SafePeak

Poria Hospital, Israel, Accelerates its Mission-Critical Applications using SafePeak®

Poria hospital chose SafePeak® to help meet its goal of providing fast application response time and SLA during high load peaks.

SafePeak offers a plug and play software solution to improve existing enterprise/data center infrastructure and performance mission-critical applications, with shortest time to resolution and fast ROI.

Business Challenge

The IT department of Poria Hospital is responsible for providing and supporting real-time critical mission applications such as EMR (Electronic Medical Records) ,LIS (laboratories Information System), PACS (Picture Archiving and Communications Systems) , BI (Business Intelligence) and various research Knowledge-base systems.
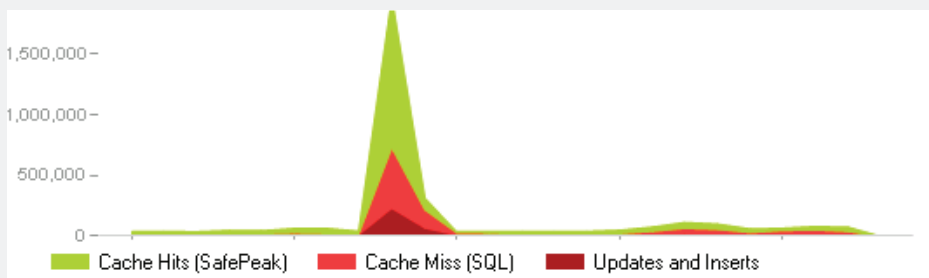
Due to government regulation and requirements all hospital's systems had to be integrated and synchronized with other nation-wide hospitals and government entities.

One specific application, the knowledgebase system, based on Microsoft MOSS (SharePoint 2007) and is used by large number of hospital personal, suffered from performance degradation during peak times. Applications based on Microsoft SharePoint platform are known to be highly database intensive applications, and during heavy traffic volumes and create high load on the SQL Server resulting in overall performance degradation. Complicated environment, 3rd party platform basis has small room for optimizations. The traditional approach remained was upgrade of servers and high I/O performance storage.

Acceleration and SLA during Peaks

SafePeak software solution was installed on Poria's virtual server (VM on VMware) and acted as a automated dynamic caching proxy between the application servers and the SQL Server. There were no software modifications needed on neither the application nor the SQL Server database.

The company has done a quick configuration tuning and less than 24 hours later delivered significant improvement in database load reduction, delivering the same level of SLA during peak and off-peak hours with major response time improvement.

Cache Hits (SafePeak)   Cache Miss (SQL)   Updates and Inserts

Improvement %

Geography

Tiberius, Israel, EMEA

Industry

Healthcare

Business need

Provide a real-time response time performance to the hospital staff on the mission critical SharePoint based application running on SQL Server 2005 especially during peak hours and high traffic volume.

Solution SafePeak:

a plug and play automated dynamic caching solution for SQL Server applications.

Results

▸ Cut SQL Server load by 50% on average and 62% at peaks (cache hits), upgrading its throughput abilities by 163% at peaks

▸ Improved data access response time to 0.250 milliseconds when served from cache (versus original tens/hundreds of milliseconds and even seconds).

▸ Average data access time was reduced by 45%.

▸ Improved response time of top heavy query patterns by 94% when served from cache, and 54% on average

▸ Improved application and database SLA during peaks

▸ Saved money

Product used

SafePeak® v1.3.7

During business hours SafePeak returned between 50% to 78% from cache (average of all databases on the SQL Server), resulting in up to 151% increase of potential throughput. During the busiest working hours the efficiency was optimal (the more users and load – the better improvement).

SQL Server load of most active databases were reduced by 60% to 90%, especially during peak hours.

Database Name	% of Traffic	Behavior	Cache Res. Time	Avg. Res. Tin
wss_content_portal_pro	50.26%		0.6111	7.8195
ssp_16000_db	15.9%		0.3632	2.1757
ssp_1600_search_db	12.75%		0.5807	29.0986
sharepoint_config	9.27%		0.2852	6.2649
ssp_db	8.01%		0.2685	0.4534
poriya	1.5%		0.5245	2.4538
ssp_mysites_content	0.69%		0.2479	1.6558
wss_content_ssp_16000	0.69%		0.2257	1.6897
ssp_content	0.68%		0.2636	1.7013
ssp_search_db	0.24%		0.2189	1.5565

The application is characterized in three types of pages in case of database consumption:

1. Frequent used pages with very high quantity (30-60) of small queries per page (10-50 milliseconds per query).

2. Pages with complex heavy queries (1+ second per query) and high load of small queries.

3. Background indexing and other processing services of MOSS.

In addition, the application has high number of background services that mainly perform crawling and indexing of the content resulting in sending high number of "update" (DML) commands to the database.

The improvement of the "heaviest" queries and patterns was most significant (Chart 3). Results returned from SafePeak memory shaved full seconds. Pages with heavy queries received the highest acceleration effect.

Pages with only small queries have also response time improvement, although lower, due to need of the page to execute 40-80 queries, which now also operate faster.

Behavior	Cache	DB
	3.675	1005.2792
	0	160.9409
	0	38.777
	0.5177	36.3834
	0.1968	32.536

SafePeak accelerated Poria Hospital application, reduced load of its database server and provided insurance versus spikes of load and degradation of performance at peaks of hours or days.

Daniel Zohar, IT director
Poria Hospital
Tiberius, Israel, EMEA:

"Instead of going with the traditional hardware upgrade approach, I decided to evaluate an intelligent caching solution from SafePeak. After intensive evaluation and testing period by our QA team, we have decided to purchase the system to support our production real-time databases. We are very pleased to deploy the unique and simple solution for the problem with substantial and proven ROI."

About Poria Hospital

Poria Hospital provides services in almost every medical profession and serves a population of the Israel northern region of 100.000 permanent residents. The hospital also serves military personal and UN soldiers stationed in The Golan heights and Lebanon. The hospital has 284 beds and 31 neonatal cots as well as employs approximately 870 individuals, including physicians, nursing personnel and administrative workers.

About SafePeak®

SafePeak Technologies delivers acceleration and scalability enhancement solutions to increase efficiency and performance of existing enterprise/data center infrastructure. SafePeak®, an Automated Dynamic Caching solution, accelerates data access speed to microsecond level while cutting database load by order of magnitude. No changes are required to applications, databases, queries or stored procedures. SafePeak is installed in minutes, fine tuned in hours and the improvements are applied to all parts of the any existing enterprise application.

Founded in 2007, SafePeak has offices worldwide and delivers solutions to address unique challenges cross-industries IT departments.

SafePeak

To learn more about how SafePeak can help accelerate your business, visit www.safepeak.com or call 1.800.985.9587
SafePeak® is available for free download and trial:
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