



Test Results for Disk Imaging Tool: Cinolink Dual HDD Dock

Federated Testing Suite for Disk Imaging

June 2020



**Homeland
Security**

Science and Technology

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Introduction

The Computer Forensics Tool Testing (CFTT) program is a joint project of the Department of Homeland Security (DHS) Science and Technology Directorate (S&T), the National Institute of Justice (NIJ), and the National Institute of Standards and Technology (NIST) Special Programs Office and Information Technology Laboratory (ITL). CFTT is supported by other organizations, including the Federal Bureau of Investigation; the U.S. Department of Defense Cyber Crime Center; U.S. Internal Revenue Service Criminal Investigation Division Electronic Crimes Program; and the U.S. Department of Homeland Security's Bureau of Immigration and Customs Enforcement, U.S. Customs and Border Protection, and U.S. Secret Service. The objective of the CFTT program is to provide measurable assurance to practitioners, researchers, and other applicable users that the tools used in computer forensics investigations provide accurate results. Accomplishing this requires the development of specifications and test methods for computer forensics tools and subsequent testing of specific tools against those specifications.

Test results provide the information necessary for developers to improve tools, users to make informed choices, and the legal community and others to understand the tools' capabilities. The CFTT approach to testing computer forensics tools is based on well-recognized methodologies for conformance and quality testing. Interested parties in the computer forensics community can review and comment on the specifications and test methods posted on the CFTT website at <https://www.cfft.nist.gov/>.

This document reports the results from testing the disk imaging function of the Cinolink Dual HDD Dock using the CFTT Federated Testing Test Suite for Disk Imaging, Version 5.

Federated Testing is an expansion of the CFTT program to provide forensic investigators and labs with test materials for tool testing and to support shared test reports. The goal of Federated Testing is to help forensic investigators to test the tools that they use in their labs and to enable sharing of tool test results. CFTT's Federated Testing Forensic Tool Testing Environment and included test suites can be downloaded from <https://www.cfft.nist.gov/federated-testing.html> and used to test forensic tools. The results can be optionally shared with CFTT, reviewed by CFTT staff, and then shared with the community.

Test results from this and other tools can be found on S&T's computer forensics web page, <https://www.dhs.gov/science-and-technology/nist-cfft-reports>.

How to Read This Report

This report is organized into the following sections:

1. **Tested Tool Description.** The tool name, version, vendor information, and support environment version (e.g., operating system version) are listed.
2. **Testing Organization.** The name and contact information of the organization that performed the tests are listed.
3. **Results Summary.** This section identifies any significant anomalies observed in the test runs. This section provides a narrative of key findings identifying where the tool meets expectations and provides a summary of any ways the tool did not meet expectations. The section also provides any observations of interest about the tool or about testing the tool including any observed limitations or organization-imposed restrictions on tool use.
4. **Test Environment.** Description of hardware and software used in tool testing in enough detail to satisfy the testing organization's policy and requirements.
5. **Test Result Details by Case.** Automatically generated test results that identify anomalies.
6. **Appendix: Additional Details.** Additional administrative details for each test case such as, who ran the test, when the test was run, computer used, etc.

Federated Testing Test Results for Disk Imaging Tool: Cinolink Dual HDD Dock

Tool Description

Tool Name: Cinolink Dual HDD Dock

Tool Version: N/A

Vendor:

Vendor name: Cinolink-direct

Contact: support@cinolink.com

Testing Organization

Organization conducting test: Nova Southeastern University

Contact: lh1490@mynsu.nova.edu

Report date: March 15, 2020

Authored by: Lazaro Herrera

Results Summary

The tested tool functioned as expected with no anomalies.

Test Environment & Selected Cases

Hardware: Cinolink Dual HDD Dock

Selected Test Cases

This table presents a brief description of each test case that was performed.

Test Case Status

| Case | Description | Status |
|-----------------|---|-----------|
| FT-DI-07-SATA28 | Create a clone of a drive directly from a source drive of a given type using a given write blocker connected to a computer over a given interface. Test ability to create a clone during acquisition of given drive type with the given write blocker connected to a computer over the given interface. | completed |
| FT-DI-07-SATA48 | Create a clone of a drive directly from a source drive of a given type using a given write blocker connected to a computer over a given interface. Test ability to create a clone during acquisition of given drive type with the given write blocker connected to a computer over the given interface. | completed |

Test Result Details by Case

This section presents test results grouped by function.

FT-DI-07

Test Case Description

Create a clone of a drive directly from a source drive of a given type using a given write blocker connected to a computer over a given interface. Test ability to create a clone during acquisition of given drive type with the given write blocker connected to a computer over the given interface.

This test can be repeated to test acquisition of multiple drive types. This test tests the ability of the tool to clone a specific type of drive (the drive type tested is included in the test case name) using a specific write blocker (applies only to tools that are used with hardware write blockers) and a certain interface connection between the test computer and the write blocker. The write blocker used and the interface connection between the test computer and the write blocker are listed for each test case in the table below. Two tests are required to test ATA or SATA drives, one to test drives smaller than 138GB (ATA28 & SATA28: 28-bit addressing) and one to test larger drives (ATA48 & SATA48: 48-bit addressing).

Test Evaluation Criteria

The comparison of the source to the destination should have no sectors differ.

Test Case Results

The following table presents results for individual test cases.

Test Results for FT-DI-07 cases

| Case | Src | Blocker (interface) | Compared | Differ |
|-----------------|-----|----------------------------|-----------|--------|
| FT-DI-07-SATA28 | a1 | No blocker was used (SATA) | 234441648 | 0 |
| FT-DI-07-SATA48 | a2 | No blocker was used (SATA) | 390721968 | 0 |

Case Summary

Results are as expected.

Appendix: Additional Details

Test Case Admin Details

For each test run, the test computer, the tester, the source drive, the image file drive, the destination drive, and the date the test was run are listed.

Test Case Admin Details

| Case | User | Host | Blocker (PC interface) | Src | Image | Dst | Date |
|-----------------|----------------|----------|----------------------------|-----|-------|-----|--------------------------|
| ft-di-07-sata28 | LAZARO HERRERA | Personal | No blocker was used (SATA) | a1 | none | d2 | Sat Mar 14 14:04:53 2020 |
| ft-di-07-sata48 | LAZARO HERRERA | Personal | No blocker was used (SATA) | a2 | none | d1 | Sun Mar 15 11:08:10 2020 |

Test Setup & Analysis Tool Versions

Version numbers of tools used are listed.

Setup & Analysis Tool Versions

| |
|--|
| cfft-di Version 1.25 created 05/23/18 at 15:58:45 |
| diskcmp.c Linux Version 1.3 Created 03/20/13 at 14:23:34 |
| zbios.c Linux Version 1.8 Created 07/14/13 at 20:49:31 |
| zbios.h Linux Version 1.2 Created 03/20/13 at 14:23:33 |

Tool: @(#) ft-di-prt_test_report.py Version 1.24 created 05/23/18 at 16:08:06

OS: Linux Version 4.13.0-37-generic

Federated Testing Version 5, released 3/12/2020