National Crime Agency

National Cyber Crime Unit

NCA Vision

Message from Keith Bristow

"Protecting the public: leading our fight against serious and organised crime"

Working with our partners will be critical to the success of the agency and it will be our combined efforts, working to protect the public, that will have a real impact.

Lead, Support, Co-ordinate

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Office for National Statistics

In 2013, 36 million adults (73%) in Great Britain accessed the Internet every day, 20 million more than in 2006, when directly comparable records began.

Access to the Internet using a mobile phone more than doubled between 2010 and 2013, from 24% to 53%.

In 2013, 72% of all adults bought goods or services online, up from 53% in 2008.

In Great Britain, 21 million households (83%) had Internet access in 2013.

Broadband Internet connections using fibre optic or cable were used by 42% of households, up from 30% in 2012

Release Date: 08 August 2013

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17 February 2011 Last updated at 11:49

UK cyber crime costs £27bn a year - government report

Cyber crime costs the UK economy £27bn a year, the government has said.

The figures, published for the first time, are a mid-range estimate and the real cost could be much higher.

Cyber crime is seen as a growing problem

They are made up of £21bn of costs to businesses, £2.2bn to government and £3.1bn to citizens.

Security minister Baroness Neville-Jones said the government was determined to work with industry to tackle cyber crime.

At the moment, cyber criminals are "fearless because they do not think they will be caught", she said in a briefing in central London.

Related Stories

UK opts in to EU cyber-crime plan

Cyber attacks 'are acts

Measuring the Cost of Cybercrime
Ross Anderson, Cambridge University
Michael Levi, Cardiff University

Cyber Crime

- $97M Fake Antivirus
- $10M↑ Stranded Traveler
- $200M↑ Fake Escrow
- $1,000M↑ Advanced Fee
- $370M↑ Online Banking Fraud: Malware
- $320M≈ Online Banking Fraud: Phishing

Cyber Defense

- $1,000M≈ Bank Countermeasures
- $3,400M Antivirus
- $40M≈ ISP Cleanup
- $1,000M≈ Patching Vulnerabilities
- $10,000M≈ User Cleanup
- $10,000M≈ Business Security
- $400M Law Enforcement

↑Likely an underestimate
≈ High uncertainty

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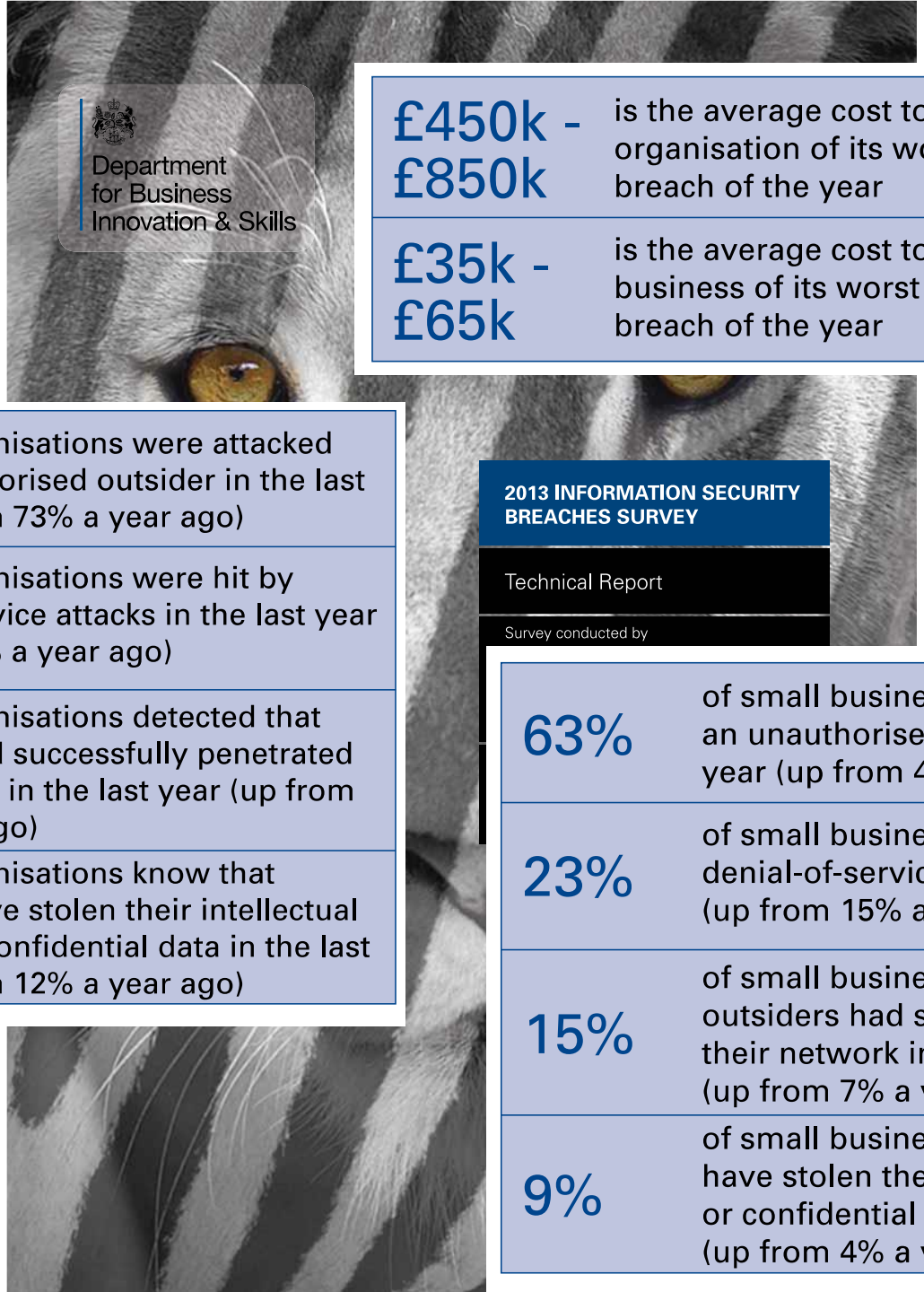

Department for Business Innovation & Skills

£450k - £850k	is the average cost to a large organisation of its worst security breach of the year
£35k - £65k	is the average cost to a small business of its worst security breach of the year

78%	of large organisations were attacked by an unauthorised outsider in the last year (up from 73% a year ago)
39%	of large organisations were hit by denial-of-service attacks in the last year (up from 30% a year ago)
20%	of large organisations detected that outsiders had successfully penetrated their network in the last year (up from 15% a year ago)
14%	of large organisations know that outsiders have stolen their intellectual property or confidential data in the last year (up from 12% a year ago)

2013 INFORMATION SECURITY BREACHES SURVEY

Technical Report

Survey conducted by

63%	of small businesses were attacked by an unauthorised outsider in the last year (up from 41% a year ago)
23%	of small businesses were hit by denial-of-service attacks in the last year (up from 15% a year ago)
15%	of small businesses detected that outsiders had successfully penetrated their network in the last year (up from 7% a year ago)
9%	of small businesses know that outsiders have stolen their intellectual property or confidential data in the last year (up from 4% a year ago)

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What is cyber crime? – Serious and Organised Crime Strategy

Cyber crime describes two distinct, but closely related, criminal activities:

- **Cyber-dependent** crimes can only be committed using computers, computer networks or other forms of information communication technology (ICT). They include the creation and spread of malware for financial gain, hacking to steal important personal or industry data and denial of service attacks to cause reputational damage.

- **Cyber-enabled crimes** (such as fraud, the purchasing of illegal drugs & child sexual exploitation) can be conducted on or offline, but online may take place at unprecedented scale and speed.

https://www.gov.uk/government/publications/serious-organised-crime-strategy
Published 7th October 2013

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The Computer Misuse Act 1990

Section 1 contains the basic **'hacking'** offence of gaining unauthorised access to any program or data held in a computer.

Section 2 makes it an offence to commit a Section 1 offence with a view to commit, or facilitate the commission of, a further offence i.e. fraud

Section 3 contains the offence of doing any unauthorised act in relation to a computer with intent:

- to impair the operation of any computer; or
- to prevent or hinder access to any program or data held in any computer; or
- to impair the operation of any such program or the reliability of such data;
- to enable any of the things to be done.

Section 3A – making, supplying or obtaining articles for use in S1 or 3

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Cybercrime-as-a-Service

Table 2. Prices for stolen credit card numbers.

Dumps	Estimate of Prices (without PIN, with PIN, PIN and good balance)											
	US			EU			CA, AU			Asia		
Visa Classic	$15	$80		$40	$150		$25	$150		$50	$150	
Master Card Standard		$90			$140			$150			$140	
Visa Gold/Premier	$25	$100	$200	$45	$160	$250	$30	$160		$55	$150	
Visa Platinum	$30	$110		$50	$170		$35	$170		$60	$170	
Business/Corporate	$40	$130		$60	$170		$45	$175		$70	$170	
Purchasing/Signature	$50	$120		$70			$55			$80		
Infinite				$130	$190		$60	$200			$190	
Master Card World		$140										
AMEX	$40			$60			$45			$70		
AMEX Gold	$70			$90			$75			$100		
AMEX Platinum	$50											

Table 1. Prices for zero-day vulnerabilities.

Adobe Reader	$5,000–$30,000
Mac OS X	$20,000–$50,000
Android	$30,000–$60,000
Flash or Java Browser Plug-ins	$40,000–$100,000
Microsoft Word	$50,000–$100,000
Windows	$60,000–$120,000
Firefox or Safari	$60,000–$150,000
Chrome or Internet Explorer	$80,000–$200,000
IOS	$100,000–$250,000

Figure 10. This spam service offers support, just like many legitimate online offers.

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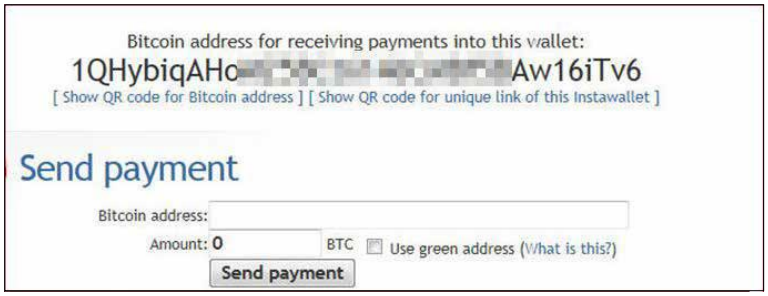
http://www.mcafee.com/uk/resources/white-papers/wp-cybercrime-exposed.pdf

Virtual Currencies

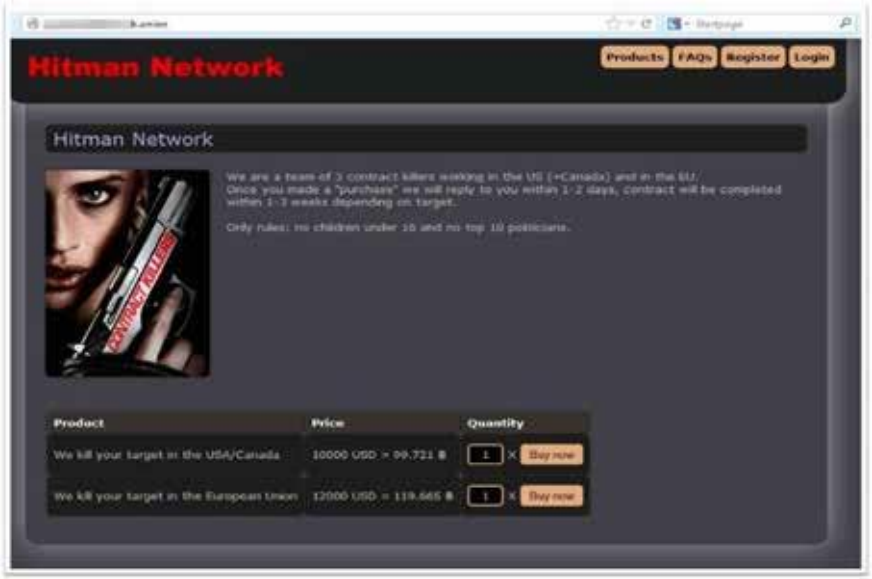
McAfee
An Intel Company



WebMoney Perfect Money

Bitcoin UKASH e-gold

Liberty Reserve



NCA Structure

DG Keith Bristow

DDG Phil Gormley

CEOP

Organised Crime Command

Economic Crime Command

Borders

NCCU

Intelligence Hub

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NCCU Mission

The aim of the NCCU is to:

- collaborate with partners to fight crime
- protect the public and reduce harm to the UK from cyber and cyber-enabled crime
- provide a specialised investigative response, nationally and internationally, to the most serious incidents of cyber crime
- work to eliminate criminal opportunities and create a hostile environment for cyber criminals
- assist law enforcement to tackle cyber and cyber-enabled crime
- support a step-change in UK law enforcement's mainstream cyber capabilities.

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NCCU Structure

Strategy, Performance & Coordination

Cyber Ops

Ops Support

Partnerships and Expertise

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Cyber Operations

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Operational Support

- Operational investigative support
  - Technical
  - Intelligence
  - Financial
  - Enforcement
- Cyber international liaison

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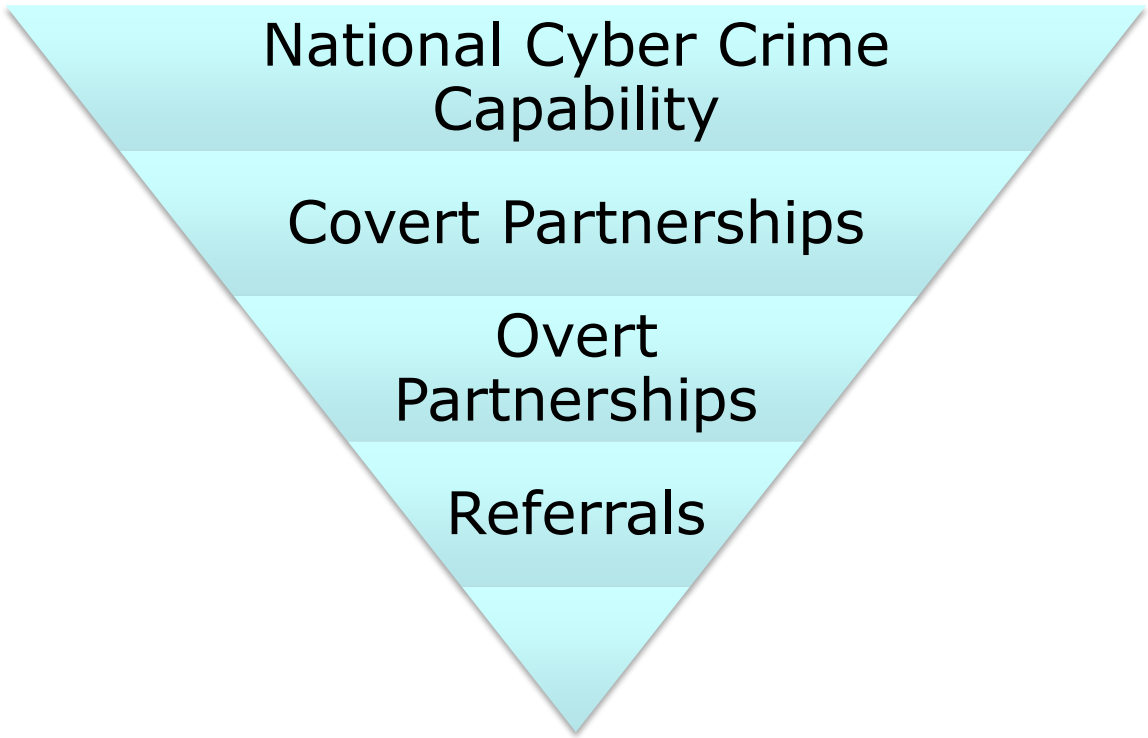
Partnership & Expertise



Prevention, disruption, enrichment of the intelligence picture & response

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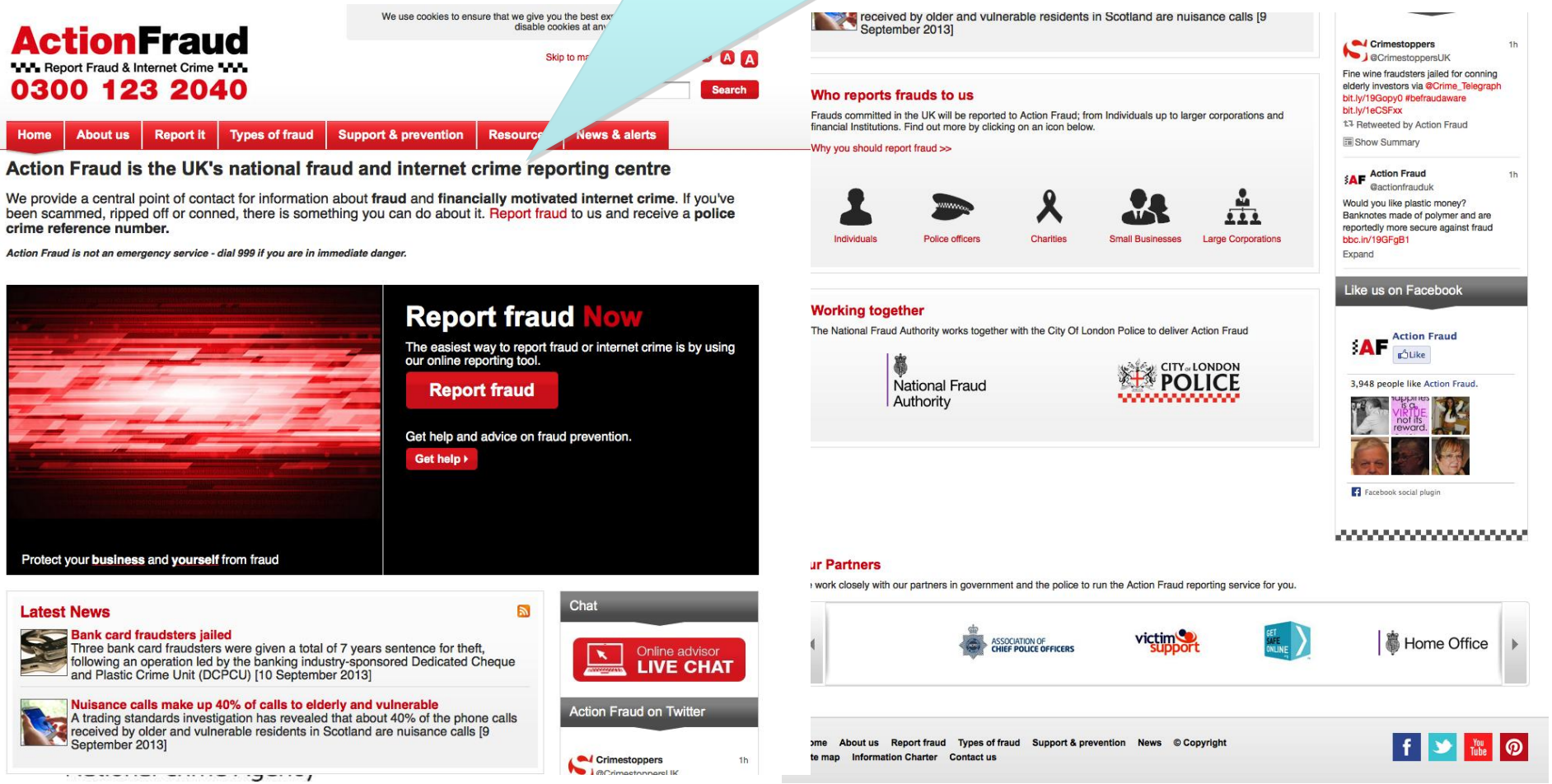
Challenges

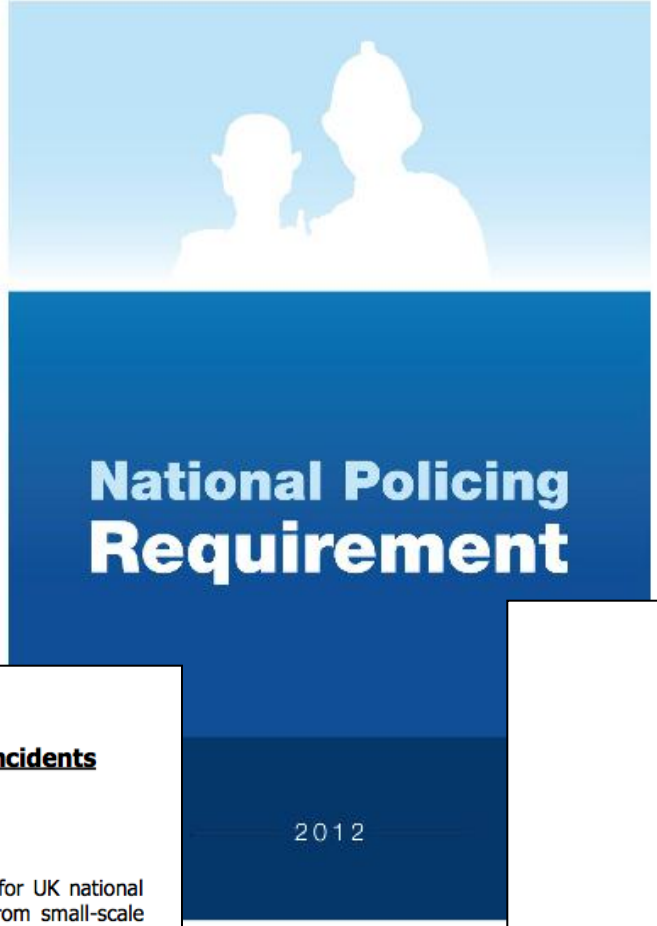
- The internet
- Multi-jurisdictional
- Legislation
- Working with industry
- Skills in policing
- Competing priorities

Action Fraud

and internet crime reporting centre



http://www.apccs.police.uk/fileUploads/APCC_Group_Emails/130408_NPR_Final_Document_2.pdf



Chapter 7

National Requirements for Large-Scale Cyber Incidents

7.1 Overview

7.1.1 Cyber security is defined as one of four top priorities for UK national security[64]. The term 'cyber attack' covers anything from small-scale email scams to sophisticated large-scale attacks driven by diverse political and economic motives.

7.1.2 The National Security Risk Assessment[65] identifies a large-scale cyber incident and the risk of a hostile cyber attack by other states as Tier 1 risks. It is important to note that a cyber incident may not necessarily result from a criminal attack but could be caused by a technological issue or failure.

7.1.3 The UK Cyber Security Strategy[66] outlines these objectives for the UK:

- **tackle** cyber crime and be one of the most **secure** places in the world to do business
- be more **resilient** to cyber attacks and able to **protect** interests in cyberspace
- help **shape** an open, stable and vibrant cyberspace which the UK public can use safely
- have cross-cutting **knowledge and skills** to underpin the achievement of these objectives.

HMIC Inspecting policing in the public interest

Strategic Policing Requirement inspection

Terms of Reference

http://www.hmic.gov.uk/publication/strategic-policing-requirement-inspection-terms-of-reference/

Policing Professional Framework

NPIA National Policing Improvement Agency

SKILLS for JUSTICE Developing skills for a safer and fairer society

Search for Roles

Log-in: Username ••••••••• Go

PPF Home | About the PPF | National Roles | Personal Qualities

PPF Home > Search

Search the Policing Professional Framework (PPF)

Search for: cyber Search

Match: Any words All words Exact phrase

Results for 'cyber'

8 results found.

1. **Cyber** Infrastructure Officer
   Police Officer Role
   National Role
   To develop and maintain tactical and strategic relationships with industry and other **cyber**-crime related partners. To design and implement methods of abuse prevention and...
   /national-roles/?r_id=1092

2. **Cyber** Intelligence Analyst
   Police Staff Role
   National Role
   ... and reducing crime and disorder. This is carried out in relation to **cyber** crime as defined by the Home Office and the National Strategy.
   /national-roles/?r_id=1090

3. **Cyber** Investigator (DI)
   Police Officer Role
   National Role
   ... detectives and police staff concerned in the investigation of serious and organised **Cyber** Crime. This is carried out in relation to **cyber** crime as...
   /national-roles/?r_id=1085

4. **Cyber** Investigator (DC)
   Police Officer Role
   National Role
   ... which is admissible in Court. This is carried out in relation to **cyber** crime as defined by the Home Office and the National Strategy.
   /national-roles/?r_id=1087

5. **Cyber** Investigator (DS)
   Police Officer Role
   National Role
   ... and serious internet based criminality. This is carried out in relation to **cyber** crime as defined by the Home Office and the National Strategy.
   /national-roles/?r_id=1086

6. **Cyber** Intelligence Researcher
   Police Staff Role
   National Role
   To service intelligence requirements in support of unit investigations in relation to **cyber** crime as defined by the Home Office and the National Strategy.
   /national-roles/?r_id=1091

7. **Cyber** Intelligence Development Supervisor
   Police Officer Role
   National Role
   ... involvement or otherwise in criminal activity.This is carried out in relation to **cyber** crime as defined by the Home Office and the National Strategy.
   /national-roles/?r_id=1088

8. **Cyber** Intelligence Development Officer
   Police Officer Role
   National Role
   ... operations to establish involvement or otherwise in criminal activity in relation to **cyber** crime as defined by the Home Office and the National Strategy...
   /national-roles/?r_id=1089

Policing Professional Framework

NPIA National Policing Improvement Agency

SKILLS for JUSTICE Developing skills for a safer and fairer society

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PPF Home | About the PPF | National Roles | Personal Qualities

PPF Home > National Roles > Police Officer Ranks > Constable > Cyber Investigator (DC)

National Roles

National Role

About this National Role

Type	Police Officer
Rank / Level	Constable
Role Type	Role
Updated	12th July 2013

Print this Role
Microsoft Word version
Open in new window

Policing Professional Framework (PPF)

Cyber Investigator (DC)

To carry out this role you must be a competent Detective Constable.

To conduct investigations and operations into the most serious incidents of network based organised criminal activity; to detect hi-tech crime; gather and distribute relevant and quality intelligence; to provide technical advice and assistance to officers engaged in the investigation of hi-tech crime; to produce evidence in a form which is admissible in Court. This is carried out in relation to cyber crime as defined by the Home Office and the National Strategy.

A Cyber Investigator (DC) must be able to

- Identify and secure electronic evidence sources
- Seize and record electronic evidence sources
- Capture and preserve electronic evidence
- Investigate electronic evidence
- Evaluate and report electronic evidence
- Conduct Open Source Internet investigations
- Conduct network investigations
- Identify and deal with threat and areas of vulnerability
- Recover technical equipment
- Health and Safety in ICT and Contact Centres at level 1

Personal Qualities

Decision making [view]

Leadership [view]

Professionalism [view]

Public service [view]

Working with others [view]

Associated Qualifications, Accreditation and Learning Programmes

Phase 1 - Suggested Basic Training

Training covering the following areas

- Open Source
- Advanced Internet Research
- Core Skills in Network Investigation
- Core Skills in Digital Investigation
- Access Data Forensic Toolkit
- How to conduct 'active file review' from a forensic image

Reference documents

- **ACPO Managers Guide** - Good Practice and Advice Guide for Managers of e-Crime Investigation
- **ACPO Good Practice Guide** for Digital Evidence *March 2012*
- **National Policing Requirement** for the Strategic Policing Requirement - Chapter 7 National Requirements for Large Scale Cyber Incidents
- **Serious and Organised Crime Strategy** *October 2013*
- **10 Steps to Cyber Security**
- **Small businesses: What you need to know about cyber security** *2013*
- www.getsafeonline.org
- www.actionfraud.police.uk
- www.ecrimewales.com

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What works

- A standards based approach to IT Hygiene, including a response to witting or unwitting employees that cause harm
- Shared intelligence and threat data, by sector or trade body
- Understanding the threat picture and your capability to respond, including protecting and backing up sensitive data
- Cross Government & industry collaboration on the threat, intelligence, response, mitigation and recovery
- Exercising the disaster response and business continuity
- Fast time incident response, whilst crime is in action, with a live forensics capability
- Education on business continuity, prevention, mitigation & disaster recovery (GSoL, CESG, CPNI, CISP)
- Being cognisant of emerging & future technologies

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