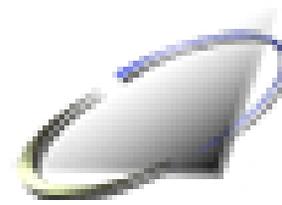




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A SMS Tool for Alerts and Monitoring of a High Availability Cluster Environment

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- Introduction
- The Proposed SMS Tool
- Experimental Results
- Conclusions and Future Work

Introduction

- NOW – Network of Workstations
 - Non-dedicated environments
 - Utilization of idle resources from a LAN or WAN
- COW – Cluster of Workstations
 - Dedicated cluster configurations
 - Homogeneity

Introduction

- Focus on COW configurations
- SMS tool
 - Monitor a cluster executing the OSCAR/HA-OSCAR software packages.

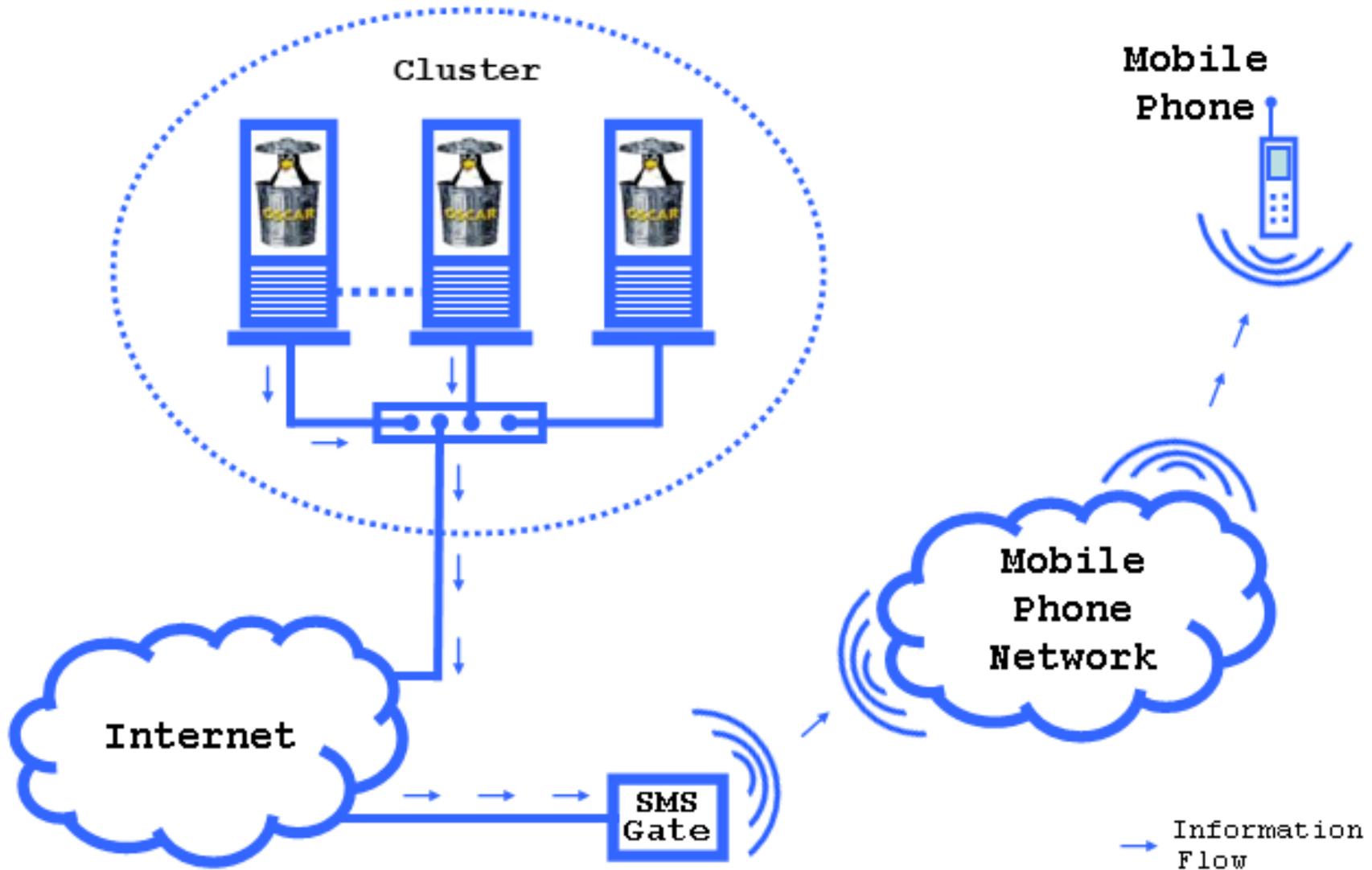
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The Proposed SMS Tool

- In case of a Cluster failure
 - Generate an alert message
 - Send to SMSGate through SMTP
 - Forward the message to a mobile phone through the public telephone system

The Proposed SMS Tool

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The Proposed SMS Tool

- Failure Verification Method
 - Connection attempt between the monitor and the monitored nodes.
 - Monitor expects deny of connection to assume that the monitored is OK.
 - Any other answer, or no answer at all, the monitor assumes that the monitored is down.

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Experimental Results

- Case Study A
 - Simultaneous failures (Standby and Slave)
 - Failures were simulated by physically disconnecting both nodes from the network.
 - After the alert messages were received, the nodes were reconnected.

Experimental Results

- Case Study B
 - Failure on the master node
 - HA-OSCAR detects the failure
 - The proposed tool detects this change and start monitoring from the new master node.
 - After the alerts were sent, the node was reconnected, granting consistency to the cluster again.

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Conclusions and Future Work

- Extends the facilities found in the wired network to mobile phones using a SMS message approach.
- Experimental results employing the tool indicate that we successfully reach our initiation proposals.

Conclusions and Future Work

- As a future work we are going to implement a more complex tool join efforts with the research work presented by A *Wireless Monitoring Approach for a HA-OSCAR Cluster Environment*, submitted paper to the OSCAR Conference, Canada, 2005.

Questions?

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