



• Performance Expert Services

- Identify Cause Of Poor Performance
- In-Place Tuning Of Your Systems
- Re-Architects Where Required
- More Performance Less CAPEX

Performance is money. Whether you are running interest rate reports out of a data warehouse, processing real-time transactions, or simply serving content to impatient users. IT performance impacts the effectiveness and productivity of your business. When performance problems happen, chasing them is one of the most difficult, most draining activities there is. Worse still, as soon as you try to measure performance on a running system, you introduce more overhead and make the problem worse.

As vendors add intelligence to their silicon and firmware, as Operating Systems get larger and more complex, as layers of code and abstraction multiply, scope increases for obscure interactions that result in performance problems.

Filesystem caching is defeated by today's hard drive geometry abstraction, efficient hypervisor memory management is confounded by page sharing within applications, CPU cache policy reduces performance under certain conditions. What was a good way to do things a year ago might not be today. What works on single core architectures, may not work with multi-core. Hyper threading slows some code down rather than speeding it up.

Tracking vendor bug reports and keeping Operating Systems, firmware, and applications patched and upgraded is a cheap and easy way to avoid performance troubles.

Our professional services consultants are there for when performance problems defeat your IT team's efforts, and are beyond the scope of vendor patches and support contracts.

The Service

Our experts begin by gaining a thorough understanding of the business impact of the problem you are experiencing. We ascertain what your IT staff have attempted already, and what action (if any) has been taken by vendors and suppliers. We take a scientific approach to performance.

- Measure & Hypothesise
- Test & Verify Findings
- Take Corrective Action & Repeat

We produce a vendor-neutral report, detailing the precise nature of the problem and recommending actions to alleviate it. Our consultants are then able to put those actions into practice or hand over to your staff for implementation.

The Benefits

- Delay capital spending on new equipment
- Get "next years hardware performance" now
- Free up staff time currently spent nursing overloaded systems
- Resolve multi-vendor multi-layer blame loops
- Maximise value from sunk investments
- Reduce license costs via higher utilization, fewer systems

Consider This Service When

- You need increased performance but have no capex
- A critical application is hindered by poor performance
- A legacy system is a bottleneck to your processing
- You require confirmation of a vendor's advice on an upgrade
- IT performance prevents business flexibility
- You can't meet your backup and maintenance windows

Case Studies

High Def Video Distribution, For Free

A provider of on-line training solutions for the automotive sector was struggling to deliver high quality streaming video to a network of several hundred dealerships throughout Europe from their UK datacenter. After receiving pricing from Content Delivery Network providers, and an alternate quote for more datacenter bandwidth, they contacted 360is to see if there was a more cost effective way of achieving their goal.

During a 2 week engagement 360is consultants designed a private Peer-To-Peer network, using in-place datacenter and dealership assets (servers and desktops on DSL) for the distribution of high quality videos. No additional hardware was required, no more bandwidth was needed, there was no licensed software bought, nor any increase in OPEX at either the datacenter or the dealerships.

40 CPUs Work From An 8 CPU System

A large international bank had built a sophisticated system for distributing patches, packages, user-credentials, and configuration files securely across their estate during a strict rolling maintenance window.

Over time this system had become overloaded and struggled to complete its task within the time window. It was frequently still sending files at start-of-day. The hardware had been upgraded to 8 CPUs and could not be upgraded further. Nor could its functions be easily moved to a larger platform due to complex interdependencies with other systems. Migration would take months. 360is were retained for a week to analyse and solve the problem.

Consultants determined that the process was network and CPU constrained. Changes were made to the system which dropped the CPU use by 80% and marginally reduced network traffic. Allowing for increasing demand, this bought the client several years of spare capacity with no capital or operational expenditure, and without disturbance to the complex software running on the system.

Virtualizing Difficult Workloads

One of the worlds best known multinational brands was moving its IT estate to a virtualised platform. Although the migration had worked well for most systems, a particular workload was performing very poorly when virtualised. The problem was characterised by long CPU spikes at 100% and unacceptable interactive response for users of the system during these spikes. After 6 months work by their own IT team and that of their strategic IT partner, they were no closer to finding a solution and 360is was called in.

Over a period of several days 360is consultants analysed the application, operating system, and underlying virtualisation platform to determine empirically where performance was being lost. The deliverable was a report which contained hard data to be presented to the vendors responsible for the problem components, and options for improving performance by 20% while the cause (a kernel-space routine in hypervisor) was addressed. The report also contained details of the more radical step of swapping out one software component for another which would provide a 100% improvement, with no adverse impact on the business critical application user.

Storage Area Network Under Performance

A fast growing online company had invested heavily in its first enterprise grade SAN. After only 6 months the system was suffering from declining performance and the software developers were talking about going back to local RAID storage. The SAN reseller immediately advocated the purchase of more equipment. However, our client was unwilling to invest further capital without rigorous justification. Independent advice from 360is, backed up by detailed performance data couched in business terms, allowed our client to justify further investment in their infrastructure. The original SAN capacity had simply been exhausted through rapid growth in the business.

Next Steps

Our scientific approach to performance analysis and engineering has been proven in previous engagements with top 5 Investment Banks, Telcos, and technology vendors. If you have an IT performance problem that is impacting your business, contact us to arrange a no-obligation meeting with one of our consultants.