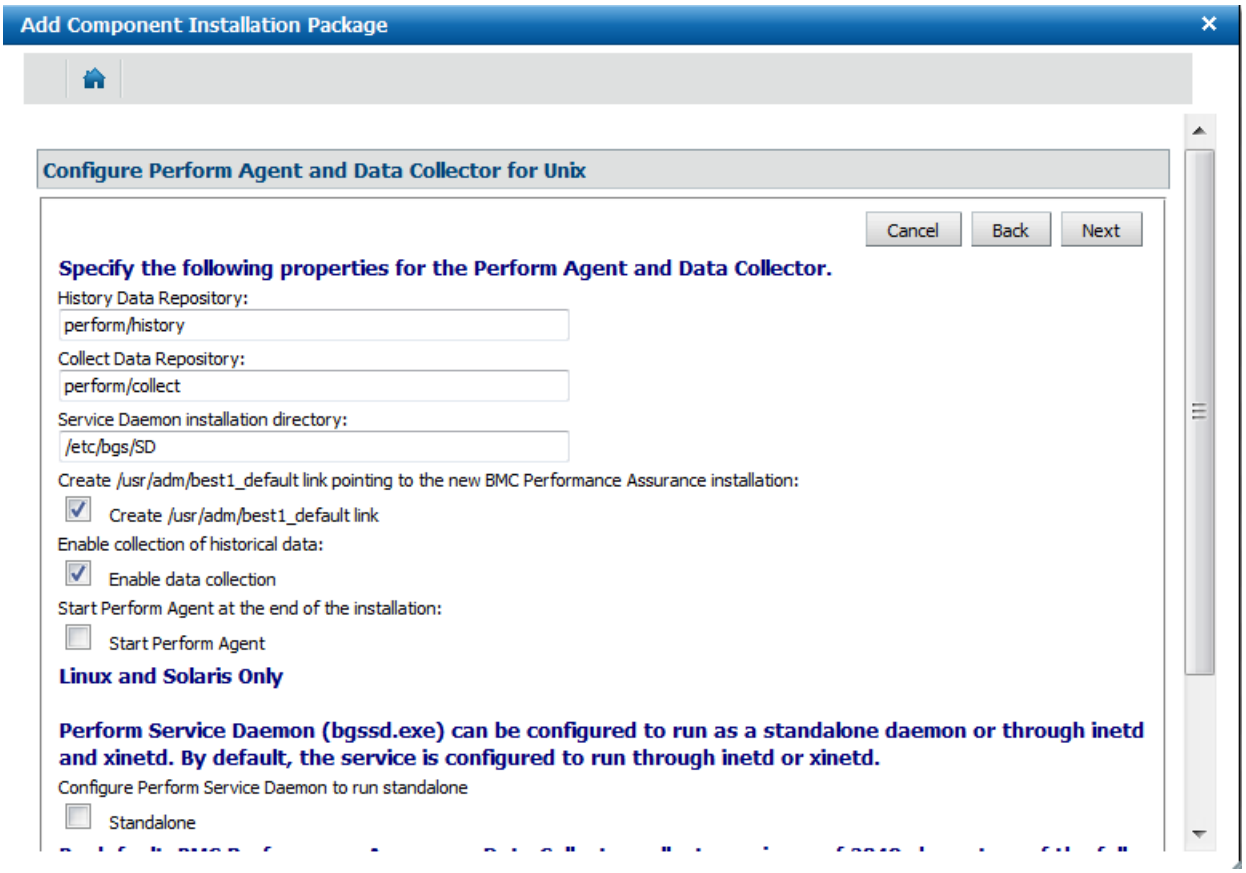
17. Leave Default and select Next:



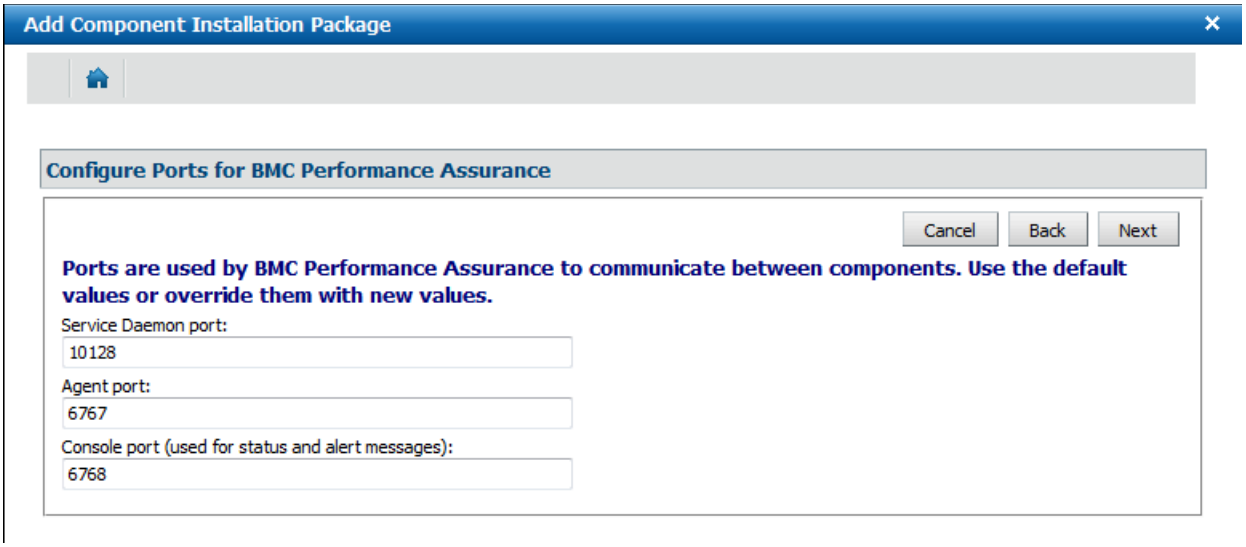
18. Leave Default and select Next:



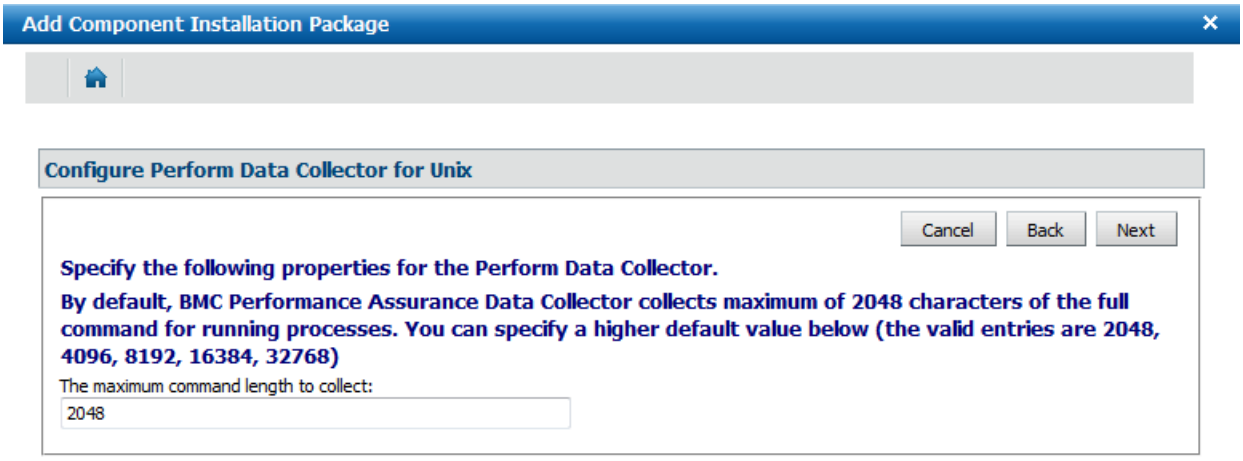
19. Leave Default and select Next:



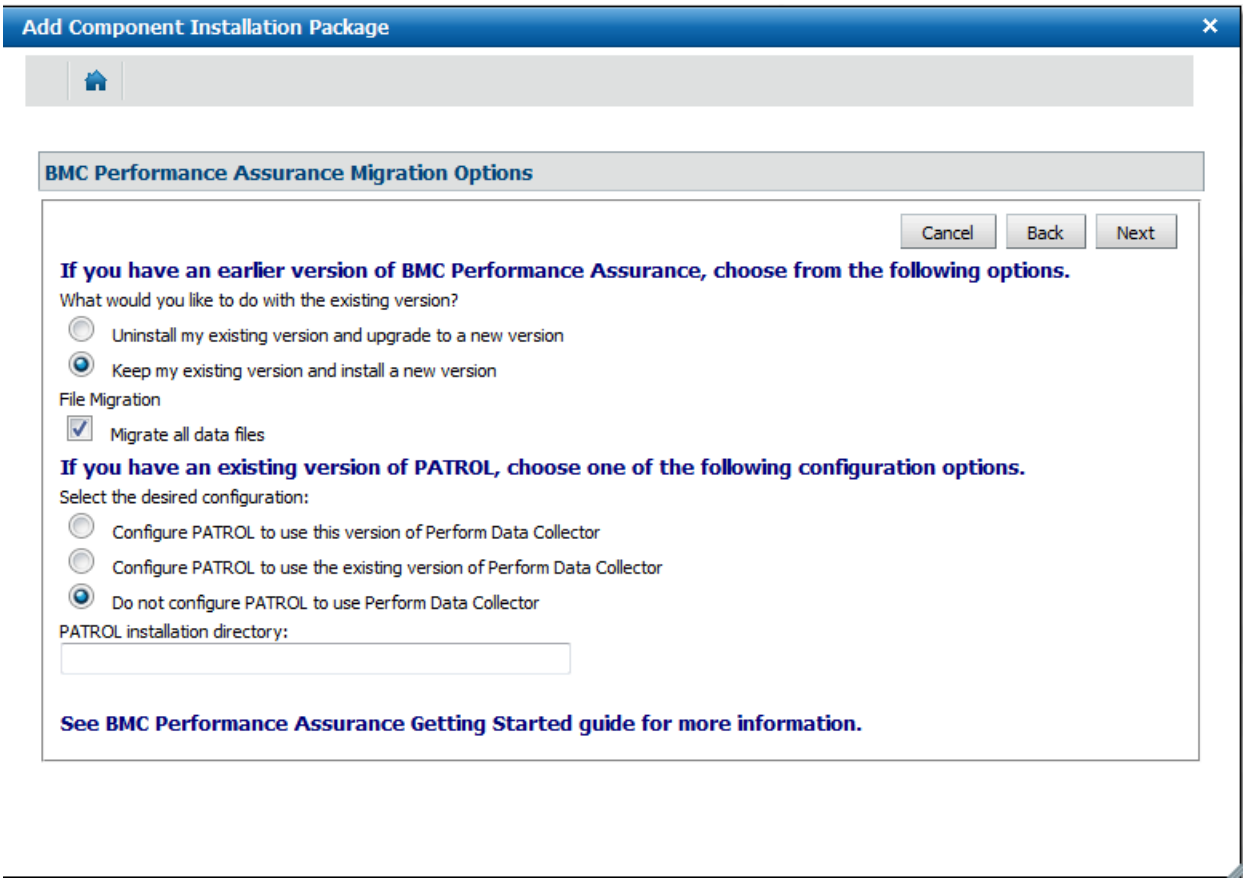
20. Leave Default and select Next:



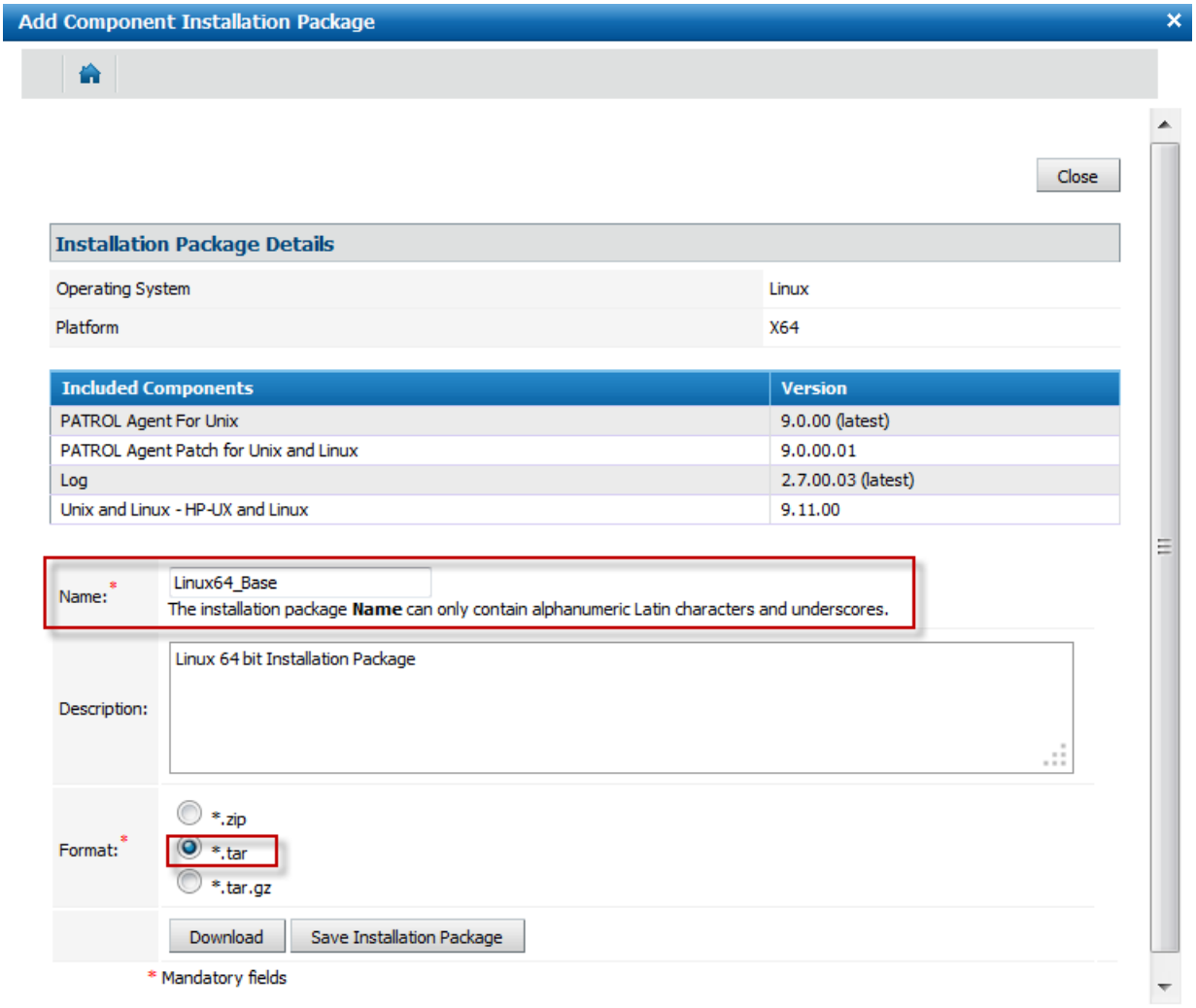
21. Leave Default and select Next:



22. Leave Default and select Next:



23. Name the Installation Package and Save.



24. Download the package and SCP/SFTP to a “target” Linux host. The file size of the tar file will be +550 MB in size. SCP the file as the **bppmagent user** to bppmagent home directory on target server.

INSTALLING IMAGE (SILENT INSTALL)

This section will step through installing the image created from the previous section.

User for running the agent: bppmagent
Sudo sser to run post scripts: karlis.peterson

[bppmagent@bldb01 bmc]$ **cd /home/bppmagent**

[bppmagent@bldb01 ~]$ **ls**

Linux64_Base.tar

[bppmagent@bldb01 ~]$ **mv Linux64_Base.tar /tmp/Linux64_Base.tar**

[bppmagent@bldb01 ~]$ **cd /tmp**

[bppmagent@bldb01 tmp]$ **tar -xvf Linux64_Base.tar**

[bppmagent@bldb01 tmp]$ **su karlis.peterson**

Password:

[karlis.peterson@bldb01 tmp]$ sudo chown bppmagent /opt/bmc

[sudo] password for karlis.peterson:

[karlis.peterson@bldb01 tmp]$ **su bppmagent**

Password:

[bppmagent@bldb01 tmp]$ **cd /tmp/bmc_products/**

[bppmagent@bldb01 bmc_products]$ **./RunSilentInstall.sh**

…
Unable to run script [root@/opt/bmc/Patrol3//bin/PtDLLSecurity /opt/bmc/Patrol3/] as user [root] because the login name was not specified. The script has to be run manually later as root.

[bppmagent@bldb01 bmc_products]$ **su karlis.peterson**

Password:

[karlis.peterson@bldb01 2013_05_11_23_37_28_install]$ **sudo chmod +x bldb01_3181_install_rootscripts**

[sudo] password for karlis.peterson:

[karlis.peterson@bldb01 2013_05_11_23_37_28_install]$ **sudo ./bldb01_3181_install_rootscripts**

…

```
PatrolAgent V9.0.00.1i, built at 20:32:03, Jul  6 2012
Copyright (C) 1997-2012 BMC Software, Inc.
Configuration successfully loaded "/opt/bmc/Patrol3/lib/integrationservice.cfg"

PatrolAgent V9.0.00.1i, built at 20:32:03, Jul  6 2012
Copyright (C) 1997-2012 BMC Software, Inc.

Configuration successfully loaded "/opt/bmc/Patrol3/lib/eventintegration.cfg"
[LOG]:[23:46 05/11/2013]:INFO:[PtDLLSecurity]: [/etc/patrol.d/patrol.conf] allows all dll's. Nothing further to do.
[DONE]
```

***For Linux you must run this additional command.*

[karlis.peterson@bldb01 Patrol3]$ **sudo /opt/bmc/Patrol3/b1config9000.sh**

```
...
Changing ownership and permissions of files in bin directory
Changing ownership and permissions of files in bin directory
Changing permissions of files in bin directory
Changing permissions of files in local directory
Changing permissions and ownership of bgs/log directory
Security Level > 1
 Creating link from: '/opt/bmc/Patrol3/Linux-2-6-x86-64/best1/9.0.00' to: '/usr/adm/best1_default'
 Creating link from: '/opt/bmc/Patrol3/Linux-2-6-x86-64/best1/9.0.00' to: '/usr/adm/best1_9.0.00'
 Linking /usr/adm/best1_9.0.00/bgs/bin/perl to /etc/bgs/PERL/perl
Enabling continuous disk IO history
Configuring permissions and ownership of /opt/bmc/Patrol3/Linux-2-6-x86-64/best1/9.0.00
Installation complete
[VIEWLOG_MSG]b1config.sh: Changing permissions on b1config.sh.LOG file
[VIEWLOG_MSG]b1config.sh: Changing ownership of b1config.sh.LOG file
[VIEWLOG_MSG]b1config.sh: Done
```

[karlis.peterson@bldb01 Patrol3]$ **su bppmagent**

[bppmagent@bldb01 Patrol3]$ **/opt/bmc/Patrol3/PatrolAgent &**

```
[1] 392
[bppmagent@bldb01 Patrol3]$
PatrolAgent V9.0.00.1i, built at 20:32:03, Jul  6 2012
Copyright (C) 1997-2012 BMC Software, Inc.

[1]+  Done                    /opt/bmc/Patrol3/PatrolAgent
```

[bppmagent@bldb01 Patrol3]$ **ps -ef | grep Patrol**

```
502      416    1  0 07:26 ?        00:00:00 PatrolAgent
502      500   351  0 07:38 pts/1    00:00:00 grep Patrol
```

INTEGRATIONG WITH AUTOMATION TOOLS

Once the Patrol Agent has been installed and running, you can now create 2 smaller compressed (tar) files which can be leveraged by tools such as Puppet and Chef. The size of the files will be ~1/3 of the size of the installable image from the previous section.

CREATE COMPRESSED (TAR) FILES FROM RUNNING AGENT

Logon to a Linux server with a Patrol Agent running and follow the steps to create 2 compressed files.

[karlis.peterson @bldb01 tmp]$ **tar -pcvzf /tmp/Linux64_AgentBase.tar.gz /opt/bmc**

[karlis.peterson @bldb01 tmp]$ **tar -pcvzf /tmp/Linux64_AgentBase2.tar.gz /etc/patrol.d**

[karlis.peterson @bldb01 tmp]$ ls -la Linux*

```
-rw-r--r-- 1 karlis.peterson karlis.peterson 185441217 May 12 10:37 Linux64_AgentBase.tar.gz

-rw-rw-r-- 1 karlis.peterson karlis.peterson 2977 May 12 15:08 Linux64_AgentBase2.tar.gz
```

Now copy (SCP/SFTP) the 2 files to a remote location, where the files will be distributed with an automation tool.

EXTRACTING COMPRESSED (TAR) FILES ON A TARGET HOST

This section will walk through manually uncompressing the files and running a script. These steps can be easily automated with other tools.

Once the 2 files have been copied to a target host system (with SAME user credentials for Patrol Agent), follow the next steps. In this example, the sudo user "karlis.peterson" used WinSCP to move the files to home directory (/home/karlis.peterson). Open an ssh session as the sudo user and then goto root directory. You will need to extract files from '/'.

[karlis.peterson@bldb01 /]$ **cd /**

[karlis.peterson@bldb01 /]$ **sudo tar -pxvf /home/karlis.peterson/Linux64_AgentBase.tar**

```
....
opt/bmc/Install/insthist/uninst_ux/uninstal.xml
opt/bmc/webcentral/
opt/bmc/webcentral/km_services/
opt/bmc/webcentral/km_services/html/
opt/bmc/webcentral/km_services/html/default/
opt/bmc/webcentral/km_services/html/default/lib/
opt/bmc/webcentral/km_services/html/default/lib/help/
opt/bmc/webcentral/km_services/html/default/lib/help/EN_USA/
opt/bmc/webcentral/km_services/html/default/lib/help/EN_USA/puk_9.11.00_en_usa.jar
opt/bmc/webcentral/install/
opt/bmc/webcentral/install/kmuaddhelp.sh
opt/bmc/webcentral/install/kmudeletehelp.sh
opt/bmc/log/
opt/bmc/log/2013_05_11_23_37_28_install/
opt/bmc/log/2013_05_11_23_37_28_install/bldb01_3181_install_user
```

```
opt/bmc/log/2013_05_11_23_37_28_install/bldb01_3181_install-output.log
opt/bmc/log/2013_05_11_23_37_28_install/bldb01_3181_install-product.log
opt/bmc/log/2013_05_11_23_37_28_install/bldb01_3181_install
opt/bmc/log/2013_05_11_23_37_28_install/bldb01_3181_install_rootscripts
opt/bmc/log/2013_05_11_23_37_28_install/bldb01_3181_install-user.log
opt/bmc/log/2013_05_11_23_37_28_install/bldb01_3181_install-display
```

[karlis.peterson@bldb01 /]$ **sudo tar -pxvf /home/karlis.peterson/Linux64_AgentBase2.tar.gz**

```
etc/patrol.d/
etc/patrol.d/dlls.conf
etc/patrol.d/patrol.conf
etc/patrol.d/bak/
etc/patrol.d/security_policy_v3.0/
etc/patrol.d/security_policy_v3.0/site.plc
etc/patrol.d/security_policy_v3.0/signer.plc
etc/patrol.d/security_policy_v3.0/verifier.plc
etc/patrol.d/security_policy_v3.0/proxy.plc
etc/patrol.d/security_policy_v3.0/client.plc
etc/patrol.d/security_policy_v3.0/agent.plc
etc/patrol.d/security_policy_v3.0/bak/
etc/patrol.d/security_policy_v3.0/esi.plc
```

[karlis.peterson@bldb01 /]$ **cd /opt/bmc/log**

[karlis.peterson@bldb01 log]$ **ls** *(**this is a dynamic created folder based!)*

```
2013_05_11_23_37_28_install
```

[karlis.peterson@bldb01 log]$ **cd 2013_05_11_23_37_28_install/**

[karlis.peterson@bldb01 2013_05_11_23_37_28_install]$ **ls**

```
bldb01_3181_install          bldb01_3181_install_rootscripts

bldb01_3181_install-display     bldb01_3181_install_user

bldb01_3181_install-output.log   bldb01_3181_install-user.log

bldb01_3181_install-product.log
```

[karlis.peterson@bldb01 2013_05_11_23_37_28_install]$ **sudo ./bldb01_3181_install_rootscripts**

[sudo] password for karlis.peterson:

```
…
[LOG] Begin execution of policy_install.sh
[LOG] Parameters passed in:
[LOG] 1. Source Policy File: /opt/bmc/common/security/config_v3.0/client.plc
[LOG] 2. Dest Policy File: client.plc
[LOG] 3. Overwrite Flag: FALSE
[LOG] OVERWRITE = FALSE. Do not update security policy.
```

```
./bldb01_3181_install_rootscripts: line 46: /opt/bmc/Patrol3/scripts.d/mod_patrolconf.sh: No such file or
directory

PatrolAgent V9.0.00.1i, built at 20:32:03, Jul  6 2012
Copyright (C) 1997-2012 BMC Software, Inc.

Configuration successfully loaded "/opt/bmc/Patrol3/lib/integrationservice.cfg"

PatrolAgent V9.0.00.1i, built at 20:32:03, Jul  6 2012
Copyright (C) 1997-2012 BMC Software, Inc.

Configuration successfully loaded "/opt/bmc/Patrol3/lib/eventintegration.cfg"
[LOG]:[15:30 05/12/2013]:INFO:[PtDLLSecurity]: [/etc/patrol.d/patrol.conf] allows all dll's. Nothing further to do.
[DONE]
```

[karlis.peterson@bldb01 2013_05_11_23_37_28_install]$ **su bppmagent**

```
Password:
```

[bppmagent@bldb01 2013_05_11_23_37_28_install]$ **cd /opt/bmc/Patrol3**

[bppmagent@bldb01 Patrol3]$ **./PatrolAgent &**

```
PatrolAgent V9.0.00.1i, built at 20:32:03, Jul  6 2012
Copyright (C) 1997-2012 BMC Software, Inc.


[1]+  Done                    ./PatrolAgent
```

[bppmagent@bldb01 Patrol3]$ **ps -ef | grep PatrolAgent**

```
502     17399     1  0 15:34 ?       00:00:00 PatrolAgent
502     17434 17357  0 15:36 pts/1    00:00:00 grep PatrolAgent
```

FEEDBACK AND ENHANCEMENTS

Please provide feedback or enhancements to karlis_peterson@bmc.com