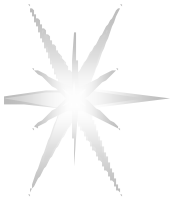
Clearinghouse for Incident Handling Tools

TF-CSIRT Seminar

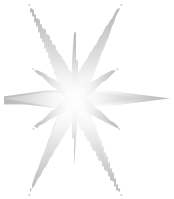
January 18, 2001

Barcelona



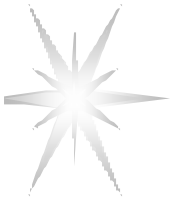
Agenda

- Clearinghouse goals
- Tools used by CSIRTs
  - Evidence Collection tools
  - Investigative tools
  - Incident tracking/reporting tools
- Remedy Action Request System by Andrew Cormack, CERT UKERNA
- Recommendations
  - How to proceed?



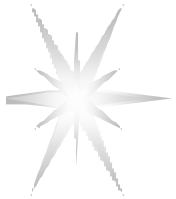
Clearinghouse goals

- Experience exchange
  - E.g., library of rules for Intrusion/Activity detection
  - Can we do it in effective way?
- Easy setting up work procedure for new CSIRT teams
- Simplify information exchange
- Provide collective feedback for manufactures and developers
- Possible establishing recommended/common tools set



Tools used by CSIRTs

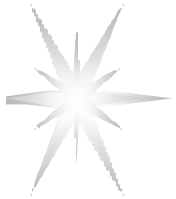
- Evidence collection tools
- Investigative tools
- Proactive tools
- Incident registration and tracking tools
  - Support CSIRT procedure
  - Customer support (call center)



Evidence collection tools – Requirements 1

Actions required during Incident data (Evidence) collection

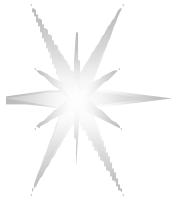
- processes examining
- examining system state
- program for doing bit-to-bit copies
- programs for generating core images and for examining them
- Programs/scripts to automate evidence collection



Recommended Evidence collection tools set

http://www.ietf.org/internet-drafts/draft-ietf-grip-prot-evidence-01.txt

- Forensics CD should include the following
  - a program for examining processes (e.g., 'ps').
  - programs for examining system state (e.g., 'showrev', 'ifconfig', 'netstat', 'arp').
  - a program for doing bit-to-bit copies (e.g., 'dd').
  - programs for generating core images and for examining them (e.g, 'gcore', 'gdb').
  - scripts to automate evidence collection (e.g., The Coroner's Toolkit)
- The programs on the forensics CD should be statically linked, and should not require the use of any libraries other than those on the CD.



Investigative tools – Requirements 2

Actions required during Incident data analysis/investigation

- Checking Attacker and Victim identity
  - IP -> DN, DN -> IP
  - Contact, network data
- Extracting information from collected data and CSIRT archives
  - Extended log file analysis
    - Based on library of rules
  - Tracking similar cases

Investigative tools – CERT UKERNA Example

about - obtains information from DNS and whois servers for a given IP address or name; checks the current CERT mailboxes and router logs to see if the IP address has been reported in other contexts

apnic, arin, ripe - look up details of a numeric IP address in the APNIC, ARIN or RIPE

gross - script to distill information from some supplied router log files. Attempts to identify hosts probed, start and end times of probing and ports probed.

eh - script to identify well-known portnumbers

findref - script to search for a string in JANET-CERT mailboxes (open, closed or all)

keykatch - script to extract contact information only from RIPE, ARIN and APNIC db

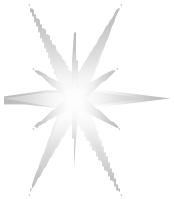
soa - script to find the e-mail address responsible for the DNS server in a domain e.g.

internic - script to query the InterNIC for details about some networks

ip2host - public domain script to take a file of IP addr. and convert them to hostnames

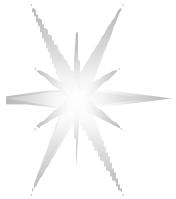
janic - script to query the JANET whois server for details about .ac.uk domains

nameof - script to translate a numeric IP address into a name



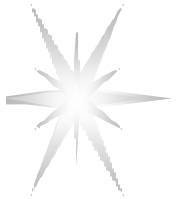
Incident tracking tools – Requirements 4

- Support CSIRT procedure
  - Incident registration
  - Incident tracking
  - Incident reporting
- Easy configurable
  - Web-based interface
- Customer support (call center) – optional?



Incident tracking tools – Examples

- Action Request System from Remedy (ARS)
  - Web-based user self-support
  - Easy configurable
  - Integration with Network Management packages
- Magic Total Service Desk (Magic TDS)
  - Web-based customised interface
  - Network Oriented and scalable up to 1000 nodes
  - SNMP support (traps, etc.)
  - XML built and database format customisation
  - Based on MS DNA: Support VB abd COM scripts
  - Enables end-users to send requests via e-mail
- Clarify



Recommendations or How to proceed?

Clearinghouse of Incident Handling Tools

- Create repository of investigative tools for incident/evidence collection
  - Manual/Tutorial is very desirable
- Prepare list of recommended tools for Incident tracking
- **Questionnaire on used tools and practices to CSIRT Teams**
- Include basic/recommended tools into Training Programme/materials
- Develop common tools and/or recommendations to make Incident/CSIRT information exchangeable
  - Think about IODEF implementation