

Seagate Info Advanced Administration

Seagate Info Technical Roadmap Series

Overview

This document outlines advanced administrative features, tools, and processes that can help you optimize and troubleshoot your Seagate Info deployment. It also discusses how you can monitor the system health and resources. You should read this document if you are a Seagate Info administrator. This document applies to Seagate Info 7.

Contents

INTRODUCTION	2
ADMINISTRATIVE REPORTS	2
<i>Standard Reports.....</i>	2
<i>Developing Custom Administrative Reports.....</i>	2
MONITORING TOOLS	3
<i>Veritas Manage Exec</i>	3
Seagate Info and the ManageExec Windows Desktop	4
Seagate Info and the ManageExec Web Console	4
<i>MMC Snap-In.....</i>	6
<i>Performance Monitor.....</i>	6
UTILITIES	7
Modules.exe	7
BlackIce.exe	7
ImpUsers.exe.....	7
Sicvw32.exe	8
Sqlcon32.exe	8
Svrdep.exe.....	8
ACTIVITY TRACING	8
Installation.....	8
Info System Database migration	9
Info Sentinel.....	9
Info APS.....	9
Info APS Clustering	9
RPTAgent.....	10
SUMMARY	10

Introduction

This document introduces advanced administrative tools and features available in Seagate Info 7. It is designed as a companion guide to the Seagate Info Administrator's Guide and goes into more detail on the ongoing monitoring of system health and resources.

The first section on administrative reporting explains how to access standard administrative reports shipped with Seagate Info and how to create new reports that report off the Info System Database. The second section discusses the monitoring tools shipped with Seagate Info, including ManageExec, the Seagate Info MMC snap-in component and the Performance Monitor. The third section describes the set of administration/monitoring tools shipped on the Seagate Info product CD and those available from the Crystal Decisions web site. The fourth and final section on activity tracing explains how activity for main Seagate Info components is logged.

Administrative Reports

This section introduces the **Administrative Report component** that is shipped with Seagate Info. You will learn how to create new administrative reports against the Seagate Info system database by describing the table structure of **CI_INFOOBJECTS** and **CI_RUNTIMEIMAGE**.

Standard Reports

The Seagate Info Group Members Report and the Seagate Info NT Event Log are included as sample administrative reports with Seagate Info.

The Group Members Report lists the groups within Seagate Info and the members belonging to any given Seagate Info Group. The report is based on 3 tables: **CI_GRPINFO**, **CI_GRPUSERS**, **CI_USERS**.

The main table, **CI_GRPINFO** links to the **CI_GRPUSERS** table via the **CI_GROUPID** field. The **CI_GRPUSERS** table links to the **CI_USERS** table via the **CI_GRPUSERS.CI_USER_ID** field to **CI_USERS.CI_USERSECID**.

The Seagate Info NT Event Log lists all the Seagate Info-related application events from the NT Application Event Log, sorting them from most to least recent. The report is based on the NT Application Event Log.

Developing Custom Administrative Reports

The Info System Database stores status information on pending jobs, folders, objects, security settings, and a range of other variables related to system configuration and performance. In addition to the **CI_GRPINFO**, **CI_GRPUSERS** and **CI_USERS** tables, other useful source tables are **CI_RUNTIMEIMAGE** and **CI_INFOOBJECTS**.

Reporting against the Info System Database is only supported using the Seagate Info Software Developer's Kit (SDK). Reporting against the database through any other means may cause the Info APS to become unstable and is not recommended.

For more information on the Info System Database, please contact Technical Support.

Monitoring Tools

In this chapter we will concentrate on the three monitoring tools that are shipped with Seagate Info 7: **Manage Exec**, **MMC Snap-In**, **Performance Monitor**.

Manage Exec is the most comprehensive tool for monitoring Seagate Info activities and resources on the back-end server machines. MMC Snap-In acts only as Seagate Info activity monitor but is easy to install and some people are used to working with MMC tool. Performance Monitor will monitor Seagate Info activity in similar fashion as MMC does and also will give you ability to monitor resources on SI back-end servers like Manage Exec does, but you might find that the interface within Manage Exec and MMC is more user friendly. Even though MMC and Performance Monitor to certain extent can monitor similar things that Manage Exec does, but both of those tools will not allow you to view historical data (e.g. SI connected users monthly distribution) that are being accumulated within Manage Exec system over period of time.

Veritas Manage Exec

Veritas ManageExec is the most comprehensive monitoring tool for Seagate Info deployments. It is ideal for large deployments that need to view and report on current and historical data. It allows you to monitor not only Seagate Info activities but also monitor resources on the SI back-end server machines. ManageExec is also Web-enabled to allow remote monitoring of system activity and performance.

Veritas Manage Exec helps you manage the behavior of worldwide, heterogeneous (NT and NetWare) networks from a central location. Manage Exec monitors and analyzes Windows NT and Novell NetWare system health, establishing profiles of normal behavior. It then alerts you when server behavior falls outside those profiles, letting you proactively manage your servers. Manage Exec forwards alerts via email, pager, or SNMP Traps.

In addition to viewing alerts, you can view extensive system configuration and performance data from both a graphical Windows console and a Web console. Manage Exec monitors hundreds of NT and NetWare statistics, and lets you drill down on events, providing intelligent, on-line problem diagnosis and historical and real-time trend-analysis charting. You can generate Enterprise-level reports and drill down to view the daily and hourly behavior of your systems. Manage Exec can monitor up to 1,024 servers from a single Alert Server and support multiple Alert Servers across your worldwide network. The Windows and Web Consoles display server statistics that would require dozens of NT and NetWare utilities, such as User Manager, Task Manager, Event Viewer, Performance Monitor, MONITOR, NETADMIN, NWADMIN, SYSCON, SERVMAN, DSREPAIR, and others.

ManageExec ships on the Seagate Info product CD and can be accessed through either a Windows- or a web-based interface.

Seagate Info and the ManageExec Windows Desktop

Reports on the Seagate Info system can be accessed through Reports | Applications | Seagate Info. These reports are gathered by ManageExec through API calls to the Info APS executable. Following is a list of the reports available.

SI Active Jobs (Hourly Distribution)

This report displays the number of active jobs on each Seagate Info Report Server hourly.

SI Active Jobs (Weekday Distribution)

This report displays the number of active jobs on each Seagate Info Report Server by day.

SI Compare Counters (Active Jobs vs Replies per Sec)

This report displays the data of active jobs vs. Replies/sec for each Seagate Info Report Server.

SI Compare Counters (Active Jobs vs Working Set)

This report displays the data of active jobs vs. Working Set for each Seagate Info Report Server.

SI Compare Counters (Connected Users vs Replies per Sec)

This report displays the data on connected users vs. Replies/sec for each Seagate Info Report Server.

SI Compare Counters (Connected Users vs Working Set)

This report displays the data on Connected Users vs. Working Set for each Seagate Info Report Server.

SI Connected Users (Hourly Distribution)

This report displays the number of users connected the by hour.

SI Connected Users (Monthly Distribution)

This report displays the number of connected users by month.

SI Connected Users (Weekday Distribution)

This report displays the number of connected users by day.

SI Number of Objects

This report displays the number of objects per Info Report Server.

Seagate Info and the ManageExec Web Console

Reports on the Seagate Info system can be accessed through Health | Seagate Info. You will be presented with the list of following parameters. Note that the ManageExec Agent has to be running on the Info APS machine and has to collect all the data while issuing API calls to APS32.EXE. Following is a list of reports that can be accessed through the ManageExec Web Console:

Alerts

An alert is a message from the Manage Exec system indicating that something may be wrong with one of the nodes on your network. Alerts are prioritized,

and the help files offer response suggestions for many alerts. Only alerts from Seagate Info systems are listed on the Seagate Info Alerts page.

Connected Users

This displays the number of users currently connected to the selected Info APS or APS cluster, and the number of sessions on that APS or cluster. This value is shown as sessions per user (i.e. a single owner may have more than one session).

The owner of an object or instance is the person who created it.

User Licenses

The number of Seagate Info licenses on the selected APS/APS Cluster.

Running Jobs

Jobs currently being processed on an Info Server. A running job might also be in the process of loading onto the Info Server, or a job might be labeled "Running" if its last state was "Running" prior to a system lockup.

Pending Jobs

Pending jobs are not ready to run. They may not be scheduled to run yet, they may be dependent on other events or there may not be an Info Server available to process them.

Waiting Jobs

These jobs are ready to begin processing but are waiting for an Info Server to become available.

Successful Jobs

Jobs completed successfully.

Failed Jobs

Jobs that did not complete successfully. A failed job may have completed with errors, failed to complete, failed to respond, or might be in the act of terminating.

APS CPU

On APS machines, this is CPU utilization on the APS system. On APS clusters, this is the average CPU utilization of all APS machines in the cluster.

APS Memory

On APS machines, this is memory utilization on the APS system. On APS clusters, this is the average memory utilization of all APS machines in the cluster.

Info Server CPU

CPU utilization on the Info Server machine or the average CPU utilization of all Info Servers in an APS cluster.

Info Server Memory

Memory utilization on an Info Server machine or the average memory utilization of all Info Servers in an APS cluster.

MMC Snap-In

The Seagate Info MMC Snap-in allows you to monitor a number of key performance and usage indicators through the Microsoft Management Console. If you want to minimize the hard drive requirements for your deployment or do not want to run a Web server, the MMC Snap-In is recommended. The main strength of the MMC Snap-In is as a Seagate Info activity monitor. It is easy to install and is often a familiar environment for system administrators.

The Microsoft Management Console (MMC) is a common console framework for management applications. MMC itself does not provide any behavior other than to serve as a common environment for Snap-Ins, which are the management tool applications that can be hosted in the MMC.

Seagate Info 7 includes the Info Monitoring Snap-In for MMC, which provides administrators with the means to monitor Seagate Info system activity. The Snap-In returns information pertaining to system configuration (identification of all APS and Info Server machines), connected user profiles, and job activity.

To use the Info Monitoring Snap-In, you have MMC installed on your system (MMC is included on the Seagate Info product CD in the following directory: `\redist\Mmc\x86`). The “Install Info Monitoring Snap-In for MMC” option must also be selected during Seagate Info 7 setup.

The Info Monitoring Snap-In allows you to monitor the following (see Manage Exec section above for a description of these statistics):

- Running Jobs
- Pending Jobs
- Waiting Jobs
- Failed Jobs
- Users

Performance Monitor

Performance monitor enables activity monitoring and resource monitoring on Seagate Info back-end servers. If you do not want to run a web server for ManageExec or need a quick way to get snapshot views of system performance, Performance Monitor is an effective tool. The user interface for Performance Monitor is not as friendly as ManageExec or MMC but it does deliver a wide range of monitoring functionality.

Performance Monitor is a tool for measuring the performance of your own computer or other computers on a network. On each computer, you can view the behavior of objects, such as processors, memory, cache, threads, and processes. Each of these objects has an associated set of counters that provide information about device usage, queue lengths, delays, and information used to measure throughput and internal congestion.

Performance Monitor provides charting, alerting, and reporting capabilities that reflect both current activity and ongoing logging.

The following Seagate Info environment statistics can be tracked in the Performance Monitor:

- #Connected users
- Total # Active Jobs
- Total # Finished Jobs
- Total # of Cube Objects
- Total # of Cube View Objects
- Total # of DB activities/sec
- Total # of Folder objects
- Total # Program Objects
- Total # replies/sec
- Total # Report Objects
- Total # requests/sec
- Total size of object maps

Utilities

The Seagate Info product CD includes a number of utilities to simplify the setup and administration of the system. We will also offer additional utilities on our web site as they become available. This section lists and describes each of these utilities. For specific instructions on using these utilities, consult the help files provided with each application.

Modules.exe

This tool will allow you to see what programs (.exe) files are currently loaded into the memory of the machine and will also allow you to see what .dll files each program invoked. You will also be able to see the list of dll files and find out by which program was given .dll invoked.

Location: Seagate Info Version 7, Maintenance Release 1 CD

Directory: Tools\Dll_loc

BlackIce.exe

This is a self-extracting executable that will install the BlackIce printer driver that will allow you to schedule to fax destination.

Location: Seagate Info Version 7, Maintenance Release 1 CD

Directory: Tools\Fax

ImpUsers.exe

This tool will allow you to import a list of users from NT or Netware Networking Operating System into Info Administrator.

Location: Seagate Info Version 7, Maintenance Release 1 CD

Directory: Tools\Impusers

Sicvw32.exe

You can email this self-extracting file to users who will want to install Info Analyzer on their web browser machines. Users can then launch the Info Analyzer to view and analyze reports distributed through the Seagate Info Custom WebAccess desktop.

Location: Seagate Info Version 7, Maintenance Release 1 CD

Directory: Tools\sicvw

Sqlcon32.exe

This tool will allow you to test ODBC data sources configured on your machine outside of Seagate Info deployment. If the ODBC data source on your box is not configured properly, there is no chance that Seagate Info will be able to utilize that data source successfully.

Location: Seagate Info Version 7, Maintenance Release 1 CD

Directory: Tools\SQLconn

Svrdep.exe

This tool will allow you to find service dependency for NT services. It will also allow you to change service dependency. Basically, NT services very often need other NT services to be running before they can start running themselves properly. This tool will reveal which other NT services the service of your concern depends on.

Location: Seagate Info Version 7, Maintenance Release 1 CD

Directory: Tools\svpdep

Activity Tracing

Activity tracing can be useful if you are encountering difficulties installing or running Seagate Info. By changing specific registry keys, you can force the system to create descriptive log (*.log) files or entries in the NT Application Event Log that can help you troubleshoot your Seagate Info deployment.

Seagate Info enables tracing for the following activities: Installation, Info System Database migration, Info Sentinel, Info APS, Info APS clusters and the RPTAgent.

Installation

Log file name: cistp32.log

Log location: \cinfo (pre-7.0) or \Program Files\Seagate Software\si (Version 7.0 or greater)

Log creation: This log is automatically created upon install.

Notes: Use this log to help diagnose install problems. It records down the files that get installed and other installation options and events.

Info System Database migration

Log file name: dbutil.log

Log location: Determined by the location of the cidbutil.dll.

Log creation: This log is automatically created when an Info System Database is created or migrated.

Notes: Look for SQL_FAILURE entries in conjunction with SQL statements that are attempting to create tables, drop tables, or insert data into tables.

Info Sentinel

Log file name: tcpip.log, ipxspx.log, netbios.log, filemsg.log (depends on the protocol)

Log location: Determined by the location of the sentl32.exe or sentinel.exe.

Log creation: Use the regedit.exe utility to change the SentinelTrace key from 0 to 1. It is located under:

HKEY_LOCAL_MACHINE \Software\Seagate Software\Seagate Info\Options

Notes: Look for two machines caching to the same IP address if there are problems connecting to the APS.

Info APS

Log file name: Stored in the NT Event Viewer (Application log).

Log location: N/A

Log creation: Event log entries are created automatically. Additional debug messages can be created by changing the APSTraceLevel key from 0 (the default) to 4 or greater. It is located under:

HKEY_LOCAL_MACHINE\Software\Seagate Software\Seagate Info\Options

Notes: Additional debug logging shows the exact messages that the Sentinel is sending to the APS. Note that the number of events written to the event log will increase substantially if the APSTraceLevel key value is increased.

Info APS Clustering

Log file name: cluster.log

Log location: default TEMP directory

Log creation:

In HKEY_LOCAL_MACHINE\Software\Seagate Software\Seagate Info\APSClusterSettings, change the ClusteringTrace key from 0 to 1.

Notes: Look at the APSLoad value to determine the relative load of an APS compared to another APS in the cluster (0-1000).

RPTAgent

Log file name: Stored in the NT Event Viewer (Application log).

Log location: N/A

Log creation: Event log entries are created automatically. Additional debug messages can be created by changing the RptAgentTraceLevel key (HKLM\Software\Seagate Software\Seagate Info\Options) from 0 (the default) to 4 or greater.

Notes: Additional debug logging will show the location of the input, output and cache files. It will also show any drive mapping that the Sentinel is doing. Note that the number of events written to the event log will increase substantially if the RptAgentTraceLevel key value is increased.

Summary

This document outlines advanced administrative features and processes that can help you optimize and troubleshoot your Seagate Info deployment. For more detail on step-by-step system administration, consult the Seagate Info Administrator's Guide.

For additional information or assistance with Seagate Info deployment and tuning, please contact Crystal Decisions Professional Services.

The information contained in this document represents the best current view of Crystal Decisions on the issues discussed as of the date of publication, but should not be interpreted to be a commitment on the part of Crystal Decisions or a guarantee as to the accuracy of any information presented.

This document is for informational purposes only. CRYSTAL DECISIONS MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, IN THIS DOCUMENT. CRYSTAL DECISIONS SHALL HAVE NO LIABILITY OR OBLIGATION ARISING OUT OF THIS DOCUMENT.

© Copyright 2001 Crystal Decisions, Inc. All rights reserved. Crystal Reports, Crystal Enterprise, and Crystal Decisions are the trademarks or registered trademarks of Crystal Decisions, Inc. All other trademarks referenced are the property of their respective owners.

Specifications and product offerings subject to change without notice.