



InfoSphere VDP Tech Brief

Daily Tasks for Administrators

This tech brief describes the daily tasks that should be performed by an InfoSphere VDP Appliance administrator. Tasks include:

[Reviewing Daily Report Manager Reports](#) on page 1

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Reviewing Daily Report Manager Reports

The optional Report Manager can generate detailed reports on your InfoSphere VDP Appliance and the applications and data it manages.

For details on how to configure the Report Manager to automatically generate and deliver daily email reports, see ***Using the Report Manager***.

At a minimum, IBM InfoSphere recommends that you review the following reports:

Overall Appliance Summary

The following is an example of an Overall Appliance Summary report.



Overall Appliance Summary Report

Failed Jobs By Application Report

In the Failed Jobs By Application report, review the messages associated with the application. This is a report on the failure status of different types of jobs that are run by InfoSphere VDP Appliance to execute the protection policies set for each protected applications. By exception, the details of only the failed jobs are reported.

The following is an example of a Failed Jobs By Application Report.

FAILED JOBS BY APPLICATION						
START TIME: 2015-09-10 19:13			END TIME: 2015-09-11 19:13			
APPLIANCE: cluster7			ORGANIZATION: Unassigned			
APPLICATION TYPE: FileSystem			APPLICATION: /scl/mnt/job_0168372_mountpoint t_1440574360861 (na770063616)			
FAILED JOB DETAILS						
JOB NAME	JOB TYPE	SLA	POLICY NAME	JOB FAILURE TIME	MESSAGE	
Job_0153683	snapshot	snap 3 mins	Production to Snap 1	2015-09-11 04:53	Error: Application discovery failed.	
Job_0153796	snapshot	snap 3 mins	Production to Snap 1	2015-09-11 04:55	Error: Application discovery failed.	
Job_0154142	snapshot	snap 3 mins	Production to Snap 1	2015-09-11 04:58	Error: Application discovery failed.	
Job_0154340	snapshot	snap 3 mins	Production to Snap 1	2015-09-11 05:00	Error: Application discovery failed.	
Job_0154450	snapshot	snap 3 mins	Production to Snap 1	2015-09-11 05:02	Error: Application discovery failed.	
Job_0154475	snapshot	snap 3 mins	Production to Snap 1	2015-09-11 05:05	Error: Application discovery failed.	

Failed Jobs By Application Report

A few causes for job failure can include:

- Host(s) down due to maintenance or other issues
- VMware host migrated to another vCenter
- InfoSphere VDP Connector not running

SLA Violations Details Report

In the SLA Violations Details report, review the SLA Violations Reason column.

Note: To ensure reports show the most up-to-date information, schedule the Report Manager to collect data approximately 30 minutes after the SLA violation analysis is scheduled.

The following is an example of an SLA Violations Details report.

SLA VIOLATION DETAILS									
START TIME: 2016-01-19 02:10					END TIME: 2016-01-20 02:10				
APPLIANCE: Sky6250TB					APPLICATION: / (NSTLPAR20)				
APPLIANCE	HOST NAME	APPLICATION NAME	APPLICATION TYPE	SLA	POLICY NAME	JOB TYPE	VIOLATION TIME	VIOLATION TYPE	REASON
Sky6250TB	NSTLPAR20	/	FileSystem	SnapDedup20min	Production to Snap 1	snapshot	2016-01-19 10:29	scheduler off	unknown reason
Sky6250TB	NSTLPAR20	/	FileSystem	SnapDedup20min	Snapshot to Dedup 1	dedup	2016-01-19 10:29	scheduler off	unknown reason
APPLIANCE: Sky6250TB					APPLICATION: / (rhel7)				
APPLIANCE	HOST NAME	APPLICATION NAME	APPLICATION TYPE	SLA	POLICY NAME	JOB TYPE	VIOLATION TIME	VIOLATION TYPE	REASON
Sky6250TB	rhel7	/	FileSystem	SnapDedup20min	Production to Snap 1	snapshot	2016-01-19 10:29	not run	unknown reason
Sky6250TB	rhel7	/	FileSystem	SnapDedup20min	Snapshot to Dedup 1	dedup	2016-01-19 10:29	not run	unknown reason

SLA Violations Details Report

SLA violations caused by failed jobs will list the specific problem in the Reason column.

SLA violations can also be caused by an overloaded InfoSphere VDP Appliance where some jobs are not run due to a lack of resources. For example:

- New applications were added and ingestion of new data is overloading the appliance.
- The rate of change on hosts/applications is very large and cause snapshot jobs to take longer than expected.
- The SLA window for Snapshot and Dedup (local/remote) jobs are too small.
- Dedup pool Garbage Collection job is running and competing with other jobs for system resources.

Job History Summary by Job Type

These reports detail historical information on job success and failure, sorted by application and job type. Every application is protected by executing a set of jobs (such as snapshot, Dedup, Dedup-Async, StreamSnap, expiration, and so on) depending on the protection policy set for the application. Depending on the execution frequency set in the protection policy, each type of job may run multiple times during a specified period of time. This report provides a success and failure summary for each job type for each application.

Compare the total number of successful jobs with the total number of jobs you expected to complete. A job that is hung in the running state will not be reported as an SLA violation.

The following is an example of a Job History Summary by Job Type report.

Review this report to ensure:

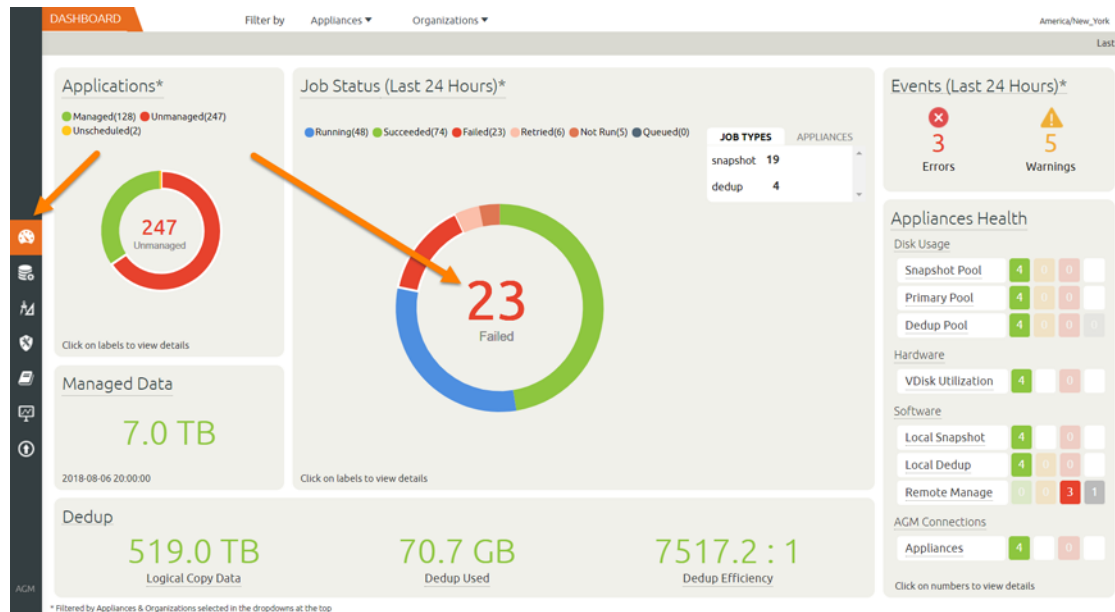
- The expected number of jobs have completed successfully
- No jobs have failed

JOB HISTORY SUMMARY BY JOB TYPE					
START TIME: 2015-09-10 19:20			END TIME: 2015-09-11 19:20		
APPLIANCE: clusterh7			ORGANIZATION: Unassigned		
APPLICATION TYPE: FileSystem			APPLICATION: / (size 12)		
JOB TYPE	TOTAL JOBS (#)	SUCCESS JOBS (#)	JOBS SUCCEEDED (%)	FAILED JOBS (#)	JOBS FAILED (%)
dedup	2	2	100	0	0
snapshot	2	2	100	0	0

Job History Summary by Job Type

Reviewing Job Failures Displayed on the IVGM Dashboard

The number of and information about job failures is displayed in the center of the IVGM Dashboard:



Number of Job Failures Displayed on Dashboard

Click on the number of job failures to display a list of failed jobs in the System Monitor service. For example:

The screenshot shows the 'SYSTEM MONITOR' Jobs page. A table lists failed jobs with columns for Job, Status, Host, Application, Queued, Started, Ended, Type, Template, Policy, Priority, and Transp... The table contains four entries, all with a status of 'Failed' and an error code of 21009.

JOB	STATUS	HOST	APPLIC...	APPLIA...	QUEUED	STARTED	ENDED	TYPE	TEMPLA...	POLICY	PRIORITY	TRANSP...
Job_051...	Failed Error Code: 21075	virt_9	virt_9	deceptic...	08-07 13...	08-07 13...		snapshot	Dedupas...	Producti...	medium	Block
Job_051...	Failed Error Code: 21009	virt_8	virt_8	deceptic...	08-07 13...	08-07 13...		dedup	Virtapps...	Dedups10	medium	Block
Job_051...	Failed Error Code: 21009	virt_7	virt_7	deceptic...	08-07 13...	08-07 13...		dedup	Virtapps...	Dedups10	medium	Block
Job_051...	Failed Error Code: 21009	virt_6	virt_6	deceptic...	08-07 13...	08-07 13...		dedup	Virtapps...	Dedups10	medium	Block

Job Failures Displayed in System Monitor Service

Double-click on a job entry to display detailed information about the entry.

Review the details of the entry and:

- o Ensure the application's host is running.
- o For virtual machines, verify the VM has not been migrated to another vCenter.
- o If applicable, verify that the InfoSphere VDP Connector service is running.

The screenshot shows the 'Job_0519962 Details' page. It displays various job details including ID, Progress, Appliance, Policy Name, Priority, Job Type, Status, Host Name, Template Name, and Application Name.

ADDITIONAL	VOLUME INFO	STATISTICS
ID	Job_0519962_1415050203	
PROGRESS	4%	
APPLIANCE	deception2	
POLICY NAME	Dedups10	
PRIORITY	medium	
JOB TYPE	dedup	
STATUS	failed	
HOST NAME	virt_8	
TEMPLATE NAME	Virtapps_misfire	
APPLICATION NAME	virt_8	

Reviewing Errors and Warnings Displayed on the IVGM Dashboard

The number of errors and warnings encountered by an InfoSphere VDP Appliance are displayed in the upper right-hand corner of the Dashboard:

Events (Last 24 Hours)*

×

3

Errors

!

5

Warnings

Number of Errors and Warnings Displayed in IVGM Dashboard

Click on the number of errors or warnings to display a list of the errors or warning in the System Monitor service. For example:

SYSTEM MONITOR

Filter byAppliancesOrganizations

America/New_Yorkadmin

Refresh in: 13Last Updated: 13:27:41

clear all filters

MESSAGE

filter by message

EVENT DATE

Past Day

Past Week

Past Month

REQUIRES CLEARING

Yes

No

SEVERITY

Error

Info

Warning

Events

hide filtersTime: Past DayStatus: Error

type to search...

EVENT ID	MESSAGE	APPLIANCE	COMPONENT	EVENT DATE	REQUIRES C...	SEVERITY
43901	Failed snapshot Job_0312464 for application orcdbp on host oel7.3-vmp2, ...	APS.Sky1-41	CDS	08-07 07:00:53	No	Error
43901	Failed snapshot Job_0312143c for application orcdbp on host oel7.3-vmp2...	APS.Sky1-41	CDS	08-07 02:27:53	No	Error
43901	Failed snapshot Job_0311820c for application orcdbp on host oel7.3-vmp2...	APS.Sky1-41	CDS	08-06 20:27:37	No	Error

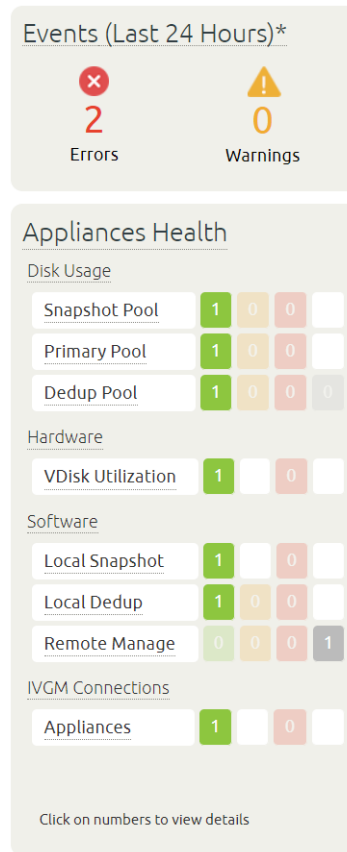
1 - 3 of 3 events1 of 1 page

Errors Displayed in System Monitor Service

Double-click on an error entry to display detailed information about the error.

Reviewing the Appliances Health Monitor in the IVGM Dashboard

The high-level status of your managed InfoSphere VDP Appliances is displayed in the Appliances Health Monitor on the right-hand side of the Dashboard:



Appliances Health Monitor in IVGM Dashboard

The Appliances Health Monitor provides an overview of resource usage and system health.

- **Disk Usage:** Current percent utilization of the default pools (Snapshot, Primary, and Dedup pools). Clicking the Snapshot Pool, Primary Pool, or Dedup Pool label displays the associated pool window in the Domain Manager. If you do not have access to Snapshot Pool, Primary Pool, or Dedup Pool information, then you see no values in Disk Usage.
- **Hardware:** Status of storage resources and VDisk utilization.
- **Software:** Status of local snapshot, local dedup, and remote protection.
- **IVGM Connections:** Status of connections to each managed InfoSphere VDP Appliance.

If you mouse over an entry in the System Health Monitor, definitions for the various color coded status indicators are displayed. The following sections detail these components of the System Health Monitor:

[Disk Usage](#)

[Hardware](#)

[Software](#)

[IVGM Connections](#)

Disk Usage

If the System Health Monitor shows a Disk Usage pool as YELLOW or RED:

1. Click on the pool and the Domain Manager's Storage Pools page is displayed.
2. If possible, add more disks to the pool. See IVGM Online Help for instructions.
3. Contact IBM InfoSphere Support if more disks cannot be added.

Name	Type	Appliance	Warning	Safe	% Used	Free	Usage
act_per_pool000	Snapshot	decepticon2	80	90		99.50 GB	
act_per_pool000	Snapshot	bigcats	80	90		99.50 GB	
act_per_pool000	Snapshot	powerkill	80	90		99.50 GB	
act_per_pool000	Snapshot	APS.Sky1-41	80	90	1.9	997.00 GB	19.

Checking Disk Usage

Hardware

- If the System Health Monitor Hardware Storage section displays YELLOW or RED, ensure storage is online.
- If VDisk utilization is RED, the VDisk count has exceeded its limit and corrective action is necessary: unmount unneeded active images and expire old images from snapshot pool. The IVGM online help has instructions.

Software

- If Local Snapshot or Dedup is RED, contact IBM InfoSphere Support.
- If Remote Manage is YELLOW or RED, determine if communication between InfoSphere VDP Appliances has been disrupted or changed.

IVGM Connections

If any IVGM connections are RED or YELLOW, then click on the red or yellow square to see in the Domain Manager which managed appliances have issues.

Appliance ID	Name	Stale	IP	Synchronized	Version
1415050203	decepticon2	false	172.16.122.187	2018-08-07 15:04:27	7.1 (7.1.4.331)
1415069575	bigcats	false	172.16.122.186	2018-08-07 15:04:26	7.1 (7.1.3.268)
1415071315	powerkill	false	172.16.122.185	2018-08-07 15:04:27	7.1 (7.1.2.195)
1415038267	APS.Sky1-41	false	172.16.122.41	2018-08-07 15:04:26	8.0 (8.0.0.1231)

Checking IVGM Connections