

DRC INSIGHT – Central Office Services (COS) Installation & Troubleshooting (Full)

Audience: IT Administrators / MSP Engineers

Platform: Ubuntu 22.04 / 24.04 + Chromebook environments

Overview

DRC INSIGHT Central Office Services (COS) is a local content hosting system that allows testing devices to retrieve assessment content from a local server instead of the internet.

Key Concept:

COS is a service-based HTTP system, NOT a file share.
Devices do NOT access `/opt/CentralOffice` directly.

Architecture

```
graph TD; A[Testing Devices] --> B[DRC INSIGHT App]; B --> C[COS Server]; C --> D[Local Content (/opt/CentralOffice/content_fs)];
```

Testing Devices
↓
DRC INSIGHT App
↓
COS Server
↓
Local Content (`/opt/CentralOffice/content_fs`)



Fallback → DRC Cloud

Installation (Ubuntu)

1. Update System

```
sudo apt update && sudo apt upgrade -y
```

2. Install Required Dependencies

```
sudo apt install -y \  
libxcb-xinerama0 \  
libalt-getopt-complete-perl \  
libxcb-icccm4 \  
libxcb-image0 \  
libxcb-keysyms1 \  
libxcb-render-util0 \  
libxcb-xkb1 \  
libxkbcommon-x11-0
```

Critical: Missing dependencies will cause silent installer failures or services crashing.

3. Fix /tmp Permissions

```
sudo chmod 1777 /tmp  
ls -ld /tmp
```

4. Clean Previous Install

```
sudo rm -rf /opt/CentralOffice  
sudo rm -f /tmp/coinstaller*.lock
```

5. Run Installer

```
chmod +x silent-linux.sh
sudo ./silent-linux.sh
```

Registration (REQUIRED)

Important: You MUST open the setup URL generated during installation.

This step registers COS with DRC and enables services.

If skipped:

- Relay fails
- Contenthosting fails
- Devices cannot connect

Validate Services

Check Running Services

```
sudo /opt/CentralOffice/node \
/opt/CentralOffice/setup/node_modules/forever/bin/forever -p /opt/CentralOffice list
```

Expected:

- management
- relay
- proxy
- contenthosting

Check Ports

```
sudo ss -tulnp | grep node
```

Typical Ports:

- 55223 - Content Hosting
- 55224 - Relay
- 55225 - Proxy

Test Service

```
curl -I http://127.0.0.1:55223
```

HTTP 404 is normal and confirms the service is running.

DRC Portal Configuration

Content Management

- Enable Content Management → ON
- Select tests (PSSA, Keystone, CDT)
- Click Update Configuration

Content Hosting

- Enable Content Hosting → ON
- Load Balancer → OFF
- Shared Content Location → OFF

Shared content should only be used in multi-server environments.

Proxy

- Use Proxy → OFF
-

Chromebook Configuration

Install App

- Deploy DRC INSIGHT via Google Admin Console

Register Device

Launch App → Assign Device to ORG Unit → Enter ORG ID

Required Settings

- Display Scale = 100%
- Keyboard = US English
- Same network as COS

Network Requirements

Allowlist

```
*.drccdirect.com
```

Ports

- 80 (HTTP)
- 443 (HTTPS)

Internal COS Ports

```
sudo ufw allow 55223/tcp  
sudo ufw allow 55224/tcp  
sudo ufw allow 55225/tcp
```

Content Validation

```
ls -lah /opt/CentralOffice/content_fs
```

```
sudo journalctl -u centralofficecontenthosting -f
```

Troubleshooting

Installer Fails

```
sudo chmod 1777 /tmp  
sudo rm -rf /opt/CentralOffice  
sudo ./silent-linux.sh
```

Only Proxy Running

Cause: COS not registered

Heartbeat Error

```
CO API - Heartbeat returned undefined
```

Fix:

- Complete setup URL
- Verify internet access
- Allow DRC domains

Chromebooks Cannot Connect

- Verify ORG ID
- Check network
- Confirm ports open

Validation Checklist

- [] COS services running
 - [] Ports listening
 - [] Content downloading
 - [] Portal configured correctly
 - [] Chromebooks registered
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Key Takeaways

- COS is NOT a file server
 - Uses HTTP endpoints
 - Registration is required
 - Content hosting must be enabled
-

End of SOP

Revision #3

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