

EMC Data Protection Advisor

EMC Data Protection Advisor (**DPA**) is an automated backup system reporting and analysis software tool. DPA software gathers key statistics regarding the overall backup and restore environment in the data centers. DPA provides information about end-to-end backup and restore throughput, audit reports, job reports, correlation reports, and summaries including backup success rates, scheduling reports, point-in-time bar charts by duration and size.

The information that is gathered during the interviews and captured with the DPA tool is used to create an in-depth report that focuses on your company's current and future backup and restore environment, including recommendations for improving efficiency using existing assets and methods to improve your company's backup and restore infrastructure.

Eastern computer Exchange, Inc (**Eastern**) utilizes this tool to:

- Assess the current backup and restore environment and review the standard operating procedures, and disaster recovery preparedness.
- Provide information on new archiving and backup/restore technologies to further leverage the equipment your company currently uses in the backup environment.

This assessment provides specific recommendations on planning and improving backup and restore capabilities, including:

- Reducing the overall backup and restore times and failures
- Reducing the amount of backup media required to support backups
- Increasing the use of the existing disk and backup infrastructure to eliminate errors and increase performance.

This report addresses several key areas, relating to how well your company's backup and recovery infrastructure is meeting business goals:

- Factual information that can be used in planning and further discussions, including the configuration of servers, clients and tape jukeboxes.
- Media utilization information, providing insight into both operational and capital costs
- Performance and scalability challenges to highlight areas for improvement
- Reliability and exposure, identifying unreliable and unprotected clients for further analysis

DPA also provides us at Eastern to analyze the reasons for failed backups. If the reasons for failures are related to tape library or switches they usually show up in the report.

However, if the reasons for failures are at the Backup server level, we need to get the performance statistics from these servers to analyze further. To integrate the entire process of reporting we recommend installing DPA agents (Collectors) on the backup servers so that we have one single database of the entire collection matrix. Which further helps us to perform a causal analysis of the failed jobs and produce a report.

However, if the Agent is not installed on the Backup servers, we can still pull out reports pertaining to Backups jobs, switch and tape level activity, but we will not be able to analyze the Backup server resources at times when there were failed backups or other bottlenecks.

Evaluation Overview and Requirements

This document lists information and resources necessary to begin an EMC DATA PROTECTION ADVISOR (DPA) evaluation in a minimally-intrusive and timely manner. The evaluation setup and installation take one to two days, after which production data will be collected for five to ten days (depending on your environment). Please note that these estimates may vary depending on your particular backup environment, data volumes, staff availability, and system resource utilization.

The information gathered can provide valuable information in areas such as management of your backup infrastructure, meeting Service Level Agreements, and preparing for application/data recovery. EMC Data Protection Advisor can help you easily identify and proactively project important aspects of your backup environment. Some examples of available reports are:

- “Top 10” Fastest & Slowest Clients
- “Top 10” Most Unreliable Clients
- Device Configuration & Status
- Failed Jobs
- “Top 10” Largest Clients
- “Report Card”
- Performance statistics
- Media Counts and Usage

RESOURCE REQUIREMENTS

Evaluations are structured to require minimal time and impose limited impact on your day-to-day activities. Technical staff should plan to be available for a minimum of six to eight hours during the installation and configuration of the software. Required components for the evaluation:

Identify which file servers and file systems will be scanned

- Data and servers should be chosen to capture production activities, including any identified peak periods such as End-of-Month or full backups of large data stores.
- The DPA collector must be installed on all UNIX OS based backup servers to ensure performance data collection.
- Include any servers that require large back-up/restore windows due to volume or throughput
- Include any servers that have exhibited problems such as incomplete backup, missed files, completion outside of optimal back up window, low throughput, etc.

Hardware and Software

- EMC DATA PROTECTION ADVISOR is installed on a standalone server for best performance.
- The DPA collector / agent component needs to be installed remotely on Backup servers in case of:
 - A firewall between an DPA server and Backup server.
 - If performance data needs to be collected from a UNIX OS based Backup server.
- Ideally the DPA server will meet the following minimum specifications:
 - Windows 2000 sp4 or Windows 2003 sp2 operating system
 - Intel P4 CPU at 1.2GHZ or higher
 - 1GB memory or higher

- 30GB of free disk space
- LAN Connection to production backup network
- Database supported are SQL 2000/2005 in Windows environment. (*optional*)
- For monitoring TSM Backup servers DPA collector needs to be installed on them or TSM client needs to be installed on DPA server.

Minimum Collector Requirements:

Solaris

- The Collector requires the following Solaris specifications:
- Solaris 8, 9, or 10 operating system
- At least 100 MB of free hard disk space
- The Solaris patch cluster (recommended) patch (or higher) obtained at:
- (<http://sunsolve.sun.com/pub-cgi/show.pl?target=patches/patch-access>)

Windows

- The Collector requires the following Windows specifications:
- Windows 2000 AS or Windows 2003 Server operating system
- At least 100 MB of free hard disk space
- The following service packs (or higher) are recommended:
- Windows 2000 service pack 4
- Windows 2003 Server service pack 1

Impact on your Backup Server(s)

The DPA collector will use approximately 3MB of memory and about 50MB of disk space on a Windows server. On a Solaris server, the DPA collector uses about 4 MB of memory and approximately 50 MB of disk space. CPU usage will vary depending on DPA agent configuration, especially for polling frequency. It is recommended to use the default polling settings if they do not adversely affect your server performance.

The evaluation will utilize an MSDE data base to store the captured data. The database can accommodate collection data for approximately 300 clients for 30 days' activity. If your analysis requires a larger data store, MS SQL must be used, and this will lengthen the installation, configuration, and resource requirements of the evaluation.

TEAM SELECTION

Evaluation team members should be identified from each participating organization/site:

- Include members of the IT Management and Infrastructure group as appropriate for your environment. Minimally, the Team should include the IT Operations Manager, the Backup Administrator (and Manager if different than Operations), Storage Administrator, and Network Engineers (if data network and/or SAN components will be included for analysis).
- At least one designated team member must have administrative access to the backup servers for installation of the DPA application.

- Staff members with knowledge of hardware and software configurations for servers/storage identified for scanning are required to provide specifics on the environment and usage.

CONTACT LISTS

Once team members have been selected, a contact list should be created for the group. This list must contain contact information for all personnel associated with the evaluation in order to ensure a successful engagement.

EXECUTING THE EVALUATION

The evaluation process consists of software installation/configuration, data collection, and analysis of resulting data files. The software and all instructions required to perform the evaluation will be provided by Eastern Computer Exchange. Full support for evaluation-related activities and products will be available on-site, via telephone and e-mail as necessary.

EVALUATION COMPLETION

Eastern Computer Exchange will coordinate the final processing of the collected data and arrange for a comprehensive follow-up with the Evaluation Team.