



Use statistics to monitor Hyper-V and SQL Server over SMB activity

ONTAP 9

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Table of Contents

Use statistics to monitor Hyper-V and SQL Server over SMB activity	1
Determine which statistics objects and counters are available in ONTAP	1
Display SMB statistics in ONTAP	4

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Determine which statistics objects and counters are available in ONTAP

Before you can obtain information about CIFS, SMB, auditing, and BranchCache hash statistics and monitor performance, you must know which objects and counters are available from which you can obtain data.

Steps

1. Set the privilege level to advanced:

```
set -privilege advanced
```

2. Perform one of the following actions:

If you want to determine...	Enter...
Which objects are available	statistics catalog object show
Specific objects that are available	statistics catalog object show -object <i>object_name</i>
Which counters are available	statistics catalog counter show -object <i>object_name</i>

Learn more about `statistics catalog object show` and `statistics catalog counter show` in the [ONTAP command reference](#).

3. Return to the admin privilege level:

```
set -privilege admin
```

Examples

The following command displays descriptions of selected statistic objects related to CIFS and SMB access in the cluster as seen at the advanced privilege level:

```

cluster1::> set -privilege advanced

Warning: These advanced commands are potentially dangerous; use them only
when directed to do so by support personnel.
Do you want to continue? {y|n}: y

cluster1::*> statistics catalog object show -object audit
    audit_ng                      CM object for exporting audit_ng
performance counters

cluster1::*> statistics catalog object show -object cifs
    cifs                          The CIFS object reports activity of the
                                    Common Internet File System protocol
                                    ...
cluster1::*> statistics catalog object show -object nblade_cifs
    nblade_cifs                   The Common Internet File System (CIFS)
                                    protocol is an implementation of the
Server
                                    ...
cluster1::*> statistics catalog object show -object smb1
    smb1                          These counters report activity from the
                                    SMB
                                    revision of the protocol. For information
                                    ...
cluster1::*> statistics catalog object show -object smb2
    smb2                          These counters report activity from the
                                    SMB2/SMB3 revision of the protocol. For
                                    ...
cluster1::*> statistics catalog object show -object hashd
    hashd                         The hashd object provides counters to
measure
                                    the performance of the BranchCache hash
daemon.
cluster1::*> set -privilege admin

```

The following command displays information about some of the counters for the `cifs` object as seen at the advanced privilege level:



This example does not display all of the available counters for the `cifs` object; output is truncated.

```

cluster1::> set -privilege advanced

Warning: These advanced commands are potentially dangerous; use them only
when directed to do so by support personnel.
Do you want to continue? {y|n}: y

cluster1::*> statistics catalog counter show -object cifs

Object: cifs
  Counter          Description
  -----
  -----
  active_searches      Number of active searches over SMB and
SMB2
  auth_reject_too_many  Authentication refused after too many
                        requests were made in rapid succession
  avg_directory_depth  Average number of directories crossed by
SMB
                        and SMB2 path-based commands
  ...
  ...

cluster2::> statistics start -object client -sample-id
Object: client
  Counter          Value
  -----
  cifs_ops          0
  cifs_read_ops     0
  cifs_read_recv_ops 0
  cifs_read_recv_size 0B
  cifs_read_size    0B
  cifs_write_ops    0
  cifs_write_recv_ops 0
  cifs_write_recv_size 0B
  cifs_write_size   0B
  instance_name     vsserver_1:10.72.205.179
  instance_uuid      2:10.72.205.179
  local_ops          0
  mount_ops          0

  ...

```

Learn more about `statistics start` in the [ONTAP command reference](#).

Display SMB statistics in ONTAP

You can display various SMB statistics to monitor performance and diagnose issues.

Steps

1. Use the `statistics start` and optional `statistics stop` commands to collect a data sample.
2. Perform one of the following actions:

If you want to display statistics for...	Enter the following command...
All versions of SMB	<code>statistics show -object cifs</code>
SMB 1.0	<code>statistics show -object smb1</code>
SMB 2.x and SMB 3.0	<code>statistics show -object smb2</code>
SMB subsystem of the node	<code>statistics show -object nblade_cifs</code>

Related information

- [statistics show](#)
- [statistics start](#)
- [statistics stop](#)

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