

# Article

## Improving SharePoint Performance

Many companies are using Microsoft SharePoint to share information across teams and across the company to:

- Improve team productivity
- Facilitate collaboration
- Streamline processes
- Centrally store, organise and target company information
- Author, review and publish documents
- Create, capture and share community knowledge

However, in some cases the success of SharePoint has been undermined by poor performance of the system leading to user frustration and a reluctance to use the system.

### Reasons for poor performance

There can be a number of reasons:

- Poorly configured search and indexing
- Poor LAN connections, from the browser or between the Index server, SPS and SQL server
- WAN connection issues
- SharePoint configuration :-
  - Documents stored at a Portal level, causing a bottle neck
  - Multiple portals on a single server, for example a combination of live and development portals on the same server.
- Poorly written bespoke web parts
- Inadequate hardware
- SQL database distribution poorly utilised

### Remote Users are affected the Most

One of the major problems which Cantono have found is with companies using SharePoint across their geographically-dispersed organisations. Addressing SharePoint issues is half the battle as even an optimal SharePoint installation will suffer from connectivity issues.

Poor performance in these cases can have a significant impact especially as the number of people working remotely and the use of pdas and laptops on the road increases. In some organizations, 67% of employees work in a location other than the headquarters. As the use of SharePoint increases the performance for remote workers deteriorates.

Ensuring good performance for remote and offline users is key to ensuring widespread use of collaborative applications like SharePoint, and getting the benefits promised from its use. Mobile and remote workers are often the critical customer-facing employees most likely to affect business achievements and most impacted by poor application performance.

To address this some companies have bought more servers, routers, or large extra network capability and discovered that performance improvements have been minimal.

### **Combination of factors on the network**

Web applications and portals are usually architected to work over a LAN. However, for a remote user over a WAN user performance degrades massively due to a combination of:

- constrained bandwidth
- chatty transport protocols
- application protocol inefficiencies

Since the above factors are additive, for SharePoint and other applications accessing content from a central server over a WAN the net result may be a delay of tens of seconds - resulting in reduced use and massive user inefficiency.

If you don't solve all three of these issues, users will not see performance benefits they need.

### **Other requirements for any successful solution**

Any solution also has to have the following characteristics

- **Transparent:** the users at the branch office do not see anything different from today in the application (apart from improved performance)
- **Compatible:** as well as being suitable for SharePoint it should also be suitable for other standard applications and formats
- **Reliable:** hardware and software redundancy should be inbuilt
- **Scalable:** the solution should be upgradeable to grow from a few to thousands of users as your use of SharePoint grows
- **Cost effective :** it must deliver an ROI which justifies the solution over for example buying extra bandwidth

### **Cantono solves the problems for remote SharePoint Users**

Riverbed appliances implemented by Cantono meet all these requirements and deliver LAN-like performance over wide area networks (WANs), enabling geographically dispersed teams to run SharePoint and other applications off central servers and share large documents as if they were all working in the same office.

With Riverbed appliances:

- Applications run up to 100 times faster. The acceleration of Sharepoint, Exchange, Windows, FTP, HTTP, Notes, MS SQL and other key enterprise applications used on WANs dramatically improves collaboration, file sharing and productivity.
- Redundant WAN traffic is eliminated, reducing bandwidth utilization by 60% to 95% on average. This enables network managers to delay or avoid WAN bandwidth upgrades, or even de-provision their current bandwidth.

### **How does it Work?**

Riverbed uses a number of different approaches:

#### **Data Streamlining**

- data reduction – eliminate redundant data on the WAN
- compression – LZ-compression for 'new' data segments

- prioritise – prioritisation of data on bandwidth and latency

#### Transport Pooling

- high speed TCP – ‘fill the pipe’ for OC12 and larger connections
- connection pooling – eliminate 50% of overhead for small short-lived connections
- adaptive congestion windows – apply transfer parameters based on network characteristics
- limited and fast retransmits – ensures priority handling for packet resends

#### Application streamlining

- window file-sharing
- UNIX file-sharing

#### **Major performance gains**

Implementation by Cantono of Riverbed systems have shown marked improvements in application performance. Remote offices have been pleasantly surprised at the response from application systems including Sharepoint and Microsoft Exchange.

Cantono use Riverbed technology themselves and are happy to talk to customers about the approach and the results of the implementation within Cantono and with their clients. Call for a discussion or demonstration.