

The Alpha0 version of the Web100 software has been distributed to the 19 early adopter groups as well as installed on platforms at the 3 Web100 partner (PSC, NCSA, NCAR) sites. For the current software version, we have asked the early adopters to focus on basic issues such as ease of installation, overall documentation issues as well as interactions between the Alpha0 code and host operating system and applications.

An internal WWW site, <http://internal.web100.org> was implemented this past year in order to facilitate collaboration with the Early Evaluators as well as provide a complete documentation repository for the project. This site is used to record and track all problems, observations, modifications and enhancements associated with the project. For the Alpha0 release, roughly 13 bugs reports have been recorded. Examples of bugs include: inability to run on multi-processor (SMP) Linux platforms; instruments implemented incorrectly; and problems with sample tools used for testing the code. In most instances, the bugs were fairly simple to correct, such as incorrectly coding a specific instrument. A few were more fundamental in nature, such as a misunderstanding of how to instrument specific TCP characteristics. The majority of the bugs were addressed with a subsequent minor release of the software. Design flaws will be corrected in the next major release of the code.

At PSC, NCSA and NCAR the Web100 Alpha0 code has been used to diagnose networking problems between two of the sites - NCSA and PSC, as well as tune specific applications within the site.

While the software has been very helpful in both situations, it has limitations due to the restricted set of instruments implemented in the code. These tests have also been used to identify what instruments should be collected in subsequent versions of the code as well as to prioritize their implementation. While testing, we have also discovered some bugs within the code. We have not yet done a complete verification of the results of the code. This will be done over the next few months, prior to the development and release of the next major Web100 software version. We plan to use existing network diagnostic tools to compare and verify results from the Web100 software.

In general, we have found that the current Web100 Alpha0 code provides new insight into TCP performance issues. The few read/write variables included in the code support manual tuning for TCP connections on the host, a useful function for many hosts and applications. Subsequent versions of the code will include a mechanism for automatically tuning the TCP connections.