Central Office Services (COS) Overview
2018–2019 School Year

Introduction

This document provides an overview of the DRC Central Office Services (COS) software, available for the 2018–2019 testing year. COS is a powerful, integrated software that allows users to easily install, configure, and manage their online testing environment from a central location.

COS includes the following major components:

- The **COS – Device Toolkit interface**, which includes a visual dashboard of the COS configurations and displays status information as well as links to information about the devices associated with each configuration. Users access the COS – Device Toolkit interface through the web-based eDIRECT portal.

- The **COS Service Device software** offers testing sites an option to replace the TSM software with Content Hosting and Content Management. The service device software is installed locally on one or more dedicated service devices at testing sites.

The remainder of this overview discusses the benefits and features of COS, compares and contrasts the COS Service Device with the TSM, and answers a couple of Frequently Asked Questions about COS Service Device. For an understanding of some of the terms that are specific to COS (and its relationship with the TSM), see COS Terminology at the end of this overview.

Benefits of COS Service Device Software

COS offers many benefits to users, including a streamlined configuration and setup process.

- **Users no longer have to go to multiple places to set up, configure, and manage online testing environments.** Users can access these functions centrally from eDIRECT through COS.

- **Users no longer need to maintain separate content hosting servers for multiple online testing programs.** Sites can manage all of their DRC INSIGHT testing programs by using COS as a single content management and content hosting service.

- **COS Service Device software provides flexible installation options based on a testing site's needs.**
    - Sites can select the specific COS Service Device components needed per site machine.
    - COS supports pre-defined service device configurations, making it easy to install COS Service Device across multiple service devices.

- **The COS – Device Toolkit interface offers an enhanced, more user-friendly version of the Device Toolkit.**
    - A dashboard allows users to visually monitor and manage configurations, including health and status information for all devices.
    - The dashboard offers centralized device management with easy drill-down access to view and manage devices and configurations.

- **Enhanced content management allows sites to download only the content they need for testing.** In addition, a COS Service Device can be set up to download content to a network share location that multiple content hosting services can use.

- **The COS Service Device software new code base and enhanced technology takes advantage of device resources such as increased memory.** This can increase device scalability resulting in a larger number of concurrent testers per service device. For details, see the *DRC Central Office Services (COS) Service Device Requirements* topic in the *DRC Supported System Requirements*, available at your state's eDIRECT site under **General Information–Downloads–View System Requirements**.

- **COS Service Device software uses enhanced security controls and permissions, to provide better control of both user access and user actions.**

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COS Features

The following table further describes the current features and benefits of COS.

Feature	Description	Benefits
COS – Device Toolkit	Device configuration capabilities and caching services can be managed from a single, central location.	The COS – Device Toolkit offers a graphical, drill-down dashboard to provide easier, centralized management and control of the online test environment. Within the COS – Device Toolkit, sites can access and manage multiple testing programs from a single Windows, Mac, or Linux computer, reducing both test device configuration and setup effort, and the amount of hardware required.
Enhanced security	An updated security framework provides additional controls for managing access.	COS Service Device uses the Portal and eDIRECT log-in process to provide stronger, more secure access.
Silent installation of service devices	After installing a single COS Service Device, sites can run scripts to silently install additional COS Service Devices.	Silent installation streamlines and centralizes the process of service device configuration and allows sites to easily create a pool of COS Service Devices within a configuration.
Content Management	Sites can download just the specific test content that they need.	With a COS Service Device, sites can download just the test content for the administrations and assessments that they need, reducing download times and device storage requirements.
Response Caching	Currently, COS can be used with a TSM for response caching.	Sites can configure a dedicated TSM for response caching for locations within a configuration that require response caching.
Content Hosting	Test content is securely served to student test devices.	For maximum security, COS Service Device encrypts all test content when it is downloaded to a COS Service Device.

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Side-by-Side Comparison of COS and the TSM

The following checklist compares the features available with COS Service Device software to the features available with a TSM.

Feature	COS Service Device Software	TSM
Increased retries during content download	☑	☑
Content Hosting (content caching on the TSM)	☑	☑
Response caching is available for fixed-form tests[1] (currently, COS requires a TSM to be configured in order to perform response caching)	☑	☑
Enhanced content handling (cloud-based content distribution network)	☑	☑
Test readiness tools for load simulation[2]		☑
Must be configured manually to take advantage of additional system resources		☑
Enhanced security, including stronger device access controls with sign-on validation	☑	
Small, medium, and large installation options based on testing site's size and needs	☑	
Provide status information regarding content download and device-readiness	☑	
Report detailed COS Service Device status information at regular intervals to help users verify the status of test content (The COS – Device Toolkit also can verify that a TSM is active.)	☑	
A single, centralized, user interface with a dashboard for test readiness, device configuration, and content caching	☑	
Supports multiple testing programs, eliminating the need for separate content hosting servers for each program	☑	
Automatically scales to use the resources available in the COS Service Device	☑	
Provides option to download only the content needed for the testing site	☑	
Provides option to download content to a network share location that multiple Content Hosting services can use	☑	

[1] DRC is currently developing an offline, computer-based testing option for sites with unreliable Internet connectivity that are administrating fixed-form tests.

[2] DRC plans to add enhanced testing simulation features to COS Service Device for 2018–19.

FAQs

The following are Frequently Asked Questions about COS.

Do I have to perform a new software installation to use the full version of COS?
Yes, the full version of COS requires a new installation of COS Service Device software on at least one device to create an initial COS configuration and a COS Service Device. The DRC INSIGHT software on the test devices works with both COS Service Devices and TSMs without a new installation.

What are the system requirements for a COS Service Device software?
For the COS Service Device software system requirements, see the *DRC Central Office Services (COS) Service Device* Software *Requirements* in the *DRC Supported System Requirements*, available at your state's eDIRECT site under **General Information–Downloads–View System Requirements**.

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COS Terminology

The following terms are important for understanding COS (and its relationship to the TSM).

Configuration (COS)

In COS, a configuration is a logical grouping of devices, usually consisting of one or more COS service devices, multiple testing devices, and optional TSMs. A COS configuration allows sites to logically group testing devices and COS service devices across locations while easily specifying the settings for all of the devices in the configuration (for simple testing scenarios, COS also allows sites to create configurations containing testing devices only).

Location (COS)

For COS, the term location refers to a testing site, such as a specific school within a state testing program. A configuration can contain multiple locations and testing programs. For example, sites can create configurations at the district level and then use locations to link testing devices to all of the DRC testing programs in the district.

Within a COS configuration, a location can define a TSM for response caching*, indicate whether a testing device receives automatic updates of the INSIGHT software, determine which administrations will be available from the service device, specify a proxy host for offline testing, and other settings.

*A TSM can also be used for content caching within a location if the location does not use a COS Service Device for Content Hosting or Content Management. Within a location, COS Service Devices configured for Content Hosting and Content Management replace TSMs configured for content caching.

Content Management and Content Hosting (COS)

Content Management is the COS software service that manages the delivery of test content to each site. Sites can download only the test content they need to reduce download times. For example, a site could download test content for only one administration.

Content Hosting is the COS software service that provides content to student testing devices. This service authenticates content requests, decrypts content, and aggregates items into forms.

Content Caching and Response Caching (TSM)

The TSM offers content caching for test content and response caching for student test responses.

- At test time, the TSM content caching software sends its cached test items to the testing devices. This content must be current in order for students to test.

- During testing, if test computers cannot communicate with the DRC server, TSM response caching software stores test responses for transmission to DRC.

COS – Device Toolkit

COS integrates the TSM interface and the Device Toolkit interface into a single user interface, which includes a user-friendly dashboard to manage devices and configurations centrally. This web browser-based interface allows sites to manage COS service devices, testing devices, and TSMs from a single point of control, while the dashboard provides status information for all COS devices.

COS Service Device

A COS Service Device is a Windows, Mac, or Linux computer that has the COS software installed on it and is configured to provide a COS software service, such as Content Management.

Testing Device (COS or TSM)

A testing device is a Windows, Mac, Linux, iPad, or Chromebook device with the DRC INSIGHT software installed on it. Usually, the device is configured to work with a COS Service Device or a TSM for student testing.