

GDZIP Reduces Storage and Bandwidth Requirement

About the Client

The client, a major European Semiconductor Manufacturer, is a leading innovator in the international semiconductor industry. They design, develop, manufacture and market a broad range of semiconductors and complete system solutions targeted at applications in multiple industries.

Quote

"Solution-Soft's compressor GDZIP has saved us a considerable amount of storage space, and backup time. Since our partners also use the compressors we both benefit from shorter, more reliable and more secure ftp transfers."

*Juergen Geissler –
Tapeout Engineer*

The GDSII File Size Problem

With so many of today's electronics products requiring more and more capabilities, semiconductor companies are addressing these needs with larger and more complex IC designs. As these designs continue to grow at an alarming rate annually, many semiconductor companies face significant issues with their infrastructure reliability and performance to handle the large volume of large GDSII chip design files.

Their GDSII Issue

This semiconductor manufacturer was not happy with several aspects of their IC design infrastructure. The amount of online storage required for their semiconductor design file repository § The time it took to transfer design files between their storage systems and their design workstations § The amount of time required to perform their data archive process.

Being thorough strategist, this manufacturer was also greatly concerned with the continued explosion in their design sizes with many designs currently in the GB file sizes and their constantly shrinking available portion of resources.

Lastly, they also hoped to help ease their network bandwidth requirements between themselves and their foundry and mask shop partners (most of whom had already adopted Solution-Soft's gdzip compression technology).

The GDZIP Solution

When presented with Solution-Soft's gdzip compressor, which is optimized for GDSII files, the client systematically tested it against their current solution (a gzip based compression technology). They conducted an intensive evaluation that compared the performance of gdzip versus gzip on their GDSII file repository of nearly 3,000 design files. In summary, their results showed that on average, gdzip compressed GDSII files were 3 times smaller than gzip compressed files and the gdzip compressor performed nearly 1.5 times faster than gzip.

With so many GDSII files, it made immediate sense to replace gzip with gdzip throughout their entire process. This meant modifying a number of process management scripts and replacing calls to gzip with similar calls to gdzip. The modification itself was quite simple and straightforward and they easily accomplished it in under 4 man-hours.

About Solution-Soft

Solution-Soft is the leader in virtual clock, time shift testing software solutions for the ever-changing digital world. Our flagship and market proven product, Time Machine, opened up brand new possibilities in the application testing landscape upon its release in 1997. Today, thousands of applications have been tested with Time Machine, and IT professionals recognize that using a virtual clock is the ideal and safest way to conduct date and time testing. As pioneer in our field, we've created the Time Machine Product Suite and Time Machine for Container, a collection of cutting-edge testing software that augment Time Machine to further streamline enterprise cloud initiatives, containerization, micro services, and IT modernization for end-to-end integration testing, cloud migration, test automation, Agile/DevOps, Continuous Operation, and Test Data Management.

We proudly provide our 2000+ domestic and international customers, including 47 of Fortune 100 companies, with our advanced solutions to optimize their testing and help deliver projects on-time. Solution-Soft's customers are across all market sectors including 3M, AMEX, AIG, Australia Tax Office, BBC, Boeing, British Gas, Covered California, Dept of Works & Pension, Deutsche Bank, Discover, FedEx, Federal Reserve Bank, Orange, National Australia Bank, SNCF, and Zurich Insurance. We bolster our market presence through robust partnerships with companies including Accenture, Capgemini, DXC, HPE, IBM, Infosys, Microsoft, Oracle, Red Hat, and RedMane.

Founded in 1993, Solution-Soft is privately held and based in Santa Clara, CA.

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www.solution-soft.com.

The Result

Today the client has successfully completed their standardization on ggzip for all aspects of the GDSII design process. Through ggzip's use, they enjoy the benefits of tripling the compression rates of their GDSII files. These benefits include a dramatic savings in file access times, data back-up & recovery times, LAN network bandwidth, and faster and more reliable monthly tape-out's to all of their partners in throughout the world.

According to their Tapeout Engineer, Juergen Geissler, "Solution-Soft's compressor ggzip has saved us a considerable amount of storage space, and backup time. Since our partners also use the compressors we both benefit from shorter, more reliable and more secure ftp transfers."