

2016

Networker 8.2.2 For RHEL6.4 Installation Manual



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1, 系统环境

1.1 , 系统版本和安装类型

最小化安装的 RHEL6.4 系统。

```
[root@backup ~]# cat /etc/redhat-release
Red Hat Enterprise Linux Server release 6.4 (Santiago)
[root@backup ~]#
```

1.2 , 磁盘分区信息

有一块 90G 的逻辑卷 挂载/node1 目录, 用于存储备份数据

```
[root@backup ~]#
[root@backup ~]# df -h
Filesystem                Size      Used Avail Use% Mounted on
/dev/mapper/vg_backup-LogVol101
                          16G       1.9G   13G   13% /
tmpfs                      932M         0  932M    0% /dev/shm
/dev/sda1                  194M       27M   157M   15% /boot
192.168.105.4:/fileshare   68G       17G   47G   27% /fileshare
/dev/mapper/vg_networker-vg_networker_node1
                          89G      184M   84G    1% /node1
[root@backup ~]#
```

1.3 , yum 状态

Yum 源已经配好, 使用的 RHEL6.4 ISO 文件里的 rpm 包作为 yum 源。

```
[root@backup ~]# yum repolist
Loaded plugins: product-id, subscription-manager
This system is not registered to Red Hat Subscription Management. You can use subscription-manager to register.
repo id                                repo name                                status
base                                    rhel6u4                                  3,648
repolist: 3,648
[root@backup ~]#
```

1.4 , iptables 和 selinux 状态

Iptables 和 selinux 已经关闭。

```
[root@backup linux_x86_64]# /etc/init.d/iptables status
iptables: Firewall is not running.
[root@backup linux_x86_64]# chkconfig --list|grep iptables --color
iptables          0:off  1:off  2:off  3:off  4:off  5:off  6:off
[root@backup linux_x86_64]# sestatus
SELinux status:                disabled
[root@backup linux_x86_64]# cat /etc/sysconfig/selinux

# This file controls the state of SELinux on the system.
# SELINUX= can take one of these three values:
#   enforcing - SELinux security policy is enforced.
#   permissive - SELinux prints warnings instead of enforcing.
#   disabled - No SELinux policy is loaded.
SELINUX=disabled
# SELINUXTYPE= can take one of these two values:
#   targeted - Targeted processes are protected,
#   mls - Multi Level Security protection.
SELINUXTYPE=targeted

[root@backup linux_x86_64]#
```

1.5 , 主机名和 IP 地址

Hostname : backup.alv.pub

IPaddress : 192.168.105.6

2, 软件需求

软件包名称 : nw822_linux_x86_64.tar.gz

软件用途 : 这个软件包里面的内容就是安装 Networker 所需要的东西 , 这里我们已经将它上传到我们要安装

Networker 的服务器中去了。

nw822_linux_x86_64.tar.gz	3/8/2016 1:01 PM	WinRAR 压缩文件	514,164 KB
---------------------------	------------------	-------------	------------

```

[root@backup ~]# ls
nw822_linux_x86_64.tar.gz
[root@backup ~]#

```

3, 安装 Networker

3.1 , 设置本地 host 解析

```

[root@backup ~]# vim /etc/hosts
192.168.105.6 backup.alv.pub backup

```

```

127.0.0.1    localhost localhost.localdomain localhost4 localhost4.localdomain4
::1         localhost localhost.localdomain localhost6 localhost6.localdomain6
192.168.105.6 backup.alv.pub backup

```

3.2 , 解压 Networker 安装包

```

tar xf nw822_linux_x86_64.tar.gz

```

```

[root@backup ~]# ls
nw822_linux_x86_64.tar.gz
[root@backup ~]#
[root@backup ~]# tar xf nw822_linux_x86_64.tar.gz
[root@backup ~]# ll
total 514172
drwxr-xr-x. 2 root games    4096 Sep 30  2015 linux_x86_64
-rwxr--r--. 1 root root    526503480 May 16 19:01 nw822_linux_x86_64.tar.gz
[root@backup ~]#

```

3.3 , 安装 Networker rpm 包

```

cd linux_x86_64/
yum install lgto* -y

```

```
[root@backup ~]# cd linux_x86_64/
[root@backup linux_x86_64]# ls
lgtocInt-8.2.2-1.x86_64.rpm  LGTO_METAFILE.linuxx86_64
lgtocInt_8.2.2_amd64.deb    lgtonmc-8.2.2-1.x86_64.rpm
lgtofr-8.2.2-1.x86_64.rpm  lgtonode-8.2.2-1.x86_64.rpm
lgtolja-8.2.2-1.x86_64.rpm lgtozh-8.2.2-1.x86_64.rpm
lgtoko-8.2.2-1.x86_64.rpm  lgtozh-8.2.2-1.x86_64.rpm
lgtolicm-8.2.2-1.x86_64.rpm NetWorkerAdaptor-1.2.0-63-linux-x64.run
lgtoman-8.2.2-1.x86_64.rpm sd products.res
[root@backup linux_x86_64]# yum install lgtoc* -y
```

```
Installed:
lgtocInt.x86_64 0:8.2.2-1  lgtofr.x86_64 0:8.2.2-1  lgtolja.x86_64 0:8.2.2-1
lgtoko.x86_64 0:8.2.2-1  lgtolicm.x86_64 0:8.2.2-1  lgtoman.x86_64 0:8.2.2-1
lgtonmc.x86_64 0:8.2.2-1  lgtonode.x86_64 0:8.2.2-1  lgtozh.x86_64 0:8.2.2-1

Dependency Installed:
compat-libcap1.x86_64 0:1.10-1  compat-libstdc++-33.x86_64 0:3.2.3-69.el6
glibc.i686 0:2.12-1.107.el6  ksh.x86_64 0:20100621-19.el6
nss-softokn-freebl.i686 0:3.12.9-11.el6

Complete!
[root@backup linux_x86_64]#
```

3.4 , 给予安装脚本可执行权限 , 运行安装脚本

```
[root@backup linux_x86_64]# chmod +x NetWorkerAdaptor-1.2.0-63-linux-x64.run
[root@backup linux_x86_64]# ./NetWorkerAdaptor-1.2.0-63-linux-x64.run
```

```
[root@backup linux_x86_64]#
[root@backup linux_x86_64]# ll
total 515948
-rw-r--r--. 1 root games 137115792 Sep 30 2015 lgtocInt-8.2.2-1.x86_64.rpm
-rw-r--r--. 1 root games 146200470 Sep 30 2015 lgtocInt_8.2.2_amd64.deb
-rw-r--r--. 1 root games 10444352 Sep 30 2015 lgtofr-8.2.2-1.x86_64.rpm
-rw-r--r--. 1 root games 10042141 Sep 30 2015 lgtoja-8.2.2-1.x86_64.rpm
-rw-r--r--. 1 root games 9414568 Sep 30 2015 lgtoke-8.2.2-1.x86_64.rpm
-rw-r--r--. 1 root games 2230850 Sep 30 2015 lgtolicm-8.2.2-1.x86_64.rpm
-rw-r--r--. 1 root games 319288 Sep 30 2015 lgtoman-8.2.2-1.x86_64.rpm
-rwxr-xr-x. 1 root games 7388 Sep 30 2015 LGTO_METADATA.linuxx86_64
-rw-r--r--. 1 root games 87603858 Sep 30 2015 lgtonmc-8.2.2-1.x86_64.rpm
-rw-r--r--. 1 root games 35265439 Sep 30 2015 lgtonode-8.2.2-1.x86_64.rpm
-rw-r--r--. 1 root games 60675606 Sep 30 2015 lgtoerv-8.2.2-1.x86_64.rpm
-rw-r--r--. 1 root games 9590377 Sep 30 2015 lgtozh-8.2.2-1.x86_64.rpm
-rw-r--r--. 1 root games 19335971 Aug 8 2014 NetWorkerAdaptor-1.2.0-63-linux-x64.run
-rwxr-xr-x. 1 root games 63844 Sep 30 2015 sd_products.res
[root@backup linux_x86_64]#
[root@backup linux_x86_64]# chmod +x NetWorkerAdaptor-1.2.0-63-linux-x64.run
[root@backup linux_x86_64]#
[root@backup linux_x86_64]# ./NetWorkerAdaptor-1.2.0-63-linux-x64.run
```

以下操作中没有内容的地方，就是直接回车。

```
[root@backup linux_x86_64]# ./NetWorkerAdaptor-1.2.0-63-linux-x64.run
-----
Welcome to the NetWorker Adaptor for EMC Backup & Recovery Manager Setup Wizard.
Before continuing with the NetWorker adaptor installation make sure you have
installed a Backup & Recovery Manager server and have access to it from this
machine. If the adaptor service cannot access the BRM server it will not start
properly.

-----
Please read the following License Agreement. You must accept the terms of this
agreement before continuing with the installation.

Press [Enter] to continue :
EMC Backup & Recovery Manager v1.2

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This software (including documentation) is subject to the terms and conditions
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the U.S. Government are subject to restrictions set forth in subparagraph
(c) (1) (ii) of the Rights in Technical Data and Computer Software clause at DFARS
252.227-7013 or subparagraphs (c) (1) and (2) of the Commercial Computer Software
- Restricted Rights at 48 CFR 52.227-19, as applicable. Manufacturer is EMC
Corporation, 176 South St., Hopkinton, MA 01748.
```


EMC, the EMC logo, and EMC products and services names are trademarks of EMC Corp. Other trademarks may be the property of their respective companies.

Press [Enter] to continue :

Do you accept this license? [y/n]:

Directory where NetWorker Adaptor for EMC Backup & Recovery Manager will be installed

Installation Directory: /nsr/nsrmq

Press [Enter] to continue :

EMC Backup & Recovery Manager Configuration Setting

NetWorker Server Setting:

Hostname/IP ["Please enter the NetWorker Host/IP"]:

EMC Backup & Recovery Manager Settings:

Hostname/IP ["Please enter the BRM Host/IP"]:

Username []:

Password :

Setup is now ready to begin installing NetWorker Adaptor for EMC Backup & Recovery Manager on your computer.

Do you want to continue? [Y/n]:

Please wait while Setup installs NetWorker Adaptor for EMC Backup & Recovery Manager on your computer.

Installing

0% _____ 50% _____ 100%

#####

Setup has finished installing NetWorker Adaptor for EMC Backup & Recovery Manager on your computer. Detailed information about the adaptor service is contained in the /nsr/nsrmq/logs/nsrmq.log file.



[root@backup linux_x86_64]#

3.5 , 启动 Networker 服务

```
[root@backup linux_x86_64]# /etc/init.d/networker start
[root@backup linux_x86_64]#
[root@backup linux_x86_64]# /etc/init.d/networker status
+---o lgtolmd (1593)
+---o nsrexecd (1582)
```

```
[root@backup linux_x86_64]#
[root@backup linux_x86_64]# /etc/init.d/networker start
[root@backup linux_x86_64]# /etc/init.d/networker status
+---o lgtolmd (29193)
+---o nsrexecd (29182)
[root@backup linux_x86_64]#
```

3.5 , 安装 Networker Management Console

```
[root@backup linux_x86_64]# /opt/lgtonmc/bin/nmc_config
```

```
[root@backup linux_x86_64]# /opt/lgtonmc/bin/nmc_config

For optimum security, the embedded web server inside this product must
run as a non root user. Please specify a local user name and group name
the web server must run as. It is recommended that the user and group
you specify have limited privileges and file access permissions. Please
create such a local user and group first if required.
Please specify in the format user/group. For example nobody/nobody.

Please specify the user/group for the web server [nobody/nobody]? 
Using nobody as user name and nobody as group name

What port should the web server use [9000]? 
What port should the GST server use [9001]? 
What directory should be used for the LGTONmc database [/opt/lgtonmc/lgto_gstdb]
? 
Where are the NetWorker binaries installed [/usr/sbin]? 
Start daemons at end of configuration [n]? y
Creating installation log in /opt/lgtonmc/logs/install.log.
Performing initialization. Please wait...

Starting GST:
GST Services, Version 8.2.2.Build.926

done.
Installation successful.
[root@backup linux_x86_64]#
```

Connected to 192.168.105.6:22.

SSH2 xterm 116x

3.6, 检查 gst 服务

在上一个步骤的最后一个选项中，那个选项的意思就是是否开启 gst 服务，开启 9000 端口，由于我们选择的是 y，所以在他这个时候我们 gst 服务就已经开启了，gst 是一个关于 Networker Management Console 的服务，如果这个服务没有开启，那么该 Server 的 9000 端口也就不会打开，我们就无法去访问 Networker Management Console 了。

接下来的步骤中，我们检查一下 gst 服务，了解一下它。

查看 gst 服务的状态

```
[root@backup linux_x86_64]# /etc/init.d/gst status
```

```
GST is running
```

查看 9000 端口是否已开启

```
[root@backup linux_x86_64]# netstat -anplut | grep 9000
```

```
tcp        0      0 :::9000                :::*                    LISTEN      2158/httpd
```

```
[root@backup linux_x86_64]#
```

关闭 gst 服务

```
[root@backup linux_x86_64]# /etc/init.d/gst stop
```

```
Stopping GST: ..
```

```
done.
```

```
[root@backup linux_x86_64]#
```

查看 gst 服务器的状态

```
[root@backup linux_x86_64]# /etc/init.d/gst status
```

```
GST is not running
```

查看 9000 端口是否开启

```
[root@backup linux_x86_64]# netstat -anplut | grep 9000
```

开启 gst 服务

```
[root@backup linux_x86_64]# /etc/init.d/gst start
```

```
Starting GST:
```

```
GST Services, Version 8.2.2.Build.926
```

```
done.
```

再次查看 9000 端口是否已开启

```
[root@backup linux_x86_64]# netstat -anplut | grep 9000
```

```
tcp        0      0 :::9000                :::*                    LISTEN      2285/httpd
```

```
[root@backup linux_x86_64]# /etc/init.d/gst status
GST is running
[root@backup linux_x86_64]# netstat -anplut|grep 9000
tcp        0      0 0.0.0.0:9000          :::*                   LISTEN      2158/httpd
[root@backup linux_x86_64]# /etc/init.d/gst stop
Stopping GST: ..
done.
[root@backup linux_x86_64]# /etc/init.d/gst status
GST is not running
[root@backup linux_x86_64]# netstat -anplut|grep 9000
[root@backup linux_x86_64]# /etc/init.d/gst start
Starting GST:
GST Services, Version 8.2.2.Build.926
done.
[root@backup linux_x86_64]# netstat -anplut|grep 9000
tcp        0      0 0.0.0.0:9000          :::*                   LISTEN      2285/httpd
[root@backup linux_x86_64]#
```

Connected to 192.168.105.6:22. SSH2 xterm 116x35 35 29 1 session

确认 gst 服务和 Networker 服务是否设置了开机自动启动。

```
[root@backup linux_x86_64]# chkconfig --list|grep gst
gst          0:off 1:off 2:off 3:on 4:off 5:on 6:off
[root@backup linux_x86_64]# chkconfig --list|grep networker
networker    0:off 1:off 2:off 3:on 4:off 5:on 6:off
[root@backup linux_x86_64]#
```

4, 在 windows 上使用、管理 Networker

4.1, 安装 java

我们从 windows 通过 Networker Management Console 去管理 Networker, 在访问 Networker 之前, 我们需要先安装 java, 这里我访问 Networker management 的系统环境是 windows 10, 安装的 java 版本是 8.77

View basic information about your computer

Windows edition

Windows 10 Enterprise

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System

Processor: Intel(R) Core(TM) i7-6700 CPU @ 3.40GHz 3.40 GHz

Installed memory (RAM): 48.0 GB

System type: 64-bit Operating System, x64-based processor

Pen and Touch: No Pen or Touch Input is available for this Display

Google Chrome	Google Inc.	5/18/2016
Insyde Airplane Mode HID Mini-Driver	Insyde Corporation	5/10/2016
Java 8 Update 77 (64-bit)	Oracle Corporation	5/16/2016
Java SE Development Kit 8 Update 77 (64-bit)	Oracle Corporation	5/16/2016
Microsoft Office Professional Plus 2016 - en-us	Microsoft Corporation	5/14/2016

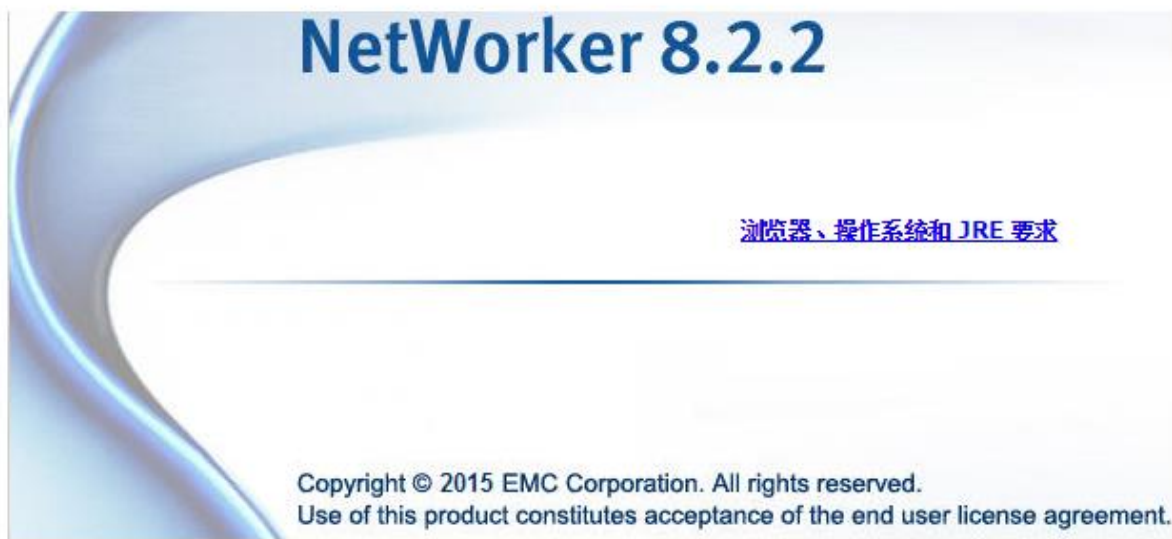
安装包名称是 jdk-8u77-windows-x64.exe

ibm_uti_asa_3021_windows_32-64.exe	4/14/2010 3:38 AM	Applic
jdk-8u77-windows-x64.exe	4/18/2016 10:21 AM	Applic
ire-6u25-windows-i586.exe	4/27/2011 9:46 AM	Applic

4.2 , 通过浏览器访问 Networker 服务器的 9000 端口

本次实验中我们安装 Networker 的 Server IP 是 192.168.105.6 , 所以在浏览器中我们输入 192.168.105.6:9000 进行访问。

然后点击如图所示的地方 , 去启动 Networker Management Console。



警告： 无法检测 Java™ Runtime Environment

ATTENTION: 32-bit web browsers require a 32-bit JRE and 64-bit web browsers require a 64-bit JRE.







此 Web 浏览器无法检测到支持的 Java™ Runtime Environment (JRE™) 版本。 必须安装 JRE 才能运行 NetWorker Management Console。 不过，如果您已经安装了所需的 JRE 版本，请单击[这里](#)启动 NetWorker Management Console。



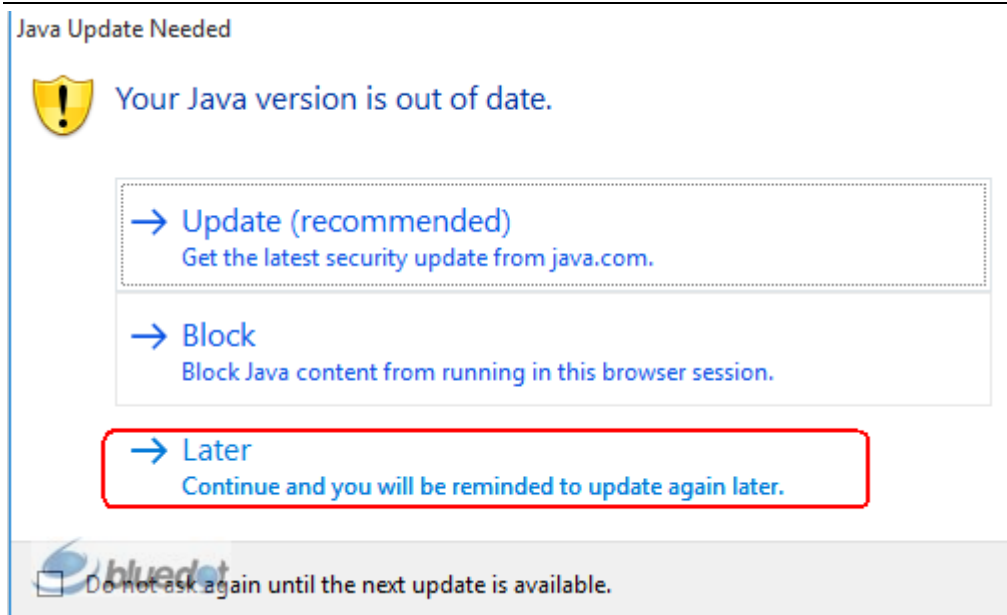
然后会下载一个名为 gconsole.jnlp 的文件。

4.2 ， 运行开始程序，设置 Networker Management Console

这个时候我们双击点击运行这个程序。

	eaton_fw_011_FDD_V2_10_0002_anyos_nmc...	5/9/2016 11:20 AM	Compressed (zipp...	1,200 KB
	eaton_fw_nmc_v01.13.0001_anyos_noarc...	5/9/2016 10:52 AM	Compressed (zipp...	1,564 KB
	gconsole.jnlp	5/16/2016 3:20 PM	JNLP File	4 KB
	ibm_sw_srapp_9.30-17006_anyos_32-64.iso	5/7/2016 11:53 AM	Disc Image File	342,004 KB
	mtrox_invg_dvd_video_4.00.01.004_wind...	5/9/2016 11:12 AM	Application	3,522 KB
	naqios agent install.sh	5/4/2016 1:28 PM	SH File	2 KB

点击 Later



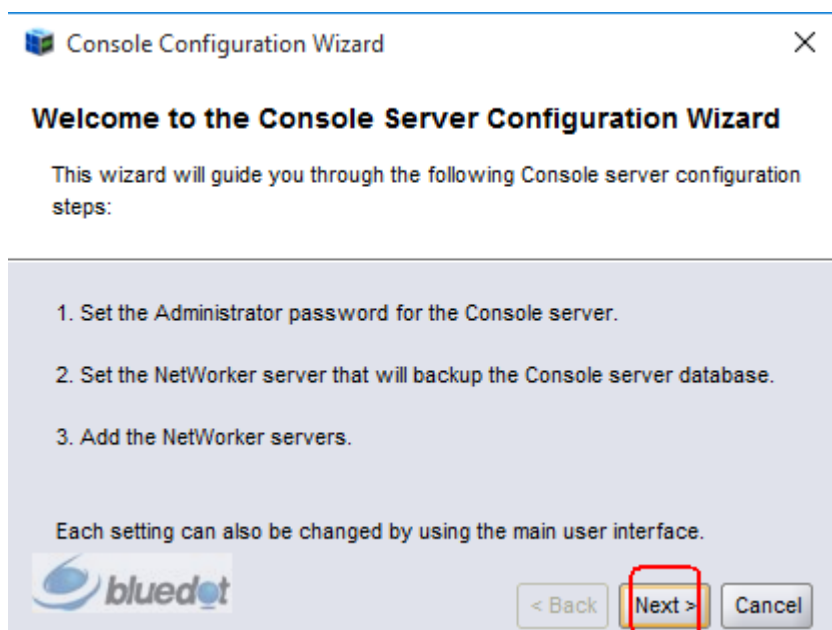
点击 Run



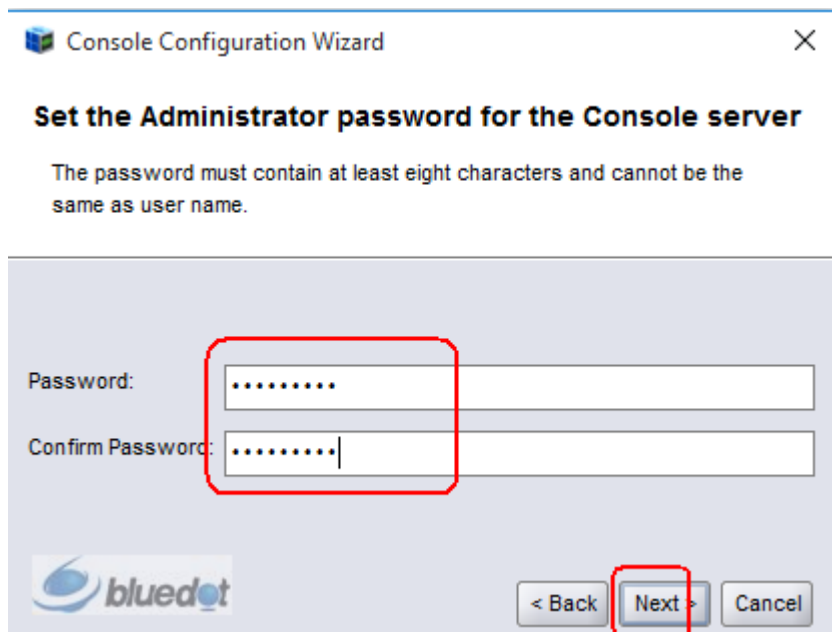
点击 Accept



点击 Next



设置这个 Networker Management Console 的 Administrator 用户的密码



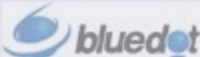
Console Configuration Wizard

Set the Administrator password for the Console server

The password must contain at least eight characters and cannot be the same as user name.

Password:

Confirm Password:



设置备份服务器和客户端



Console Configuration Wizard

Set Database Backup Server

Specify the NetWorker server that will backup the Console server database and click Next.

NetWorker Server:

Create client resource on this server: ☒

Client name:



添加 NetWorker 服务器，这里我们什么也没有添加，点击 Finish。

Console Configuration Wizard

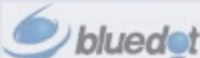
**Add the NetWorker servers**

Specify the NetWorker servers that this Console server will manage.
Specify each NetWorker server on a new line.

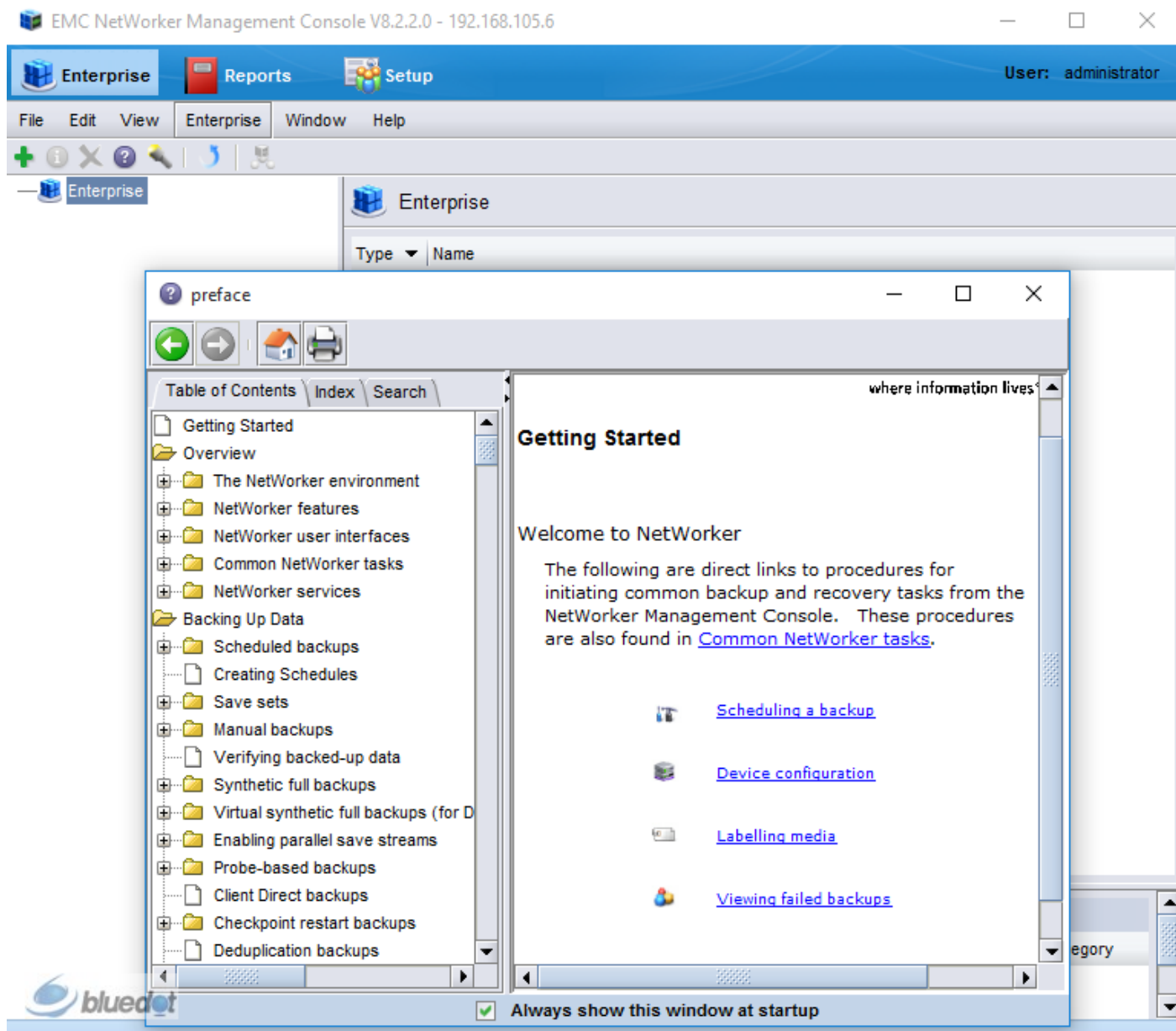
NetWorker Servers:

All the specified NetWorker servers will have the following features:

- ☒ Capture Events
- ☒ Gather Reporting Data

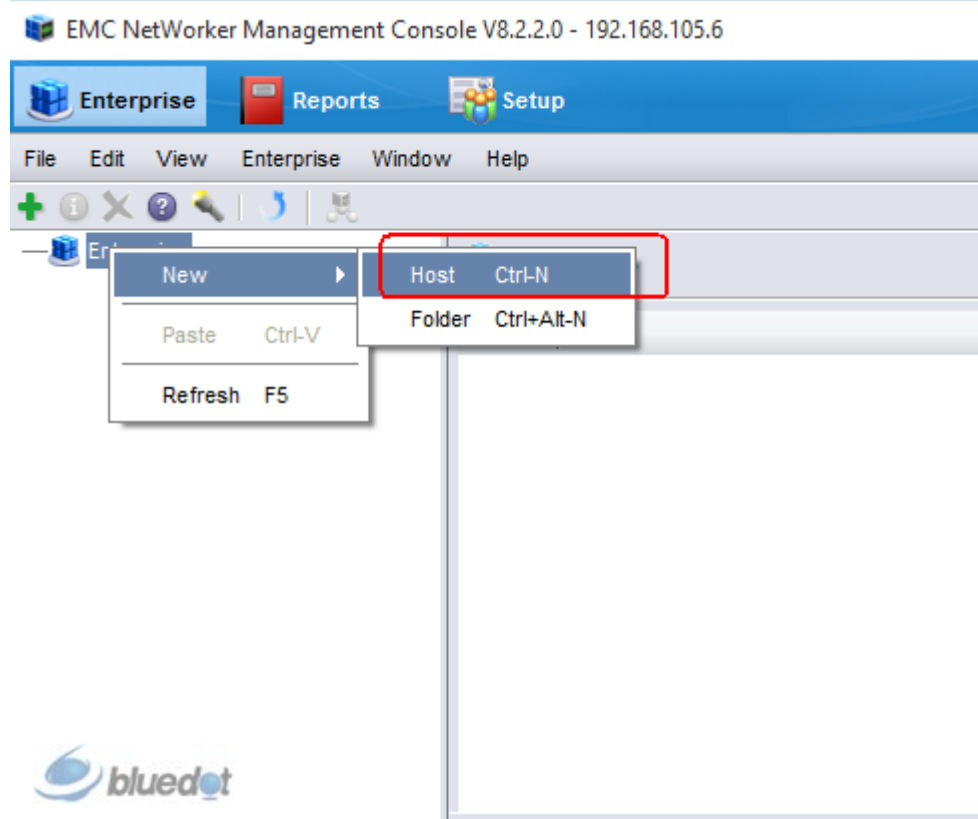


然后就进入到了 Networker Management Console 的界面，同时还会弹出一个 Prefact.



4.3 , 添加 NetWorker Server 到 NetWorker Management Console

然后在这里我们添加一个 host ,



输入 hostname

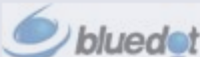
Add New Host

**Create Host**

Create a new host and add it to the Enterprise Hierarchy

Host Name:

backup.alv.pub



< Back


Next >

Cancel

点击 Next

Select Host Type


Select type of the new host



☒ NetWorker
Backup and recover for the department and enterprise

☐ Avamar
Deduplication backup and recover for the enterprise

☐ DataDomain
Data Domain System

 < Back **Next >** Cancel

点击 Finish。

Add New Host

Manage NetWorker

Configure Console to monitor activities on the host

Host Type: NetWorker


Description: Backup and recover for the department and enterprise

Vendor Name: EMC Corporation

Features

☒ Capture Events

☒ Gather Reporting Data



< Back

Finish

Cancel

现在 Networker Server 就已经添加到 Networker Management Console 里面去了，一台 Networker Management Console 可以管理很多台 Networker Server。

4.4 ， 启动管理 Networker Server

点击 Launch Networker Administrator 来打开我们添加的 Networker Server

EMC NetWorker Management Console V8.2.2.0 - 192.168.105.6

Enterprise Reports Setup User: administrator

File Edit View Enterprise Window Help

Enterprise backup.alv.pub

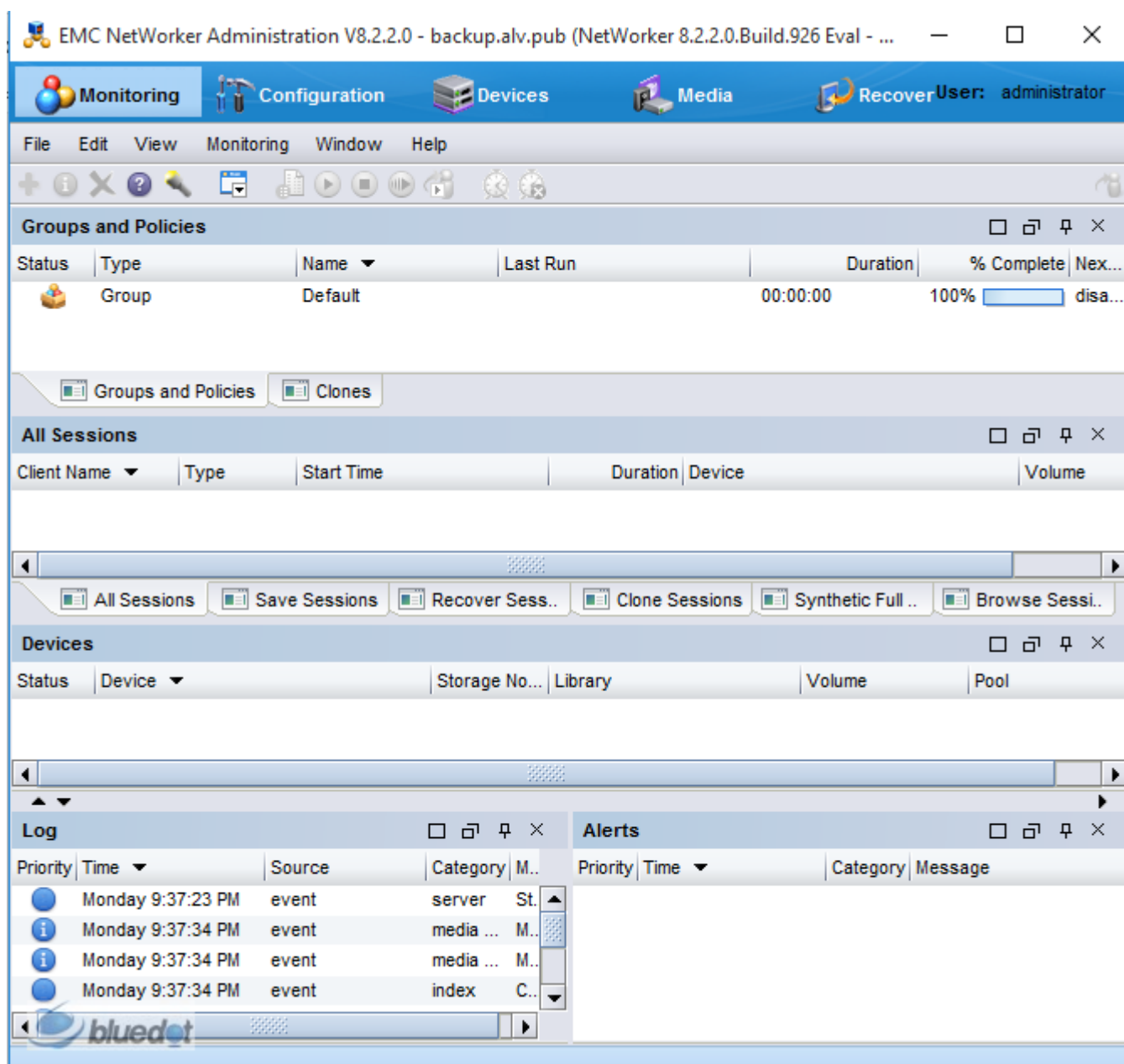
NetWorker Server: backup.alv.pub

Name: backup.alv.pub
Comment:
Version: NetWorker 8.2.2.0.Build.926 Eval
Save Totals: 0 session(s)
Recover Totals: 0 session(s)
Server Start Time: May 16, 2016 9:37:25 PM
[Launch NetWorker Administration](#)

Events

Priority	Server Name	Server Type	Time	Category
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现在，我们看到的就是我们刚搭建的 Networker 的管理界面了。



5, 文档结束

本篇文档只讲述 Networker Server 和一个 Networker Manager Console 的安装，为避免篇幅过长，关于 Networker 的管理我们通过另外一篇文档再来单独去讲述。

感谢您的阅读！

Alvin