

## Nimble 存储系统管理参考指南

**声明:**

本文仅作为 HPE 和 H3C 官方文档的补充说明及技术参考，并非替代官方文档，请认真阅读 HPE 和 H3C 官方文档避免出现技术风险。本文并不保证时时更新，文中涉及的一切内容均以官方内容为准。

**技术支持中心-存储产品支持部**

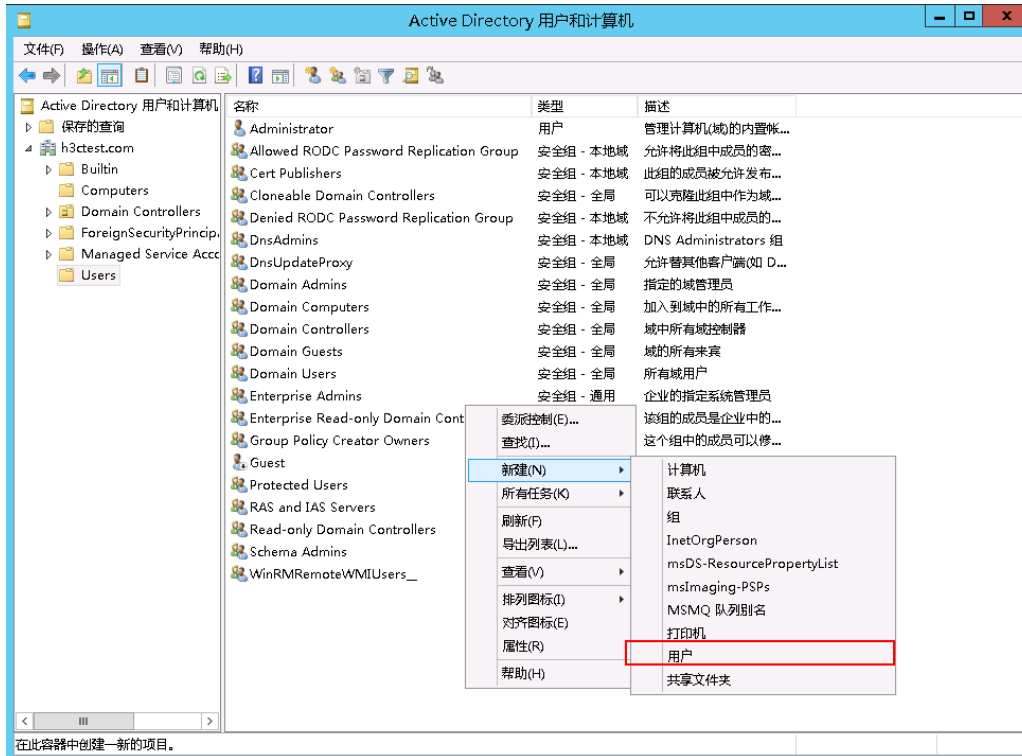
版本修订记录	Date	Revision Version	Change Description	Author
日期		修订版本	修改描述	作者
2018.2		1.0	无	伍雅宁

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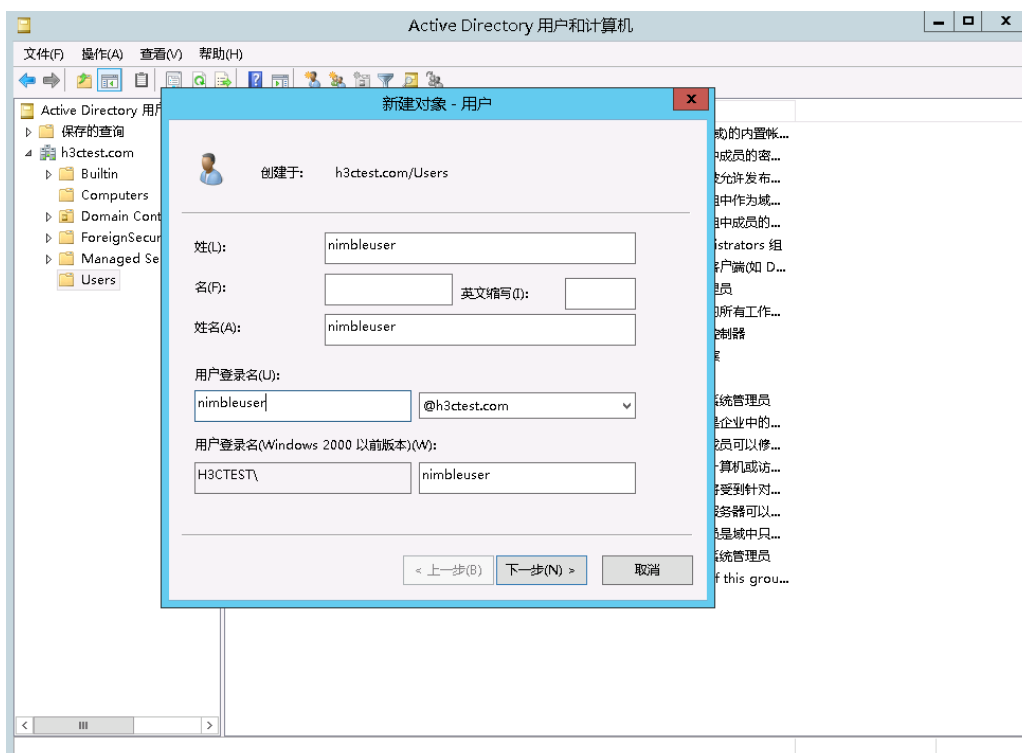
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# AD 域认证管理功能

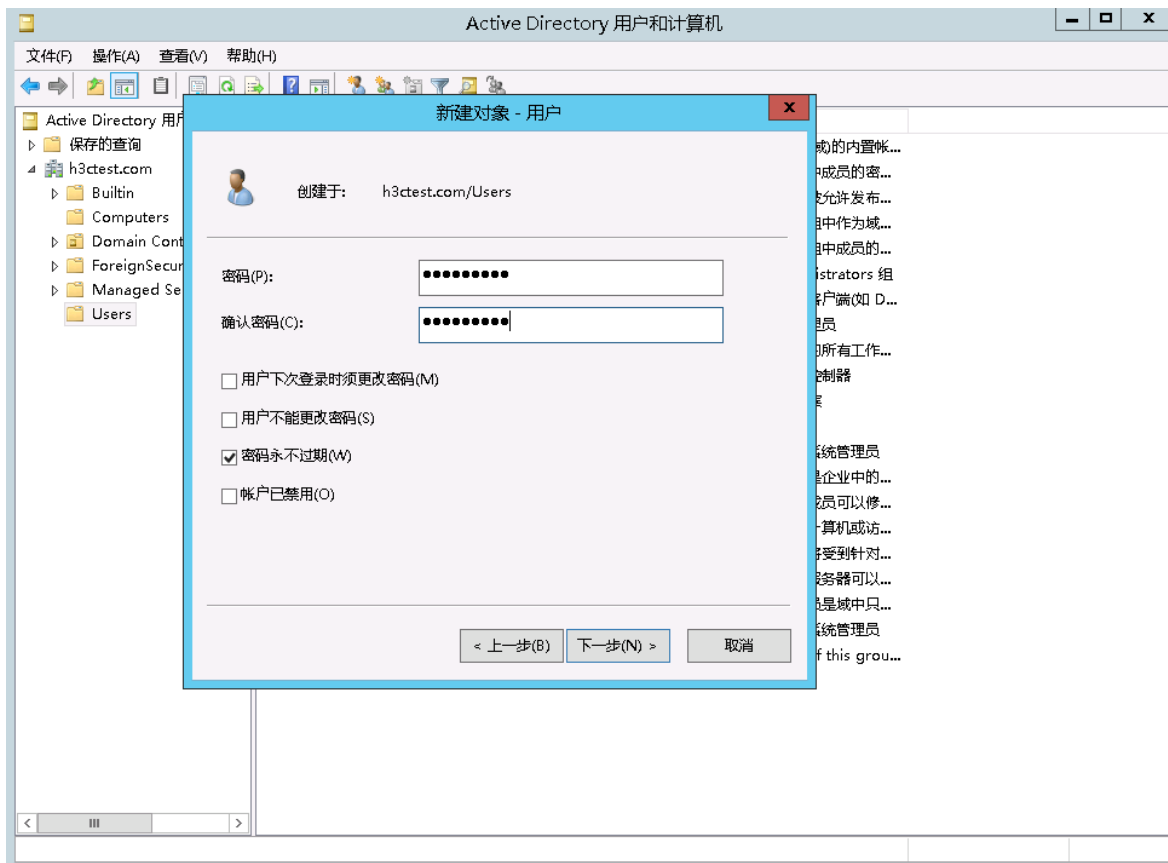
首先在 AD 域中创建用户。



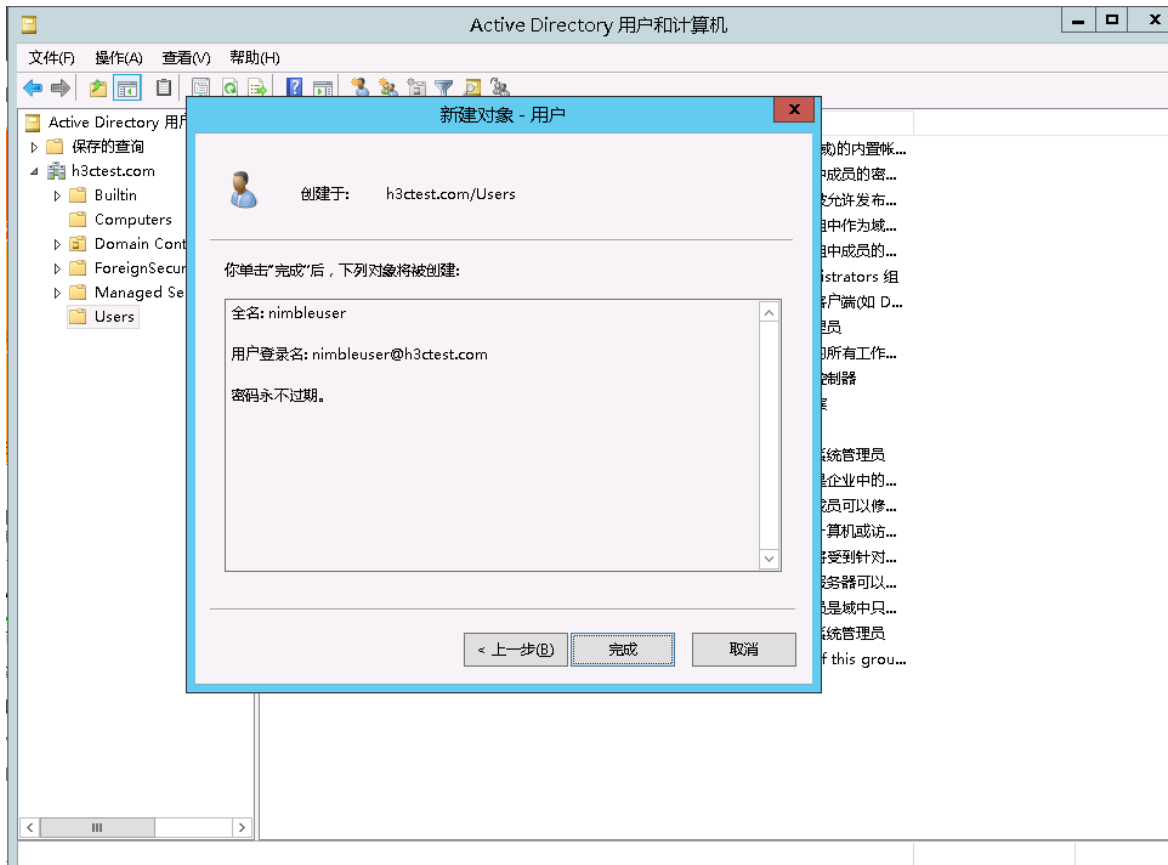
创建用户名为 nimbleuser，点击下一步。



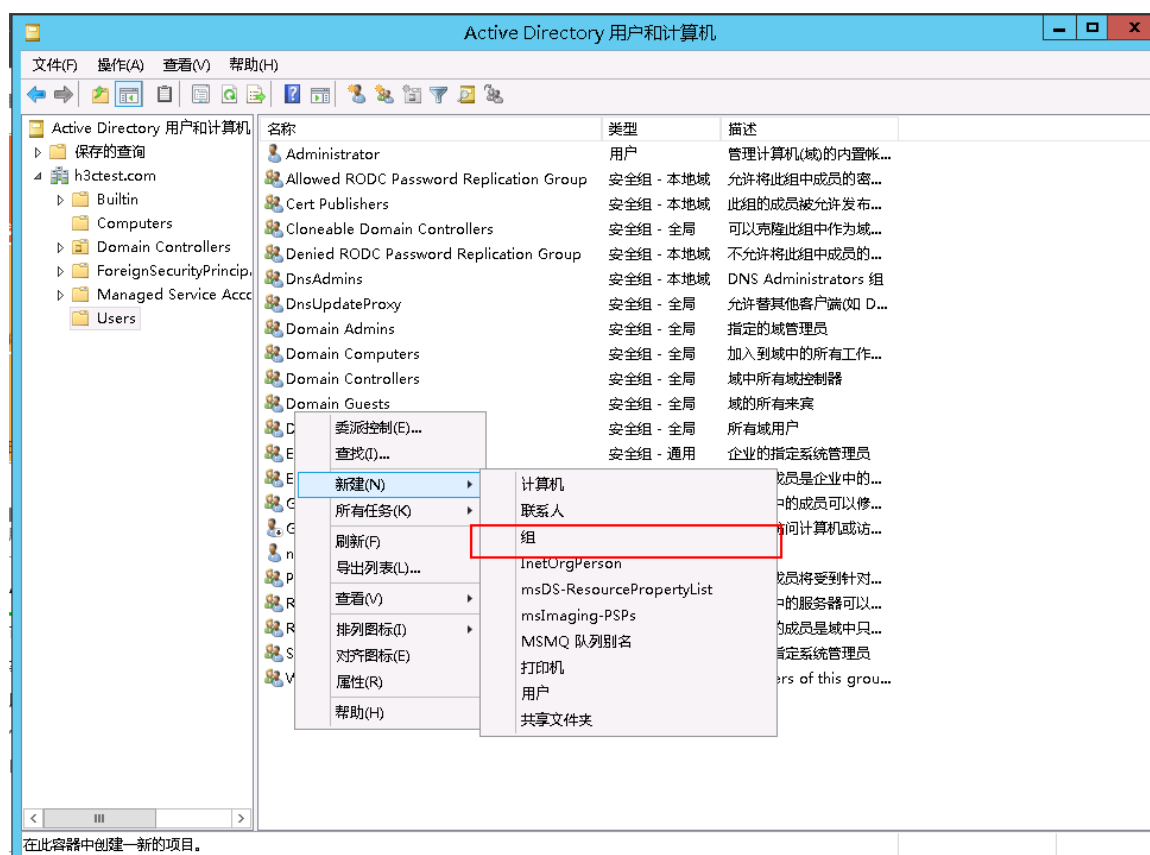
设置用户登录密码，点击下一步。



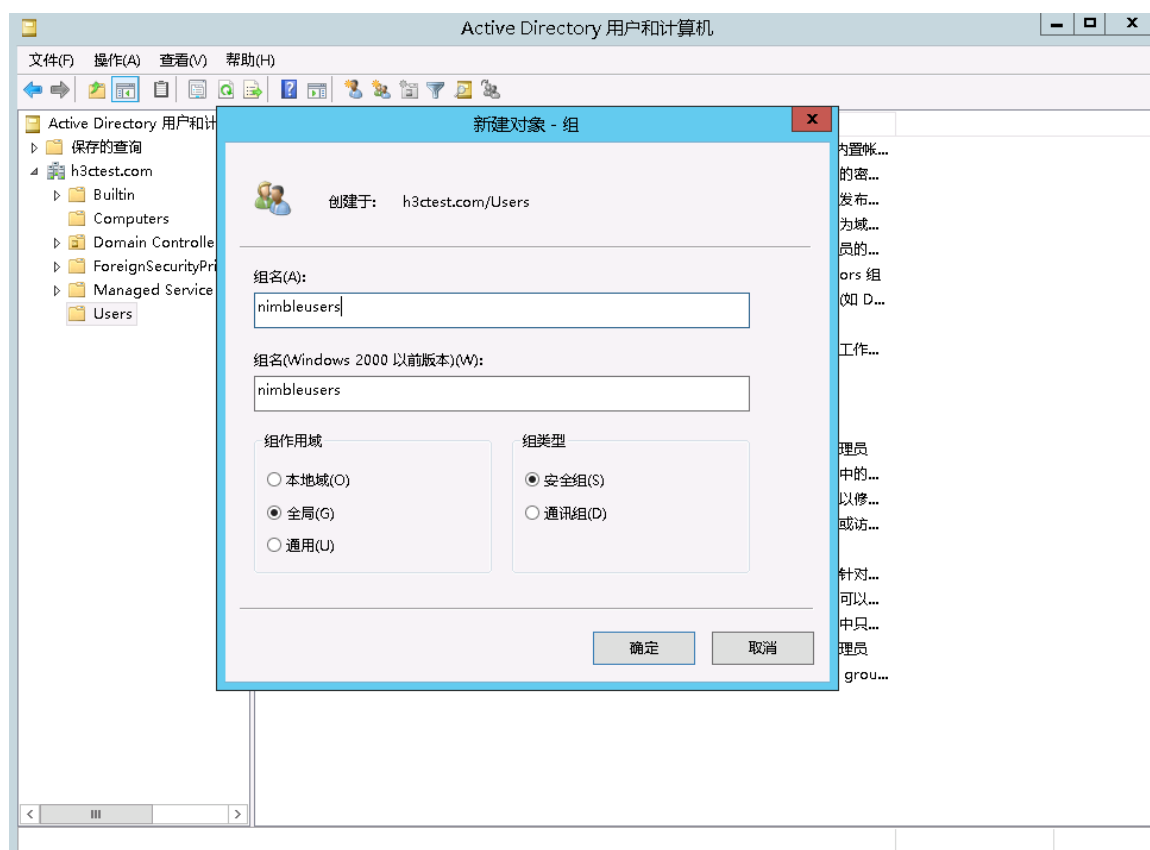
完成用户创建。



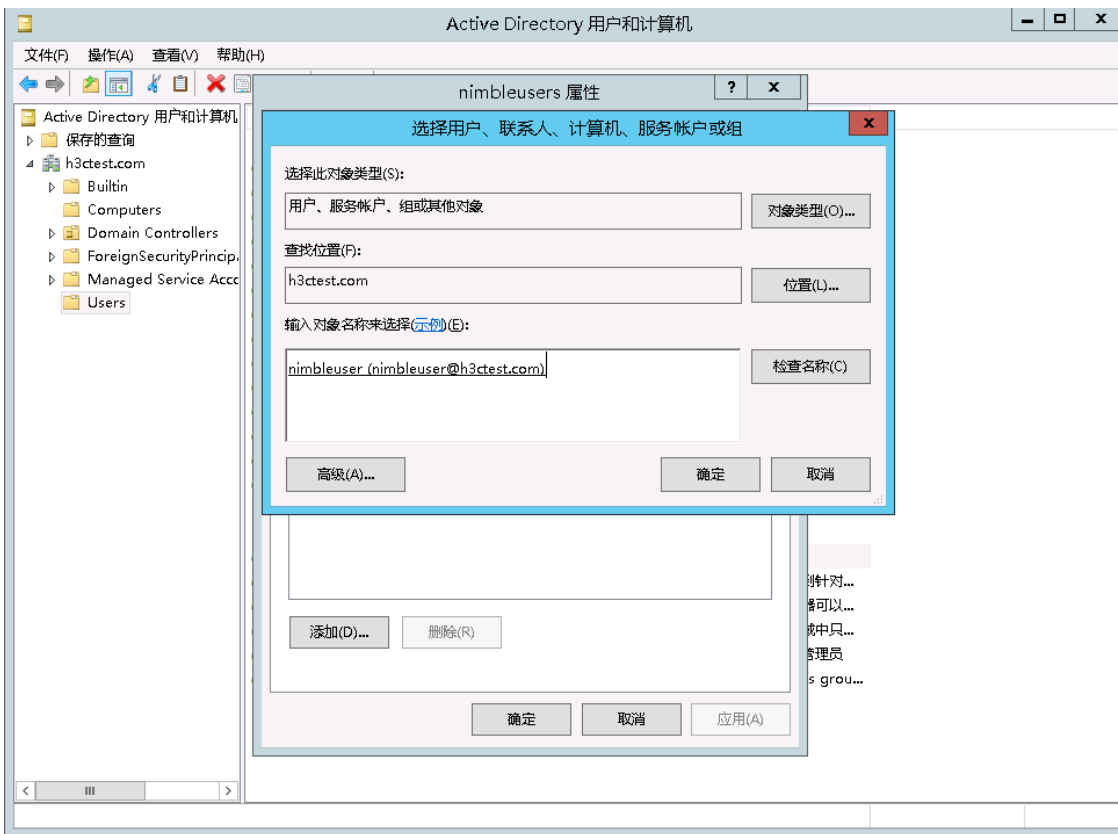
然后添加组。



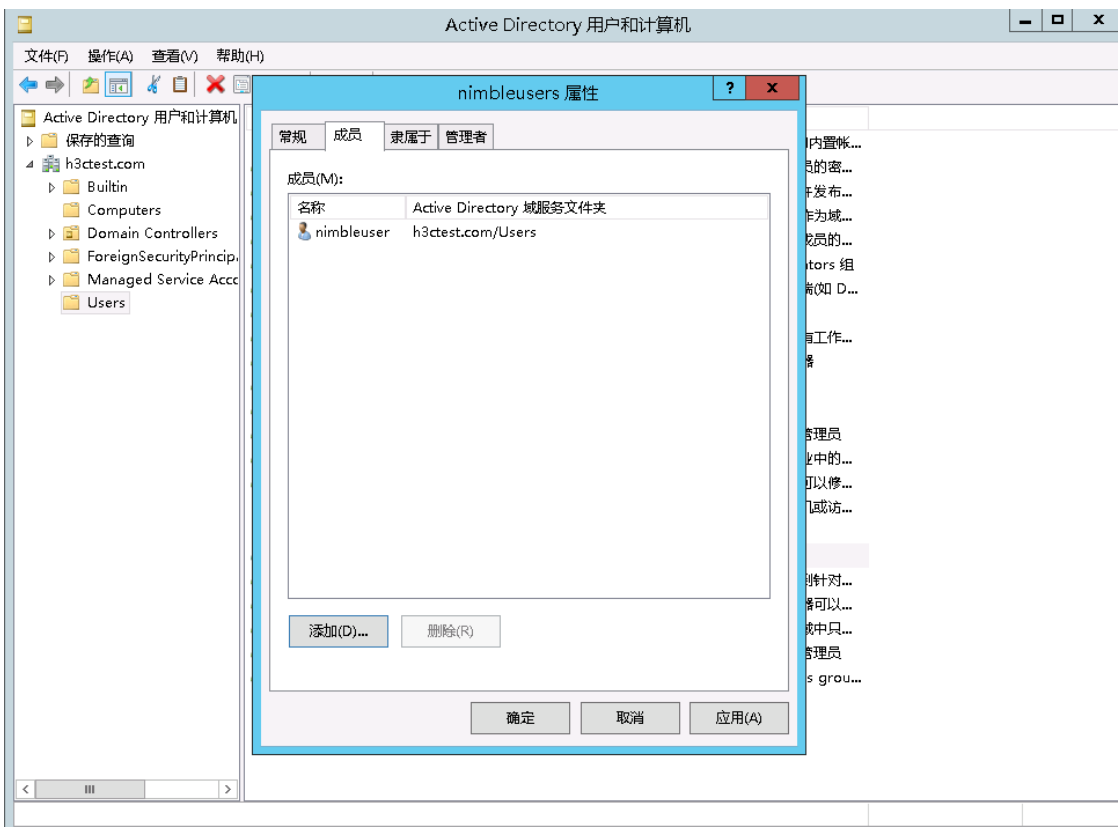
这里设置组名为 nimbleusers，点击确定。



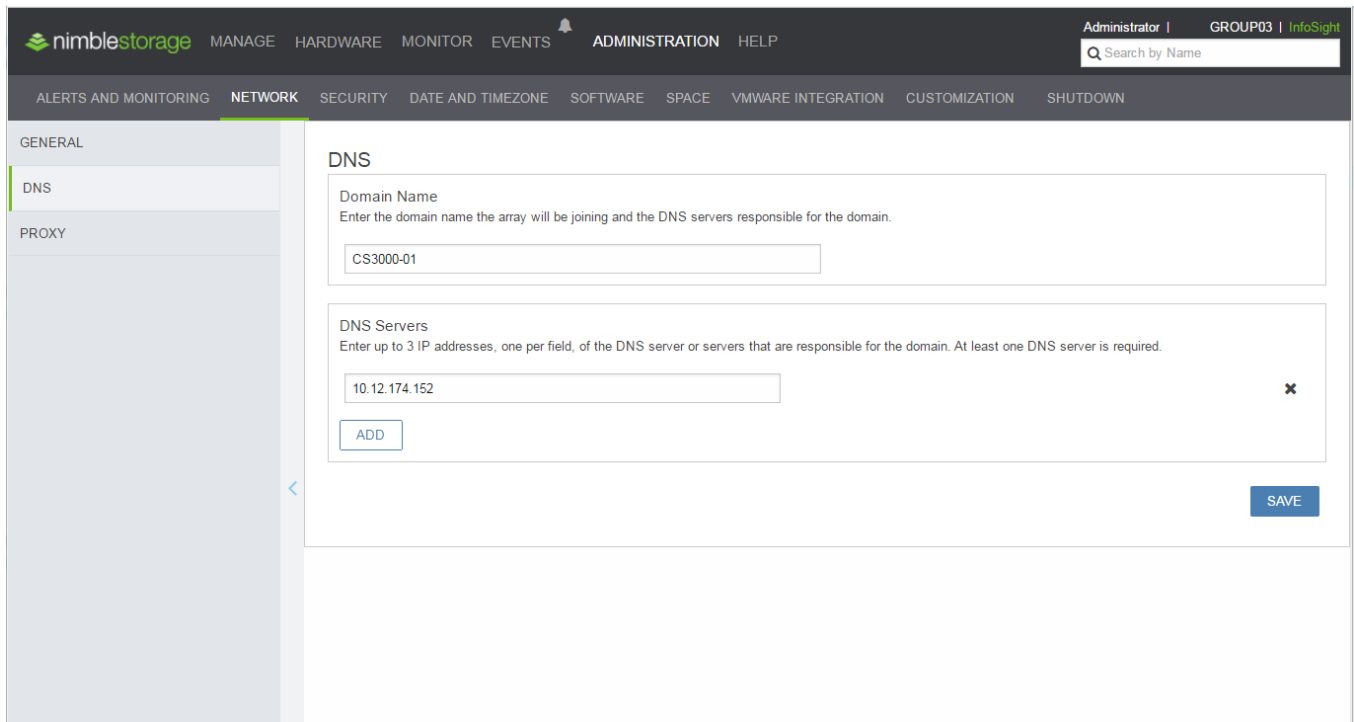
把之前创建的用户 nimbleuser 加入到 nimbleusers 组，点击确定。



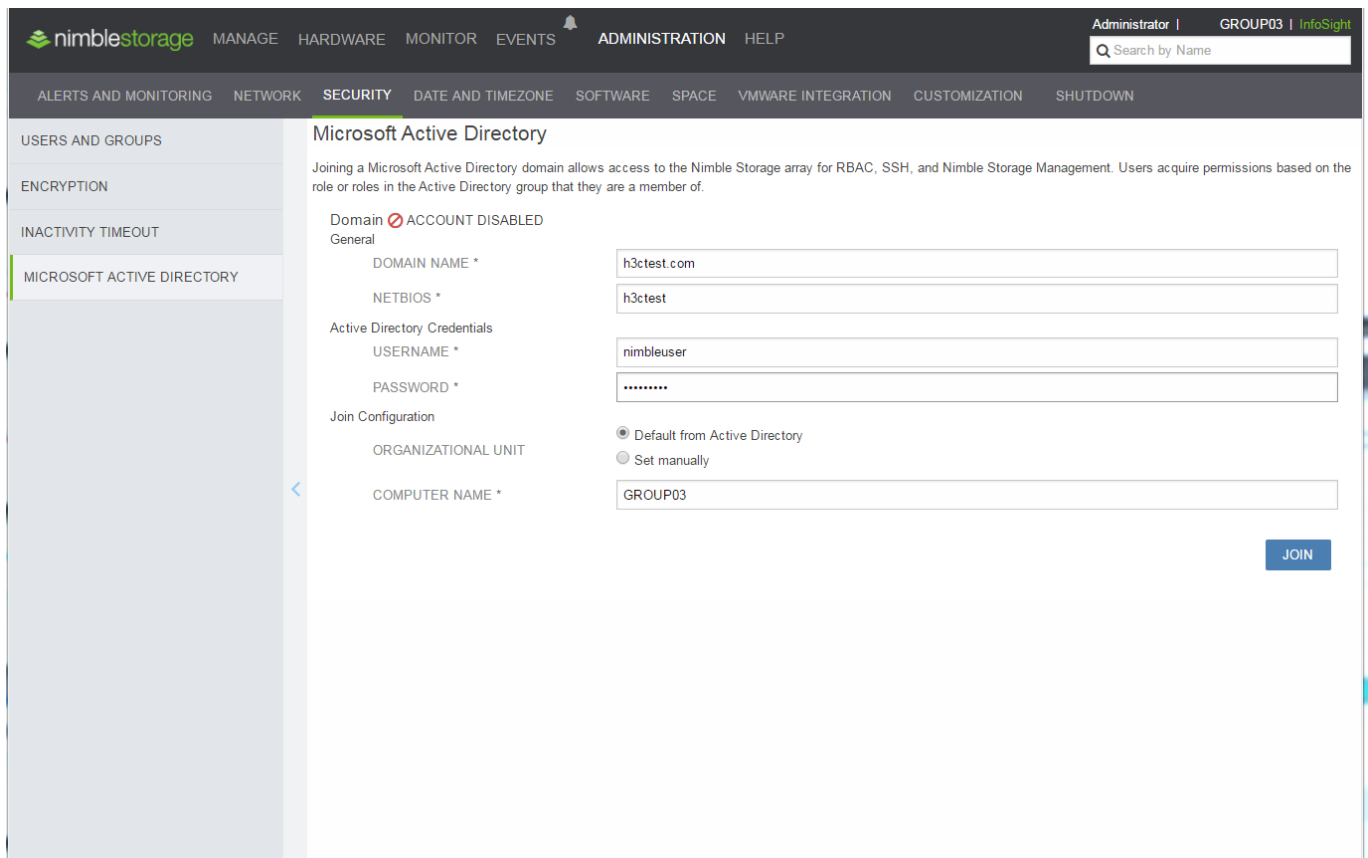
添加完成。



确认网络配置中 DNS Server 为 AD 域控制器的 IP。

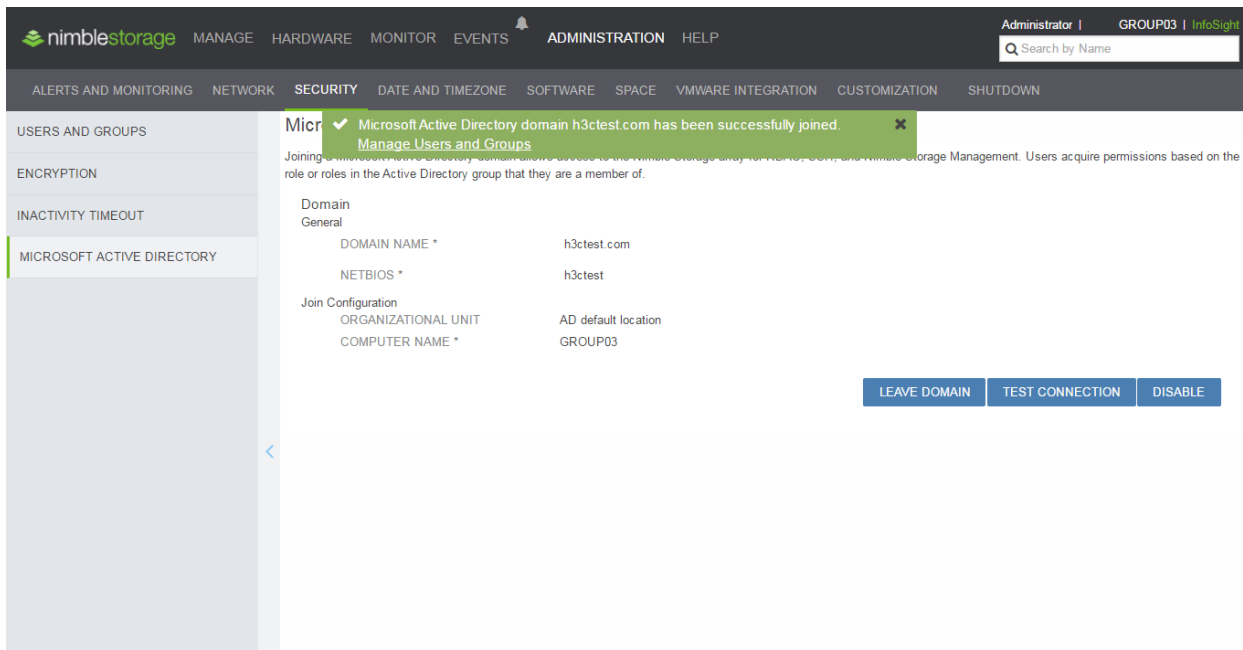


在 ADMINISTRATION-SECURITY-MICROSOFT ACTIVE DIRECTORY 中填写 AD 域信息，输入之前创建的域账号和密码，点击 JOIN。

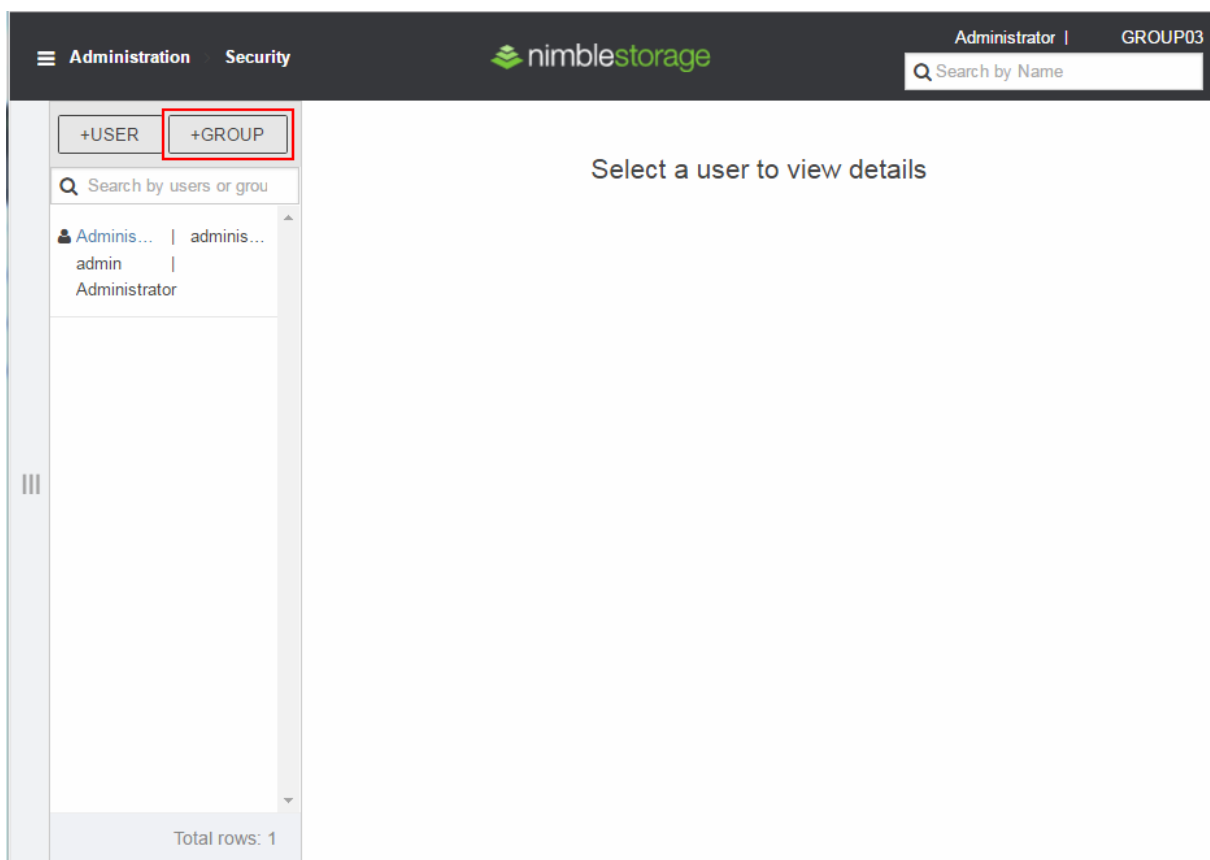




AD 域加入完成。



然后添加用户组。



组名填写 nibleusers，选择角色后点击 SUBMIT。

Administration Security niblestorage Administrator | GROUP03

Search by Name

+USER +GROUP

Search by users or grou

Adminis... | adminis...  
admin | Administrator

GROUP NAME \* nibleusers

ROLE administrator

DESCRIPTION

INACTIVITY TIMEOUT minutes

SUBMIT CANCEL

Total rows: 2

确认当前组类型为 Microsoft Active Directory

Administration Security niblestorage Administrator | GROUP03

Search by Name

+USER +GROUP

Search by users or grou

nibleu... | adminis...  
Adminis... | adminis...  
admin | Administrator

nibleusers EDIT More Actions

Type Microsoft Active Directory

Role administrator

Description

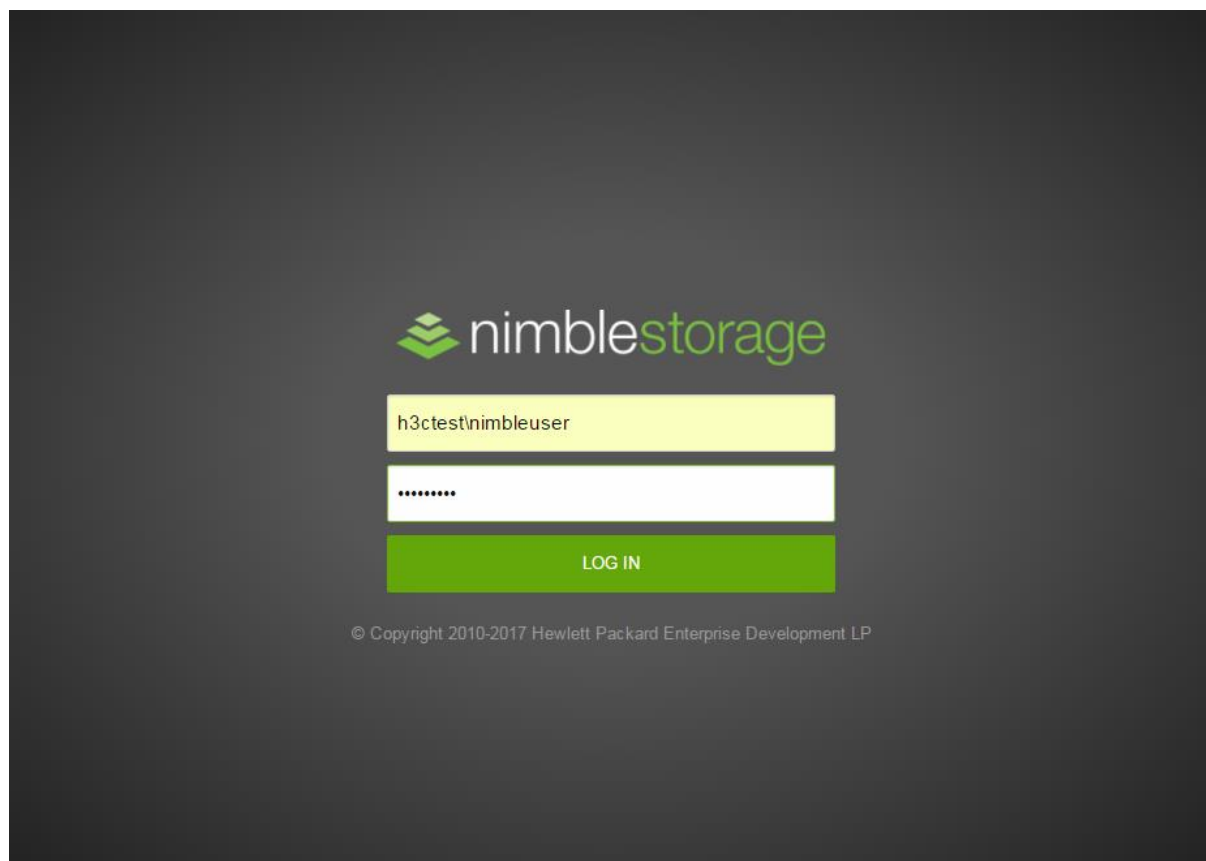
Inactivity Timeout 30 minutes

Activity Log

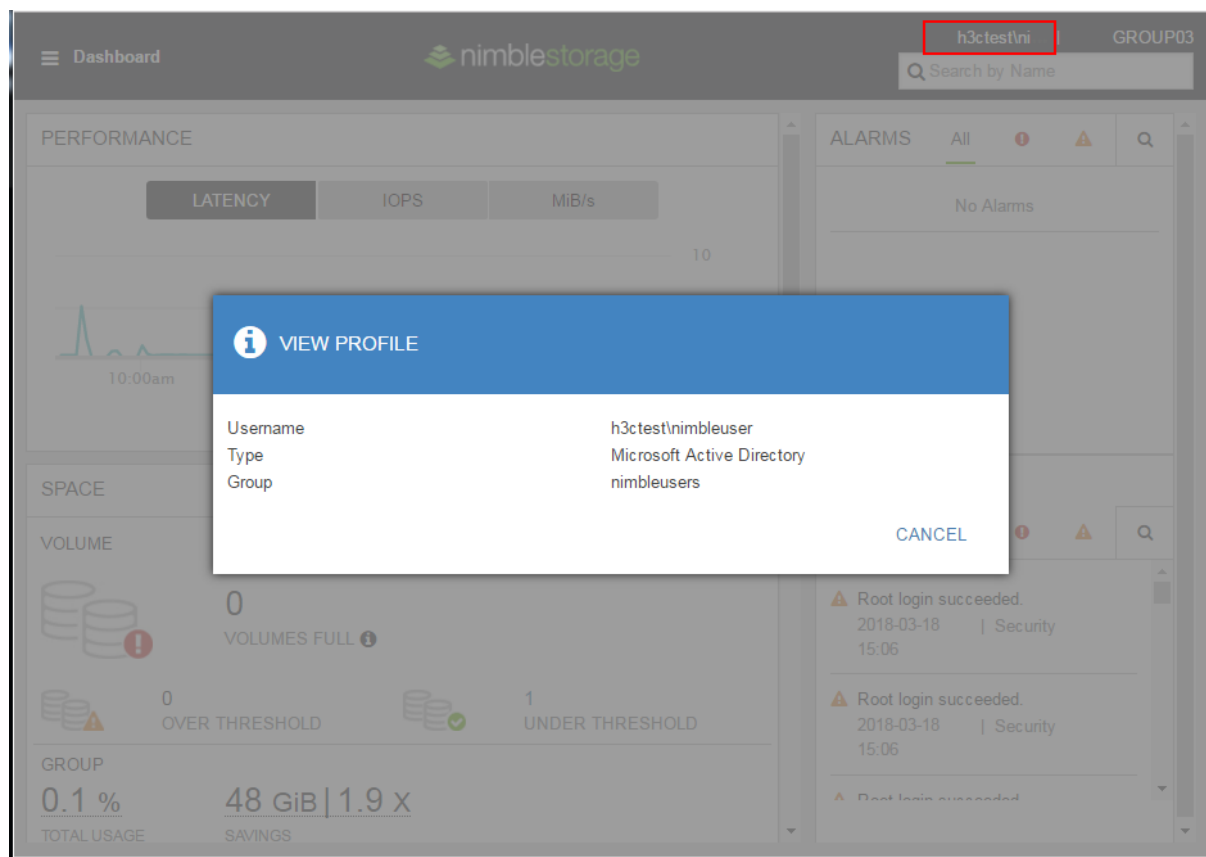
TIME	ACTIVITY	STATUS	USER	CLIENT IP ADDRESS	ACCESS TYPE
No items to show.					

Total rows: 2

使用域账号登录。

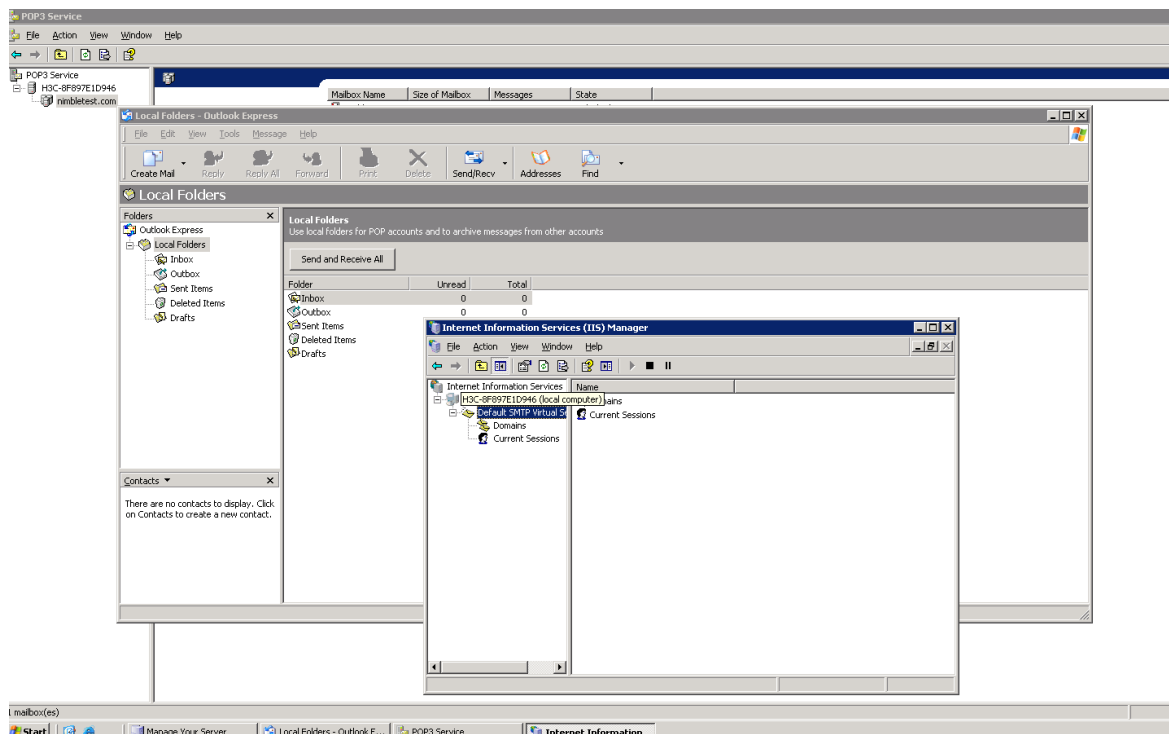


登录成功。

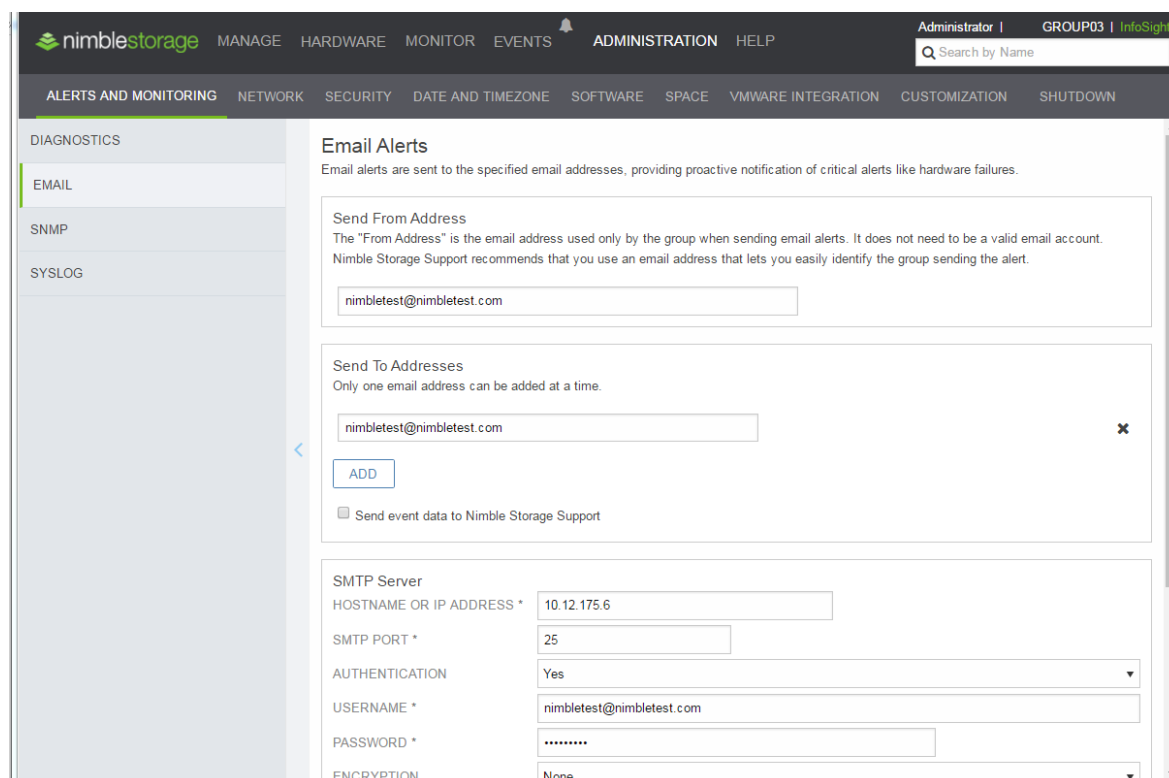


# E-Mail 报警管理功能

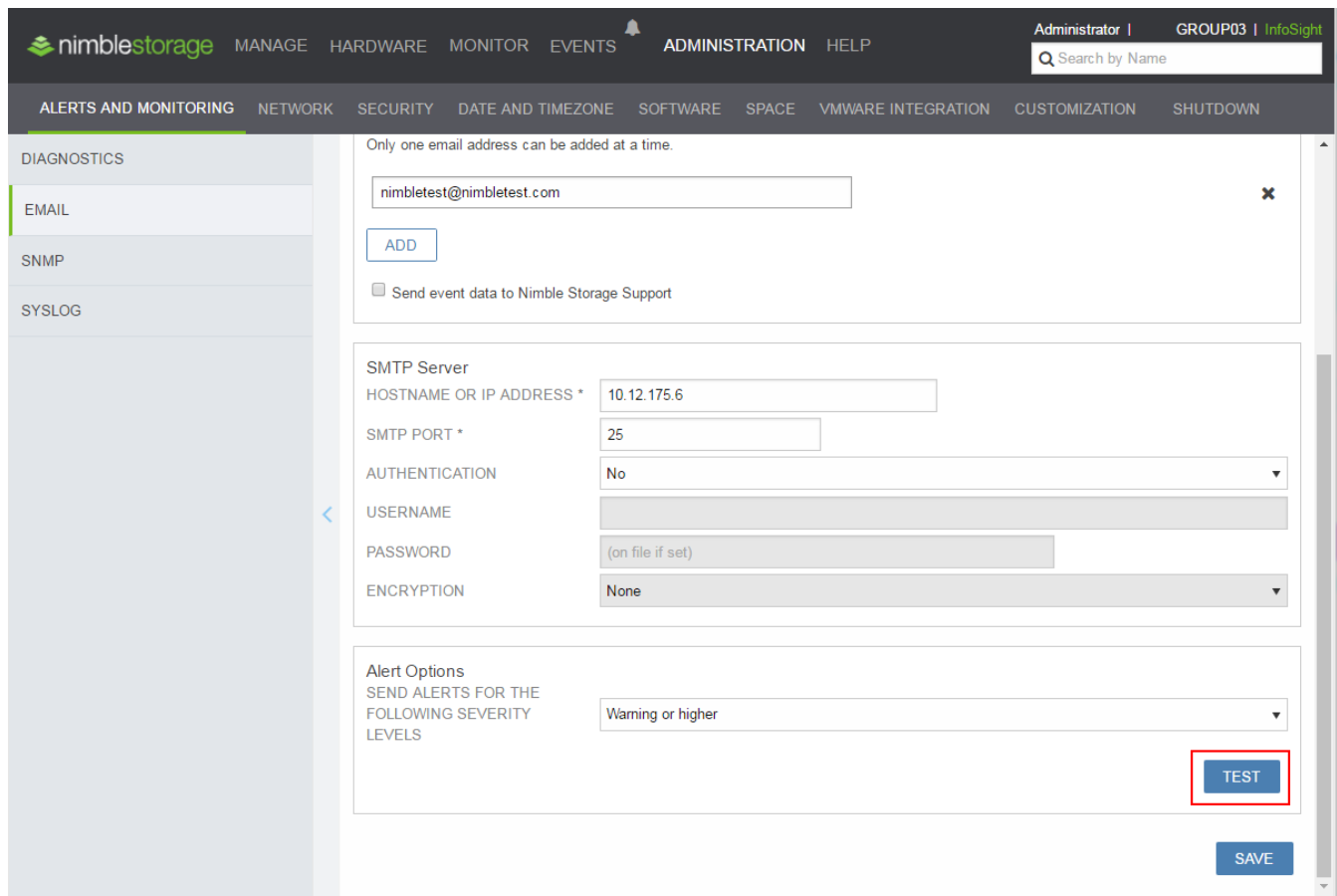
使用 Windows Server 2003 搭建 SMTP 和 POP 3 服务器, 建立 [nimbletest@nimbletest.com](mailto:nimbletest@nimbletest.com) 邮箱账号, 并登陆 Outlook Express。



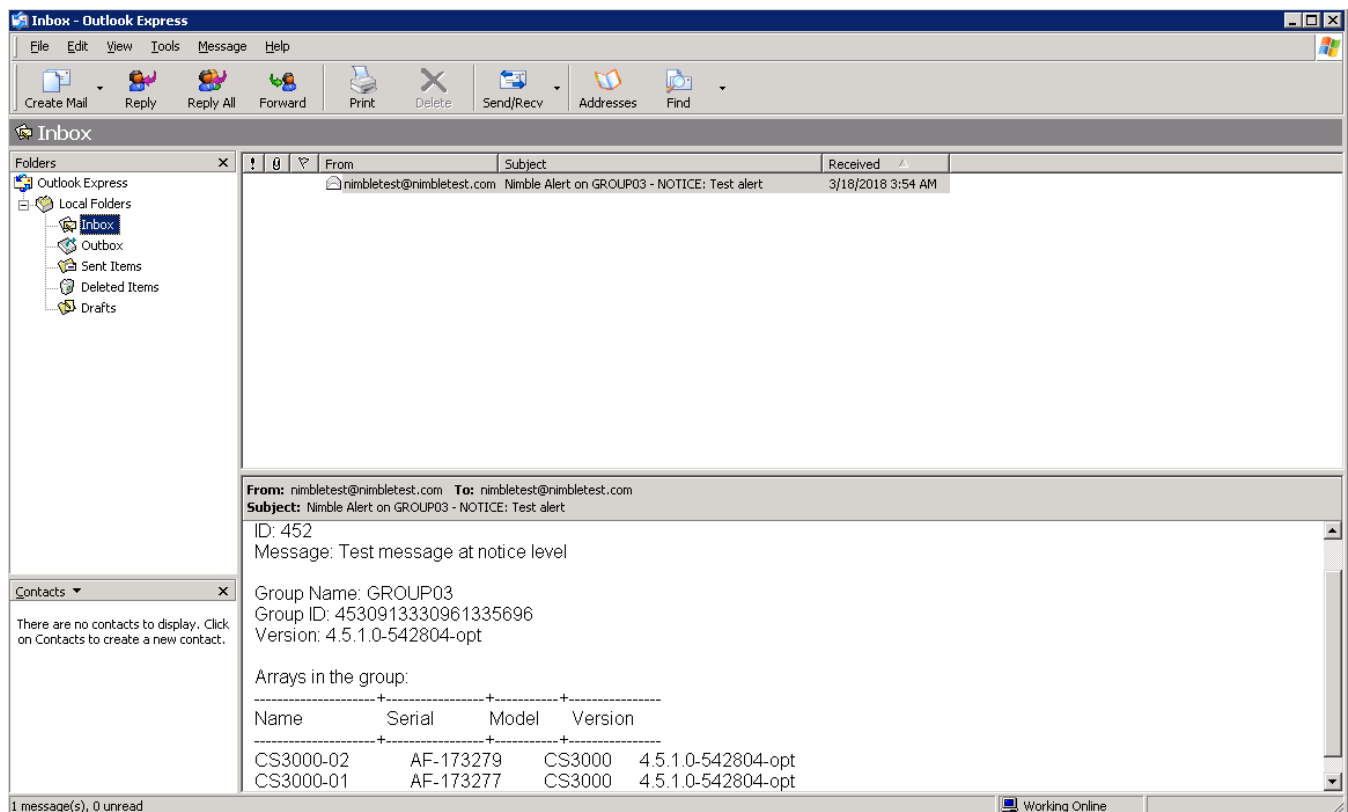
点击 Alert AND MONITORING-EMAL, 发件地址和收件地址都填写 [nimbletest@nimbletest.com](mailto:nimbletest@nimbletest.com), SMTP 服务器填写之前搭建的 SMTP 服务器地址, 认证选择 Yes, 用户名和密码填写 [nimbletest@nimbletest.com](mailto:nimbletest@nimbletest.com) 账号。



选择报警级别，然后点击 **SAVE** 后点击 **TEST**。

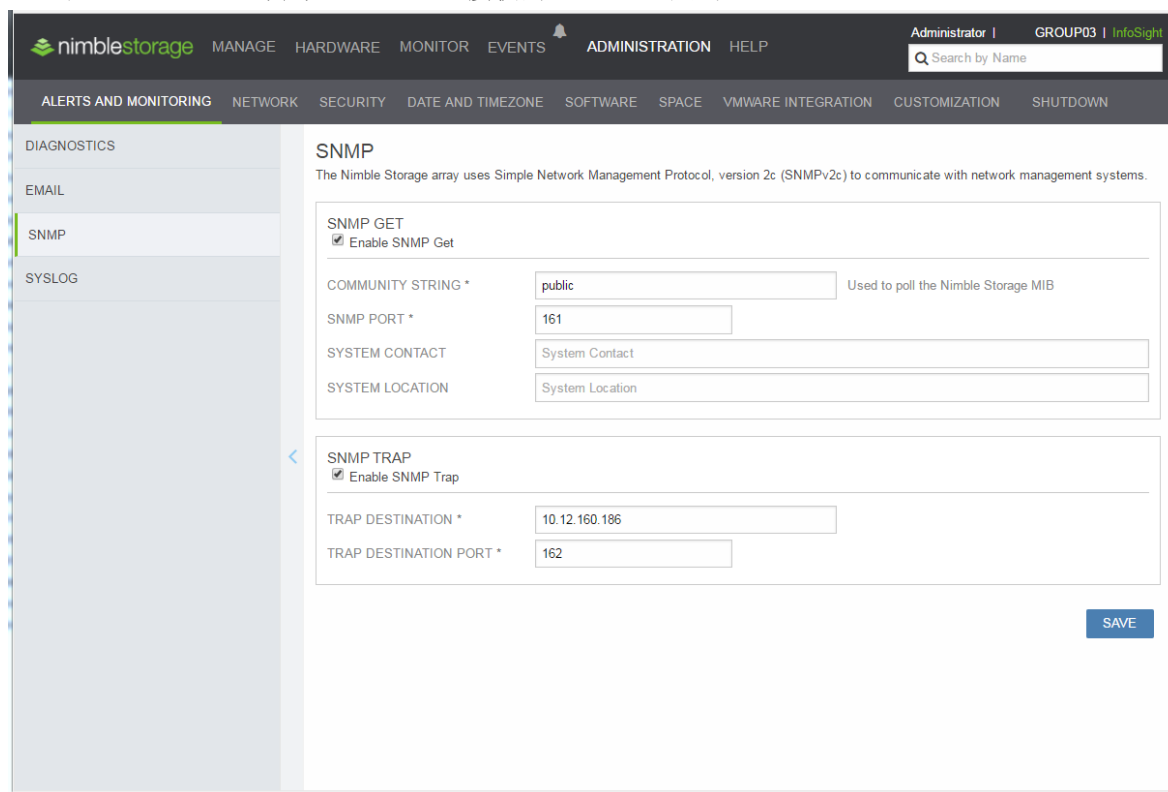


查看 Outlook Express 可以收到报警邮件，测试完成。

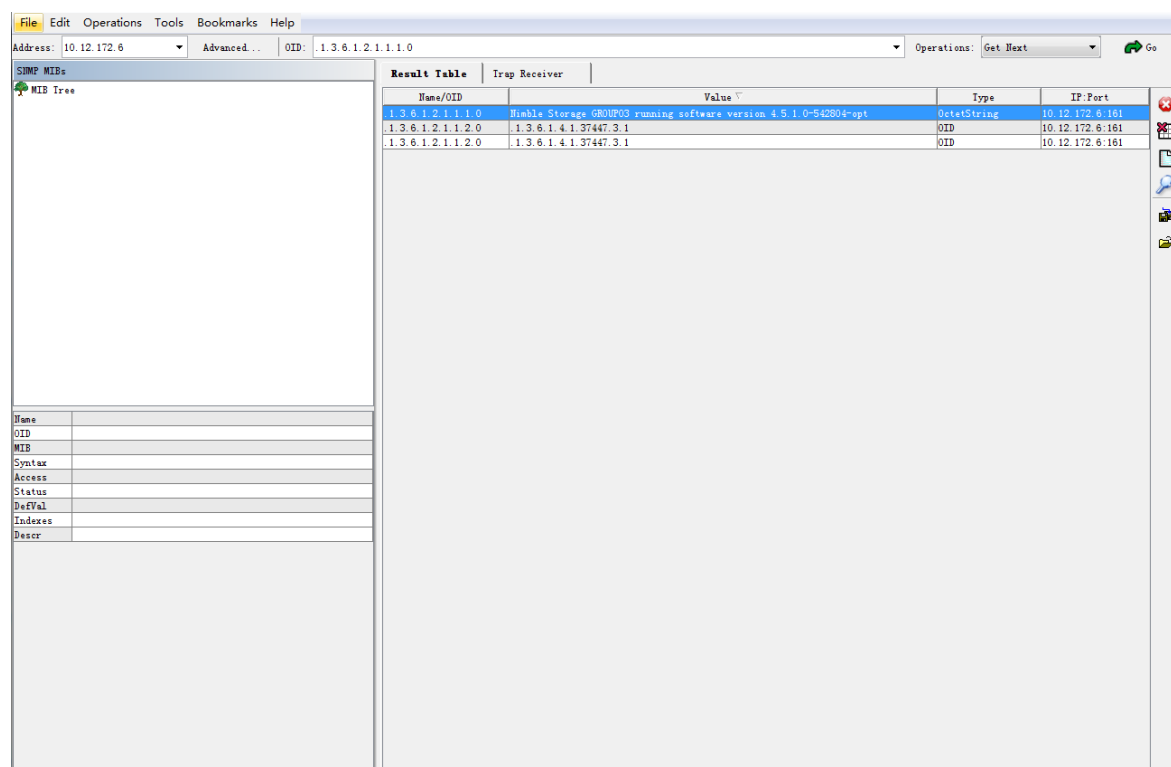


# SNMP 管理功能

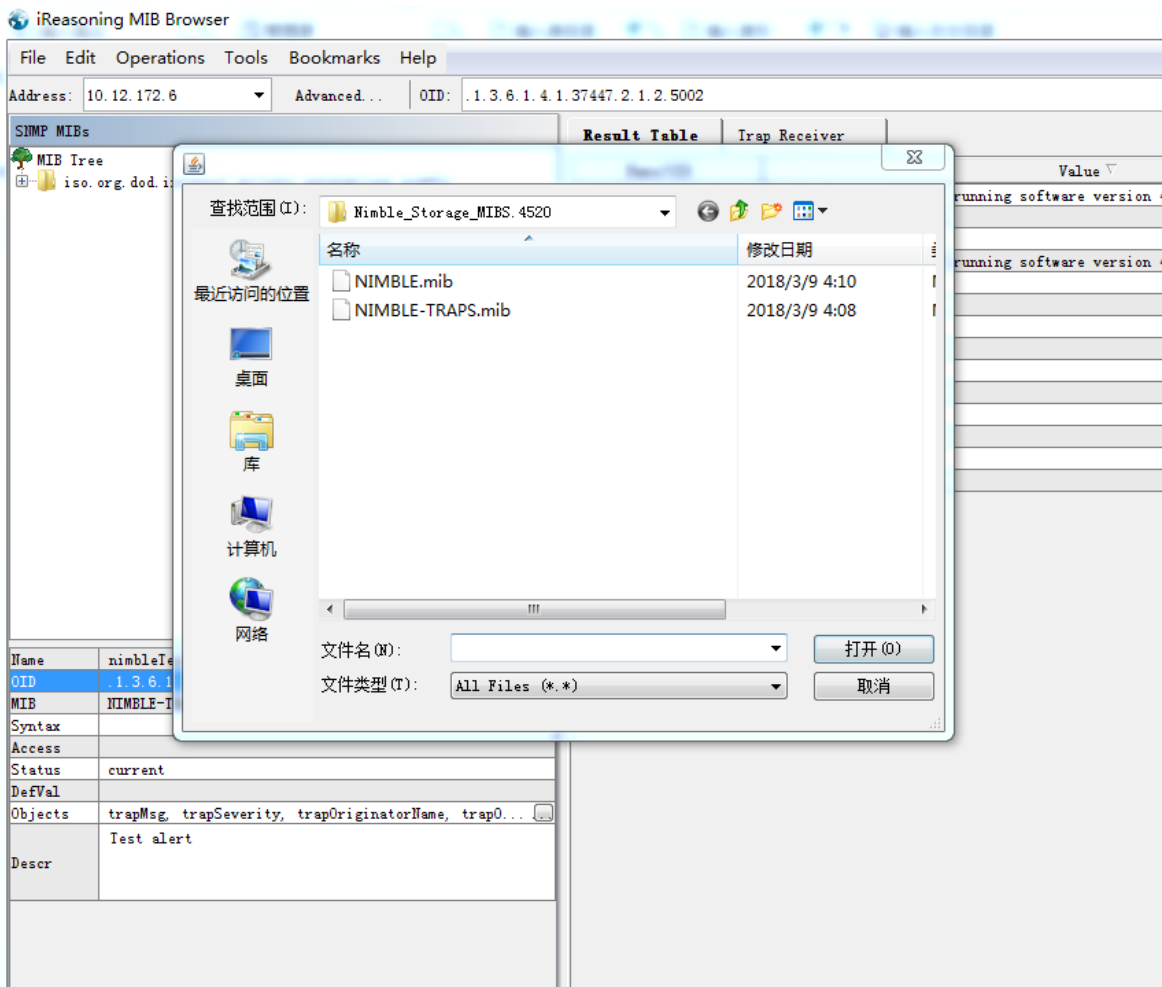
Nimble 存储支持 SNMP V1, V2 和 V2c, 支持 SNMP GET 和 TRAP。点击 ALERTS AND MONITORING-SNMP 启用 SNMP GET 和 SNMP TRAP, 填写 SNMP TRAP 接收的 IP 地址, 点击 SAVE。



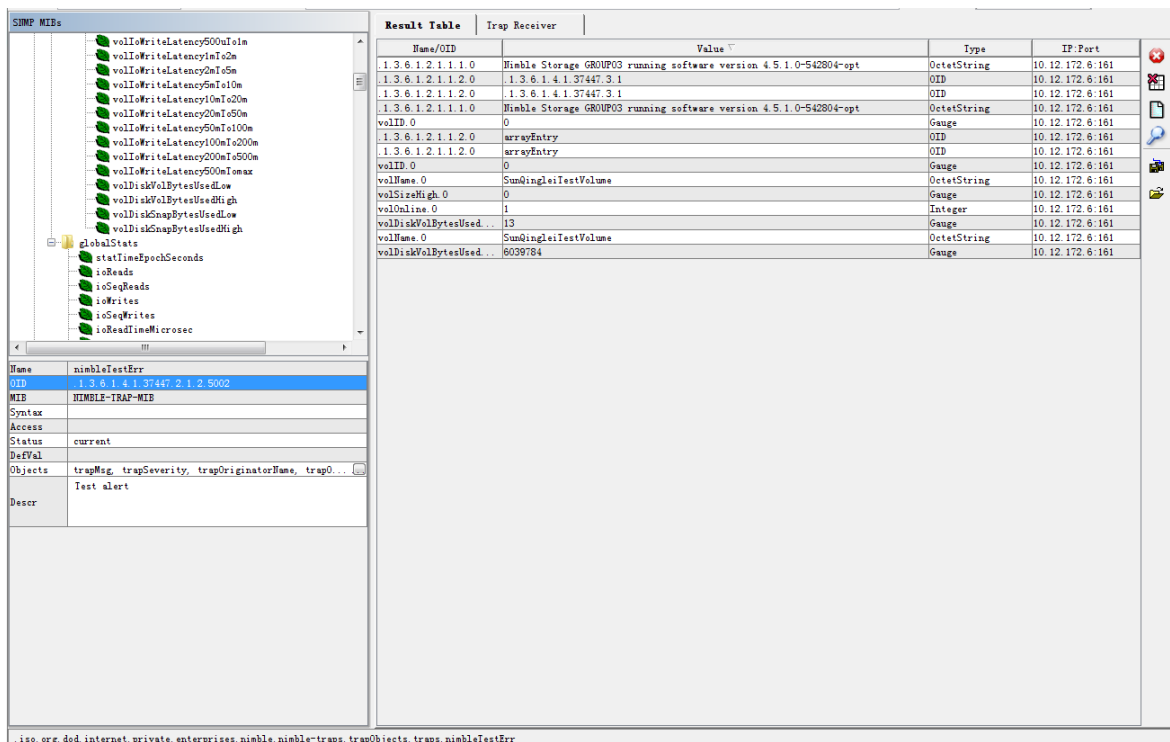
使用 MIB Browser 软件可以使用 Get 功能查看到 Nimble 存储的信息。



在导入 MIB 后可以获取到更多信息。



可以查看到当前存储的卷分配以及占用空间等信息。



使用 disk - remove 移除硬盘测试 SNMP TRAP。

```
Nimble OS $ disk --remove 24 --array CS3000-02 --shelf_location A.P1.1
Nimble OS $ disk --add 24 --array CS3000-02 --shelf_location A.P1.1
Nimble OS $ disk --list
ERROR: Array name or serial number must be specified.
Nimble OS $ disk --list --array CS3000-02
```

slot #	Serial #	Type	Disk Size (GB)	Disk State	RAID Status	Shelf Serial	Shelf Location
1.A	S2UJNX0HB04161	SSD	480.10	in use	N/A	AF-173279	A.0
2.A	S2UJNX0HB04174	SSD	480.10	in use	N/A	AF-173279	A.0
3.A	S2UJNX0HB04114	SSD	480.10	in use	N/A	AF-173279	A.0
4	K5HKMZDZ	HDD	2000.40	in use	okay	AF-173279	A.0
5	K5HLHZAD	HDD	2000.40	in use	okay	AF-173279	A.0
6	K5HL19UD	HDD	2000.40	in use	okay	AF-173279	A.0
7	K5HLHZYD	HDD	2000.40	in use	okay	AF-173279	A.0
8	K5HKMADD	HDD	2000.40	in use	okay	AF-173279	A.0
9	K5HKSULD	HDD	2000.40	in use	okay	AF-173279	A.0
10	K5HLJ54D	HDD	2000.40	in use	okay	AF-173279	A.0
11	K5HKM78D	HDD	2000.40	in use	okay	AF-173279	A.0
12	K5HLHZPD	HDD	2000.40	in use	okay	AF-173279	A.0
13	K5HJ9YSD	HDD	2000.40	in use	okay	AF-173279	A.0
14	K5HKS6D	HDD	2000.40	in use	okay	AF-173279	A.0
15	K5HK2L3D	HDD	2000.40	in use	okay	AF-173279	A.0
16	K5HHP8VD	HDD	2000.40	in use	okay	AF-173279	A.0
17	K5HK2KHD	HDD	2000.40	in use	okay	AF-173279	A.0
18	K5HK2HSD	HDD	2000.40	in use	okay	AF-173279	A.0
19	K5HLS7GD	HDD	2000.40	in use	okay	AF-173279	A.0
20	K5HK1K1D	HDD	2000.40	in use	okay	AF-173279	A.0
21	K5HK2L6D	HDD	2000.40	in use	okay	AF-173279	A.0
22	K5HK1N6D	HDD	2000.40	in use	okay	AF-173279	A.0
23	K5HH8XKD	HDD	2000.40	in use	okay	AF-173279	A.0
24	K5HLNDKD	HDD	2000.40	in use	okay	AF-173279	A.0
1.A	S2TWNX0J411818	SSD	240.06	in use	N/A	AF-172769	A.P1.1
2.A	S2TWNX0J414218	SSD	240.06	in use	N/A	AF-172769	A.P1.1

MIB Browser 可以收到阵列降级的警告，SNMP TRAP 测试成功。

The screenshot shows the MIB Browser interface with a 'Trap Receiver' window open. The window displays a table of trap events. The selected event is 'nimbleRaidDegradedV2'.

Description	Source	Time	Severity
nimbleRaidDegradedV2	10.12.172.5	2018-03-18 18:40:14	
.1.3.6.1.6.3.1.1.5.1	10.12.172.5	2018-03-18 18:39:38	
.1.3.6.1.6.3.1.1.5.1	10.12.172.5	2018-03-18 18:38:38	
.1.3.6.1.6.3.1.1.5.1	10.12.172.5	2018-03-18 18:37:38	
.1.3.6.1.4.1.37447.2.1.2.14806	10.12.172.5	2018-03-18 18:37:23	
.1.3.6.1.4.1.37447.2.1.2.14806	10.12.172.5	2018-03-18 18:37:22	
.1.3.6.1.6.3.1.1.5.1	10.12.172.5	2018-03-18 18:36:38	
.1.3.6.1.4.1.37447.2.1.2.14806	10.12.172.5	2018-03-18 18:35:59	
nimbleGroupAttrSyncDelay	10.12.172.5	2018-03-18 18:35:59	
.1.3.6.1.4.1.37447.2.1.2.14806	10.12.172.5	2018-03-18 18:35:59	
.1.3.6.1.6.3.1.1.5.1	10.12.172.5	2018-03-18 18:35:38	
.1.3.6.1.4.1.37447.2.1.2.14806	10.12.172.5	2018-03-18 18:35:33	
.1.3.6.1.6.3.1.1.5.1	10.12.172.5	2018-03-18 18:34:38	
.1.3.6.1.6.3.1.1.5.1	10.12.160.186	2018-03-18 18:34:32	
.1.3.6.1.6.3.1.1.5.1	10.12.172.5	2018-03-18 18:33:38	
.1.3.6.1.6.3.1.1.5.1	10.12.160.186	2018-03-18 18:33:03	
.1.3.6.1.6.3.1.1.5.1	10.12.172.5	2018-03-18 18:32:38	
.1.3.6.1.6.3.1.1.5.1	10.12.172.5	2018-03-18 18:31:38	
.1.3.6.1.6.3.1.1.5.1	10.12.172.5	2018-03-18 18:30:38	
.1.3.6.1.6.3.1.1.5.1	10.12.172.5	2018-03-18 18:29:38	

The selected event details are as follows:

- Name: snmpTrapOID
- Value: [OID] nimbleRaidDegradedV2
- Name: .iso.org.dod.internet.private.enterprises.nimble.nimble-traps.trapObjects.trapvariables.trapMsg
- Value: [OctetString] RAID array degraded by 1 disk on expansion shelf AF-172769
- Name: .iso.org.dod.internet.private.enterprises.nimble.nimble-traps.trapObjects.trapvariables.trapSeverity
- Value: [OctetString] WARN
- Name: .iso.org.dod.internet.private.enterprises.nimble.nimble-traps.trapObjects.trapvariables.trapOriginatorName
- Value: [OctetString] CS3000-02



## SYSLOG 管理功能

首先在 RHEL 服务器中确认已经安装 rsyslog 组件，然后编辑/etc/rsyslog.conf，主要把\$ModLoad immark, \$ModLoad imudp, \$UDPServerRun 514 三行取消注释。

```
[root@teacher ~]# rpm -qa | grep rsyslog
rsyslog-8.24.0-12.el7.x86_64
[root@teacher ~]# vim /etc/rsyslog.conf
[root@teacher ~]# more /etc/rsyslog.conf
# rsyslog configuration file

# For more information see /usr/share/doc/rsyslog-*/rsyslog_conf.html
# If you experience problems, see http://www.rsyslog.com/doc/troubleshoot.html

#### MODULES ####

# The imjournal module below is now used as a message source instead of imuxsock.
$ModLoad imuxsock # provides support for local system logging (e.g. via logger command)
$ModLoad imjournal # provides access to the systemd journal
#$ModLoad imklog # reads kernel messages (the same are read from journald)
$ModLoad immark # provides --MARK-- message capability

# Provides UDP syslog reception
$ModLoad imudp
$UDPServerRun 514

# Provides TCP syslog reception
$ModLoad imtcp
$InputTCPServerRun 514

#### GLOBAL DIRECTIVES ####

# Where to place auxiliary files
$WorkDirectory /var/lib/rsyslog
```

然后使用 `systemctl restart rsyslog` 或者 `service rsyslog restart` 重启 rsyslog 服务，使用 `netstat -tulpn | grep rsyslog` 确认 syslog 端口在监听状态。

```
Redirecting to /bin/systemctl restart rsyslog.service
[root@teacher ~]# netstat -tulpn | grep rsyslog
tcp        0      0 0.0.0.0:514          0.0.0.0:*           LISTEN    64321/rsyslogd
tcp6      0      0 :::514              :::*                 LISTEN    64321/rsyslogd
udp        0      0 0.0.0.0:514          0.0.0.0:*           LISTEN    64321/rsyslogd
udp6      0      0 :::514              :::*                 LISTEN    64321/rsyslogd
[root@teacher ~]#
```

