PTD "We penetrate targets’ defences."

BULLRUN

PTD Lead for Special Operations and Policy
TOP SECRET STRAP1

BULLRUN

• Covers the ability to defeat encryption used in specific network communications

• Includes multiple, extremely sensitive, sources and methods

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Network Security Technologies

• Secure Sockets Layer/Transport Layer Security (SSL/TLS) (webmail)
• Secure Shell (SSH)
• Encrypted chat
• Virtual Private Networks (VPNs)
• Encrypted VoIP

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Response to improving security

• For the past decade, NSA has lead an aggressive, multi-pronged effort to break widely used Internet encryption technologies
• Cryptanalytic capabilities are now coming on line
• Vast amounts of encrypted Internet data which have up till now been discarded are now exploitable
• Major new processing systems, SIGDEV efforts and tasking must be put in place to capitalize on this opportunity

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Sensitivities

- Cryptanalytic capabilities
  - Are extremely difficult and costly to acquire
  - Require a long lead time
  - Depend on sensitive sources
  - Are very fragile
  - If lost, may never be regained

- The mere “fact of” a capability is very sensitive:
  - An adversary who knows what we can/cannot break is able to elude our capabilities even without knowing the technical details of how the capabilities work

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Protecting BULLRUN Capabilities

• Technical and operational details
  – Need to be known only by cryptanalysts and those who enable cryptanalysis
  – Protected by established ECI’s
    • PICARESQUE, PAWLEYS, AMBULANT, …

• “Fact of” information
  – Needs to be known very widely within the SIGINT production chain
  – Protect with new secure community of interest (COI)
Protecting the Info – Secure COI

- Secure Community of Interest (COI) – protects “fact of” as well as volume and scope of the capability
- BULLRUN indoctrination required for access to COI
- BULLRUN-related material, data – decrypted content and decrypted metadata, and details must be protected within the COI

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Protecting the information

• BULLRUN is for internal (Sigint) use only
• Implemented at NSA & CSEC; DSD & GCSB to follow
• Not to be shared with UK Partners / customers
• EP not to reveal sources & methods; further guidance to be developed
• BULLRUN brief on Gcwiki for reference

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Examples

- (S S1) Unspecified capabilities against [VPNs, IPSEC, TLS/SSL, HTTPS, SSH, PPTP, eChat, eVoIP]

- (TS S1 COMINT) Capabilities against the encryption used in [VPNs, IPSEC, TLS/SSL, HTTPS, SSH, PPTP, eChat, eVoIP]

- (TS S2 BULLRUN) Capability against specific applications

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BULLRUN Bottom Line

- Groundbreaking capabilities
- Extremely fragile
- Do not ask about or speculate on sources or methods underpinning BULLRUN successes
- Indoctrination required for access to secure COI

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