



*ACE 2011 International*

# Tuning for Global Multi-Site Deployments

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# Session Goals



- ❑ Discussion of various hardware, software and network configurations and how these impact multi-site, global deployments with massive data sets and large user counts



# Why are we “Tuning”



## 1. Optimize end user perception of performance

Time to Logon, run Queries, check-out Files, ...

## 2. Failover / Redundancy

NOTE: There are some similar techniques for the two situations, for example Replication, but the goals are different. This session we focus on how to improve end-user perceived performance

# Why are we “Tuning”



## 1. End-users measure performance differently than IT

They have expectations set by their other on-line and home PC experiences

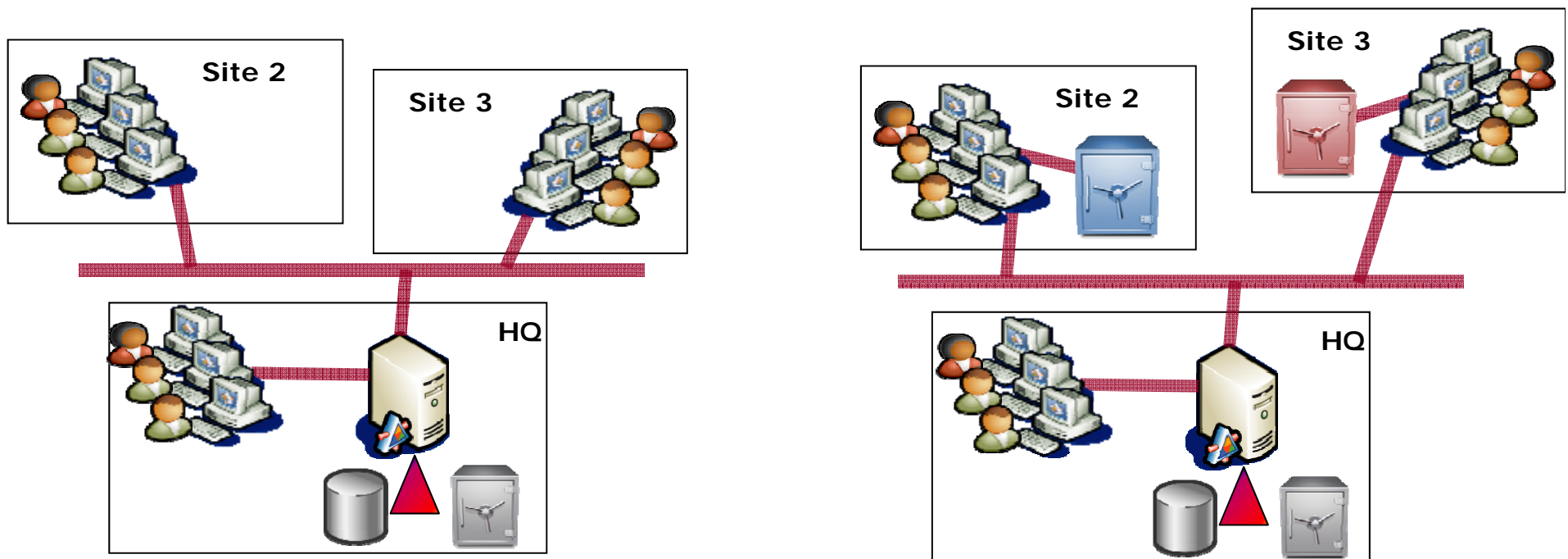
## 2. End-user adoption is critical to PLM success!

The value of PLM is directly related to the accuracy and timeliness of the data. If the end-users begin working off-line in Excel and Post-it Notes , the PLM database is no longer going to be relevant

# Configuration Options for a PLM rollout



- Single server, all client connections over the WAN
- Single application server + multiple vault servers: localized file traffic with meta-data over the WAN
- Distributed Aras Innovator instances



# Predictors / Drivers of Perceived Performance



## First – every PLM rollout will have certain users with different levels of perceived performance

- Every WAN configuration is different
  - Every PLM data set is different
  - Every PLM user population has different expectations and context to judge performance
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- Sometimes the solution is a code change, and Aras will issue a patch. There are still configurations and scenarios that we've never seen before.
  - Most of the time, however, there are configuration issues with networks, servers, software, and desktops that are easily remedied.

# Predictors / Drivers of Perceived Performance



## Things that we've seen affect end-user performance

- Anti-virus software settings
- Network Latency
- Bandwidth
- Large files not being replicated for whatever reason
- Reporting and BI tools sharing the same DB as Production
- Bad choices in customization
  - There are trade-offs on deciding where to put the rules and automation; Client, Server, or DB

# Typical Solutions



- ▶ **Change settings on the Virus Scanner, or Proxy Servers**
- ▶ **Turn on Compression for Vault server file transfers**
- ▶ **Use Replicated Vault Servers**
- ▶ **Use multi-streaming on vault transactions**
- ▶ **Adjust the HTML Caching options**
- ▶ **Aras provides a code patch**
- ▶ **Multiple Instances of PLM**
  - If the network is really bad, this may be your only option. Install multiple separate instances of Aras Innovator, with partial replication between them. This configuration takes planning, but is not as tough as you'd think. See the Federation workshop materials.



# Got a problem, now what do I do?



- Don't panic
- If you're a Subscriber, contact Aras and we'll help
- Our process
  - Work with you to document the symptoms of the problem
  - Design specific tests / experiments that display the specific end-user problem repeatedly
  - Use standard network sniffers to capture logs (how to handle black box implementations)
  - Analyze, Analyze, and then Solve - what are we looking for in the logs?
  - Re-run the tests

# More Resources



## ▶ Forums

- [www.aras.com/forums](http://www.aras.com/forums)

## ▶ [Support@aras.com](mailto:Support@aras.com) (for Aras Subscribers)

## ▶ Documentation

- Platform Specifications
- Configuring Vault Replication
- Installation Guide
- .NET Client Configuration



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