

Fabric and Fan-only Module Handling

B.1 Fabric and Fan-only Module Description

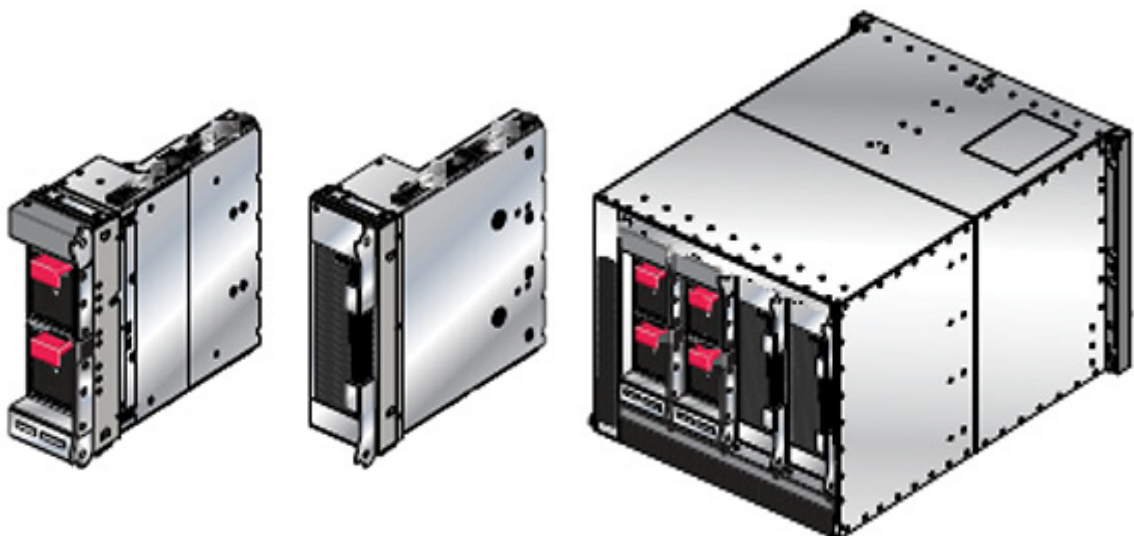
Each switch has four rear slots for **fabric modules**. In addition to providing the data transport media, fabric modules contain fan modules that circulate air through the switch. Proper switch operation requires the population of each rear slot.

Switches that are configured for maximum traffic capacity contain a fabric module in each rear slot. In network configurations that do not require maximum traffic capacity, an economical alternative is to replace two fabric modules with **fan-only modules**.

Each fan-only module provides the cooling capacity of the corresponding fabric module through a set of fans that are integrated into the module. The fans of a fan-only module are not removable, unlike the fabric module that requires the insertion of individual fan modules.

Fan-only modules are available for the 7304 and 7308 switches. [Figure B-1-left](#) displays a 7304 fabric module and a 7304 fan-only module that are removed from the switch. [Figure B-1-right](#) displays the rear panel of a 7304 switch that contains two fabric modules and two fan-only modules.

Figure B-1: Fabric and Fan-only Modules: Extracted (left) and installed (right)



Each module includes lock-levers that secure it to the chassis. The module and the lock levers are easily damaged by improperly removing, inserting, or handling the fabric module. Never use the lock levers to lift or move the module after it is removed from the chassis.

The fan direction of the fabric modules is specified by the color of the fan modules. The fan direction on fan-only modules is denoted by the indicator located below the top handle (Figure B-5-right).

The following module combinations are the only valid rear panel configurations:

- Fabric Modules in slots 1 – 4
- Fabric Modules in slots 1 – 2; Fan-only modules in slots 3 – 4.

Note

On the 7308, if a fan-only module is not inserted, a metal piece covers the slot as shown below



1 Metal covering

Part Numbers

Table B-1 lists the part numbers of Fabric and Fan-only Modules.

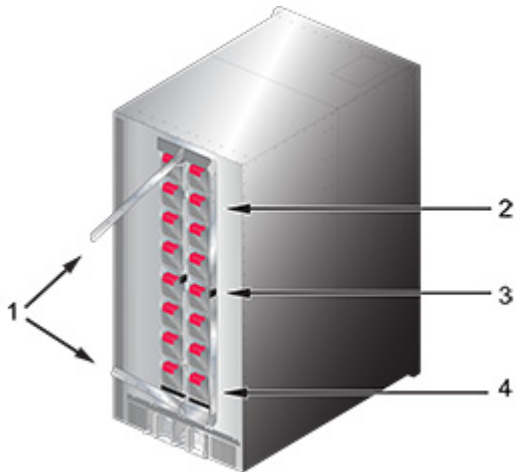
Table B-1 Fabric and Fan-only Module Part Numbers

Switch Model	Fabric Module	Fan-only Module
DCS-7304 (Air Inlet) DCS-7304 (Air Exit)	DCS-7304X-FM-R DCS-7304X-FM-F	DCS-7304-S-FAN-R DCS-7304-S-FAN-F
DCS-7308 (Air Inlet) DCS-7308 (Air Exit)	DCS-7308X-FM-F DCS-7308X-FM-R	DCS-7308-S-FAN-R DCS-7308-S-FAN-F
DCS-7316 (Air Inlet) DCS-7316 (Air Exit)	DCS-7316X-FM-F DCS-7316X-FM-R	Not Available Not Available
DCS-7324 (Air Exit Only)	DCS-7324-FM-F	Not Supported
DCS-7328 (Air Exit Only)	DCS-7328-FM-F	Not Supported

B.2 Handling Fabric Modules

Figure B-2 depicts a DCS-7316 chassis with the inner two fabric modules installed. Lock-levers are shown in the open and closed position, along with the button that releases them into the open position. The lock-levers are in the closed position when the switch is in service.

Figure B-2: Locking Mechanism: DCS-7316 Fabric



- | | | | |
|---|-------------------------------|---|-------------------------------|
| 1 | Lock levers open (FM2) | 3 | Release button (FM3) |
| 2 | Upper lock lever closed (FM3) | 4 | Lower lock lever closed (FM3) |

These sections describe fabric module handling procedures. Illustrations depict a DCS-7316 chassis and fabric modules. While proper handling of DCS-7316 components is imperative because of their size and weight, the instructions also describe best practices for handling DCS-7304 and DCS-7308 components.

B.2.1 Removing Fabric Modules

Note While removing and replacing a fabric module in a gen3 chassis (7304X3, 7308X3), you should issue a command to offload traffic before removing the module to avoid potential traffic loss.

This procedure removes a fabric from the switch chassis.

- Step 1** Release the lock-levers from the module frame (Figure B-3-left).
- Step 2** Extend the lock-levers towards the top and bottom of the chassis (Figure B-3-right).
- Step 3** Use the lock-levers to pull the module three to four inches (Figure B-4-left).
- Step 4** Return the lock-levers to the closed position (Figure B-4-right)
- Step 5** Grasp the module frame and pull the module until it is completely outside of the chassis.

Figure B-3: Fabric Module Removal: Initial Position and Opening the Lock-Levers

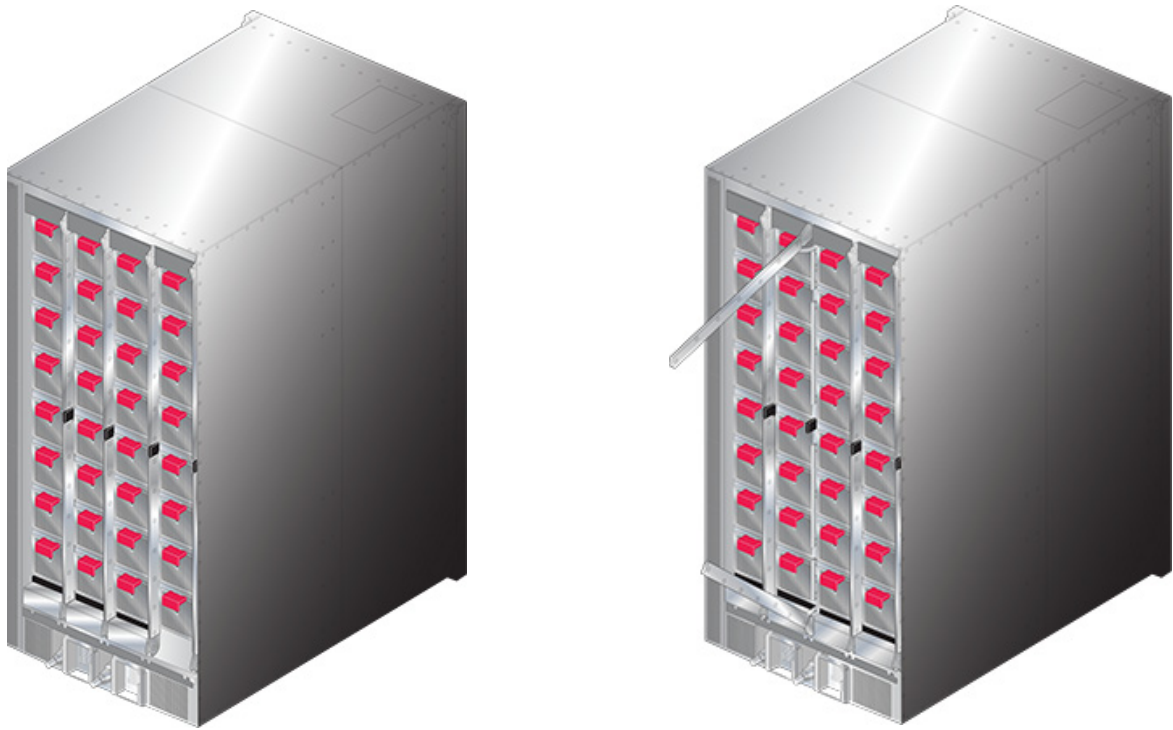
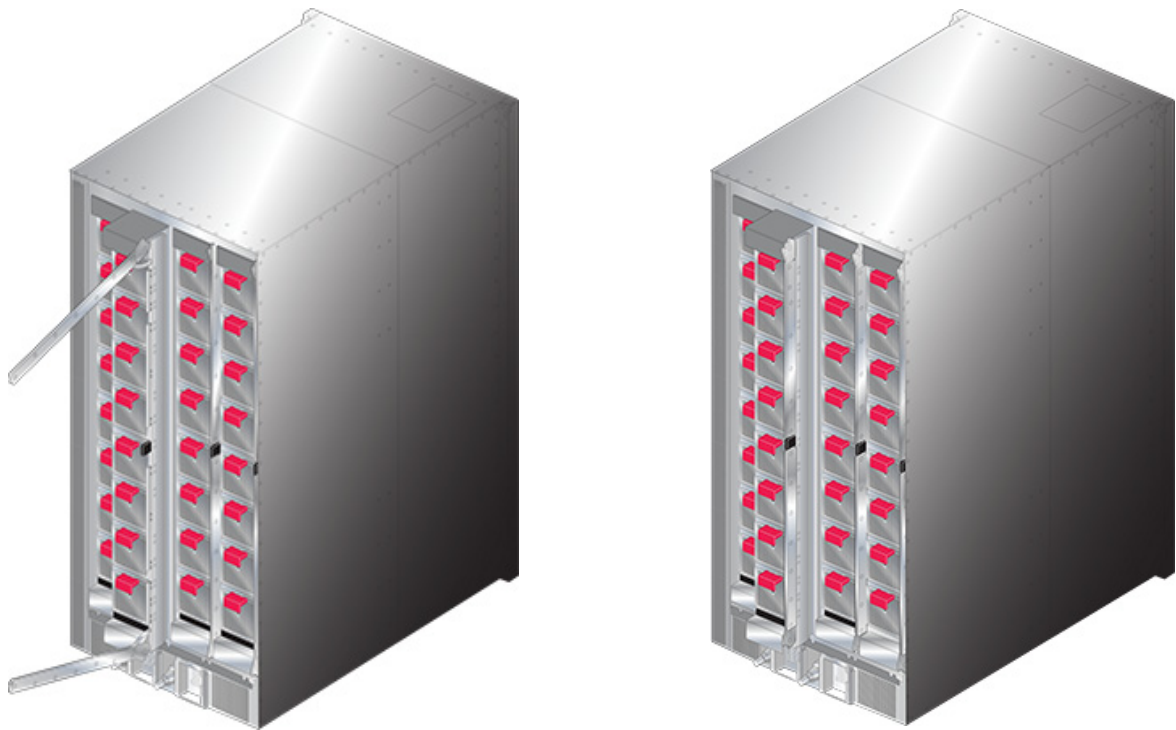


Figure B-4: Fabric Module Removal: Edging the Module Out and Closing the Lock-Levers



The DCS-7316 fabric module is almost three feet long and weighs close to 40 pounds. Use necessary precautions to safely manage the component outside of the chassis.

B.2.2 Inserting Fabric Modules

The fabric module insertion process is the inverse of the removal procedure. These instructions describe the method of inserting the fabric module into a chassis.

- Step 1** Grasping the module by its frame, place the module chassis railing that corresponds to the slot where it is to be placed. The lock-levers should be in the closed position.
- Step 2** Slide the module into the chassis until it's within three to four inches of being fully inserted ([Figure B-4-right](#)).
- Step 3** Press the Release Button to release the lock-levers into the open position ([Figure B-4-left](#)).
- Step 4** Continue inserting the module into the chassis. If other fabric modules are in the chassis, the module being installed should be in the same relative position ([Figure B-3-right](#)).
- Step 5** Return the lock-levers to the closed position, securing the module to the chassis ([Figure B-3-left](#)).

B.3 Handling Fan-only Modules

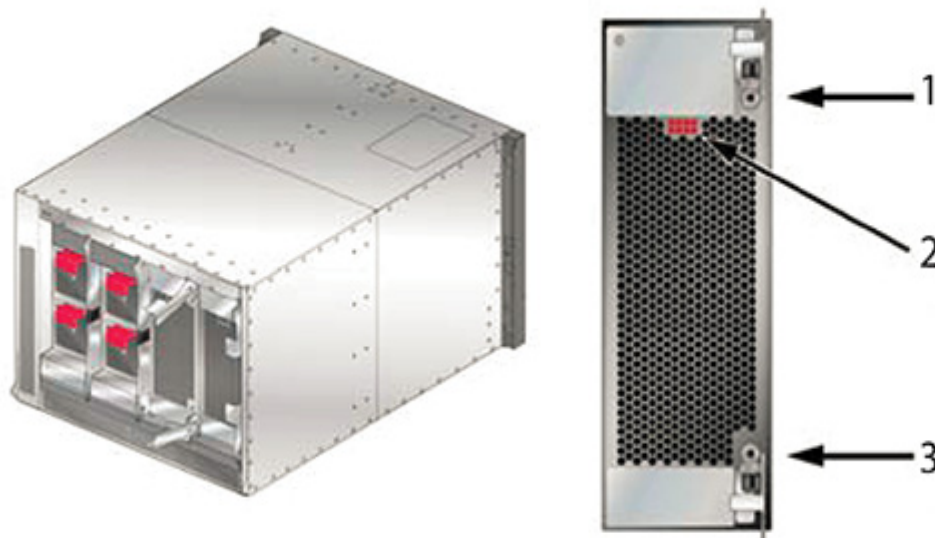
[Figure B-5-left](#) depicts a DCS-7304 chassis with installed fabric modules (slots 1 and 2) and fan-only modules (slots 3 and 4). Lock-levers are shown in the open (slot 3) and closed (slot 4) position. [Figure B-5-right](#) displays the position of the lock lever release screw (below the extended handles).

The fan direction indicator is located below the top handle. Refer to [Section 2.1](#) for airflow configuration requirements.

The following configuration is mandatory when fan-only modules are installed:

- Slots 1 and 2 contain fabric modules
- Slots 3 and 4 contain fan-only modules

Figure B-5: DCS-7304 Fabric and Fan-only Module (left); DCS-7304 Fan-only Module (Right)



- | | | | |
|---|---|---|--------------------------|
| 1 | Lock lever release screw | 3 | Lock lever release screw |
| 2 | Fan airflow direction (color indicates airflow direction) | | |

B.3.1 Removing Fan-only Modules

This procedure describes the proper method for removing fan-only modules from the switch:

- Step 1** Release the lock-levers from the module frame by rotating each handle's release screw counter-clockwise (Figure B-5-right).
- Step 2** Extend the lock-levers towards the top and bottom of the chassis (Figure B-5-left).
- Step 3** Use the lock-levers to pull the module three to four inches from the installed position.
- Step 4** Return the lock-levers to the closed position.
- Step 5** Grasp the module frame and pull the module until it is completely outside of the chassis.

B.3.2 Inserting Fan-only Modules

The fabric module insertion process is the inverse of the removal procedure. These instructions describe the method of inserting the fabric module into a chassis.

- Step 1** Grasping the module by its frame, place the module chassis railing that corresponds to the slot where it is to be placed. The lock-levers should be in the closed position.
- Step 2** Slide the module into the chassis until it's within three to four inches of being fully inserted.
- Step 3** Extend the lock-levers towards the top and bottom of the chassis.
- Step 4** Continue inserting the module into the chassis.
- Step 5** Return the lock-levers to the closed position, securing the module to the chassis.
- Step 6** Secure each lock-lever handle to the module by inserting the release screw into the module body and rotating clockwise.