



Supporting operational communities

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European Union Agency for Network and Information Security

Core Operational Department

Operational Security Unit

Operational Security Unit #COD3#



European Union Agency for Network
and Information Security



Cyber Security Incident Response

Full set of services
for CSIRTs and
operational
communities

NETWORK

we empower
communities



SUPPORT

we increase
skills via training
and good
practice

PRACTICE

we exercise
cyber crisis
management



Initiatives since:



2005 Start up programme for CSIRTs (ENISA guidelines and support on how to set up and operate CSIRT)

2008 Focus on national and governmental CSIRTs – defining minimum requirements for operations

2010 Cyber Europe Exercise (EUROPE's first ever EU cyber security exercise; continued in 2012, 2014, 2016)

2011 CSIRT and Law Enforcement cooperation support (information sharing and fight against cybercrime)

2013 Operational training programme (for CSIRTs and other ICT security specialists)

2015 Train the trainer programme (to enlarge the CSIRT training capacity in Europe)

CSIRTs in Europe – Q1/2016

Currently in Europe 275 teams listed! Around 1/6 are n. or g. CSIRTs.

A map of Europe with the landmasses highlighted in blue against a light blue background. The map shows the outlines of the continents and major islands.

Austria	Lithuania
Belgium	Luxembourg
Bulgaria	Malta
Croatia	Netherlands
Czech Republic	Norway
Denmark	Poland
Estonia	Portugal
Finland	Romania
France	Slovakia
Germany	Slovenia
Greece	Spain
Hungary	Sweden
Iceland	Switzerland
Ireland	United Kingdom
Italy	EU Institutions
Latvia	

We are building and actively supporting a growing network of national/governmental CSIRTs

CSIRT Interactive MAP: <http://www.enisa.europa.eu/activities/cert/background/inv/certs-by-country-interactive-map>

Cybersecurity Exercises by ENISA

Cyber Europe 2010

- Europe's first ever EU cyber security exercise

Joint EU-US Cybersecurity Exercise 2011

- First transatlantic cooperation exercise

Cyber Europe 2012

- Testing the EU Standard Operational Procedures (EU-SOPs)

EuroSOPEx 2012

- Large scale realistic cyber-crisis exercise

Cyber Europe 2014

- Involved MS, private sector and EU institutions.
- Testing the EU Standard Operational Procedures (EU-SOPs)

Cyber Europe 2016

- In planning phase



ENISA's library



- Good Practice Guide for Incident Management
- Proactive detection of incidents
- Fight against Cybercrime
- Alerts-Warnings-Announcements
- Incident Handling Automation
- Actionable Information

Material, Roadmap and Methodology



Material since 2008

Roadmap from 2012

Methodology from 2014



Building artifact handling and analysis environment

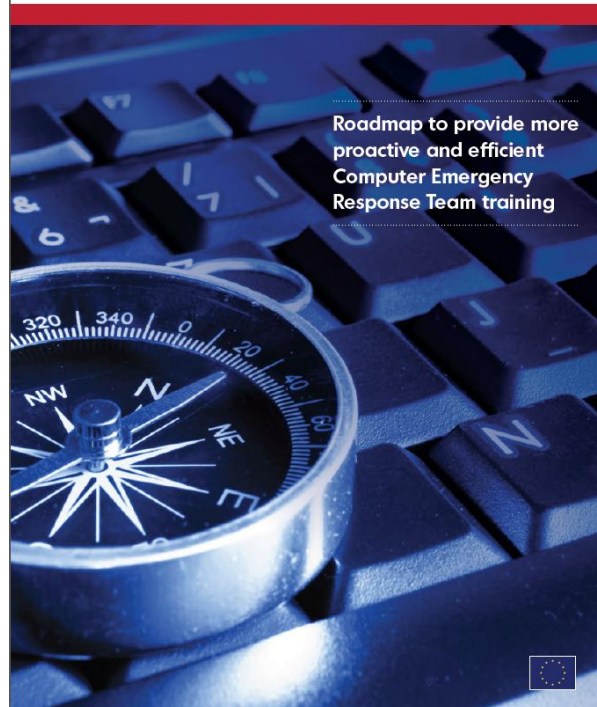
Artifact analysis training material
November 2014



European Union Agency for Network and Information Security



www.enisa.europa.eu



Good Practice Guide on Training Methodologies

How to become an effective and inspirational trainer
November 2014



European Union Agency for Network and Information Security



www.enisa.europa.eu

Delivered to the stakeholder

Training Courses

More than 35 different topics

Courses follow the needs of operational communities

ENISA trains trainers, multipliers and operational communities

<https://www.enisa.europa.eu/activities/cert/training>



Training Resources



Examples of training resources



Mobile threats
incident handling



Digital forensics



Large scale incident
handling



Network forensics



Triage & basic
incident handling



Vulnerability handling



Artifact analysis
fundamentals



Advanced artifact
handling



Writing security
advisories



Developing
countermeasures



Identification and
handling of electronic
evidence



Automation in
incident handling

Artifact analysis process chart



Viper

MISP, CRITs

Virtualbox, Cuckoo,
Volatility

MISP, CRITs

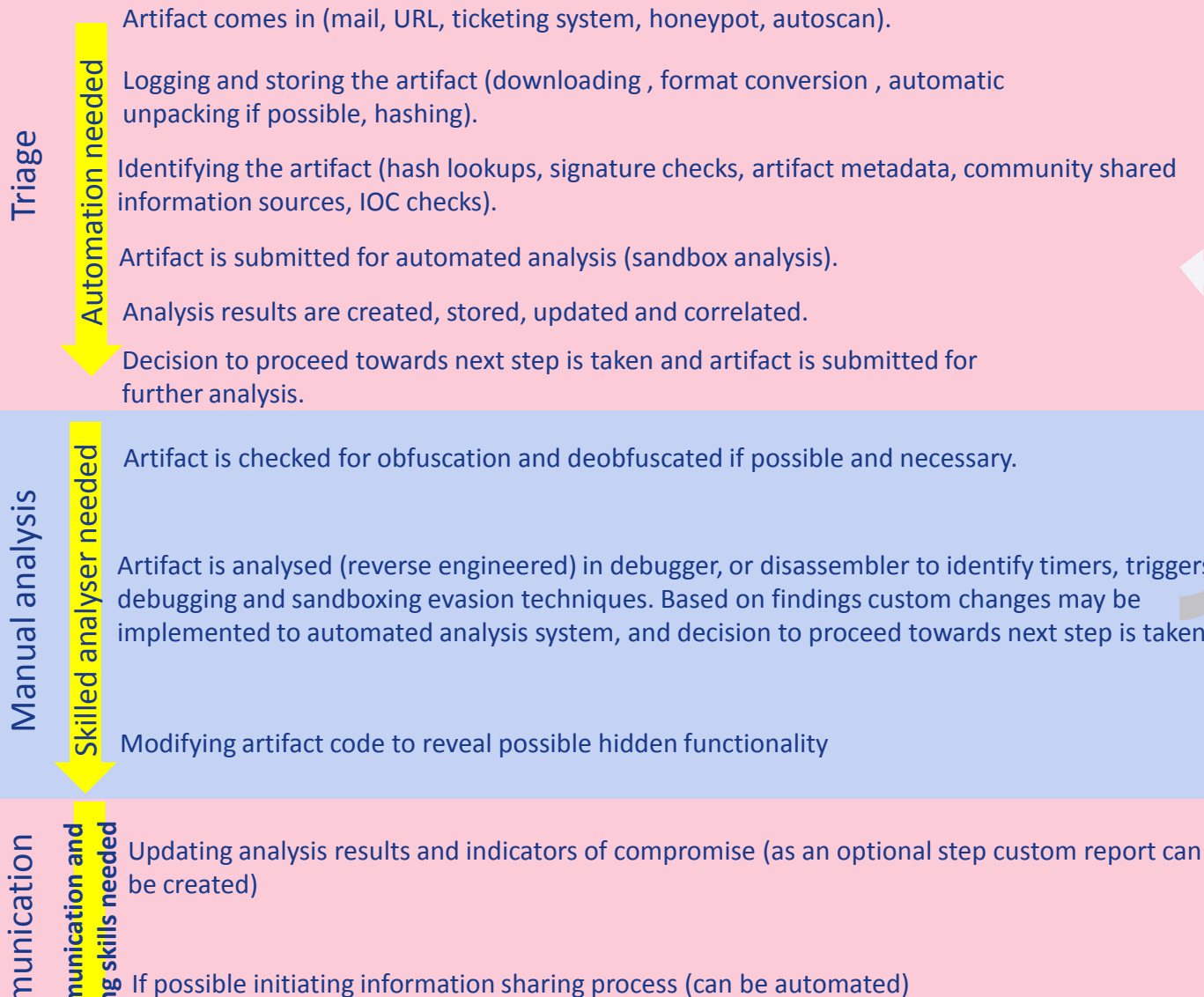
Debuggers: Ollydbg,
Radare2, Immunity
DBG , X64DBG, IDA
Free

Memory Dumpers:
LordPE, OllyDump

.Net deobfuscators:
de4dot, ILSpy

Packer Detection:
Detect It Easy, PeID,
Exeinfo PE, PEView, PE
Tools

MISP, CRITs 10



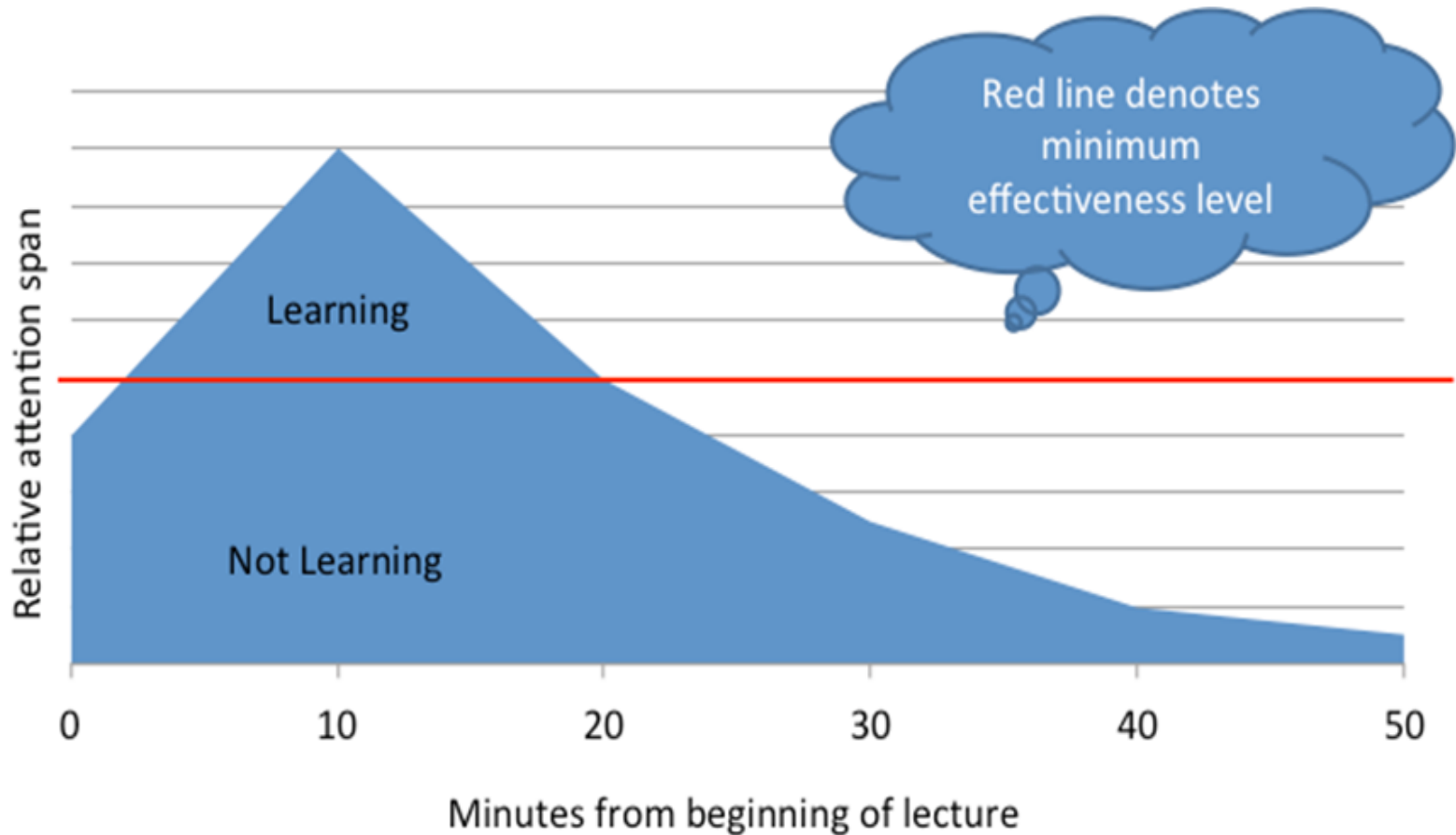
Train the trainers events



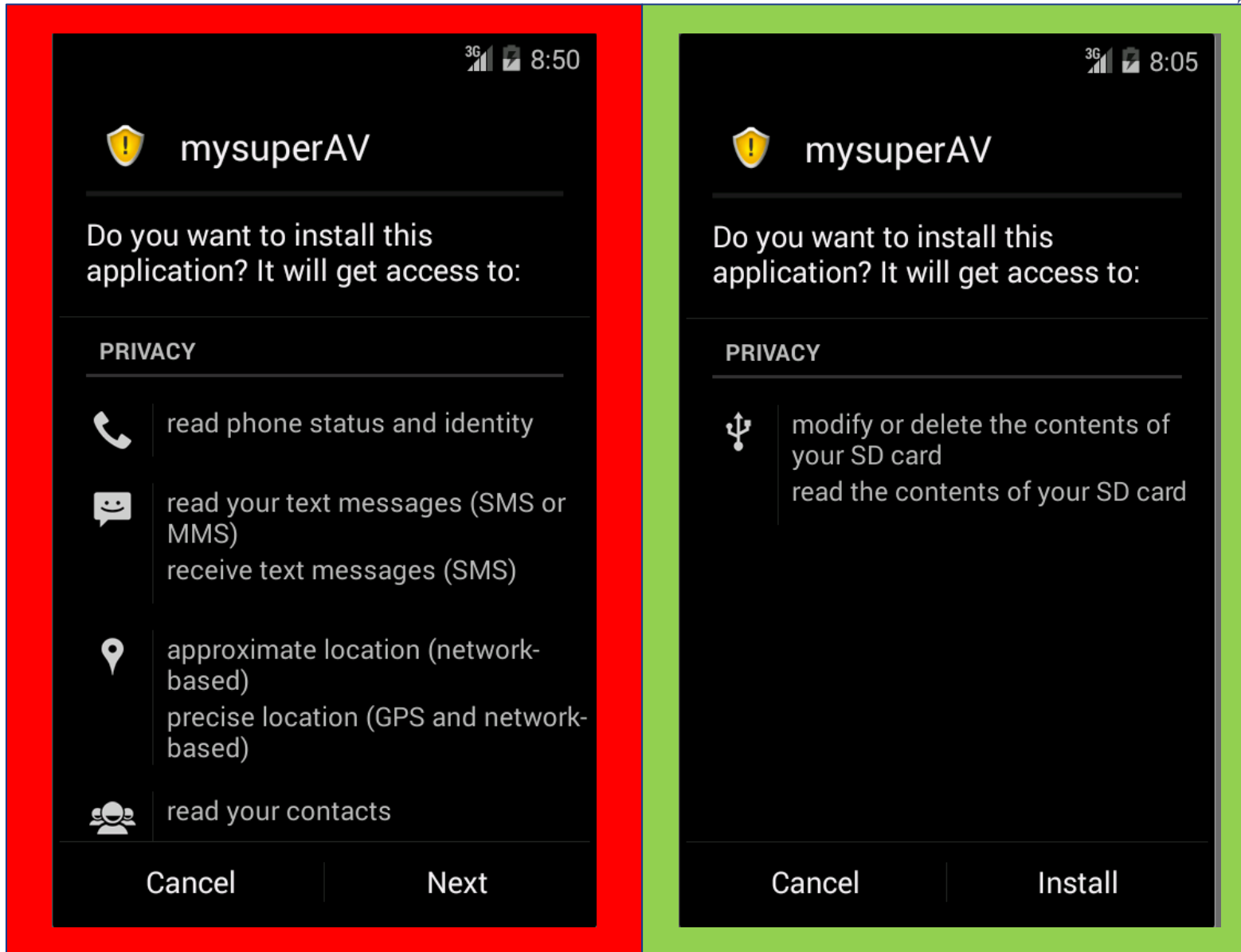
- Methodologies of conducting trainings
- Training needs and demands for trainers and teams
- Available trainings / cost models / efficiency



Good practice guide on training methodologies



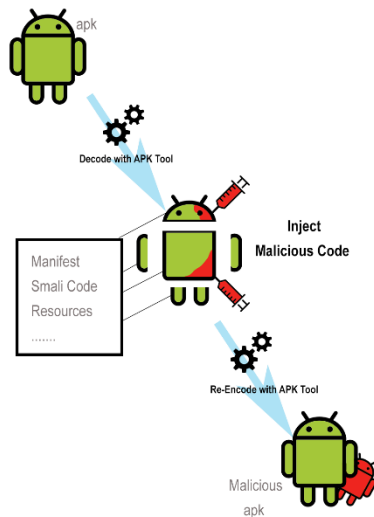
Mobile threats incident handling



What will we see?



App Cloning



Malware:

- SimpleLocker
- Pincer



OS Vulnerabilities: WebView



Mobile threats incident handling



VM – Toolset!



- Static analysis



- Dynamic analysis



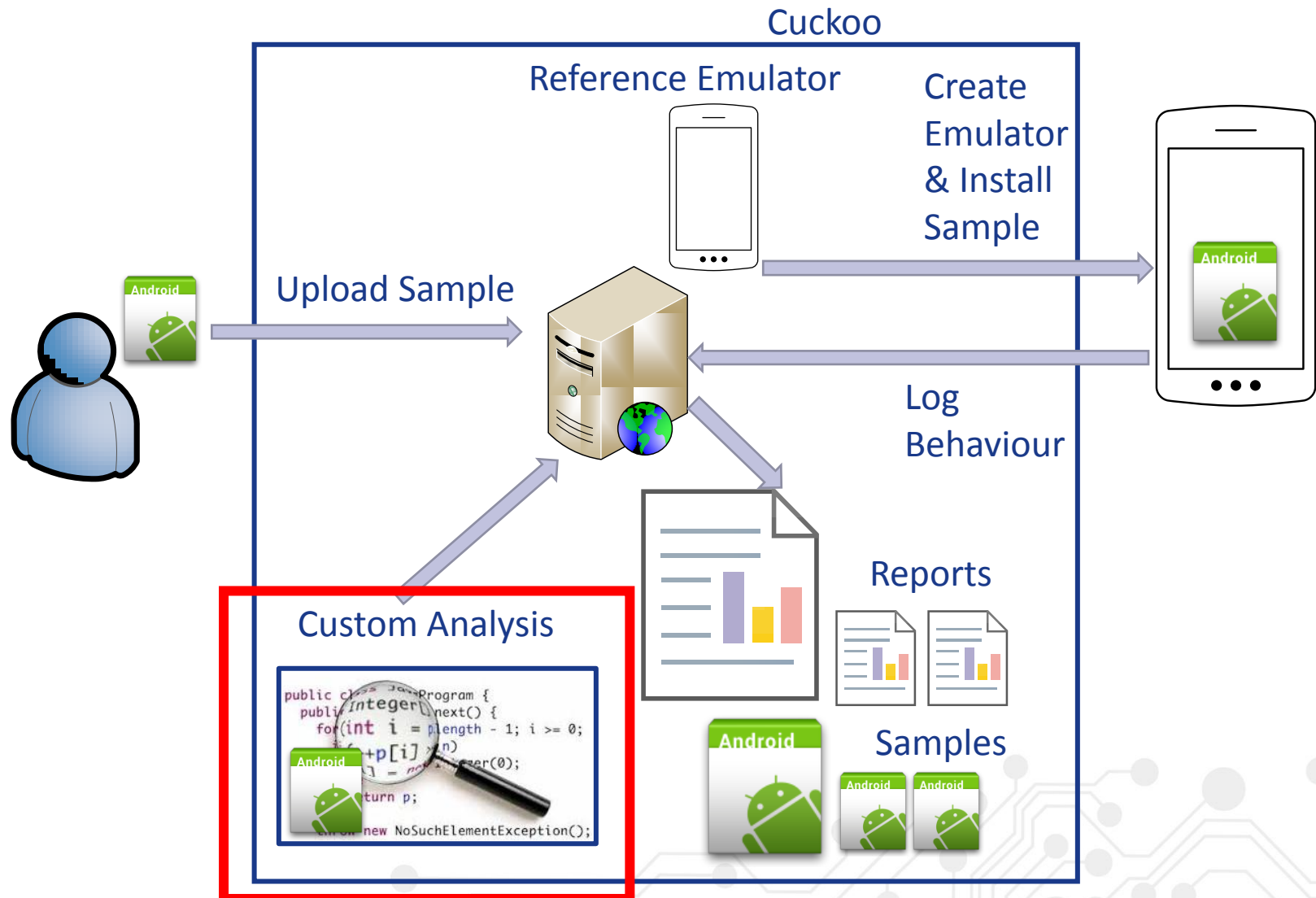
- Network analysis



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We provide tools, information, knowledge, and guidance that allows participants to set up their own analysis environments.

Cuckoo/Droid





Thank you



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