



Building trust
in eHealth
interoperability

European Connectathon ONLINE 2021

Connectivity tests kick-off

26-05-2021

Anne-Gaëlle BERGE

IHE-Europe

Connectivity test kick-off

- Connectivity testing
 - Objectives and requirements
 - Test process

CONNECTIVITY TESTS OBJECTIVES and Requirements

Online Connectathon : network over internet

- In the objectives of connectivity-tests:
 - Verify if nodes and machines from different test participants can see each other and access ports
 - Verify if firewall configuration does not block access, adjust it eventually
 - Verify DNS registration
- Out of scope
 - Verify IHE Transaction

Pre-requisites

- All Systems up and running on internet with a **public IP address**
- Must be registered in Gazelle TM
 - All nodes as hosts (FQDN + IP address for each)
 - All Configurations of implemented actors
 - See previous training about Configurations for an online event:
<https://gazelle.ihe.net/training#ConnectathonTraining>

CONNECTIVITY TEST PROCESS



Process overview

1. Get the host white-list for firewall configuration
 2. Get the configuration list to verify
 3. Perform connectivity-test on each entry
 4. Report connectivity status to the technical manager
- Keep in mind that
 - The process is driven by operators of initiating actors
 - Operator of responding actors can also be pro-active and also ask for connectivity-tests to operators of system they would like to test with at the event.

STEP 1: Get the host white-list for Firewall configuration

- Get the host white-list from Gazelle Test Management
 - Menu Configurations > Network configuration overview, then click on the button Download the hosts file.
 - It will list all nodes that are part of the « online-test-network » for the event.
 - Can be used as data source to configure your firewall
 - Can be used as hosts file in case of DNS delay or issue.
- Update or verify your Firewall configuration

STEP 2: Get the list of configurations to verify

- Get the list of all listening actors for the event
 - Menu Configurations > All configurations
 - Remove the filter on the organization

 - Focus on approved configuration only

 - Click on the button Download as Excel file.
- It is recommended to focus on test partners you have identified that will or may be involved in the tests you have to perform
 - To see your test plan, go to menu Connectathon > Connectathon > Connectathon (or the shortcut CAT button on the top right)
 - Filter the configurations either before or after the excel export

STEP 2: Warning

- **NOTE:** If systems have not completed and approved their configuration in Gazelle Test Management, the referential for the connectivity test will be unstable or incomplete.
- If your organization is in this situation, please fix it as soon as possible, otherwise you expose yourself as having no test partners trying to check connectivity with your system ahead of the event.

STEP 3 : Perform connectivity-tests for each Configuration

- For each entry in the configuration sheet
 - perform a connectivity test from the running system's environment to verify if the described configuration is reachable by your system.
 - test using the IP address
 - test with the host name to also verify DNS resolution
- How ?
 - Either perform a real IHE Transaction
 - no expectation on the functional result at this stage
 - The connection must have been established
 - Either use tools from the machine/environment on which your system is deployed
 - Telnet, nmap, nc, ping (for host), etc.

STEP 3 : Connectivity-tests Communication

- Use the live environment to contact test partners
- One channel dedicated for exchanges about the the Connectivity-tests : #connectivity-tests
- Contact other vendors by joining their company channel (virtual table): #systemkeyword
 - either to ask them to test with you
 - either to solve connectivity issues

STEP 3 : Tips

- IHE Europe has developed a script to help you performing the connectivity-tests:
 - <https://gitlab.inria.fr/gazelle/specific-tools/connectivity-test-scripts>
 - Design to process the Configuration CSV file as input
 - Based on nc command, run on Bash, Linux
 - Feel free to try and contribute
 - May work on Windows Cygwin or Windows-Linux-Subsystem.
 - Complete documentation is available in the README

STEP 4 : Report to the technical management team

- Why ?
 - Aggregate test results and share them to the participants
 - Give to all a more precise appreciation of
 - the issues faced
 - the overall network status.
 - Identify issue patterns
- Technical management can arbitrate on connectivity conflicts

STEP 4 : Report to the technical management team

- Report your connectivity results to the technical management team: technical.manager@ihe-europe.net
 - One file per initiating system, list all test entries with result PASSED or FAILED for both
 - Testing against the IP address
 - Testing against the host name
- Reuse the Excel/CSV file from Gazelle Configuration
 - Add columns: “IP test result” and “Host test result” for each entry you have tested
 - Remove lines that were not of interest to you

The connectivity script is able to generate this output for you

Next steps

- Rocket.chat is being configured and will be accessible at <https://eucat.chat.ihe-europe.net>
 - You will receive your password by email (same username as in Gazelle)
- Weekly follow-up call, no define agenda. Join in case you have questions, issues
 - June 2nd 2:00pm CEST
 - June 9th 2:00pm CEST
 - Webex links will be posted on the Google group