



思科CLI Analyzer及其他实用故障分析 工具介绍

【CSC公开课】第二十三期

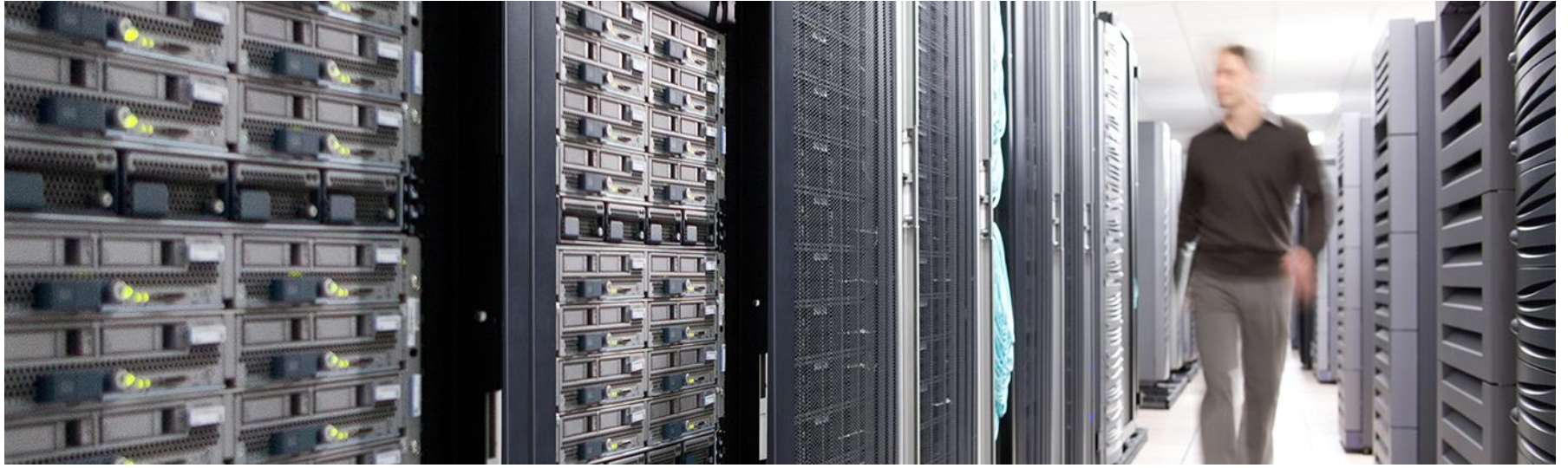
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Customer Support Engineer

August, 2016

Agenda

- Cisco CLI Analyzer
- Other Cisco Tools
 - Packet Capture Config Generator and Analyzer
 - NetDR Parser
 - IPSec Overhead Calculator Tool
 - VCS Service Checker
 - Configuration Diff
- Demo



Cisco CLI Analyzer

Cisco CLI Analyzer

- Overview
- Telnet/SSH Client
- Contextual Help and Highlighting (CHH)
- Tools
- File Analysis

Cisco CLI Analyzer

- **Overview**
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Overview

- What is it?

The Cisco CLI Analyzer is TAC powered SSH client with Advanced tools supporting ASA, IOS, IOS-XE and IOS-XR software.

- Who can use it?

Anyone with a Cisco.com account and valid support contract.

- How does it work?

Diagnostic information is captured via the Command Line Interface (CLI) and sent to Cisco for processing. Findings and recommendations are sent back to the CLI Analyzer in a results window.

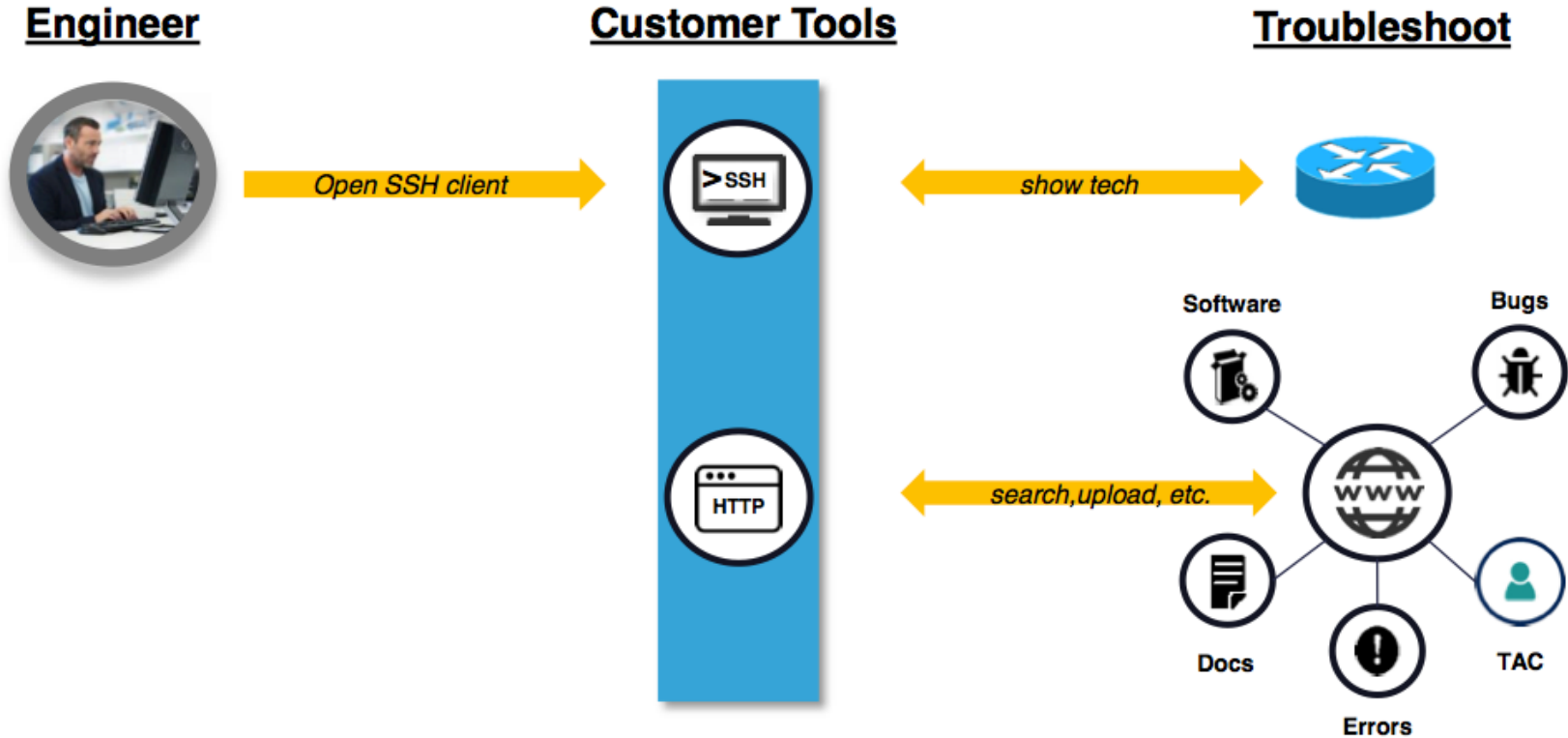
- What is the value?

CLI Analyzer reduces customer effort and creates a simplified support experience through thoughtful integrations/workflows. This translates into saved time and money.

- Where can I get it?

<http://cway.cisco.com/go/sa>

Support Experience “Today”



Support Experience “Simplified”

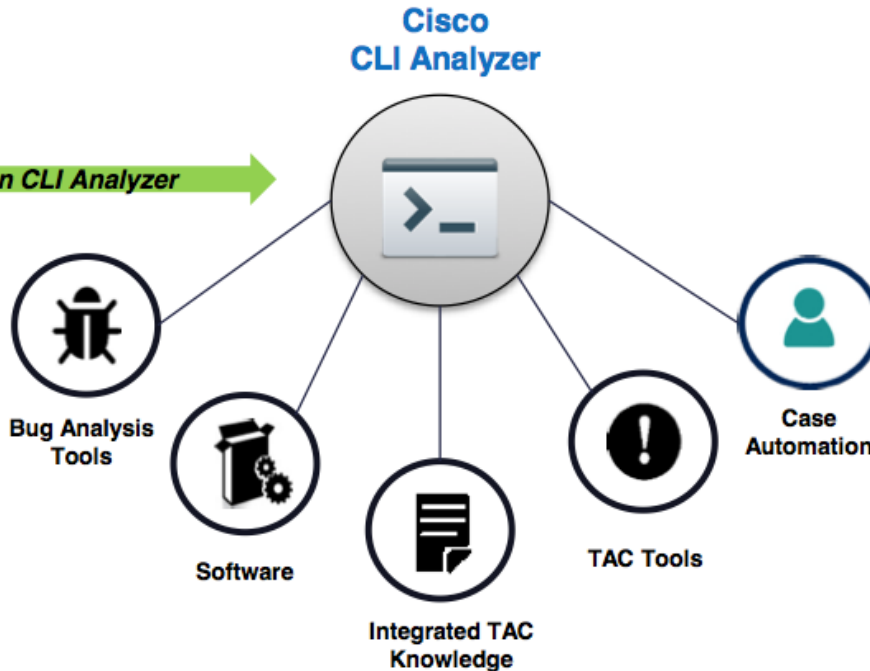
Engineer

**Integrated
Workflows**

**Business
Outcomes**



Open CLI Analyzer →



Save Time



Save Money

Main Features

- Telnet/SSH client
- Real-time Contextual Help and Highlighting (CHH)
- Real-time Tools:
 - System Diagnostics: ASA, IOS (including XE and XR)
 - ASA: Firewall Top Talkers, Traceback Analyzer, Packet Tracer
 - IOS-XR: BGP Top Talkers, L2VPN Top Talkers, LPTS Top Talkers
- File Analysis: Possibility to run system diagnostics and CHH offline on copy-pasted show commands or file with show commands when box is not reachable

System Requirements

Software

- Windows 7 (32-bit or 64-bit)
- Mac OS X versions 10.9 (Mavericks) or later

Hardware

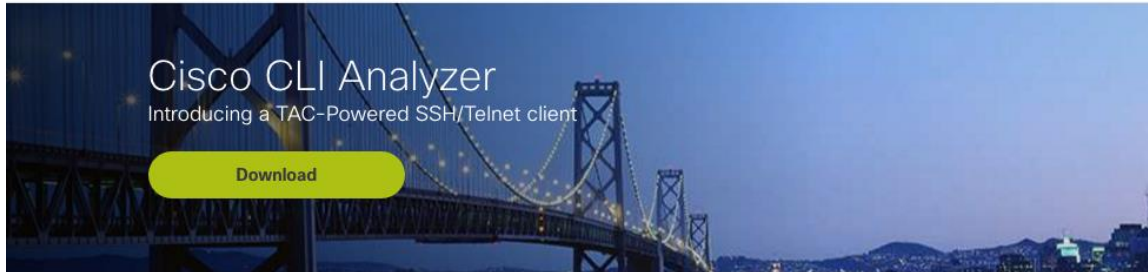
- 2 gigabytes (GB) of RAM
- 512 megabytes (MB) of available space on the hard disk

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Download

<https://cway.cisco.com/go/sa/>



Multi-Platform Support

Supports ASA, IOS, IOS-XE, IOS-XR, and NX-OS with planned future expansions



Integrated TAC Tools

Harness the power of TAC-built tools



File Analysis

New offline analysis replacing Output Interpreter



Telnet/SSH client

The screenshot displays the Cisco CLI Analyzer interface. On the left is a blue sidebar with navigation options: 'Cisco CLI Analyzer', 'Devices', '+ New Session', '~ File Analysis', 'Settings', 'Recent Sessions' (with a dropdown arrow), 'ASR9010-1', 'ASR9006-3', 'Logged in as muqchen', 'Feedback', and 'Feature Guide'. The main area is titled 'Cisco Devices' and features a search bar, a grid view icon, and a 'Device Name' dropdown menu. Below the search bar are sections for 'FAVORITES' and 'TAGS', each with checkboxes for 'Favorites'/'No Favorites' and 'Tags'/'No Tags'. The main content area shows three device cards: 'ASR9006-3', 'ASR9006-4', and 'ASR9010-1'. Each card displays the following information: IP / Hostname, Location, Model (ASR9K), Version, Serial Number (with a link), and Type (Telnet) Port (23). At the bottom of each card are icons for play, edit, delete, star, and trash.

Cisco CLI Analyzer

Cisco Devices

Search

FAVORITES

- Favorites
- No Favorites

TAGS

- No Tags

ASR9006-3

IP / Hostname 10.75.13.14
Location
Model ASR9K
Version 4.3.4
Serial Number [FOX1718GRTB](#)
Type Telnet Port 23

ASR9006-4

IP / Hostname 10.75.13.15
Location
Model ASR9K
Version 4.3.4
Serial Number [FOX1719GQ21](#)
Type Telnet Port 23

ASR9010-1

IP / Hostname 10.75.13.12
Location
Model ASR9K
Version 5.3.31
Serial Number [FOX1421G977](#)
Type Telnet Port 23

Quick Connect and Add Device

Session Login

IP / Hostname |

Type SSH TELNET

Port 23

Add Device

Device Name |

IP / Hostname

Location

Type SSH TELNET

Port 22

Manufacturer Cisco Device

Add a tag...



Notes



Cancel

Add

Settings

- User settings
- Logs
- Proxy
- Master password
- Theme

Settings

General Security Display Advanced

Scrollback Buffer 50000

Preferred Protocol SSH TELNET

Console Selection Behavior Default ▾

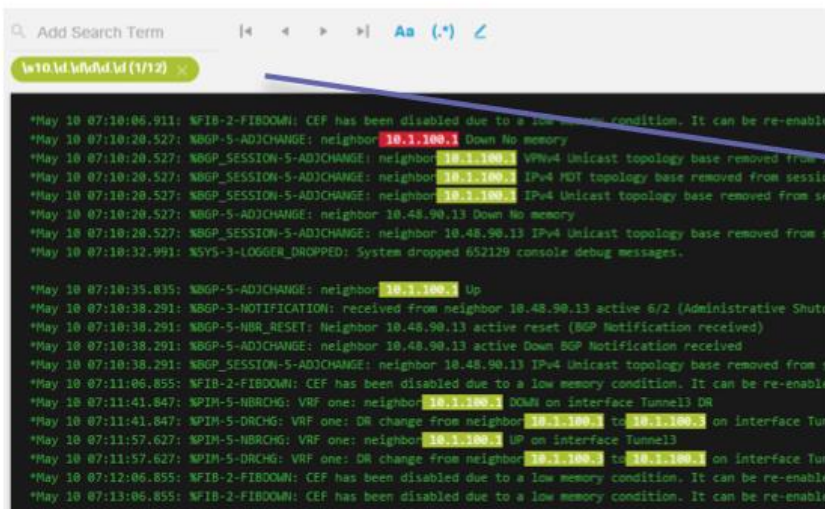
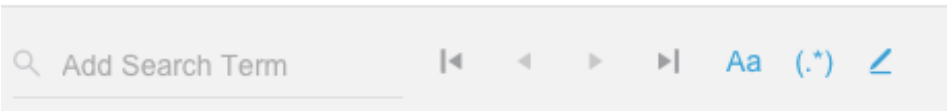
Logs Directory /Users/muqchen/Cisco-CLI-Analyzer_Session...

Automatically Enable Session Logging

Prompt before Closing Tab/Session

Tools Display on Connect

Search



- Inside the client window
 - Search for
 - Case insensitive
 - Use regular expression in search
 - Disable highlight

- regex example
 - `\s10.\d.\d\d\d.\d`
 - Searches for IPv4 addresses of the form 10.x.xxx.x

Logging

Logging: • 31 x 120 • TELNET • ⌚ 00:05:53 •

- Logging session to file
- Start/stop – provide file name

Cisco CLI Analyzer

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- **Contextual Help and Highlighting (CHH)**
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How does it work?

- TAC Engineers constantly creating new CHH rules.
- No need to upgrade CLI Analyzer client to benefit from new rules as they are downloaded automatically when starting CLI Analyzer.
- Tools require cisco.com username/password to access rules (and run tools).

Replacing Output Interpreter

- Output Interpreter was not updated anymore
- Limited supported commands
- Limited OS and platform support
- No need to upload commands to cisco.com anymore. Commands highlighted inside CLI Analyzer.

Retirement Output Interpreter

The **Cisco CLI Analyzer** (formerly ASA CLI Analyzer) will replace OI. It now supports IOS, IOS-XE, IOS-XR, NX-OS and ASA with UCS in pipeline!

Please be advised that in **September 2016** we will retire OI so we may provide you new TAC tools and knowledge to better support your Cisco network.

[Install the Cisco CLI Analyzer now](#) and receive the automatic updates as new TAC tools and knowledge are added.

Not all commands are supported by Output Interpreter. Look up supported commands relevant to your issue in the following lists:

- [List of Supported "Show" Commands](#): ↗ The list of commands the Output Interpreter can analyze, and information on the analysis.
- [Problem to Command Mappings](#): ↗ Recommended command(s) to submit to troubleshoot the issue you are experiencing.

Enter "show" command(s) output from your device for analysis.
Remove passwords and other sensitive information.

Paste the complete output of your command(s) in the field below: [View Output Example](#) ↗

(Note: You can paste multiple command outputs in the field below.)

Or, for output larger than 2MB up to 4MB, click the Browse button to upload a file.

Enter a file name (or browse your disk):

No file chosen

Cisco CLI Analyzer

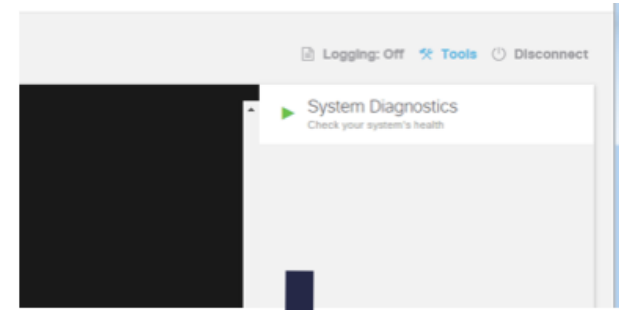
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Tools

- First tool is the System Diagnostics
- Available across platforms (ASA, IOS, IOS-XR)
- Other tools are specific
 - Specific commands
 - Correlate information from multiple commands or same command taken multiple times

System Diagnostics

Systems Diagnostics utility reports known problems found with the device's config and operating state



System Diagnostics
Check your system's health

Utilizes Cisco TAC knowledge to analyze the IOS device and detect some known issues such as system problems, configuration mistakes and best practice violations. To perform this function, the 'show tech' command is used and the resulting output is uploaded to Cisco for analysis.

enable mode needed!

IOS System Diagnostics
Mar 16th 2016 10:06:30 pm (a few seconds ago)
1 Danger 1 Warning 6 Info

- > **Generic Online Diagnostic test currently fails which might have negative impact on the functionality of the device.**
- > **Fabric Channel Errors Reported on the Device**
- > **Improve the Security Posture of the Device by Disabling Telnet**
- > **Forwarding Engine 'non-zero' error counters detected**
- > **EXEC facility timeout is disabled which is not recommended and may lead to exhaustion of all TTY lines.**
- > **Service Password Encryption Disabled**

IOS-XR Tools



System Diagn...

Check your system's he...



BGP Top Talkers

Show BGP Top Talkers



L2VPN Top Tal...

Show L2VPN Top Talkers



LPTS Top Talk...

Show LPTS Top Talkers

- **IOS-XR System Diagnostics**

Utilizes Cisco TAC knowledge to analyze the router and detect some known issues such as system problems, configuration mistakes, and best practice violations.

- **IOS-XR BGP Top Talkers**

Allows administrators to determine the BGP peers with the rates of messages sent or received over a period of time for the various VRFs and address-families.

- **IOS-XR L2VPN Top Talkers**

Allows administrators to determine the L2VPN Point-To-Point circuit or bridge-domains with the highest traffic rates.

- **IOS-XR LPTS Top Talkers**

Helps administrators determine the type of traffic being handed off from hardware to software and at which rate.

ASA Tools

- **ASA System Diagnostics**

Utilizes Cisco TAC knowledge to analyze the ASA and detect some known issues such as system problems, configuration mistakes, and best practice violations.

- **ASA Firewall Top Talkers**

Helps determine which connections passing traffic through an ASA have the highest bit rate during a certain period of time.

- **ASA Packet Tracer**

Allows administrators to simulate sending packets through the ASA. If the packet is dropped, the ASA configuration setting or feature that could have contributed to the packet drop is identified.

- **ASA Traceback Analyzer**

Attempts to match the root cause of a crash to a known bug if the ASA has experienced a system traceback. If a matching bug is found, the ASA version(s) in which the bug is fixed are provided.

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- **File Analysis**

File Analysis

- The CLI Analyzer can analyze command output without having to connect to your device.
- **Full Analysis:** Include 'show tech-support' output and optional supported commands
- **Limited Analysis:** Must include 'show version' output and supported commands
- Upload file with commands Or paste commands.
- Returns list of alerts found in the commands.

File Analysis

The CLI Analyzer can analyze command output without having to connect to your device. See [supported commands](#).



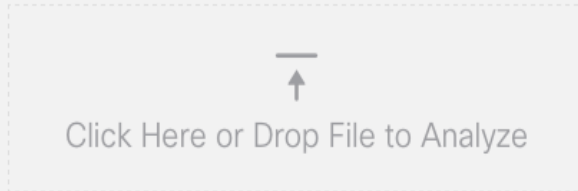
Full Analysis: Include 'show tech-support' output and optional supported commands (recommended)

Limited Analysis: Must include 'show version' output and supported commands

For each command, the command generating the output **MUST** also be included (e.g. '# show version')

[Click Here or Drop File containing command output here \(10 MB Max\)](#)

Paste command output here (2 MB Max)

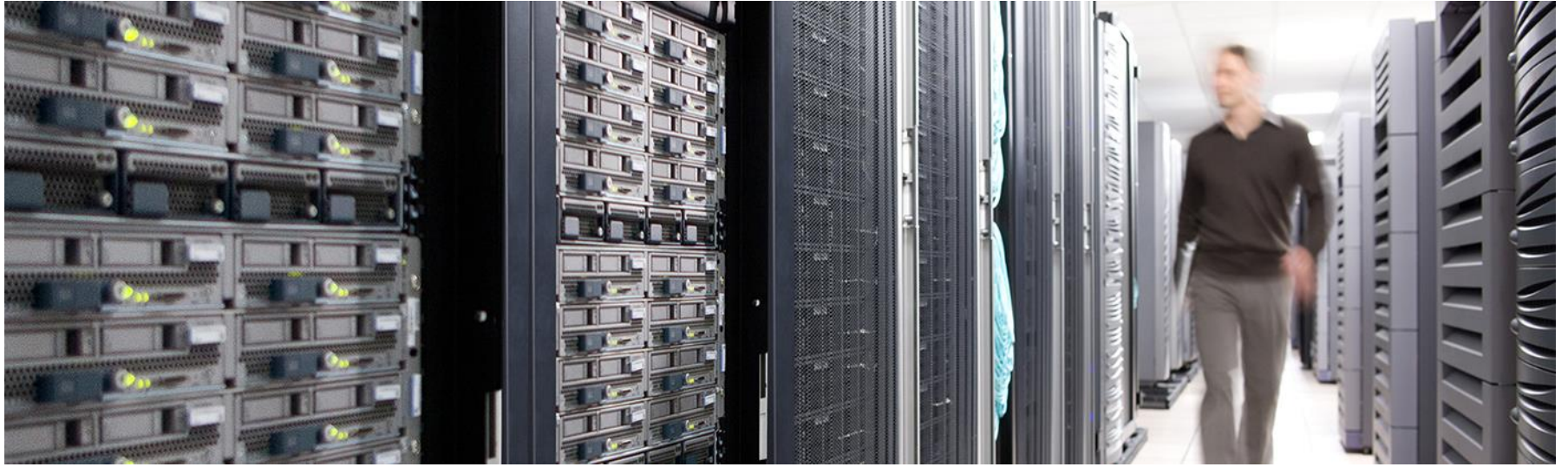


Command Output

Clear

 The selected file is invalid. Only .txt and .text files allowed

Start Analysis



Other Cisco Tools

Packet Capture Config Generator and Analyzer

- This tool is designed to aid in collection and analysis of network packet captures taken on IOS, IOS-XE and ASA devices.
- <https://cway.cisco.com/tools/CaptureGenAndAnalyse/>


The screenshot shows the top section of the tool's web interface. At the top left, the title "Packet Capture Config Generator and Analyzer" is displayed in a dark grey font, with the word "BETA" in a smaller, blue font to its right. Below the title, a horizontal line separates it from a descriptive paragraph: "This tool is designed to aid in collection and analysis of network packet captures taken on IOS, IOS-XE and ASA devices". To the right of this text is a blue link labeled "details" followed by a small upward-pointing chevron icon. Below the text, a horizontal line spans the width of the content area. Underneath this line, there are two circular icons representing steps in a process. The first icon is a solid blue circle containing the white number "1", with the word "Capture" written in blue text directly below it. The second icon is a white circle with a thin blue border containing the blue number "2", with the word "Decode" written in blue text directly below it. A thin grey horizontal line connects the two circles.

NetDR Parser

- This tool parses netdr output from Cisco 7600 and 6500 series routers and presents Top Talkers statistics. The output includes a Detailed Counters section that lists the total number of unique entries for a particular field (source IP, destination IP, TTL, etc...).
- <https://cway.cisco.com/tools/netdr/>

Paste data here to begin!

Parse Data

 Convert to pcap

 Upload File

IPSec Overhead Calculator Tool

- This tool calculates the overhead for IPSec and other common encapsulation protocols based on the input packet size and IPSec algorithms.
- <https://cway.cisco.com/tools/ipsec-overhead-calc/>

PACKET FORMAT



- New IPv4 Header for IPsec
- ESP Header
- Original IPv4 Header
- Original Data
- ESP Trailer
- ESP ICV

VCS Service Checker

- Video Communication Server (VCS) Service checker tool will help you to identify Jabber login issues, inbound call failures, phone registration failing and XMPP federation. It consists of checking if the services (SIP, H323, XMPP, collab-edge) are available on your network.
- <https://cway.cisco.com/tools/SrvRecord/>

Configuration Diff

- A diff script that is suited for Cisco configuration files.

Configuration Diff BETA

[Contributors](#)

A diff script that is suited for Cisco configuration files [details](#) ^

It understands the hierarchical structure of a config based on its indentation and assumes that the order of lines in a given section does not matter. Red lines are different or missing in the other config. Orange lines do have a matching line in the other config but are necessary to configure red lines (in other words, orange indicates sections that contain red lines).

1 First Config

↑
Drop file here

2 Second Config

↑
Drop file here

Tools & Resources

View completed Tools and Resources in Cisco website.

<http://www.cisco.com/c/en/us/support/web/tools-catalog.html>



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Featured Tools

▼ TAC [Packet Capture Config Generator and Analyzer](#) [ⓘ]

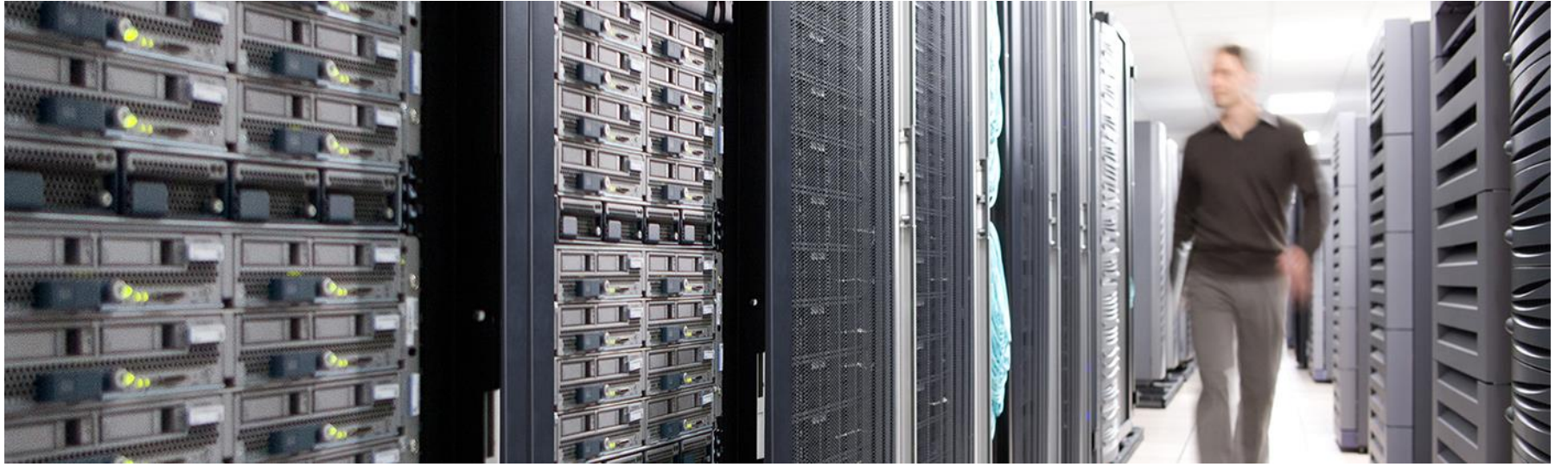
▼ TAC [Expressway SIP Call Analyzer](#) [ⓘ] BETA

▼ [Support Case Manager](#) [ⓘ] New

All Tools

▼ TAC [Cisco CLI Analyzer](#) BETA

▼ [Device Coverage Checker](#)



Demo

Ask the Expert Event following the Webcast



【专家面对面】思科 **CLI Analyzer** 及其他实用故障分析工具介绍

2016.08.10-08.19

<http://bbs.csc-china.com.cn/forum.php?mod=viewthread&tid=967995>

Please take a moment to complete the survey:

<https://www.ciscofeedback.vovici.com/se.ashx?s=6A5348A77F8CCC2A>

Collaborate within our Social Media



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Twitter- <http://bit.ly/csc-twitter>



You Tube <http://bit.ly/csc-youtube>



Google+ <http://bit.ly/csc-googleplus>



LinkedIn <http://bit.ly/csc-linked-in>



Instagram <http://bit.ly/csc-instagram>



Newsletter Subscription
<http://bit.ly/csc-newsletter>

Cisco has support communities in other languages!

If you speak Spanish, Portuguese, Japanese, Russian or Chinese we invite you to participate and collaborate in your language



Chinese 思科服务支持社区

<http://www.csc-china.com.cn>

English

<https://supportforums.cisco.com>

Spanish

<https://supportforums.cisco.com/community/spanish>

Portuguese

<https://supportforums.cisco.com/community/portuguese>

Japanese

<https://supportforums.cisco.com/community/csc-japan>

Russian

<https://supportforums.cisco.com/community/russian>



CISCO

TOMORROW starts here.