Диагностика и решение проблем

- ???????? ICAP ??????????
- ??????????? ??? KATA 7.* - ???????? ???? ??????????, ??? ??? ????????
- ??????? ??????????? ? ?????????? ????? ???????? KATAP
- ?????????? ?? ?????????? ?????? ????????????? ? Sandbox (KATA Platform v7)
- ??? ????????? ?????? ????????????? ? KATA Sandbox

Проблемы ICAP интеграции

Troubleshooting ICAP интеграции KATA с внешними системами.

???? ????? ????????? ??? ???????????? ??? ?????????? ? ????????, ????????? ????????? ????????:

Проверка сетевой взаимосвязанности

1. ????????? ?????????? ????? CN/Sensor ? Proxy ?? ????? 1344 ? ??????? `tcpdump`:

```
tcpdump -i  port 1344 -nn
```

???????? ????????????? ???????????? ??????? **tcpdump**

???????? ???????????? ?????? (????????, ????????? ???? ????? ??????).
?????????, ??? tcpdump ????????? ?????? ??? ?????? ????? Proxy ? Sensor.

???????? ?? ??????? ?entral Node

Проверка со тсороны Central Node

??????? ???????????? ??????

Проверка со стороны Proxy

Сбор tcpdump для анализа трафика

1. ??? ???????? ?????????? ?? ????? 1344 ????? CN/Sensor ? ProxyServer ????????? ?? ?????? ?? ??????:

```
tcpdump -i  port 1344 -nn -w capture_filename.pcap
```

2. ??? ????? ? ??????? PCAP ?????? ????????????? ? ???????????? ???? Wireshark.
3. ??? ???????? ?????? ???????????? SCP/WinSCP, ????????:
4. ???????????? ? CN/Sensor ??? ProxyServer.
5. ????????? ? ???????, ??? ???????? tcpdump (????????, **/home/admin/**).
6. ???????? ???? ?? ????????? ?????????.

> **Примечание:** ?????? ?? ???????? ????????????? ??????????? ??????? **tcpdump**.

Проверка логов системы

1. ???????????? ? CN/Sensor ????? SSH ? ????????? ? Technical Support Mode.
2. ??? ???????? ????? ?????????:

```
sudo su
kata-collect-siem-logs log-history --output-dir /tmp --no-compress
kata-collect-siem-logs log-detects --output-dir /tmp --no-compress
```

??????? ???????????? ??????

В данный журнал пишутся файлы создавшие сработку в решении KATA

- ? `log-history.log` ?????????? ?????? ??? ???? ?????????? ??????.
- ? `log-detects.log` — ?????????? ?? ????????, ????????? ????????????.

3. ???????? ??????? ? ??????? SCP/WinSCP ?? ???????? **/tmp**.
4. ? ?????? ????? ??????? ?????? ?? ????????? ????? `ICAP`, ????? ????????? ? ????????? ? ??????? ??????? ?? ICAP-???????.

Просмотр логов сработки

??? ????????? ????? ?????? ICAP ?? ??????? CN/Sensor ???????????? ????? SSH ? ?????????:

```
sudo su
cat /var/log/kaspersky/services/preprocessor_icap/preprocessor_icap.log
```

??? ???????? ??????? ????? ???????????? ?????????? ?? ??????? ????????????:

- **стандартный режим:**

```
grep --color 'blocking_simple mode'
/var/log/kaspersky/services/preprocessor_icap/preprocessor_icap.log | grep 'verdict'
```

- **расширенный режим:**

```
grep --color 'blocking_advanced mode'
/var/log/kaspersky/services/preprocessor_icap/preprocessor_icap.log | grep 'verdict'
```

??????? ???????????? ??????

Советы по созданию заявки в службу технической поддержки

????? ???????? ??????? ????????? ??????? ? ????????? ????? ????????? ??????, ?????????????:

- ???????? ??? ????? ?????? ?????????? ?? ????????? KATA ? KEDR:
  - ?????? ? ????????????? ????????????,
  - ??????? ???????,
  - ???? ??????????,
  - ?????? ???????????? ???????????,
  - ???? ????????????? ????????.
- ??????????? ????????? ?????????? ????:
  - ?????? ???????,
  - tcpdump ? ????? ?????? (ICAP-?????? ? ICAP-??????),

    ```
    ??????: tcpdump -i ens192 port 1344 -nn -w capture_filename
    ```

- collect log ? CN/Sensor.
  ????? ?????? KDS

????? ??????? ???? ????????, ??? ????? ???????? ??? ?????????, ? ???? ??? ??????????????.

Техническое ПМИ KATA 7.* - проверка всех технологий, что они работают

IDS-обнаружения (SPAN)

??? ???????? IDS???????????? (SPAN) ????? ???????????? ??????? `tcpreplay` ?? ???????, ????????????????? ??? ????????? ??????? SPAN.

????? `tcpreplay` ?? ?????????????? ?? ?????????, ??????? ??? ????? ?????????? ???????. ???????? ?????????? ????:

1. ???????? ????? `tcpreplay_4.3.2?1build1_amd64.deb` ?? ??????.
2. ?????????? ??????????? ???? ?? ???? KATA, ???????? ? ??????? `scp`:

   ```
   [user@host]$ scp <your-path>/tcpreplay_4.3.2-1build1_amd64.deb admin@<kata?ip>:/tmp
   ```

3. ?????????? ????? ?? ???? KATA ????????:

   ```
   [admin@katahost]$ sudo dpkg -i /tmp/tcpreplay_4.3.2-1build1_amd64.deb
   ```

????? ????????? ?? ??????? ???????????? `tcpreplay` ?? KATA.

Проверка трафика EICAR

????????? ?????? EICAR-Test-File_TCP.pcap ?? ?????? ? SPAN????????????, ????? ????????? ??????? ?? ????? `root`:

```
tcpreplay -i ens34 EICAR-Test-File_TCP.pcap    # ens34 ? ???? ??????? – SPAN??????????
```

Проверка трафика Nmap

???????? ????? ??, ??? ??? Eicar, ?????? ???????????? ?????? ???? `.pcap` (HackTool.Nmap.HTTP.C&C.pcap).

????? ???????????? ???????? ?? SPAN ?????????? ????????? tx?capture ??????? ??? ?? ????????, ??? ? ??? ?????????.

AM Engine

??? ???????? ????????????? (AM) ?????? ?????????? ???????? ???? EICAR (www.eicar.com).

- **Почта:** ????????? ???? EICAR ?? SMTP ?? ???? 25 ???? KATA (????????? SMTP ????? ???? ????????). ??? ???????? ????? ?????????????? ????????? ???????? `swaks` ?? ???? Central Node, ????? ?? ??????????? ???????? ???????.

?????? ????????????? `swaks`:

```
swaks --server 127.0.0.1 --port 25 --from antony@test.org --to cleopatra@test.org --attach eicar.com
swaks --server 127.0.0.1 --port 25 --from antony@test.org --to cleopatra@test.org --body "link_to_EICAR_here"
```

- **Конечная точка:** ????????? ???? EICAR ?? ??????? ??????? ? ????????? ??? ? ??????? ?? ???????? ??? ?????? ??????? GetFile.

Обнаружения YARA

?? ????????? ? ???????? ??? ?????? YARA. ??? ??????????? ????? ??????????? ???????? ??????? ?? ???????????? YARA (writingrules):

```
rule ExampleRule
{
    strings:
        $my_text_string = "text here"
        $my_hex_string  = { E2 34 A1 C8 23 FB }
    condition:
        $my_text_string or $my_hex_string
}
```

??? ??????? ??????? ????? ????????????? ??????, ?????????? ?????? `$my_text_string` ??? `$my_hex_string`.

Обнаружения TAA (IoA)

???????? ???????? IoA ???????? ?????? ??? ??????? ???????? KEDR.

- ?????????? ???? `.bat` ?? ????????????? ?????? Test_IOA.rar (?????? not_infected) ? ????? ????? ?? ????? ? ????????????? EDR ? ????????? ???. ????? ????????? ????? (KATA ????????? ????? ?? ???????? ? ????????? ??????????) ????????? ?????????? ? KATA. ? ?????? ?????? ???? ??? `ioa_test_detect`. ???? ??????????? IoA ?? ???? ????? ????????, ???? `.bat` ?????????? ????????? ? ?????? ?????.
- ?? ????? ? ????????????? KEA ????????? ? `cmd.exe` ???????:
  ```
  wmic.exe "sfdgcall uninstallkasperskyblabla"
  ```
  ??????? ?????????? ???????, ?? ??? ?? ?????. ????? ????????? ????? ? ????????????? KATA ???????? ????? IoA?????????????.

Обнаружения TAA по цепочке событий

????? ????????? TAA????????????? ?? ??????? ???????, ??????? ?????????, ??? ??? ??????? ???????? ? ????????????? KATA (? ??? ??????? ????????? ????????? ?? ????????).

????? ?? ????? ?? ???????????? ????? EDR ?????????? ?????? ? ????????? ???????? `.bat`:

- short_term_user_creation_complex.7z
- multiple_login_attempts_with_the_same_account_complex.7z

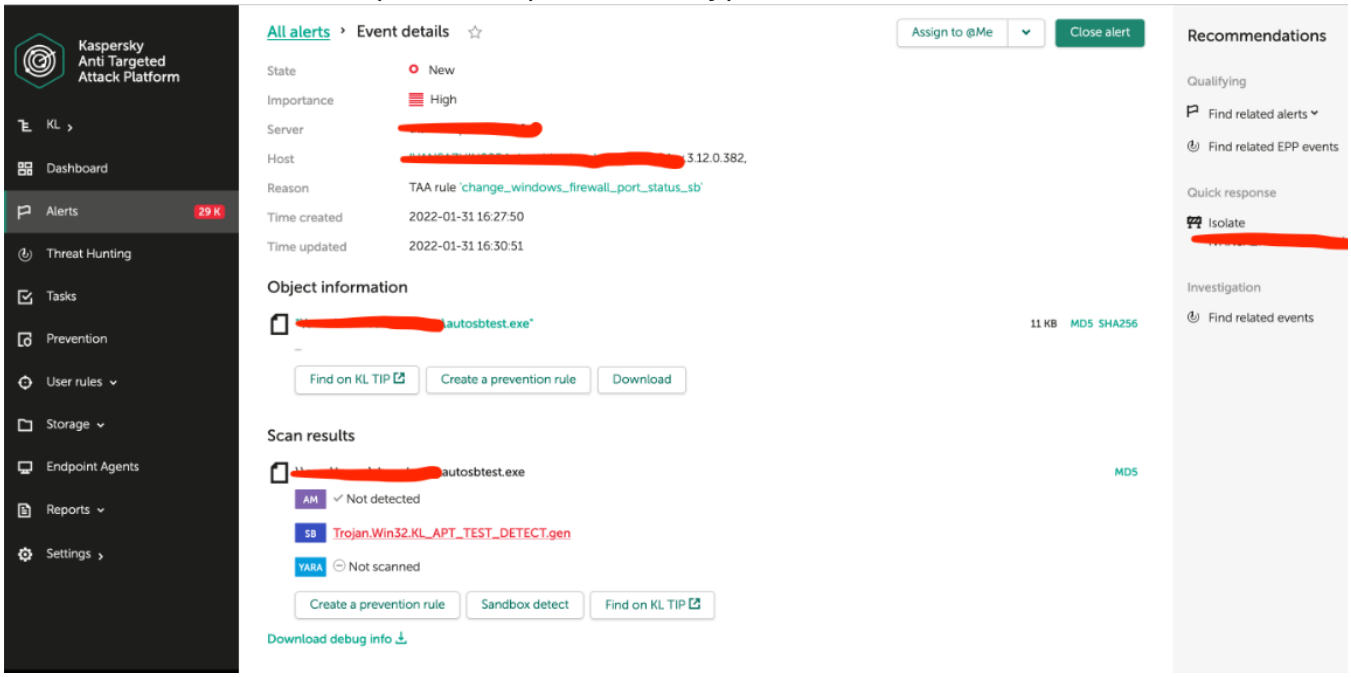
Обнаружения IoC

??? ???????????? ????? ???????????? ?????????? ???????: ????? Ioctest.zip (?????? *infected123*) ?????????? ?? ?????? `c:\windows\system32\calc.exe`.

Автоматическая песочница в EDR

??? ???????? ????????????? ?????????:

- ?????????? ????? ? ???????? ? ?????????? ?????? ??? ???????? ?? ?????????: autosbtest.zip.
- **Важно:** ?? ??????? MD5???? ???????.
- ????????? ??????? ?? ?????????? EDR ????? ? ????????? ????????????? ???????????? ????????? (verdict *Suspicious Activity*).



Для KESL: ?????????? ????? ?? ??????, ????? ??????? ???????????? ????????? ? KESL:

- ?????????? ????? test_ioa_sb_linux.7z (?????? «infected») ? ?????????? ?????? `test_ioa_sb_linux.sh` ?????? ? ?????? `kl_kata_demo_starter` ?? ???? ? KESL (????????, ????? WinSCP).
- ????????? ?????????? ?? ?????: ???? ??? ?? ???????????, ????????? ???????:

  ```
  sudo chmod 777 <????>
  ```

- ????????? ?????? ???????? `./test_ioa_sb_linux.sh` ? ????????? ????????? ?????? ? KATA.

Проверка песочницы (Sandbox detect)

??? ???????? ????????? ????? ???????????? ???? `SA_sleep.exe` ?? ?????? no_am_detection sample.rar. ?????? ???????? ? ????????? ????????? ?????? ??????.

1. ????????? ? ????????????? ???????? ??????? ???????????? KATA.
2. ???????? ???? **Хранилище → Загрузить** ? ????????? ???? `SA_sleep.exe` ?? ?????? ??? ????????? KATA.
3. KATA ???????? ??? ? ?????????, ? ???? ????? SB ?????? ??????? ??????? **Подозрительная активность**.
4. ???? ??? `SA_sleep.exe` ???????? ??????? «Not detected», ?????????? ???????? `test_sb.bat` ?? ?????? test_sb.zip.

Проверка репутации URL

??????? ?????????, ??? K(P)SN ???????? ? ???????? ?????????. ? ???? ??????? ??? MD5 ?????? ?????????? ?????? *UnTrusted*. ??? ???????? ??????????? ???????:

```
??? KATA 4.+ ? 5.0:
docker exec -it $(docker ps | grep ksn_proxy | awk '{print $1}') /opt/kaspersky/apt-ksn_proxy/sbin/ksn_client
--ip 127.0.0.1 --hash 9C642C5B111EE85A6BCCFFC7AF896A51

??? KATA 5.1:
docker exec -it $(docker ps | grep ksn_proxy | awk '{print $1}') /opt/kaspersky/apt-ksn-proxy/sbin/ksn_client
--ip 127.0.0.1 --hash 9C642C5B111EE85A6BCCFFC7AF896A51
```

?????:

- **Трафик:** ????????? ?? ?????? http://bug.qainfo.ru/TesT/Aphish_w/index.
- **Почта** (SMTP?????????? ?????? ???? ????????): ????????? ?????? ?? ??????? ?? ??????????? ?????. ??????? ???? ????? ??????? ? ??????? ??????? `swaks`:

```
swaks --server 127.0.0.1 --port 25 --from fisherman@test.org --to cleopatra@test.org --body
"http://bug.qainfo.ru/TesT/Aphish_w/index"
```

Базовая диагностика и устранение сбоев продукта KATAP

Просмотр информации о файлах, поступавших на проверку в Kaspersky Anti Targeted Attack Platform

??? ????????????? ?????????, ???????? ?? ???? ???????? ? KATAP ? ? ????? ??????????? ??????????? ???????? ??? ?????????? ???????? ?????? ? ?????? ?????????? ? ??????? ??????? **kata-collect**.

????????? ?????????? ?? ????????????? ??????? kata-collect ??????? ????? - **??????**

Как собрать первичную диагностическую информацию о компьютере при помощи скрипта collect.sh

??? ????????? ?????? ??????? ??????????? ????????? «??????????? ???????????» ????? ???????????? ?????, ????????? ? ??????? ??????? collect.sh. ? ??? ????? ??????? ??? ???????? ????????????? ?????? ?????????? ??? ??????????? Unix-???????? ???????????? ???????, ? ????? ?????? ? ?????? ????????????? ?? ?????????? ?????????? «??????????? ???????????».

Всегда используйте последнюю версию скрипта. Данные, собранные с помощью устаревшей версии скрипта, могут быть неполными.

????????? ?????????? ?? ????????????? ??????? collect.sh ??????? ????? - **??????**

Как собрать консольные и HAR-логи браузеров

??? ??????? ??????? ??? ????????????? ???????? ??????????? ????????? «??????????? ???????????» ????? ???????????? ?????????? ? HAR-????, ? ??????? ???????????? ????????????? ???????? ? ??????.
?????????? ?? ????? ?????????? ? HAR-????? ??? ?????????? ????????? ??????? ????? - **??????**

Прикладные сценарии продукта

???????? ?????????? ????????? ????????

1. **Обновление продукта:** nginx_gateway, updater (???????????? ???????????? ???, ?????????? ???)
2. **AV-проверка объектов:** edr_synchronizer, kata_scanner, preprocessor (????????? ???????????? ???????, AV-????????, ?????????? ????????)

3. **Взаимодействие с KSN:** ksn_proxy (???????? ??????????, ???????? URL ????????)
4. **Обработка сетевого трафика:** preprocessor, kata_scanner, postgresql_server, kafka, agent_proxy (?????????? ???????, ????????? ???????, ?????????? ????????, ???????? ????????, ?????????? ??????, ????????????? ???????)
5. **Уведомления:** postfix
6. **Взаимодействие с Sandbox:** kata_scanner, ksb_agent_server (???????? ?????????? ?? ?????? ? sandbox ?? ???????, ???????, ??????? ??????)
7. **Веб-консоль:** web_backend
8. **Взаимодействие с агентами:** agent_server (????????? ??????, ???????? ????? ? ????????)
9. **Авторизация:** web_backend, authorization_service, kata_scanner (??????????? ? ???????? ? ? ?????????????? ?????????)
10. **API:** events_api, response_api (?????????????? ?????????? ?\??? ?????????? ????????)
11. **Хранение настроек продукта:** etcd
12. **Лицензирование:** updater
13. **Разметка IOA:** hunts_events_processor (???????? ??????? ?? ??????? ????????? IOA)
14. **NDR:** nta_core, nta_syncer, nta_database (?????????????? ? ????????? ??????, ?????????????? UI, ????????????? ???????, ?????????????? ??)
15. **Конфигурация MT:** ksqldb_configurator, ksqldb_server, multitenancy_management_api

---

Использование console-settings-updater

1. ?????????? ????????? ??????? ? ETCD:

   ```
   console-settings-updater all | cut -d '=' -f 1
   ```

2. ?????????? ?????????? ??????:

   ```
   console-settings-updater get /kata/configuration/product/kata_scanner | python3 -m json.tool
   ```

3. ????????? ??????:

   ```
   console-settings-updater get /kata/configuration/product/kata_scanner | python3 -m json.tool >
   /path/to/kata_scanner.etcd
   ```

4. ????????? ???????:

   ```
   console-settings-updater set /kata/configuration/product/kata_scanner @/path/to/kata_scanner.etcd
   ```

5. ????????? ???????? ?????????:

```
console-settings-updater set --merge /kata/configuration/product/kata_scanner '{"ksmg":
{"max_tasks_per_client": 500}}'
```

6. Debug for preprocessor_icap:

```
console-settings-updater set --merge /kata/configuration/product/preprocessor_icap '{"logging":
{"level": {"root": "DEBUG"}}}'
```

7. Debug for kata_scanner:

```
console-settings-updater set --merge /kata/configuration/product/kata_scanner '{"logging": {"level":
{"root": "DEBUG"}}}'
```

8. Back to default:

```
console-settings-updater set --merge /kata/configuration/product/preprocessor_icap '{"logging":
{"level": {"root": "INFO"}}}'

console-settings-updater set --merge /kata/configuration/product/kata_scanner '{"logging": {"level":
{"root": "ERROR"}}}'
```

Устранение сбоев

???????? ??? ????????? ??????? ???????????? ?????? ??? ?????? ?????????? Sandbox ? Kaspersky Anti Targeted Attack Platform ?? VMware 6.7

??? ??????, ???? ??? ????????????? Kaspersky Endpoint Security ??? Windows ????????? ?????????????????? ??????????

??? ?????? ???????? ? ?????????? Kaspersky Endpoint Security ??? Windows

?????? «?????????? ???????? ????????? ????, ???? ???? ???????? ??????????????? ???????? ???????? ?????? ?? ????????? ? ???????????? ?????????»

??? ?????? ???????? ? ?????????? ??????????? Kaspersky Endpoint Security ??? Windows

?????????? ?????????? CVE-2024-6387 ? Kaspersky Anti Targeted Attack Platform

??? ??????, ???? ?? ?????????? ? Kaspersky Endpoint Security ?? ??????????? ?????? ??? ?? ??????????? ????????

??? ?????????????? ? ????????? ???????? ?? EPP-??????? Kaspersky Managed Detection and Response

??? ??????, ???? Kaspersky Security ??? ??????????? ???? ?????? ????? ?? ??????? ???????? ????? ?????????

«?????? ????????? TAA ??????. ?????????? ????????? ????? ??????????????? ??????» ? Kaspersky Anti Targeted Attack Platform

??????? ??????? ? ?????? ??????????????? NDR ? Kaspersky Anti Targeted Attack Platform

??????? ??????? ??? ????????? ? ?????????? ?????? Kaspersky Anti Targeted Attack Platform

??????? ??????? ? ????????? ?????????? ? ????????????? ??? ? Kaspersky Anti Targeted Attack Platform

??????? ????????? ??????? ??? ????????? ? ?????????? ?????? Kaspersky Anti Targeted Attack Platform

?????????? ?????? ?????????? ?????????? Endpoint Detection and Response Kaspersky Anti Targeted Attack Platform ? Central Node

??????????? ?????? ? ????????? ??????????? ? Kaspersky Anti Targeted Attack Platform

??? ????????? ?????? ???????? ?????????? ??? ??????? ? ???????? ?? ???? Sandbox ? Kaspersky Anti Targeted Platform

??? ??????, ???? ??????????????? Sandbox ? Kaspersky Anti Targeted Attack Platform ????? ?? ??????????? ??? ??? ?? ??????? ???????? ??????

???????? ??? ????????? ??????? ? ??????? ? Kaspersky Anti Targeted Attack Platform 7.0

Инструкция по устранению ошибок приоритизации в Sandbox (KATA Platform v7)

Описание проблемы

? ????? **KATA Platform версии 7** ?? ?????????? **Sandbox** ???????????:

- ???? ??????? ????????? ????????;
- ?????? ?????????????? ??????????;
- ???????? ???????? ????? ?? ?????????? ? **KSMG**.

Симптомы

1. ? ????? Sandbox (**/var/log/kaspersky/sandbox/checker/checker.log**) ???????????? ?????? ????:

```
[2025.07.01 08:53:47] [ERROR   ] - root - Job 41909 timed out
[2025.07.01 09:01:54] [ERROR   ] - root - Job 42151 timed out
[2025.07.01 09:07:02] [ERROR   ] - root - Job 42411 timed out
[2025.07.01 09:15:09] [ERROR   ] - root - Job 42744 timed out
```

2. ? ????? Central Node (**/var/log/kaspersky/services/web_backend/web_backend.log**) ?????????? ??????? ???????????????:

```
2025-07-01 02:25:27,615.615 [kata_notifications.system_health_notifier] DEBUG engines: status changed `sandbox`
2025-07-01 02:25:27,615.615 [kata_notifications.system_health_notifier] DEBUG meta received {'host': '0.0.0.0',
'status': 'error', 'lastCheck': '2025-07-01T02:23:17.600974', 'message': {'debug': 'Win7_x64-
1750946849,CentOS7_x64-1750947724', 'id': 'sandbox_error'}, 'type': 'sandbox'}
2025-07-01 02:25:27,616.616 [Audit] CRITICAL Component Sandbox IP 0.0.0.0 Type sandbox Status error
```

Решение

????????? ????????? ??????? **на всех узлах Sandbox**:

```
sudo -u postgres psql kitchen -c 'UPDATE submitters SET default_priority=0 WHERE id=2;'
```

> *Примечание: ???? ???????? ??????????? ????? ?????????? ????????? ????????, ????????????? ?????????? ? ??????????? ????????? Kaspersky ? ?????? ??????? ????? Sandbox ? Central Node.*

Как исправить ошибки маршрутизации в KATA Sandbox

Важно:

???????? ? ???-??????? Sandbox **применяются только к management-интерфейсу**. ??????????? ????????? ????????? ????? ???????? ? ??????? ????:

```
Incorrect response from server with HTTP code 500: /api/units/sandbox/network/central_node
```

??? ??????????? ? ???????? ???????????? malware-?????????? ????????????? ???????: How to fix malware interface route misconfiguration issues

???? ???????? ????????? - ????????????? ????? ?? ???? ??????? ????:

Вариант 1: Ручное исправление через Technical Support Mode

1. ????????? ? Technical Support Mode (????? ??????? ??? SSH).

2. ????????? ??????? ????????:

```
ip route show
```

3. ??????? ???????????? ????????, ????????? ? malware-??????????? (??? ?????????? ????? ?????????? - ????????, **ens224, eth1, enp3s0** ? ?.?.):

```
sudo ip route del <???????????? ???????>
```

4. ??????? ?????? ???????????? ????????, ???? ?? ??? ?????? ???????.
   ???????????? ??????? ??????? ?? ??:

   - Ubuntu: **/etc/network/if-up.d/route-<имя_интерфейса>**
   - Astra Linux: ????? ????????????? **/etc/network/interfaces.d/** ??? **systemd-networkd (/etc/systemd/network/)**

   ?????? ??? Ubuntu:

```
sudo rm /etc/network/if-up.d/route-ens224
```

5. ????????????? ????????? (???????? ens224 ?? ?????????? ???):

```
sudo ifdown ens224 --force
sudo ifup ens224 --force
```

> ?? ????????? ???????? (???????? Astra Linux) ?????? **ifup/ifdown** ?????
>
> ?????????????? **ip link set <iface> down/up** ??? **nmcli**.

6. ????????? ? ???-????????? Sandbox, ????????? ????????? malware-????????? ? ????????? ?????????.

Вариант 2: Использование встроенной утилиты sbnetworking

1. ????????? ??????? ???????????? ????:

```
/opt/kaspersky/sandbox/bin/sbnetworking all show > settings.json
```

2. ?????????????? ???? **settings.json**, ??????? ?????? ?????????? ?????? ???? "params". ?????? ??????????? ??????????? (IP-?????? ??????????????):

```
{
  "hostname": { "fqdn": "sandbox-node" },
  "slots": { "count": 48 },
  "dns": { "servers": ["192.168.x.x", "192.168.x.x"] },
  "management": {
    "ipv4": {
      "addr": "192.168.x.x",
      "mask": "255.255.255.0",
      "hw_addr": "xx:xx:xx:xx:xx:xx",
      "ip_used": "192.168.x.x"
    },
    "name": "mgmt0"
  },
  "malware_ifaces": {
    "mal0": {
      "ipv4": {
        "addr": "192.168.x.x",
        "mask": "255.255.255.0",
        "hw_addr": "xx:xx:xx:xx:xx:xx",
        "ip_used": "192.168.x.x"
      }
    }
  },
  "malware_channels": {
    "1": {
      "auto": true,
      "desc": "Primary",
      "ifname": "mal0",
      "gateway": "192.168.x.x",
      "monitor": false,
      "name": "Primary"
    }
  },
  "routes": {
    "mgmt0": [
```

```
        {
          "dest": { "addr": "0.0.0.0", "mask": "0.0.0.0" },
          "gw": "192.168.x.x"
        }
      ]
    }
  }
```

3. ????????? ???????????? ????????????:

```
/opt/kaspersky/sandbox/bin/sbnetworking all apply --file settings.json
```

4. ??????????? ????????????? ???????:

```
reboot
```

????? ?????????? ???? ????? ?????? HTTP 500 ?????? ?????????, ? Sandbox ????? ????????? ????????.

> *Примечание: ???? ???????? ??????????? ????? ?????????? ????????? ????????, ????????????? ?????????? ? ??????????? ????????? Kaspersky ? ?????? ??????? ????? Sandbox.*