Task Template

Task: a step-by-step procedure for completing a task; "How do I do X?"

All headings: use title case; begin with an action verb; use parallel structure; use active voice. Examples: "Connect the Wire" and "Remove the Fan Housing"

`[h1]Title/Topic`

`[add short description]`

Less than 50 words; use keywords and search content; use simple paragraphs, unordered lists, and definition lists as needed

`[h3]Note: or [h3]Caution: (optional)`

`[add note or caution]`

Less than 50 words; use simple paragraphs
NOTE: Place BEFORE the subject text of the note or caution

`[h2]Before You Begin (optional)`

Use simple paragraphs and ordered lists

`[add pre-requisites]`

`[h2]Materials needed (optional)`

`[add materials needed]`

`[h2]Procedure`

Use simple paragraphs only when necessary; use ordered lists whenever possible

`[add ordered list]`

`[h2]Result`

Use simple paragraphs and ordered lists

`[figure] (optional)`

Task Example:

Install the Fan Trays

If you removed the fan trays before installing the chassis in the rack, reinstall them in the chassis now.

Caution: Acoustic—At full speed operation, the fans in the fan tray produce 85 decibels of noise. If you will be working around powered-on Zen4 equipment for an extended time, wear ear protection.

Before You Begin
- Mount the chassis in the rack

**Materials Needed**
- Philips-head screwdriver

Procedure
1. Slide a fan tray into the fan bay below the card cage (see Figure 11-6).
2. Align and tighten all three retaining screws across the bottom of the fan tray.
3. Repeat these steps to install the second fan tray above the card cage.

Result
The fan tray(s) are installed in the chassis in the rack

Figure 11-6. Installing a Fan Tray

1 = Chassis
2 = Mounting screws
3 = Rack uprights

FN0024
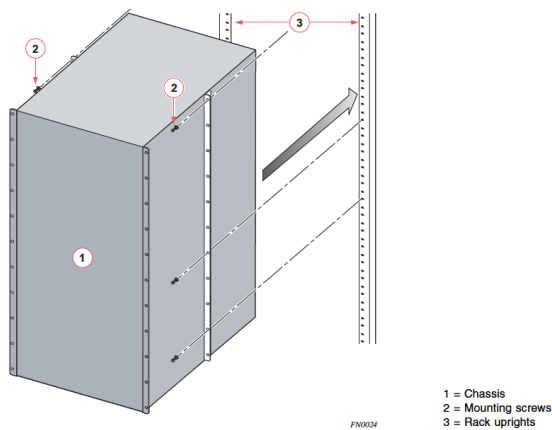
Concept Template

Concept: essential and complete information needed to understand a concept; "What is X?"

All headings: use title case; use the name of the product/part or simple noun phrases; use parallel structure;. Examples: "XYZ Module" and "Fan Housing;" "Initial Configuration" and "Network Interface Configuration"

[h1]Title/Topic

[add description]

Use keywords and search content; use simple paragraphs, unordered lists, and definition lists as needed

[h3]Note: or [h3]Caution: (optional)

[add note or caution]

Less than 50 words; use simple paragraphs
NOTE: Place BEFORE the subject text of the note or caution

[figure] (optional)

[h2]Subtitle/Subtopic

[add description]

Use keywords and search content; use simple paragraphs, unordered lists, and definition lists as needed

[h3]Note: or [h3]Caution: (optional)

[add note or caution]

Less than 50 words; use simple paragraphs
NOTE: Place BEFORE the subject text of the note or caution

[figure] (optional)
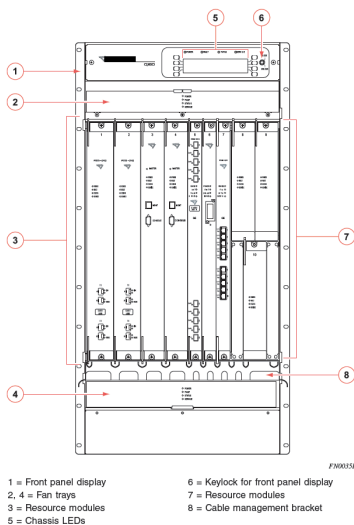
Concept Example:

Chassis Features

The Zen4 chassis (Figure 2-1) has the following features:

- Status and diagnostic LEDs for the chassis; additional LEDs on individual resource modules and other components provide status indications for those components.
- Front panel display for monitoring operation.
- Two fan trays for chassis cooling.
- Four power modules; two are required to power the system. Four modules provide 2N redundancy.
- Rack-mount flanges at the front of the chassis for installing in a four-post rack.
- Optional middle rack-mount flanges for installing the chassis in two-post rack.
- Dedicated slots for resource modules.
- Passive backplane that provides communication paths between modules.
- Recessed handles for easier rack installation.
- Cable management bracket below the card cage.

The Zen4 is designed to be rack-mounted in an EIA-standard 19-inch equipment rack. Optional rack mount flanges (ordered separately) can be added at the middle of the chassis for mounting the chassis in a two-post (telco-style) rack. With provided bracing, the chassis can be mounted in a four-post (data-center-style) rack using the flanges at the front of the chassis. Recessed handles on each side of the chassis make it easier to maneuver the chassis during installation.

The card cage has dedicated slots for ZSMs, PMMs, ASMs, and I/O modules (Ethernet or Fibre Channel). These modules include inserter/extractor levers and captive retaining screws. For slots that do not contain a module, baffle cards specific to each module type ensure proper airflow through the chassis. Slots are keyed to prevent accidental insertion of the wrong module or baffle card type.

Figure 2-1. Zen4 Chassis—Front View


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1 = Front panel display        6 = Keylock for front panel display
2, 4 = Fan trays               7 = Resource modules
3 = Resource modules           8 = Cable management bracket
5 = Chassis LEDs
```

LEDs and Front Panel Display

At the top of the chassis is a display panel with four variable selection buttons on each side. This display provides information about the power and operational state of the server. The selection buttons allow navigating through the menus; button functions are determined by the information on the display screen. A key lock disables the buttons to secure the display and buttons against unauthorized usage. For more information about the uses of the front panel display, refer to the *Zen4 Software Configuration Guide*.

Above the front panel display are four chassis LEDs labeled Power, Fault, Status, and Service. For more information about the functions of these LEDs, see .

Figure 2-2. Front Panel Display

1 = Selection buttons   3 = Display area
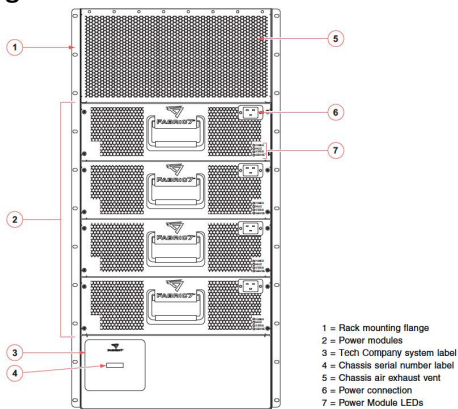2 = Chassis LEDs   4 = Key lock
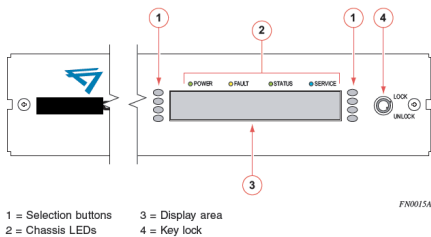
Power and Cooling

Four AC power modules are at the back of the chassis (). The power modules share the power load during normal operation. Each power module contains a fan for cooling.

Fan trays above and below the card cage provide chassis cooling. Fan trays have handles and captive retaining screws. They also have status LEDs on the faceplate.

An air filter is installed between the card cage and the lower fan tray. Servicing the air filter requires removal of the lower fan tray.

Caution: Emergency Shutdown—The Zen4 system has no physical power switch. To perform an emergency power shutdown, disconnect the power cords from all power modules.

Figure 2-3. Zen4 Chassis—Rear View

1 = Rack mounting flange
2 = Power modules
3 = Tech Company system label
4 = Chassis serial number label
5 = Chassis air exhaust vent
6 = Power connection
7 = Power Module LEDs

Reference Template

Reference: provide specification information that supports conceptual information and task completion; detailed, quickly accessed data, usually in table format

All headings: use title case; use the name of the product/part or simple noun phrases; use parallel structure;. Examples: "XYZ Module" and "Fan Housing;" "Initial Configuration" and "Network Interface Configuration"

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[h1]Title/Topic
[add short description]
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Less than 50 words; use keywords and search content; use simple paragraphs, unordered lists, and definition lists as needed

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[table and/or [figure]
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Reference Example

Front Panel Display LEDs

The LEDs on the front panel display provide system-level indications for the chassis.
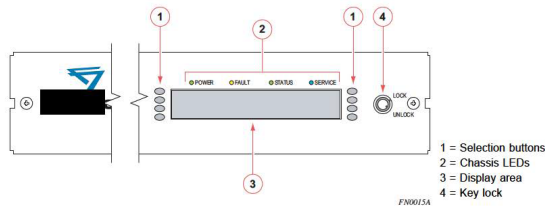
Figure A-1. Front Panel Display

Table A-1. Front Panel Display LEDs

Label	Meaning
Power	Steady green: System is powered on Off: System is not connected to power.
Fault	Steady amber: A fault event has occurred that requires attention (the event is recorded in the system error log) or a module in the system has a fault. Off: No faults exist in the system, or the system is not connected to power (if all LEDs are off).
Status	Steady green: Chassis is fully operational and no errors are present. Flashing green: Transitional stat-One or more of the modules are booting. If this LED continues to flash, there is a fault condition. Off: No modules are operational, or there is no power to the system (if all LEDs are off).
Service	Steady blue: The chassis is in "locate" mode. An off-site administrator can place the chassis in locate mode to help on-site service personnel identify the system for additional service.