



## INDEX

---

### A

- ACNS software
  - Content Engine mode [1-5](#)
- AC power
  - specifications [A-3](#)
- adapters
  - considerations [4-5](#)
  - inline [1-16](#)
  - installing [4-6](#)
  - PCI bus, identification [4-5](#)
- altitude
  - guidelines [B-3](#)

---

### B

- back panel
  - LEDs (figure) [1-9](#)
  - LEDs (table) [1-11](#)
- beeps
  - lack of
    - troubleshooting [5-33](#)
- beep symptoms [5-28](#)
- bezel

- installing [4-12](#)

- removing [4-1](#)

- bus fault error messages [5-66](#)

---

### C

- cables
  - connecting [3-12](#)
- cabling requirements
  - inline network adapter [1-19](#)
  - inline network adapter (examples) [1-22](#)
- cautions
  - description of [xiv](#)
- CD-ROM drive
  - problems [5-44](#)
- Configuration/Setup Utility program
  - using [C-1](#)
- connections
  - cables [3-12](#)
  - power [3-13](#)
  - troubleshooting [5-3](#)
- connectors and ports
  - inline network adapter [1-18](#)
  - locations [1-11](#)

## Content Engine

- front panel control buttons [1-6](#)

- functional description [1-4](#)

- installing [3-5](#)

- maintaining [B-1](#)

- removing or replacing [3-14](#)

- control buttons [1-7](#)

- conventions

- document [xiii](#)

- corrosion

- preventing damage [B-4](#)

- cover

- installing [4-12](#)

- removing [4-1](#)

- CPU diagnostic panel LED [5-20](#)

---

**D**

- DASD diagnostic panel LED [5-20](#)

- DC power

- installation precautions [2-6](#)

- diagnostic error codes [5-37](#)

- diagnostic panel

- error definitions (table) [5-34](#)

- LEDs

- figure [5-19](#)

- table [5-20](#)

- diagnostic programs

- overview [5-7](#)

- starting [5-9](#)

- troubleshooting with [5-5](#)

- diagnostics LEDs

- Light Path [5-19](#)

- diagnostic tools

- overview [5-5](#)

- document

- conventions [xiii](#)

- drives

- installing [4-13](#)

- internal [4-13](#)

- dust

- preventing damage [B-3](#)

---

**E**

- electromagnetic interference

- See EMI

- electrostatic discharge

- See ESD

- EMI

- preventing effects of [B-4](#)

- environment

- maintaining [B-1](#)

- error codes

- definitions [5-37](#)

- format [5-7](#)

- error logs

- viewing [5-10](#)

---

**ESD**

preventing damage [2-7](#), [B-4](#)

Ethernet 1 activity LED [1-10](#)

Ethernet 1 link status LED [1-10](#)

Ethernet 2 activity LED [1-10](#)

Ethernet controller

troubleshooting [5-12](#)

troubleshooting (chart) [5-13](#)

Ethernet port

connector pinouts [1-13](#)

expansion enclosure

problems [5-44](#)

---

**F**

FAN diagnostic panel LED [5-20](#)

fan error messages [5-62](#)

Fibre Channel adapter

connector [1-15](#)

LEDs [1-11](#)

PCI slot 3 (note) [1-11](#)

specifications (table) [A-5](#)

filler panel

hard disk drive bay [4-13](#)

front panel

figure [1-6](#)

LEDs [1-7](#)

---

**H**

hard disk drive

installing [4-13](#)

problems [5-45](#)

hardware

troubleshooting [5-1](#)

hardware option

problems [5-47](#)

host BIST error messages [5-66](#)

humidity

maintenance guidelines [B-3](#)

---

**I**

I/O connectors [1-11](#)

inline network adapter

cabling examples [1-22](#)

cabling requirements [1-19](#)

description [1-16](#)

specifications [A-5](#)

installation

rack [3-5](#)

tabletop [3-11](#)

warnings [2-1](#)

installing

adapters [4-6](#)

bezel [4-12](#)

cover [4-12](#)

drives [4-13](#)  
non-hot-pluggable adapters [4-6](#)

intermittent problems  
troubleshooting [5-45](#)

---

## L

### LEDs

back panel (figure) [1-9](#)  
back panel (table) [1-11](#)  
checking [3-14](#)  
description [1-7, 1-10](#)  
diagnosing problems using [5-15](#)  
diagnostic panel  
    figure [5-19](#)  
    table [5-20](#)  
front panel (table) [1-7](#)  
front view [1-6](#)  
inline network adapter [1-18](#)  
power supply [5-16](#)  
rear view [1-9, 1-12, 3-12](#)  
troubleshooting [5-15](#)

### Light Path Diagnostics

LEDs [5-19](#)  
using [5-15, 5-16, 5-21](#)

line conditioners  
using [B-7](#)

---

## M

magnetism  
    preventing effects of [B-5](#)  
maintenance [B-1 to B-7](#)  
memory  
    problems [5-46](#)  
MEMORY diagnostic panel LED [5-20](#)  
messages  
    diagnostic [5-7](#)  
microprocessor  
    problems [5-46](#)

---

## N

network  
    connection problems [5-12](#)  
    removing Content Engine from [3-14](#)  
NMI diagnostic panel LED [5-20](#)  
no beep symptoms [5-33](#)  
NONREDUNDANT diagnostic panel  
LED [5-20](#)

---

## O

operating requirements  
    minimum configuration [5-12](#)

**P**

PCI bus configuration [4-5](#)

PCI BUS diagnostic panel LED [5-20](#)

PCI or PCI-X adapters

- installing [4-6](#)

ports

- and connectors
  - inline network adapter [1-18](#)
- Ethernet
  - connecting [1-13](#)
- serial
  - connecting [1-13](#)

POST

- description [5-6](#)
- error codes [5-52](#)

power

- connecting to system [3-13](#)
- error messages [5-63](#)
- problems [5-48](#)

power control button [1-7](#)

power on LED [1-7](#)

power-on self-test

- See POST

power source interruptions

- preventing damage from [B-6](#)

power subsystem

- troubleshooting [5-11](#)

power supplies

LEDs

- table [5-16](#)
- troubleshooting with [5-16](#)

problems [5-51](#)

specifications [A-2](#)

using uninterruptible [B-8](#)

POWER SUPPLY 1 diagnostic panel LED [5-20](#)

POWER SUPPLY 2 diagnostic panel LED [5-20](#)

problem solving

- overview [5-1](#)
- tips [5-27](#)

**R**

rack installation [3-5](#)

rack requirements [3-2](#)

radio frequency interference

- See RFI

Remind button

- description [5-21](#)

removing or replacing

- Content Engine [3-14](#)

reset button [1-7](#)

RFI

- preventing effects of [B-4](#)

**S**

safety

- general precautions [2-4](#)
  - safety warnings [2-1](#)
  - SCSI
    - adapter boot option [4-6](#)
    - error codes [5-60](#)
  - SCSI port
    - connector pinout [1-15](#)
  - serial port
    - connector pinout [1-14](#)
    - description [1-13](#)
    - problems [5-49](#)
  - SERVICE PROCESSOR BUS diagnostic panel LED [5-20](#)
  - service processor error codes [5-60](#)
  - shock
    - preventing damage [B-5](#)
  - short circuit [5-11](#)
  - site environment
    - maintenance factors [B-1](#)
  - software problems
    - troubleshooting [5-50](#)
  - specifications
    - Fibre Channel adapter (table) [A-5](#)
  - status LEDs [1-9, 1-12, 3-12](#)
    - troubleshooting [5-15](#)
  - surge protectors
    - using [B-7](#)
  - switches
    - troubleshooting [5-3](#)
  - symptoms and solutions
    - tables [5-28](#)
    - system board LEDs
      - figure [5-17](#)
    - system error LED
      - description [5-33](#)
      - troubleshooting with [5-16](#)
    - system identification LED [1-8](#)
    - system problems
      - identifying [5-2](#)
    - system reliability [2-6](#)
    - system shutdown problems [5-64](#)
- 
- ## T
- tabletop installation
    - procedure [3-11](#)
  - temperature
    - error messages [5-61](#)
    - maintenance guidelines [B-2](#)
  - TEMPERATURE diagnostic panel LED [5-20](#)
  - temperature-related system shutdown [5-65](#)
  - test log
    - viewing [5-10](#)
  - troubleshooting
    - connections [5-3](#)
    - diagnostic tools [5-5](#)
    - Ethernet controller [5-12](#)
    - LEDs [5-15](#)
    - network connections [5-12](#)

- power subsystem [5-11](#)
- switches [5-3](#)
- system hardware [5-1](#)
- trouble indicators [5-15](#)
- undetermined problems [5-25](#)
- using diagnostic programs [5-5](#)

WCCP [1-5](#)

Web Cache Communication Protocol. *See* WCCP

Wide Area Application Engine. *See* WAE

Wide Area Application Services software. *See* WAAS software

working inside Content Engine with power on [2-7](#)

---

## U

undetermined problems

- troubleshooting [5-25](#)

uninterruptible power supplies

- using [B-8](#)

---

## V

vibration

- preventing damage [B-5](#)

voltage-related system shutdown [5-64](#)

VRM diagnostic panel LED [5-20](#)

---

## W

WAAS software

- description [1-4](#)

WAFS software

- File Engine mode [1-5](#)

warnings

- installation [2-1](#)

