

# Survey on Supercomputer Cluster Security

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- *From:* [cluster.security@xxxxxxxxxx](mailto:cluster.security@xxxxxxxxxx)
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To Cluster System Administrators:

Our University has done some classified DoD work on various Beowulf clusters. As a result, we have gotten interested in the questions of securing supercomputer clusters. In particular, we are especially interested in better understanding the nature of the threats against supercomputer clusters, and the extent to which security measures are implemented. It would help us greatly if you would answer a few questions on this subject. Feel free to not answer any question that you do not wish to answer. Just select the no answer selection. A complete list of questions and possible answers are listed below in text form.

If there are several system administrators for your cluster(s), please ensure that your group submits only one survey per cluster.

You can answer the questions interactively at our website (our preferred method), by e-mail, by fax, and by regular mail. To answer on the web, please go to

<http://www.cs.umaine.edu/~markov/clustersurvey/survey.html>

and login with

login ClusterSurvey

password S3cur3Qu3st

The login is just to keep random visitors to the website from filling out the questionnaire. The web questionnaire will only be available until June 1, 2007.

There are two options when if you choose to by e-mail, fax, or regular mail. First, you can download a PDF version of the questionnaire from a link on the webpage referenced above. This is an interactive PDF file that permits you to answer the questions in the form providing you are using a new enough version of Adobe Acrobat Reader (Version 8 recommended). You can either print out the results and fax them or

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mail them, or you can e-mail the file or just the answers by hitting the e-mail button in the form. Alternatively, you can answer the questions on the form below and either e-mail it back or print out the results and fax or e-mail them back.

If you wish to fax your answers, please fax them to 207-866-3050, which is a secure fax.

We will collect whatever data we receive and organize the results. These results will be available on the web using the URL above starting July 15, 2007 in case you are interested.

All data will be aggregated and in no way will we identify any respondents -- my goal is to have some general numbers and percentages that can help us better understand who is trying to crack into supercomputers and why.

If you know of other people who would be interested in the results or would be interested in providing data, please feel free to send them a copy of this letter.

Sincerely yours,

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### QUESTIONNAIRE

1. How frequently are your supercomputer clusters attacked relative to any desktops that might be in your laboratories?

More Frequently  
About the Same Frequency  
Less Frequently  
No Answer

2. How sophisticated are the attacks against your clusters compared to the attacks against any desktops that might be in your laboratories?

More Sophisticated  
About the Same Level of Sophistication  
Less Sophisticated  
No Answer

3. Are there any IP addresses that regularly try to break into your cluster?

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Yes  
No  
Not Sure  
No Answer

4. Has anyone ever tried a man-in-the-middle type of attack against any of your clusters?

Yes  
No  
Not Sure  
No Answer

5. Have you ever been attacked from foreign IP addresses?

Yes  
No  
Not Sure  
No Answer

6. Have your clusters ever been attacked by foreign interests?

Yes  
No  
Not Sure  
No Answer

7. Has anyone ever tried a physical approach to either disrupt a computation or to steal data?

Yes  
No  
Not Sure  
No Answer

8. Has anyone ever tried to bribe or otherwise co-opt one of the cluster staff into helping with compromising the security?

Yes  
No  
Not Sure  
No Answer

9. How many times has security been breached on one of your supercomputer clusters over the past three years that resulted in either downtime or lost data?

11 or more  
6-10  
2-5  
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Not Sure

No Answer

10. Does your center have a person whose primary responsibility is cluster security?

Yes

No

Not Sure

No Answer

11. Do you run an intrusion detection system on your clusters?

Yes, on all

No, not on any

Mixed, on some and not on others

Not Sure

No Answer

12. How often do you check for rootkits?

Multiple Times a Day

Daily

Weekly

Monthly

Annually

Not at all

Not Sure

No Answer

13. How often do you run backups on your clusters?

Multiple Times a Day

Daily

Weekly

Monthly

Annually

Not at all

Not Sure

No Answer

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