

EMC ISILON CUSTOMER TROUBLESHOOTING GUIDE

TROUBLESHOOT PROBLEMS WITH YOUR NIS AUTHENTICATION PROVIDER

Abstract

This guide helps you to troubleshoot the following scenarios:

- The user is unable to connect to the cluster by using an IP address.
- The user is unable to connect to the cluster by using FQDN or SmartConnect zones.
- The user is unable to connect to some nodes.
- The domain or NIS authentication provider reports as offline.

January 6, 2016

Contents and overview

Note

Follow all of these steps, in order, until you reach a resolution.

1. Follow these steps.

Before you begin
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2. Perform troubleshooting steps in order.

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3. Appendixes

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Before you begin



CAUTION!

If the node, subnet, or pool that you are working on goes down during the course of troubleshooting and you do not have any other way to connect to the cluster, you could experience data unavailability.

Therefore, make sure that you have more than one way to connect to the cluster before you start this troubleshooting process. The best method is to have a serial cable available. This way, if you are unable to connect through the network, you will still be able to connect to the cluster physically.

For specific requirements and instructions for making a physical connection to the cluster, see [article 16744](#) on the EMC Online Support site.

Before you begin troubleshooting, confirm that you can connect either through another subnet or pool, or that you have physical access to the cluster.

Configure logging through SSH

We recommend that you configure screen logging to log all session input and output during your troubleshooting session. This log file can be shared with EMC Isilon Technical Support if you require assistance at any point during troubleshooting.

Note: The screen session capability does not work in OneFS 7.1.0.6 and 7.1.1.2. If you are running either of these versions, configure logging by using your local SSH client's logging feature.

1. Open an SSH connection to the cluster and log in by using the root account.

Note: If the cluster is in compliance mode, use the compadmin account to log in. All compadmin commands must be preceded by the `sudo` prefix.

2. Change the directory to `/ifs/data/Isilon_Support` by running the following command:

```
cd /ifs/data/Isilon_Support
```

3. Run the following command to capture all input and output from the session:

```
screen -L
```

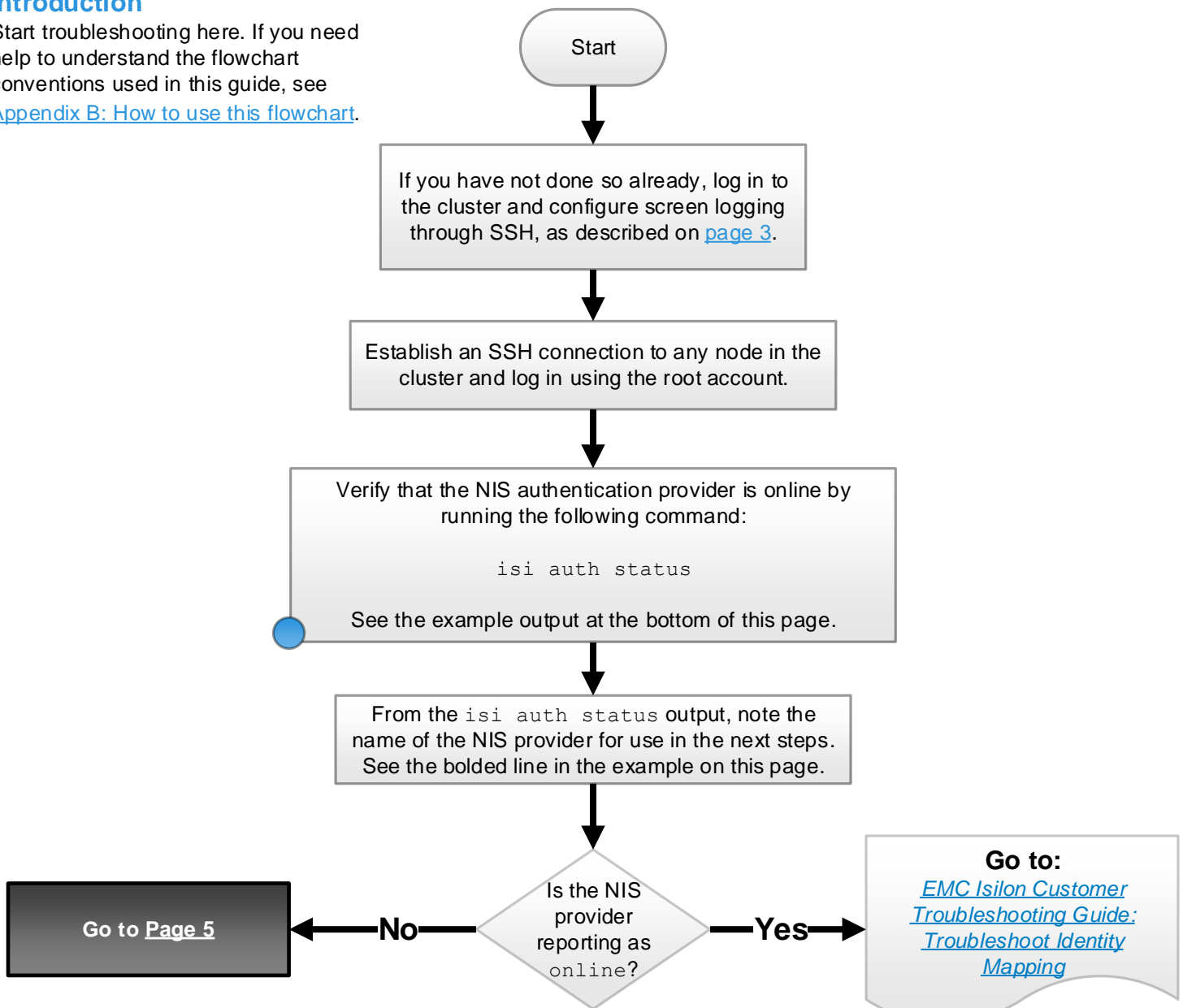
This will create a file named `screenlog.0` that will be appended to during your session.

4. Perform troubleshooting.

Start troubleshooting

Introduction

Start troubleshooting here. If you need help to understand the flowchart conventions used in this guide, see [Appendix B: How to use this flowchart](#).



Example `isi auth status` output

```
Cluster-1# isi auth status
```

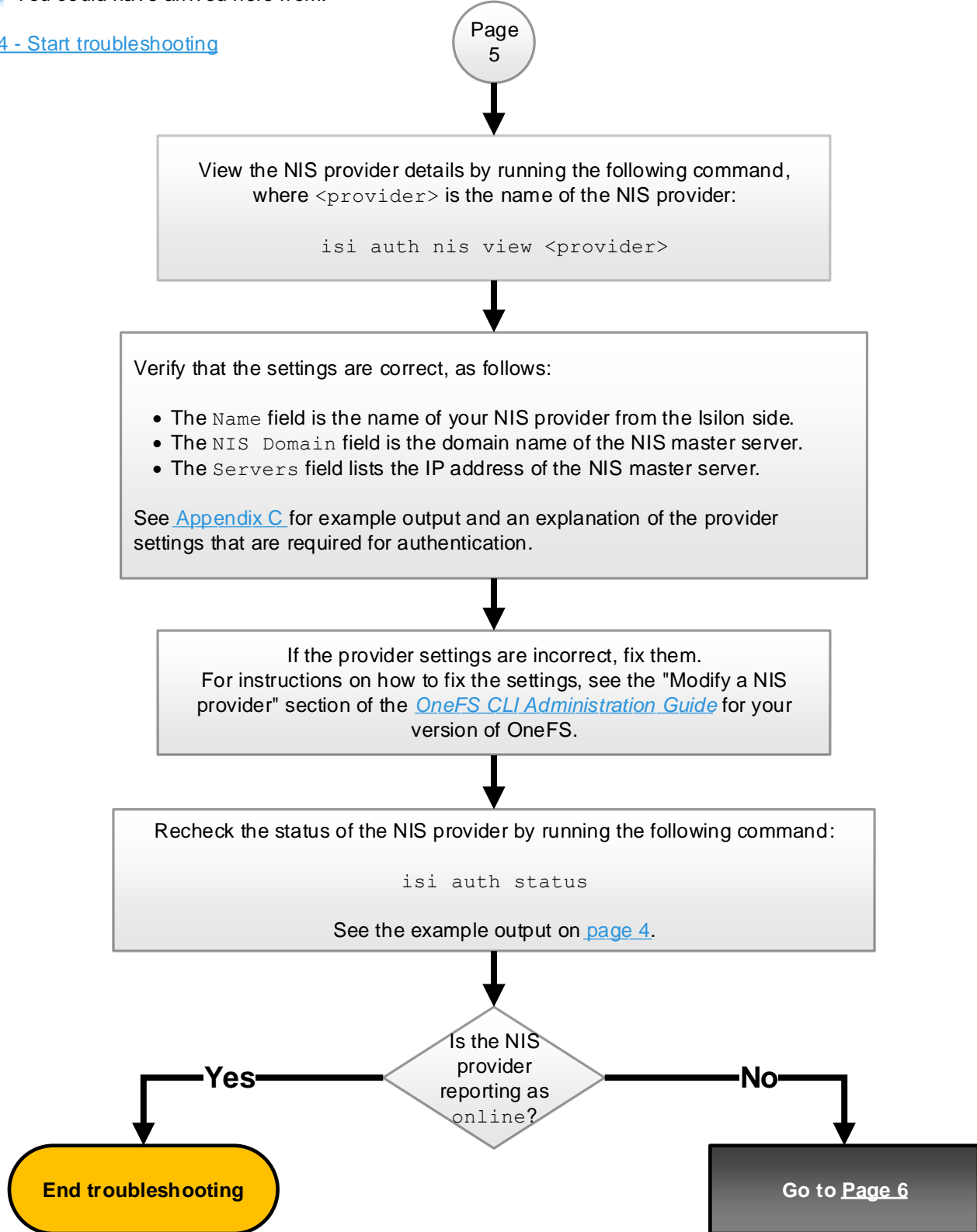
ID	Active Server	Status
lsa-activedirectory-provider:isilon.CORP	WIN2008.emc.com	online
lsa-local-provider:System	-	active
lsa-file-provider:System	-	active
lsa-ldap-provider:ldap-test	-	online
lsa-nis-provider:nis.isilon.corp	-	offline

NIS offline



You could have arrived here from:

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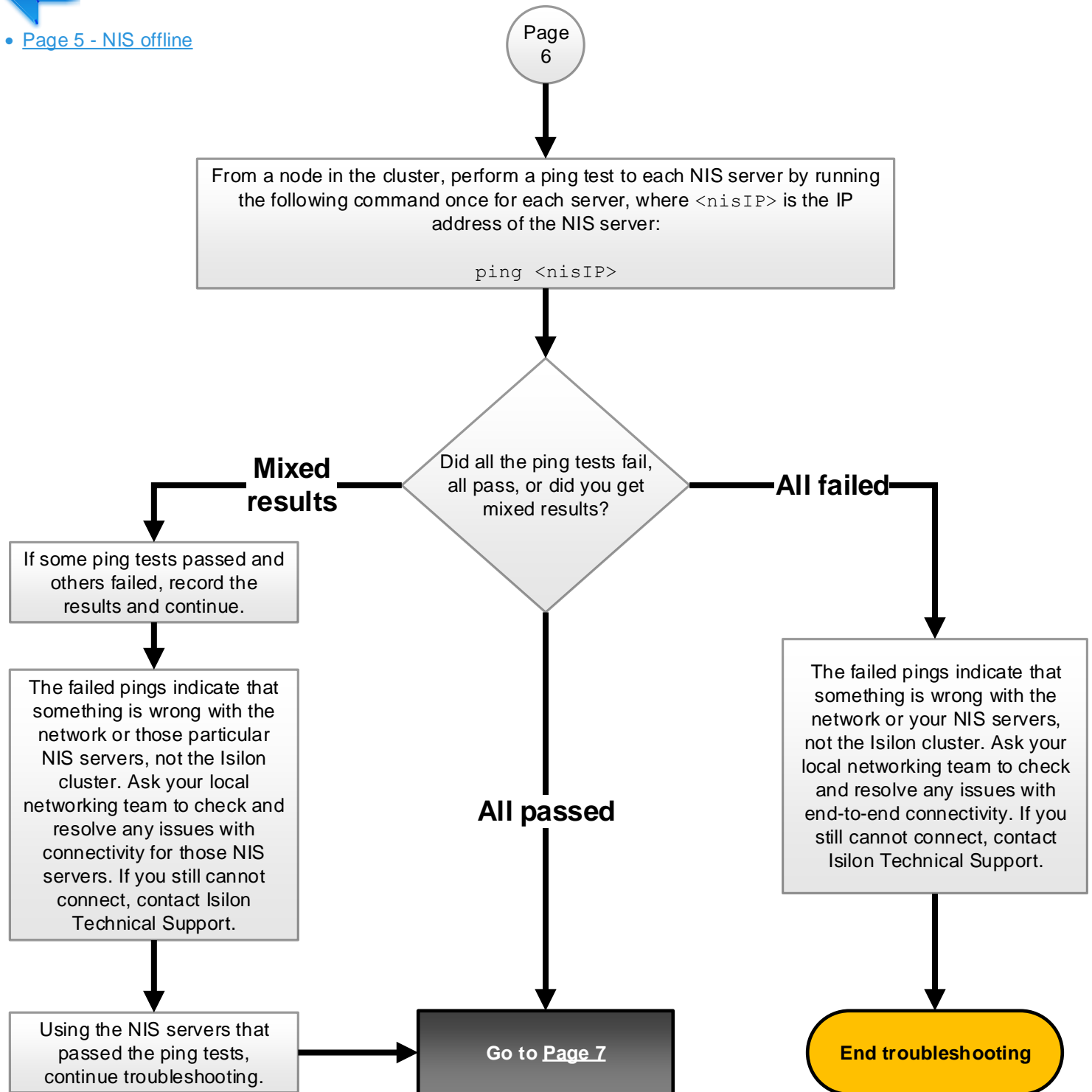


NIS offline (2)



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NIS offline (3)



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Run the following command once for each NIS server, where `<nisIP>` is the IP address of the NIS server:

```
rpcinfo -s <nisIP>
```

See the example output at the bottom of this page.

Did you receive an RPC error?

Yes

Note the page number that you are currently on. Upload log files and contact Isilon Technical Support, as instructed in [Appendix A](#).

No

Is the `ypserv` service listed in the output? See the bold text in the example at the bottom of this page.

Yes

Go to [Page 8](#)

No

Enable the `ypserv` process on your NIS servers. Enabling this process is OS specific.

Example `rpcinfo -s <nisIP>` output

```
Cluster-1# rpcinfo -s <nisIP>
program version(s) netid(s) service owner
100000 2,3,4 local,udp,tcp,udp6,tcp6 rpcbind superuser
100009 1 udp yppasswdd superuser
600100069 1 tcp,udp - superuser
100004 1,2 tcp,udp ypserv superuser
```

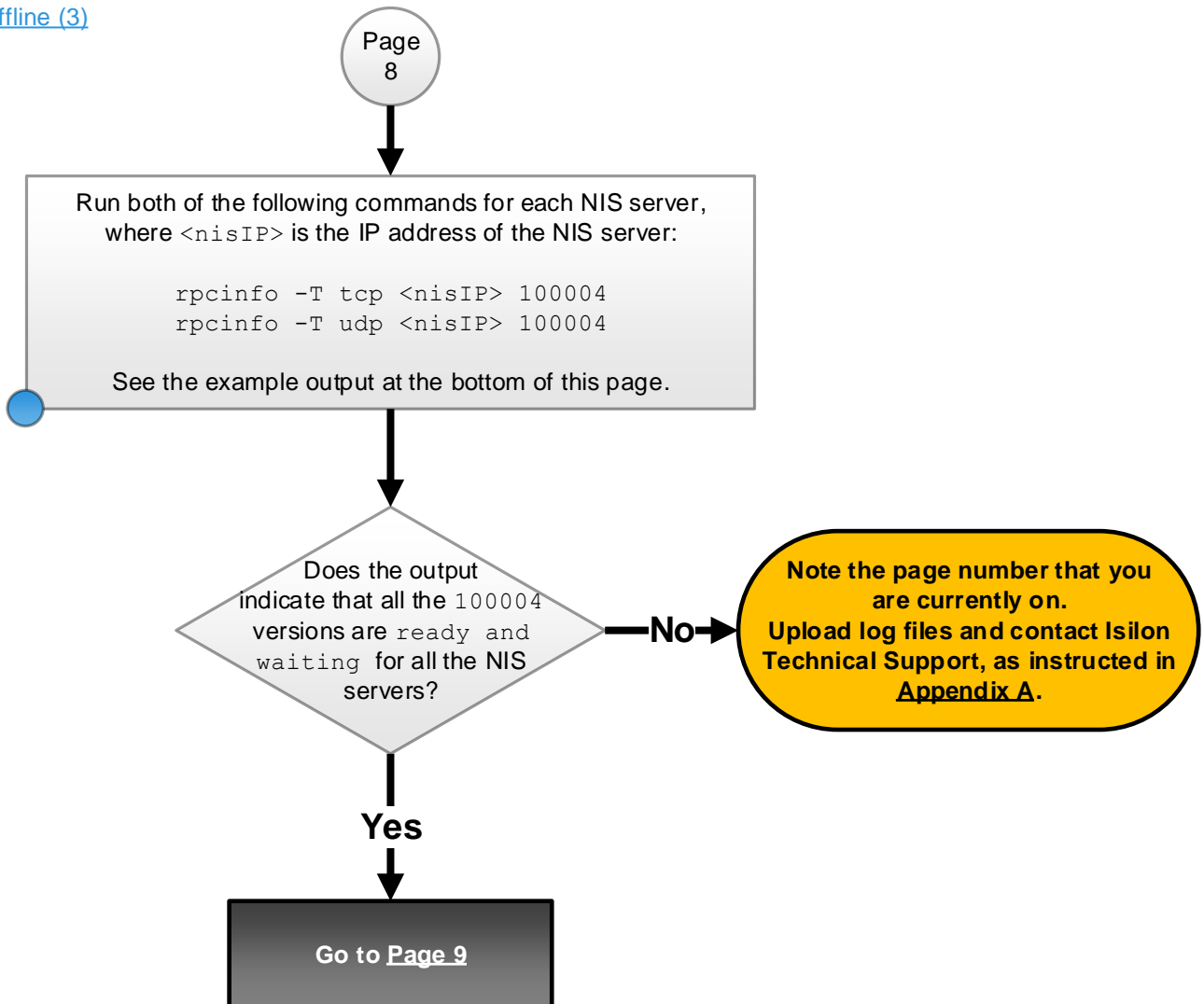


NIS offline (4)



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Example `rpcinfo -T <tcp/udp> <nisIP> 100004` output

```
Cluster-1# rpcinfo -T tcp 10.1.1.1 100004  
program 100004 version 1 ready and waiting  
program 100004 version 2 ready and waiting
```

```
Cluster-1# rpcinfo -T udp 10.1.1.1 100004  
program 100004 version 1 ready and waiting  
program 100004 version 2 ready and waiting
```


NIS offline (5)



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- [Page 8 - NIS offline \(4\)](#)
- [Page 10 - NIS offline \(6\)](#)

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Validate that the client is connected to the NIS server by running the following three commands on the client:

```
ypwhich  
ypcat ypservers  
ypcat passwd | head -3
```

See the example output and an explanation of each command at the bottom of this page.

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Example output

The command `ypwhich` lists the NIS domain that the client is using. Example output:

```
cluster-1# ypwhich  
nis1.example.jblogs.com
```

The command `ypcat ypservers` shows the NIS servers that the client is using. Example output:

```
cluster-1# ypcat ypservers  
nis1.example.jblogs.com  
nis2.example.jblogs.com
```

The command `ypcat passwd | head -3` lists the first three users configured on the NIS server. `Head` indicates the initial entries and `-3` indicates the first three lines of entries. Example output:

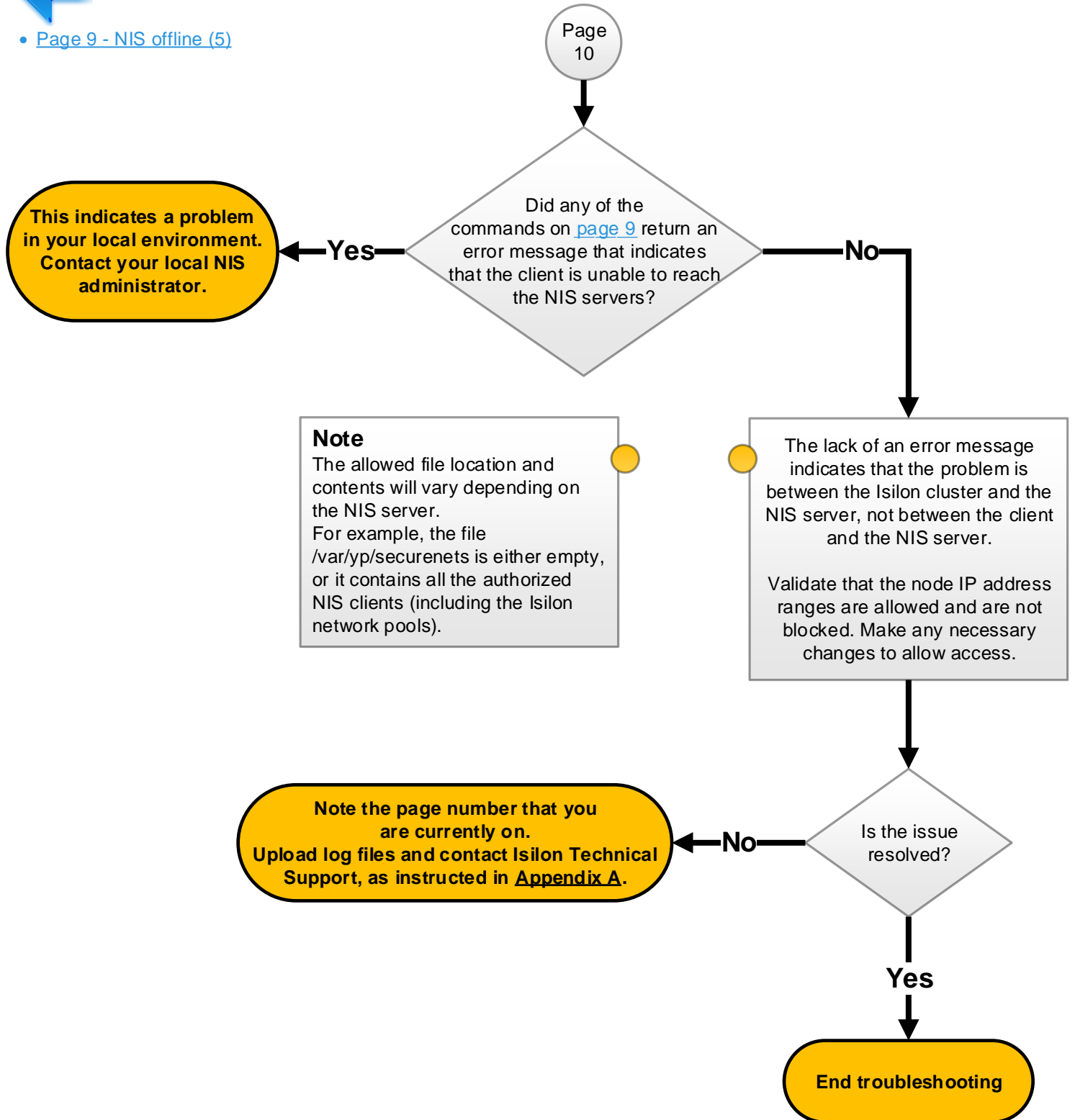
```
cluster-1# ypcat passwd | head -3  
user2083:x:2083:2083::/home/user2083:/bin/bash  
user2116:x:2116:2116::/home/user2116:/bin/bash  
user2096:x:2096:2096::/home/user2096:/bin/bash
```

NIS offline (6)



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Appendix A: If you need further assistance

Contact EMC Isilon Technical Support

If you need to contact [Isilon Technical Support](#) during troubleshooting, reference the page or step that you need help with. This information and the log file will help Isilon Technical Support staff resolve your case more quickly.

Upload node log files and the screen log file to EMC Isilon Technical Support

1. When troubleshooting is complete, type `exit` to end your screen session.
2. Gather and upload the node log set and include the SSH screen log file by using the command appropriate for your method of uploading files. If you are not sure which method to use, use FTP.

ESRS:

```
isi_gather_info --esrs --local-only -f /ifs/data/Isilon_Support/screenlog.0
```

FTP:

```
isi_gather_info --ftp --local-only -f /ifs/data/Isilon_Support/screenlog.0
```

HTTP:

```
isi_gather_info --http --local-only -f /ifs/data/Isilon_Support/screenlog.0
```

SMTP:

```
isi_gather_info --email --local-only -f /ifs/data/Isilon_Support/screenlog.0
```

SupportIQ:

Copy and paste the following command.

Note: When you copy and paste the command into the command-line interface, it will appear on multiple lines (exactly as it appears on the page), but when you press **Enter**, the command will run as it should.

```
isi_gather_info --local-only -f /ifs/data/Isilon_Support/screenlog.0 --noupload \  
--symlink /var/crash/SupportIQ/upload/ftp
```

3. If you receive a message that the upload was unsuccessful, refer to [article 16759](#) on the EMC Online Support site for directions on how to upload files over FTP.

Appendix B: How to use this flowchart

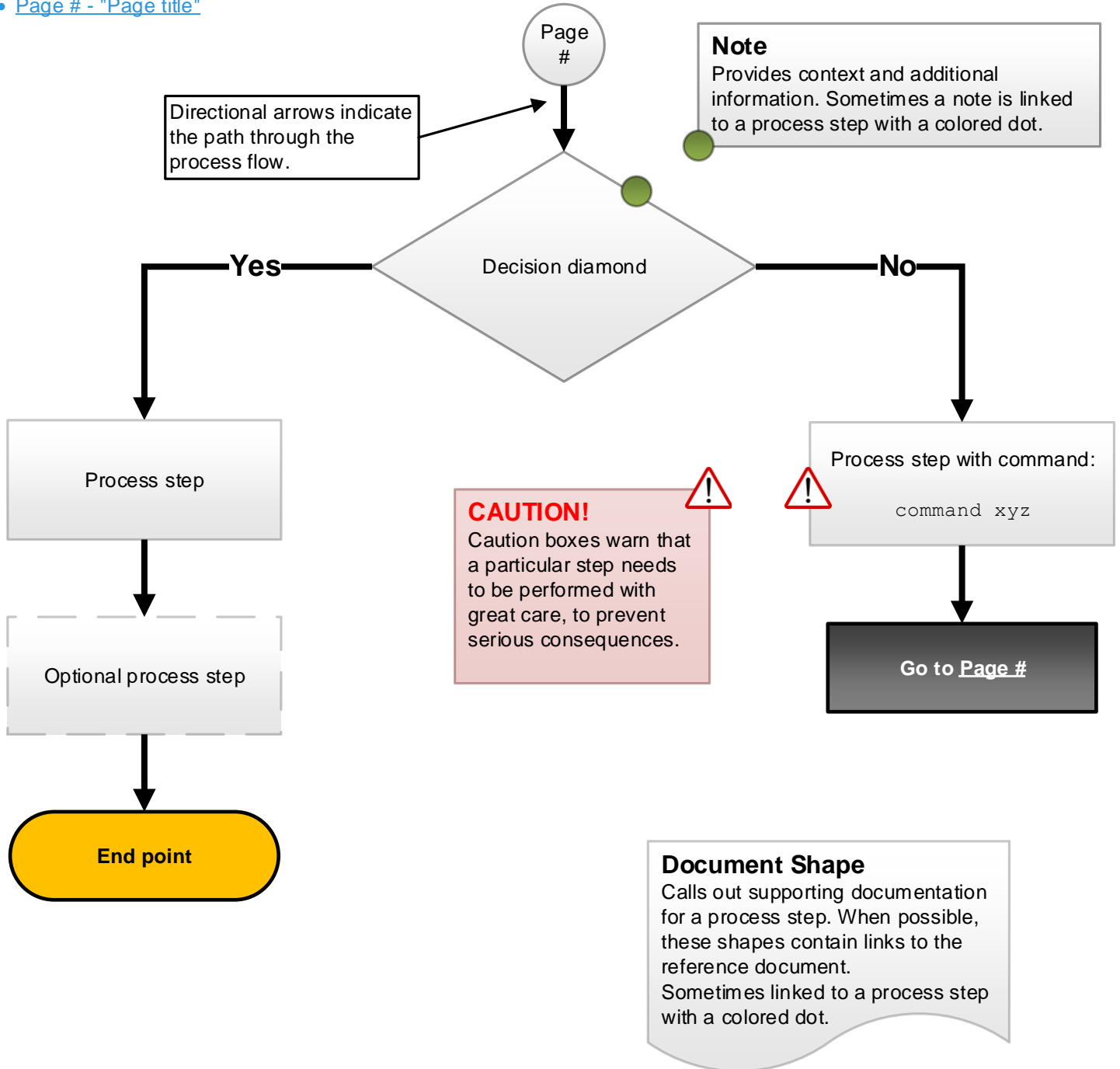
Introduction

Describes what the section helps you to accomplish.



You could have arrived here from:

- [Page # - "Page title"](#)



Appendix C: Example `isi auth nis view <provider>` output



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NIS Domain field

The `NIS Domain` field must match the domain name of the NIS master server.

To find the `NIS Domain` name, run the following command from the NIS master server:

```
domainname
```

Example output:

```
nis.isilon.corp
```

Example `isi auth nis view <provider>` output

```
Cluster-1# isi auth nis view nis1
```

```
Name: nis1
```

```
NIS Domain: nis.isilon.corp
```

```
Servers: 10.1.1.1
```

```
Status: online
```

```
Authentication: Yes
```

```
Balance Servers: Yes
```

```
Cache Entry Expiry: 15m
```

```
Check Online Interval: 3m
```

```
Create Home Directory: No
```

```
Enabled: Yes
```

```
Enumerate Groups: Yes
```

```
Enumerate Users: Yes
```

```
Findable Groups: -
```

```
Findable Users: -
```

```
Group Domain: NIS_GROUPS
```

```
Home Directory Template:
```

```
Hostname Lookup: Yes
```

```
Listable Groups: -
```

```
Listable Users: -
```

```
Login Shell:
```

```
Normalize Groups: No
```

```
Normalize Users: No
```

```
Provider Domain:
```

```
Ntlm Support: all
```

```
Request Timeout: 20
```

```
Restrict Findable: No
```

```
Restrict Listable: No
```

```
Retry Time: 5
```

```
Unfindable Groups: -
```

```
Unfindable Users: -
```

```
Unlistable Groups: -
```

```
Unlistable Users: -
```

```
User Domain: NIS_USERS
```

```
Ypmatch Using Tcp: No
```

Servers field

The `Servers` field must match the IP address of the NIS master server.

To find the NIS master server IP address, run the following command from the NIS master server:

```
ifconfig -a |grep "inet addr"
```

Example output:

```
inet addr: 10.1.1.1 Bcast: 255.255.255.1 Mask: 255.255.255.0
```

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