



OBVLADOVANJE RASTI PODATKOV

Spoznajte svoj podatkovni zaklad in izberite pravo rešitev zanj

Anton Žvanut

Ljubljana, 9. september 2010



EMC Backup, Recovery and Archive

Celovite rešitve = strojna in programska oprema + storitve

*Hardware
Solutions*

Active Archive

Backup to Disk with
Deduplication

*Software
Solutions*

Intelligent
Archiving

Backup and
Recovery

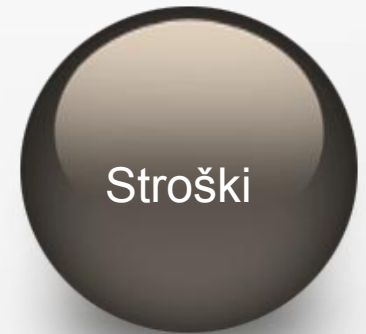
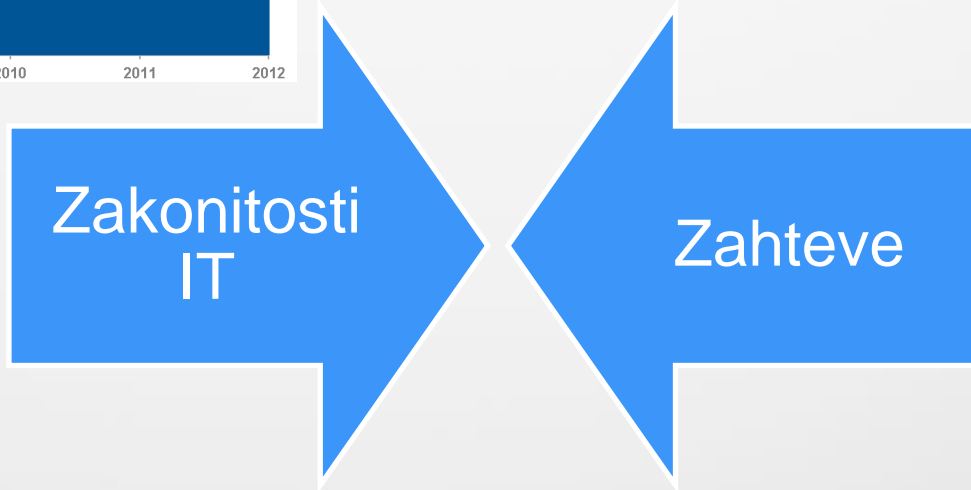
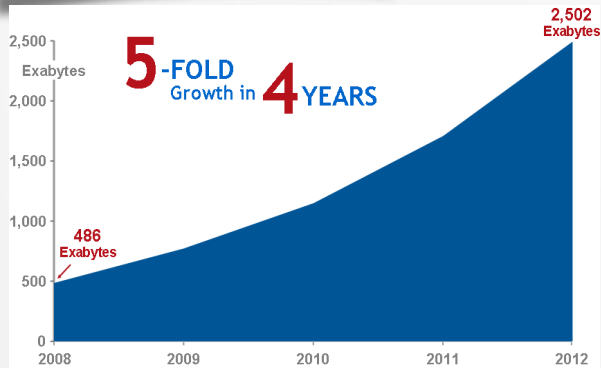
Analytics

*Services
Solutions*

Assessment, Implementation



Današnji izzivi





Spoznaj svoje podatke!

Smisel ocene in pregleda:

- Diagnosticiraj – potem predpiši rešitev!
- Prouči možnosti!
- Določi prioritete

... vendar...

– KAKO ZAČETI?

– KJE ZAČETI?

Prvo pravilo:

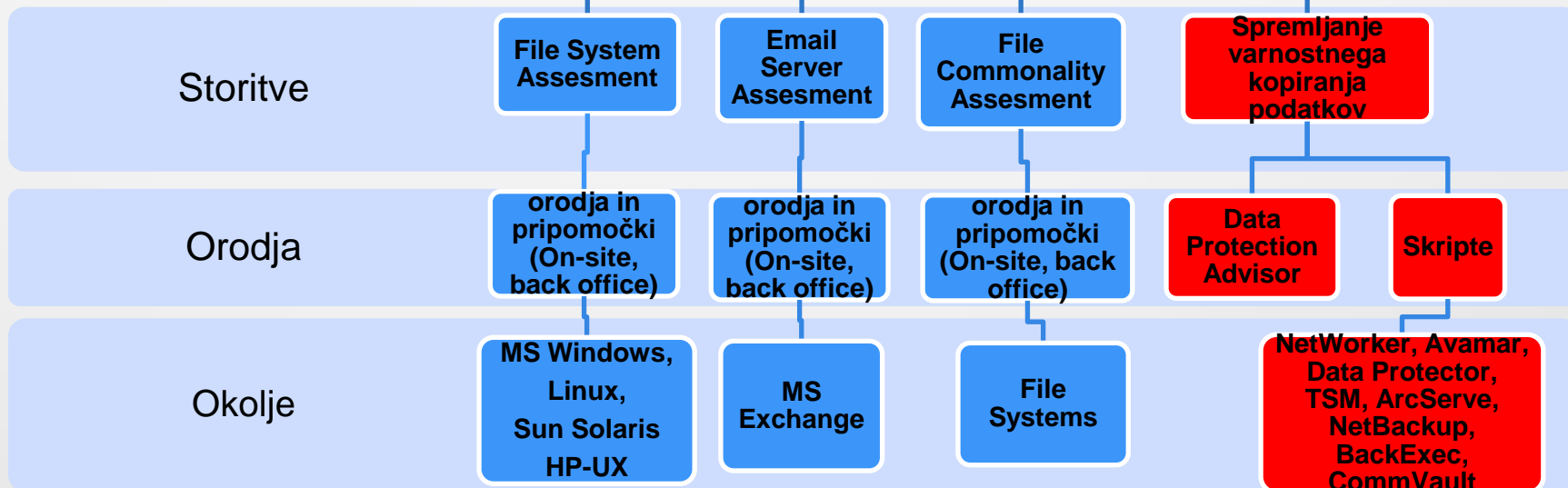
NAJPREJ REŠI NAJVEČJI PROBLEM





Pregled podatkov in varovanja

Ocena zavarovanja podatkov





Kaj vemo o naših podatkih?

- Poznavanje podatkovnega zaklada (meta data):
 - obseg
 - Sestava (tudi podvojitve datotek)
 - značilnosti nastanka in uporabe
- Identifikacija in razumevanje ključnih točk obvladovanja LASTNEGA podatkovnega zaklada
- (po)svetovanje
- Dimenzioniranje v kombinaciji z izračuni ROI/TCO



	Why	Setup Time	Scan Time	Requirements	Duration	System Impact	Results
FSA	In-depth analysis of file details, targeted at archiving opportunities	30 Min	Avg. 20 min /TB	1 Dedicated Server (physical or VM) <i>Agentless</i>	2 - 3 Days	Minimal	<ul style="list-style-type: none"> • Last modified/ accessed • Growth
ESA	In-depth analysis of email data, targeted at archiving opportunities	30 Min	2-3 Hours ¹	1 Dedicated Server (physical or VM) <i>Agentless</i> 300 + 500 mbx	2 - 3 Days	Minimal	<ul style="list-style-type: none"> • Growth • Largest mailbox • PST's Found²
CSA	Best assessment to reflect deduplication ratio and its benefits, backup duration	10 mins per server	3-7 days	1 Dedicated Server (physical or VM) access to the targeted servers to run the agents	7 - 10 Days	Impact of a regular backup on targeted servers	<ul style="list-style-type: none"> • De-Dupe ratio • Time to backup
Backup Scripts	Provides fast, detailed look at the backup environment with minimal effort	10 mins	1 Hour	Access to all backup servers being scanned	2 - 3 Days	Minimal	<ul style="list-style-type: none"> • Capacity • Configuration & • Health
DPA	Demo Data Protection Advisor and capture backup environmental data for a full analysis. (Paid Engagement)	Up to 2 hours	2-4 weeks	1 Dedicated Server (physical or VM) Plus access to backup server and other critical clients that are to be analyzed	Up to 1 Month	Minimal	<ul style="list-style-type: none"> • Capacity • Configuration • Health • Detailed performance Metrics & • Failure trends

Only with FSA



FSA/ESA

EMC Assessment WorkBench

Customer Name: XYZ Corp

Assessment Data Folder: C:\Documents and Settings\cullet\Desktop\EMC Assessment Workbench V2.6\EMC

Client Qualifier Client Qualifier is complete.

Deduplication Scan Completed 3 DDA:A scan(s). Completed 5 DDA:B scan(s).

File System Scan 1 FSA Scans available for Data Packaging.

Exchange Scan Exchange Scan has not been completed.

Create Data Package Data available for packaging: FSA, DDA:A, DDA:B

Copy URL to Clipboard Most recent data package:
sftp://sftp.emc.com/incoming/ EMCcapture_XYZ Corp_20100405123609_en-US_2.6

Status
This version of the EMC Assessment Workbench will expire on: **Thursday, July 15, 2010**

[About](#)
[Diagnostics](#)
[Advanced Options](#)



Client Qualifier



Customer Name:

Archive

- Are you currently doing disk based Archiving for your Email System?
- Are you currently doing disk based Archiving for your File System?
- Are you using an application which directly integrates with an Archive system?
- What is your current Archive System?
- How is your Archive system protected?
- What is the longest retention period for objects in your Archive System?

Backup

- What is your current Backup Software?
- How would you describe your current relationship with your Backup Vendor?
- Are you finishing backups within your backup window?
- Are you consistently meeting recovery SLA's?
- What are your Email Backup Policies?
- What are your File Server Backup Policies?
- What are your Database Backup Policies?
- What are your Media (fixed content) Backup Policies?
- What is your Retention policy for weekly Full Backups?
- What is your Retention policy for monthly Full Backups?
- How are your Backups protected?

Miscellaneous

- How satisfied are you with your current Bare Metal Recovery process?
- Does your Server Recovery Plan use VM Images?
- How many virtual machines do you have in production?
- Does your company have any Regulations or other corporate governance requirements related to data protection?
- Which Email compliance software is used, if any?
- Is Litigation support a concern of yours?

Reset Values

Save and Return



EMC Assessment WorkBench

Customer Name: XYZ Corp

Assesment Data Folder: C:\Documents and Settings\cullet\Desktop\EMC Assessment Workbench V2.6b5\E

Client Qualifier

Deduplication Scan

File System Scan

Exchange Scan

Create Data Package

No data available for packaging.

About

Diagnostics

Advanced Options

Choose DDA Scan

Choose the Data Deduplication Scan that you want to run or schedule.

Multi-run Scan - Run this scan to compare deduplication on volumes, mapped drives or directories over time. This needs to run a minimum of 3 times before collection.

Single Run Scan - Run this scan to compare deduplication on snapshots, database dumps or individual files.

Status

This version of the EMC Assessment Workbench will expire on: **Thursday, April 15, 2010**



Najboljši “assessment”:
DEMO/PILOT!



ROI/TCO

EMC Avamar TCO Analyst for Firma d.o.o.

Questionnaire

TCO and ROI Analysis

Benefit Details

Investment Details

EMC Avamar TCO Analyst

The EMC Avamar TCO Analyst quantifies the business value and return on investment from implementing EMC Avamar solutions to help reduce backup and replication costs, reduce business risks, and improve organizational resilience.

Developed independently by ex-Gartner ROI experts at leading ROI consultancy Alinean, Inc. (<http://www.alinean.com>), the tool utilizes industry research on typical current (as is) opportunities for improvement (expected to be replaced with actual customer metrics to form a personalized analysis), and value estimates from examining real-world EMC Avamar solution deployments and use cases (reviewed and replaced with personalized assessments on achievable value).

Mouse over the icon to obtain tip help and advice on each question. Click on the icon if you cannot read the full tip help.

Entry fields are colored yellow by default. When modified, entry fields will become green to indicate a user has made an edit to the default value.

Required fields are indicated with an asterisk (*). To return a value to the original default, use the available audit log by clicking on the icon.

Organization Profile

What is the name of your organization?

What is the closest match to the organization's primary business? (* = required)

What is the primary location of the organization's data center operations? *

What are the primary site locations for the organization's data centers and support organizations? *

<input type="text"/>	
Please Select	
Please Select	
Suburban	

Current (As Is) Primary Storage Profile

What is the estimated total data across the organization in GB? *

What is the total amount of primary data in GB to be protected as part of this analysis/project? *

Prorated allocation of data to total data

<input type="text"/>	0,0	
<input type="text"/>	0,0	
	0,0%	

Current (As Is) Backup: Tape Solution Costs

What is the tape backup annual hardware maintenance fee?

What is the tape backup annual software maintenance fee?

What is the annual tape media costs for backup?

<input type="text"/>	0€	
<input type="text"/>	0€	
<input type="text"/>	0€	

Current (As Is) Backup: Tape Solution Upgrade Costs for Growth and Retention

What is the cost of upgrades to your current system over the next 12 months? (i.e. tape library, drive, servers, disk pools, VTL, software)

<input type="text"/>	0€	
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Current (As Is) Backup: Tape Offsite Storage

What are the annual fees for offsite tape archiving (transportation, vaulting and annual tests)?

<input type="text"/>	0€	
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Current (As Is) Third Party Replication System Solution Costs

Would you like to provide a replication system comparison analysis in the TCO?

Yes	
-----	--

[Click here to review and edit default Current \(As Is\) assumptions.](#)

[Click here to review default Avamar Solution assumptions.](#)



ROI/TCO

www.dedupcalculator.com

Data Domain Deduplication Calculator

Instructions: Enter data below to see how to reduce storage and bandwidth requirements and compare the results to traditional disk and tape-based methods.

[Calculator FAQ](#)

[Get ROI Whitepaper](#)

Select Storage and Disaster Recovery Values

Size of your weekly backup.

10 TB

[Calculate](#)

Size of your daily backup.

2 TB

Number of hours per day available for backup over the business week.

10 Hours

Number of hours available for backup over a 2-day weekend.

40 Hours

Number of weeks backup images are kept.

8 Weeks

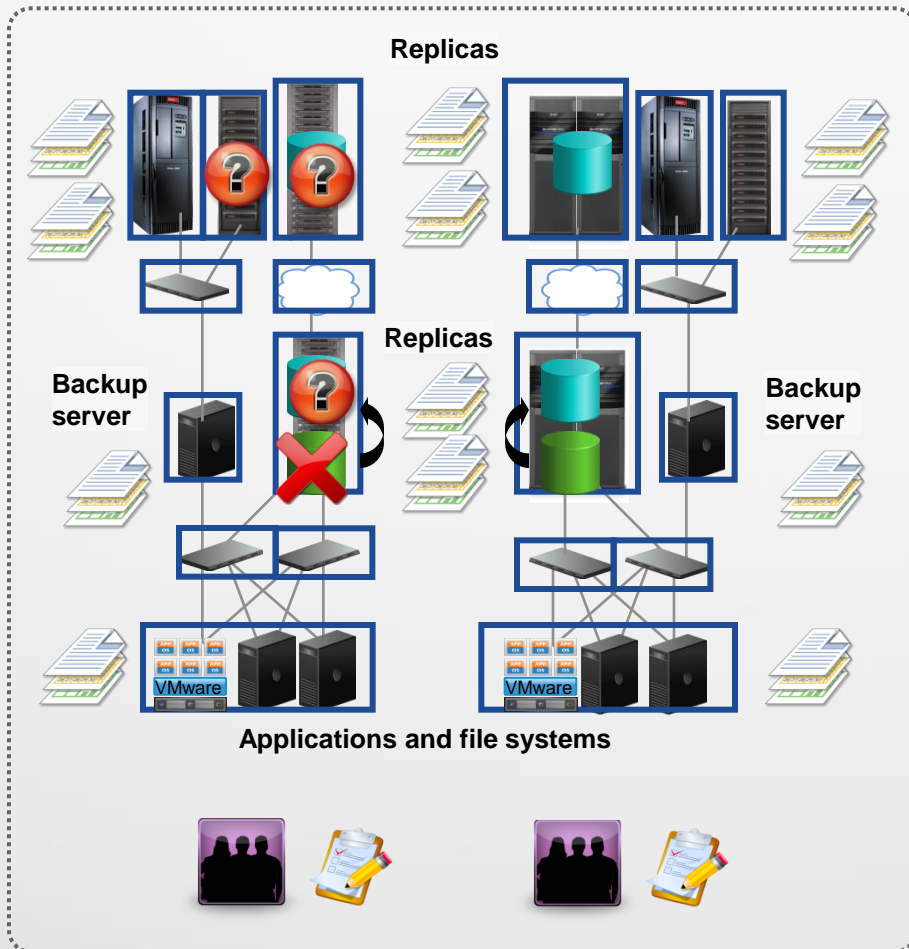
Are backups sent offsite for DR?

Yes

Input Data for Results	Primary Site	Bandwidth Requirements for Offsite Replication	Disaster Recovery Site
data domain	Input Data for Results	Input Data for Results	Input Data for Results
Plain Disk or VTL Implementation	Input Data for Results	Input Data for Results	Input Data for Results
Tape-Only Solution	Input Data for Results	Input Data for Results	Input Data for Results



Implementacija varovanja ni dokončna in večna rešitev!



Data silos

No single view leads to lack of visibility into data protection environment

Manual effort or scripting

Time-consuming data collection, reviewing log files, and analyzing spreadsheets

Expensive replication disaster recovery testing

Manual, periodic replication disaster recovery testing—costly, not frequent enough

Recovery uncertainty

Is your data recoverable at the application level? Can you meet audit requirements?

“ESG Research has found that 40% of respondents cited ‘difficulty validating backup/recovery success’ as a major challenge...”

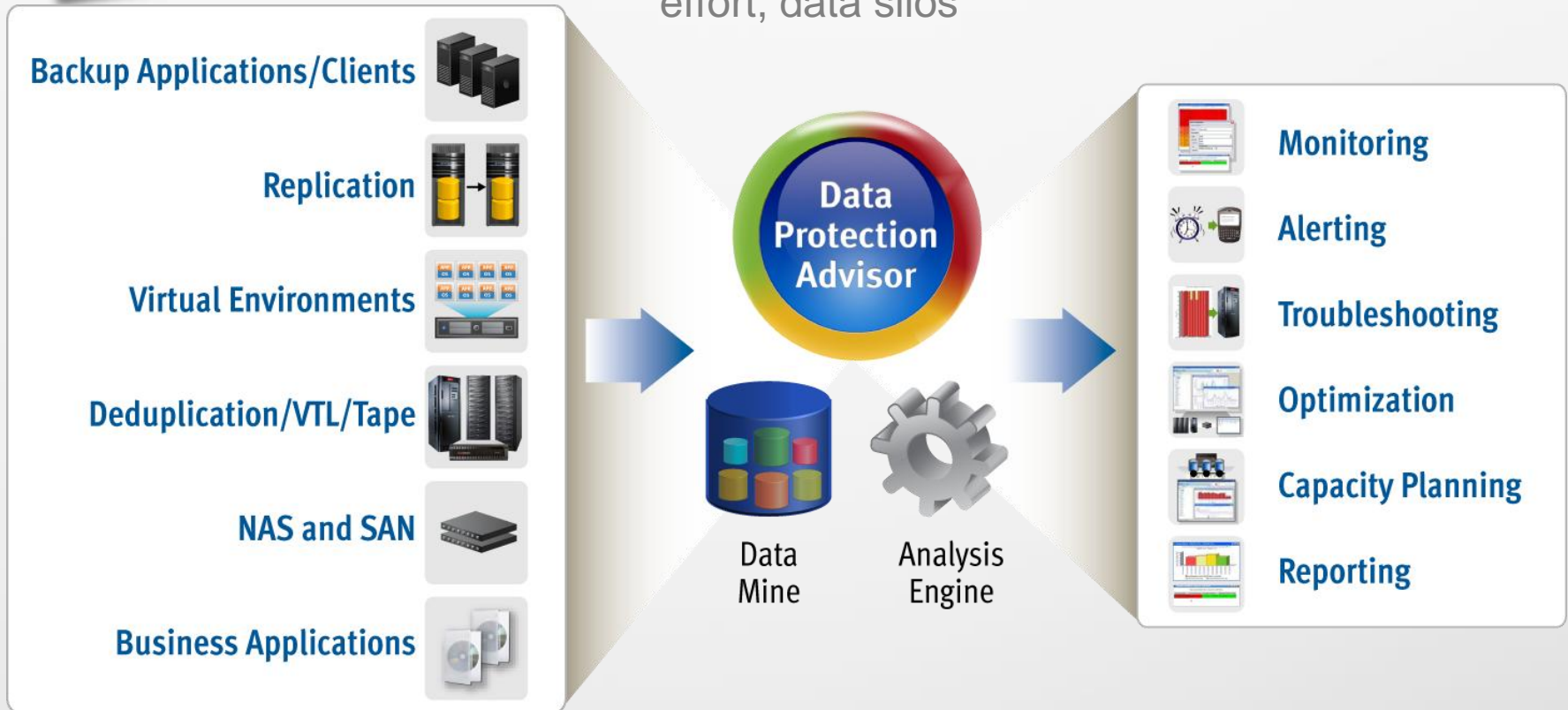
—ESG Product Brief: EMC Data Protection Advisor Streamlines Management, December 2009





Upravljanje in nadzor varovanja podatkov ni le spremljanje aplikacije!

Automated, single view eliminates manual effort, data silos



Payback typical in 12 months

- ✓ **Reduces costs**—Insight drives efficiency
- ✓ **Lowens risk**—Manage to service level agreements (SLAs)
- ✓ **Minimizes complexity**—Single, integrated view



DPA – vir za vse nivoje nadzora in poročanja!

**Data Protection Advisor
for Backup**
(optional VMware integration)

**Data Protection Advisor
for File Server**

**Data Protection Advisor
for Replication Analysis**

**Data
Protection
Advisor**



Informing the business:

- C-level reports
 - Rollup, overall statistics, dashboards
- Operations level
 - Visual Maps, vCenter Server integration, RTO/RPO
- Administrative-level reports
 - Performance, change, capacity, most at risk

**“...like a team of 24x7 storage experts
watching my data protection environment”**



DPA

DPA - Connected to: mionsdale2.corp.emc.com (5.0.0.4601)

Data Protection Advisor

File Edit Go Node Favorites Tools Window Help

Window Last Day 30/10/08 10:48 GMT - 31/10/08 10:47 GMT

- Configuration
 - Backup Servers
 - Critical Clients
 - Databases
 - Disk Management
 - DPA Server
 - Fibre Channel Switches
 - File Servers
 - IP Switches
 - Server Virtualization
 - Tape Libraries
 - Tape Library Management
 - Virtual Tape Libraries

Welcome

Welcome

Welcome to Data Protection Advisor. To get started with the product, configure the devices and applications you wish to monitor by launching the Data Collection wizard. Click on the Control Panel links below to start learning more about your environment.

Configuration

[Launch Data Collection wizard](#)
Use the Data Collection Wizard to start monitoring new devices and applications.

Controls Panels

Backup Control Panels

Backup Management Trend backup success rates and data growth in your environment.	Backup Operations View real time backup and restore statistics and compare to historical performance.
Backup Engineering Trend backup success rates and identify the slowest and fastest clients in your environment.	Backup Compliance Measure compliance of your backups against key performance indicators.

Analysis Engine

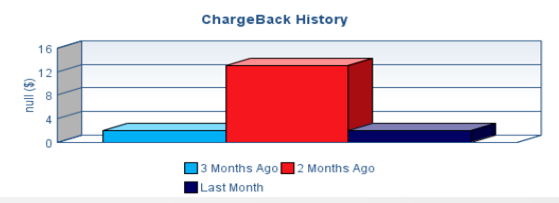
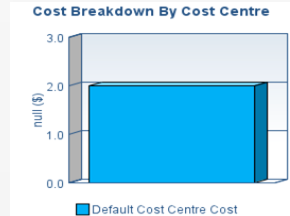
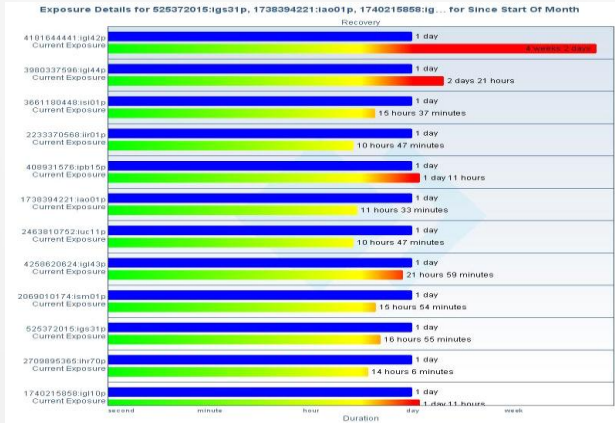
Analysis Engine Events
View the most recent problems identified in your environment.

Show Welcome screen on startup

Administrator

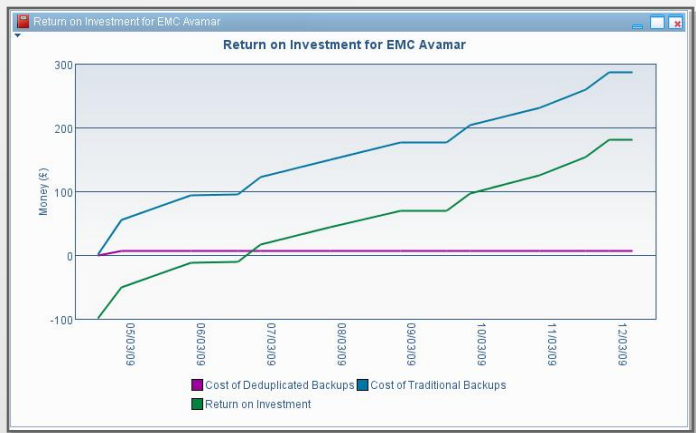


C-Level View of Data Protection Management

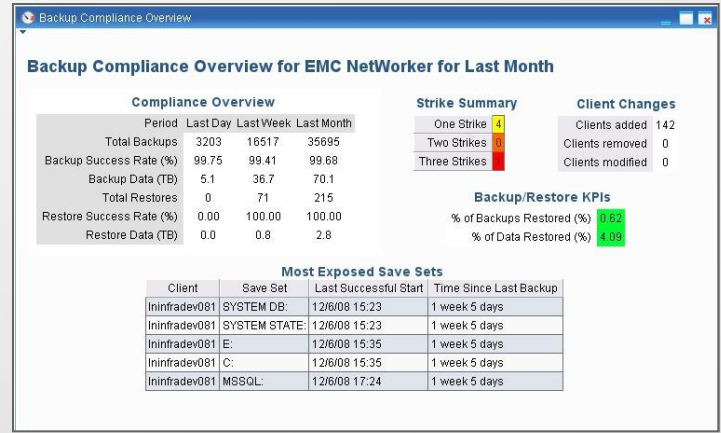


Are we meeting our service level agreement requirements?

What is the value of the services we are delivering?



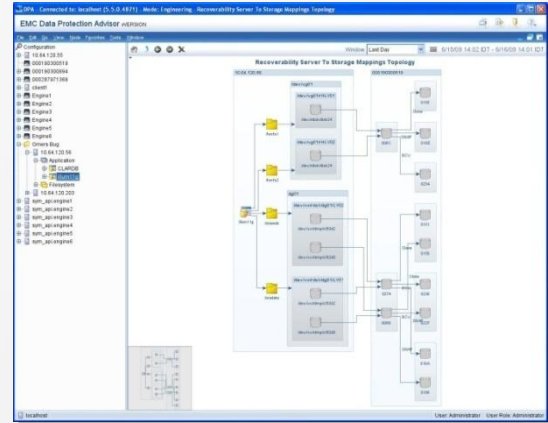
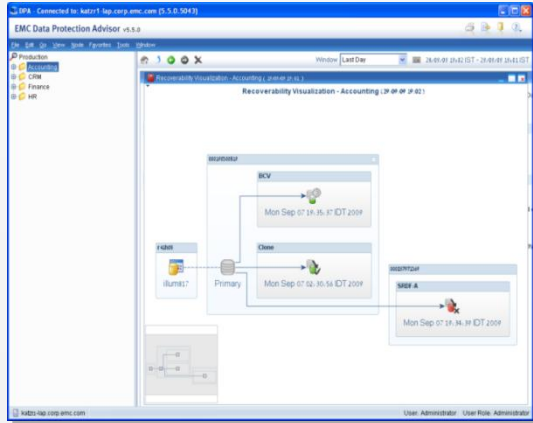
Is the investment producing the desired return?



Are we meeting our compliance requirements?

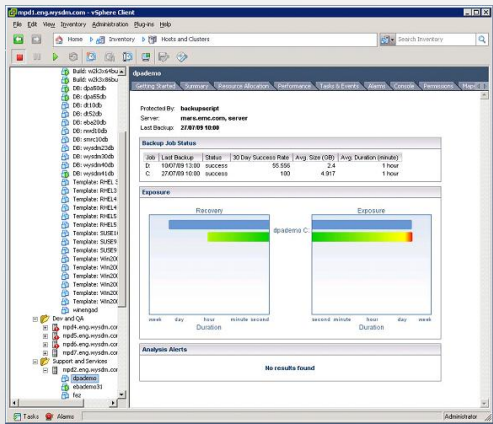


Operations View of Data Protection Management



Are there invalid replicas impacting recovery?

Are my applications properly protected?



Report Card for NetBackup Master Server for Last Week

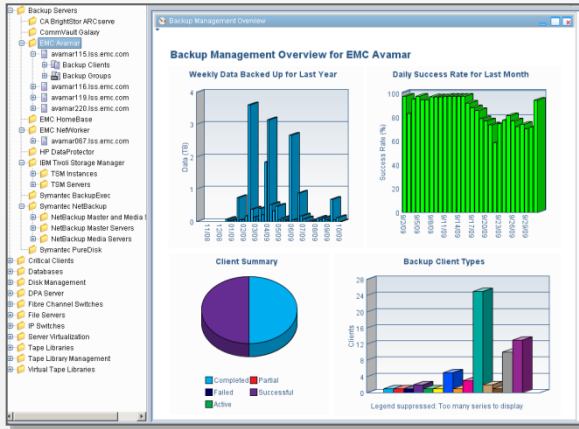
Node	16 Mar	17 Mar	18 Mar	19 Mar	20 Mar	21 Mar	22 Mar
humad001	✓	✓	✓	✓	✓	✓	✓
ibvts01	✓	✓	✓	✓	✓	✓	✓
ibvts02	✓	✓	✓	✓	✓	✓	✓
louad02	✓	✓	✓	✓	✓	✓	✓
louadwae01.vlbra_qa_hum	✓	✓	✓	✓	✓	✓	✓
louadwae01.vlbra_prod_hum	✓	✓	✓	✓	✓	✓	✓
louappwac03.rsc.humad.com	✓	✓	✓	✓	✓	✓	✓
louappwac03601.rsc.humad.com	✓	✓	✓	✓	✓	✓	✓
louappwac02602.rsc.humad.com	✓	✓	✓	✓	✓	✓	✓
louappwac04602.rsc.humad.com	✓	✓	✓	✓	✓	✓	✓
louappwac04.rsc.humad.com	✓	✓	✓	✓	✓	✓	✓
louappwac05.rsc.humad.com	✓	✓	✓	✓	✓	✓	✓
louappwac06.rsc.humad.com	✓	✓	✓	✓	✓	✓	✓
louappwds03.rsc.humad.com	✓	✓	✓	✓	✓	✓	✓
louappwds05	✓	✓	✓	✓	✓	✓	✓
louappwds06	✓	✓	✓	✓	✓	✓	✓
louappwds07	✓	✓	✓	✓	✓	✓	✓
louappwpc01601	✓	✓	✓	✓	✓	✓	✓
louappwpc01602	✓	✓	✓	✓	✓	✓	✓
louappwpc04601	✓	✓	✓	✓	✓	✓	✓
louappwpc04602	✓	✓	✓	✓	✓	✓	✓
louappwpc05601	✓	✓	✓	✓	✓	✓	✓
louappwpc05602.rsc.humad.com	✓	✓	✓	✓	✓	✓	✓
louappwpc06.rsc.humad.com	✓	✓	✓	✓	✓	✓	✓
louappwpc06602.rsc.humad.com	✓	✓	✓	✓	✓	✓	✓
louappwpc08601.rsc.humad.com	✓	✓	✓	✓	✓	✓	✓

Are my virtual machines properly protected?

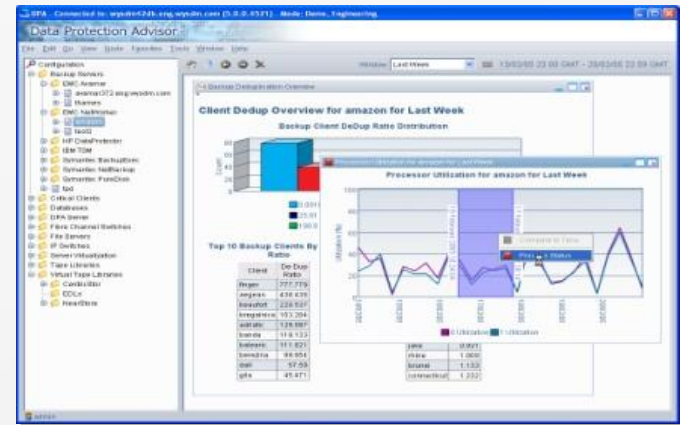
What clients are not protected? Which have failed?



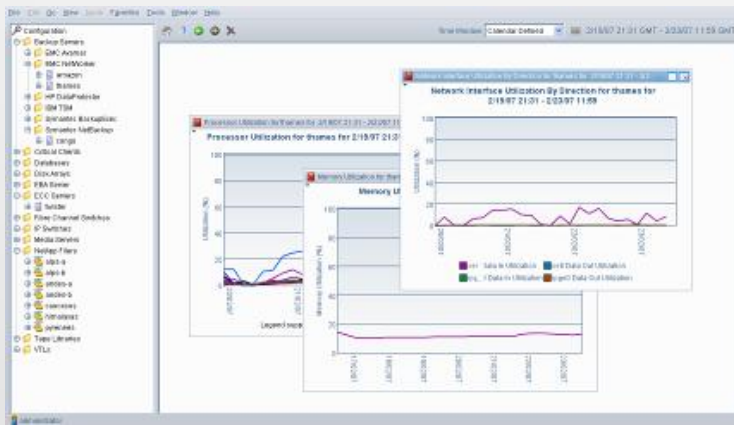
Administrator View of Data Protection Management



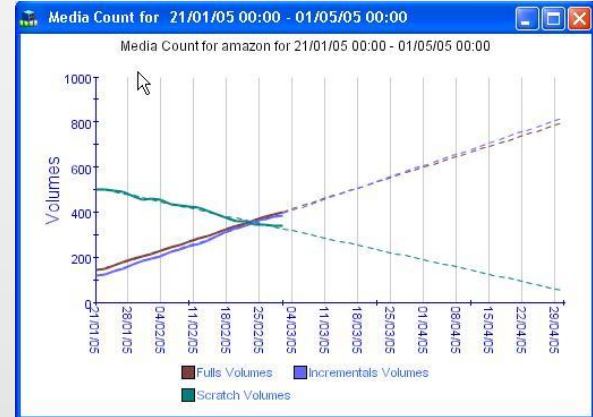
What area of the environment needs attention?



How are my clients benefiting from deduplication?



Is my backup environment optimized?



How much backup media will we need?



Z DPA je mogoče:

Always know you can recover

**Data
Mine**



Consolidate and unify

Access all operational information across backup and replication from a single console

**Analysis
Engine**



Find and anticipate

Rapidly get to the source of recovery problems—and ensure fast action

**Reporting
Engine**



Prove it

Audit recoverability and service-level status with a click of a button



EMC²
where information lives®

? vprašanja **?**

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